

Caroline Thomas Jacobs, Director

April 8, 2025

To: Stakeholders for the Liberty Utilities, LLC, 2025 Wildfire Mitigation Plan Update

Enclosed is the Decision of the Office of Energy Infrastructure Safety (Energy Safety), approving the Liberty Utilities, LLC (Liberty) 2025 Wildfire Mitigation Plan (WMP) Update.

On January 27, 2025, Energy Safety published a draft of this Decision for public review and comment.¹

Opening comments on the draft Decision were due on February 18, 2025, and reply comments were due on February 28, 2025.

Energy Safety considered the comments received in its final evaluation, leading to some changes to the Decision. A summary of these changes can be found in Appendix E. In addition to these changes, Energy Safety made non-substantive changes to correct typographical errors in the text.

If Liberty seeks to change its approved 2025 mitigation initiative targets, it must submit a change order request within 10 business days of Energy Safety's issuance of this Decision for Liberty's 2025 WMP Update. See Section 12 of Energy Safety's 2023-2025 WMP Process and Evaluation Guidelines² for further instructions and criteria for submitting a change order request.

Sincerely,

<u>/s/ Tony Marino</u>

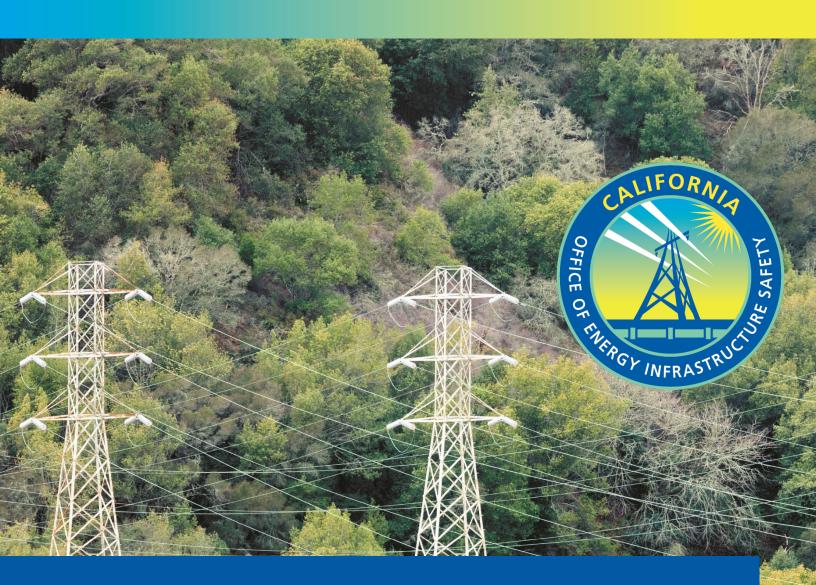
Tony Marino Deputy Director | Electrical Infrastructure Directorate Office of Energy Infrastructure Safety

¹ Draft Decision for Liberty 2025 WMP Update

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57863&shareable=true, accessed April 1, 2025).

² Energy Safety's 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Revised) (adopted Jan. 2024, published Feb. 2024), Section 12 "Change Order Requests," pp. 22-28

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56255&shareable=true, accessed May 6, 2024).



OFFICE OF ENERGY INFRASTRUCTURE SAFETY

DECISION LIBERTY UTILITIES, LLC 2025 WILDFIRE MITIGATION PLAN UPDATE

April 2025

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1. Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) works to ensure electrical corporations take effective actions to reduce utility-related wildfire risk. This Decision approves Liberty Utilities, LLC's (Liberty's) 2025 Wildfire Mitigation Plan (WMP) Update, resubmitted September 3, 2024, pursuant to a Rejection and Order to Resubmit.

In rendering this Decision, Energy Safety incorporated comments from stakeholders and members of the public.

Liberty provided a total of 67 reportable updates in its 2025 WMP Update. These include five updates to risk models; nine changes to approved targets; 20 changes to projected expenditures; four objective completion date changes; nine quarterly inspection targets for 2025; one new program; and 19 reports of progress on areas for continued improvement.

The above-listed updates encompass six initiative categories. These include risk assessment and methodology; wildfire mitigation strategy development; grid design, operations, and maintenance; vegetation management and inspections; situational awareness and forecasting; and emergency preparedness.

Energy Safety evaluated Liberty's 2025 WMP Update and finds several strengths. For example, Liberty is making several improvements to its risk model and methodology. Specifically, Liberty is in the process of developing a new risk-based decision platform, as well as a composite risk score which consists of both wildfire risk and asset failure risk. Additionally, Liberty implemented a new component within its vegetation management quality assurance/quality control program which supports risk reduction by providing statistically valid feedback to Liberty's vegetation management contractors.

Liberty also has areas of its WMP that can be further developed and improved. Overall, Liberty has 11 areas for continued improvement for which it is required to demonstrate progress in its 2026-2028 Base WMP submittal. These include demonstrating effectiveness of Sensitive Relay Profiles compared to traditional hardening; providing milestone timelines and criteria for inspection pilot programs including LiDAR, infrared, and drone inspections; and performing cost-benefit analyses for various hardening methods for Liberty's Stateline Resiliency Project.

2. Introduction and Background

Liberty Utilities, LLC (Liberty), submitted its 2023-2025 Wildfire Mitigation Plan (2023-2025 Base WMP) in 2023.¹ Energy Safety approved Liberty's 2023-2025 Base WMP on February 5, 2024. On July 8, 2024, Liberty submitted its 2025 Wildfire Mitigation Plan Update (2025 WMP Update). On September 3, 2024, Liberty submitted its revised 2025 WMP Update² to its 2023-2025 Base WMP in accordance with Energy Safety's 2025 Wildfire Mitigation Plan Update Guidelines (2025 WMP Update Guidelines)³ and Energy Safety's 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (WMP Process Guidelines).⁴

On August 19, 2024, Energy Safety issued a Rejection and Order to Resubmit⁵ for Liberty's 2025 WMP Update and received the resubmitted 2025 WMP Update⁶ on September 3, 2024.

Pursuant to Public Utilities Code section 8386.3(a), this Decision approves Liberty's 2025 WMP Update to its 2023-2025 Base WMP.

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

¹ In accordance with <u>Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines (December 6, 2022)</u> (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed April 9, 2024). ² In response to Energy Safety's Rejection and Order to Resubmit for Liberty Utilities, LLC, 2025 Wildfire

Mitigation Plan Update, Liberty submitted Liberty 2025 WMP Update Revision 1 (redlined); Liberty 2025 WMP Update Revision 1 (clean); Liberty 2023-2025 Base WMP Revision 6 (redlined); and Liberty 2023-2025 Base WMP Revision 6 (clean)

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57296&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57297&shareable=true, accessed Oct. 16, 2024).

³ Energy Safety's 2025 Wildfire Mitigation Plan Update Guidelines (adopted Jan. 2024, published Feb. 2024) (hereafter 2025 WMP Update Guidelines)

⁴ Energy Safety's 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Revised) (adopted Jan. 2024, published Feb. 2024) (hereafter Revised WMP Process Guidelines)

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56255&shareable=true, accessed May 6, 2024).

⁵ <u>Rejection and Order to Resubmit for Liberty Utilities, LLC, 2025 Wildfire Mitigation Plan Update</u> (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57213&shareable=true, accessed October 16, 2024).

⁶ <u>Liberty 2025 WMP Update Revision 1 (redlined); Liberty 2025 WMP Update Revision 1 (clean); Liberty 2023-2025</u> <u>Base WMP Revision 6 (redlined); and Liberty 2023-2025 Base WMP Revision 6 (clean)</u>

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57296&shareable=true, accessed Oct. 16, 2024); (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57297&shareable=true, accessed Oct. 16, 2024).

2.1 Consultation with California Department of Forestry and Fire Protection

The Office of the State Fire Marshal is part of the California Department of Forestry and Fire Protection (CAL FIRE). Public Utilities Code section 8386.3(a) requires Energy Safety to consult with the Office of the State Fire Marshal in reviewing electrical corporations' WMPs and WMP Updates. The Office of the State Fire Marshal provided consultation and input into Energy Safety's evaluation, but this Decision is an action of Energy Safety and not the Office of the State Fire Marshal or CAL FIRE.

2.2 Stakeholder Comments

Energy Safety invited stakeholders and members of the public to provide comments on the electrical corporations' 2025 WMP Updates and Revision Notices. Opening comments on Liberty's 2025 WMP Update were due on August 12, 2024, and reply comments were due on August 22, 2024.

Energy Safety also accepted stakeholder comments on Liberty's resubmitted 2025 WMP Update. Opening comments were due on the resubmitted 2025 WMP Update on September 13, 2024, and reply comments were due September 20, 2024.

See Appendix D for lists of stakeholders and members of the public who submitted comments.

3. Energy Safety 2025 WMP Update Evaluation Process

Energy Safety issued the following guidelines for electrical corporations' 2025 WMP Updates:

- **2025 Wildfire Mitigation Plan Update Guidelines (January 2024)** (hereafter 2025 WMP Update Guidelines), which sets forth reportable updates and general instructions for each electrical corporation's 2025 WMP Update.
- 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Revised January 2024) (hereafter WMP Process Guidelines), which outlines the process for Energy Safety's evaluation of WMPs, details the public participation process, and establishes submission requirements for the electrical corporations.
- 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Revised January 2024) and 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (Revised February 2024) (hereafter Maturity Model and Maturity Survey), which together provide a quantitative method for assessing electrical corporation wildfire risk mitigation capabilities and examining how electrical corporations continue to improve in key areas of their WMPs.^{7, 8}

3.1 Reportable Updates

Energy Safety's 2025 WMP Update Guidelines delineate the following five categories of updates that the electrical corporations are required to report:⁹

- 1. Updates to risk models
- 2. Updates to approved targets, objectives, and projected expenditures¹⁰
- 3. Quarterly inspection targets for 2025 for vegetation management and asset inspections

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

⁹ <u>2025 WMP Update Guidelines</u>, "Reportable Updates," p. 3

⁷ Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (revised and adopted Jan. 2024, published Feb. 2024) (hereafter Maturity Model)

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

⁸ <u>Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (adopted Jan. 2024, revised and published Feb. 2024) (hereafter Maturity Survey)</u>

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

¹⁰ Energy Safety's WMP evaluation and decision on a WMP is not an approval of, or agreement with, costs listed in the WMP.

- 4. New or discontinued programs
- 5. Progress on areas for continued improvement

The 2025 WMP Update Guidelines direct electrical corporations that they may not include any updates in their 2025 WMP Update that do not fall under one of these categories.¹¹

The 2025 WMP Update Guidelines further direct that if an electrical corporation does not have any updates that fall within any of the above categories, it must affirm that it has no reportable updates for 2025 and that the information provided in its 2023-2025 Base WMP is current and accurate.¹²

3.2 Maturity Model and Survey

Energy Safety used the Maturity Model¹³ and the electrical corporations' 2023 and 2024 responses to the Maturity Survey¹⁴ to assess the maturity of each electrical corporation's wildfire risk mitigation program.¹⁵

The Maturity Model consists of 37 individual capabilities describing the ability of electrical corporations to mitigate wildfire risk and Public Safety Power Shutoff (PSPS) risk within their service territory.¹⁶ The 37 capabilities are aggregated into 7 categories.¹⁷ Maturity levels range from 0 (below minimum requirements) to 4 (beyond best practice). For each electrical corporation, Energy Safety calculated maturity levels for each capability, each category, five

¹² 2025 WMP Update Guidelines, p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

Revised Final 2023 Electrical Corporation Wildfire Mitigation Maturity Survey (April 24, 2023)

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53708&shareable=true, accessed May 6, 2024)

¹⁶ <u>Maturity Model</u>, Section 1, "Introduction," p. 1

¹¹ 2025 WMP Update Guidelines, p. 3

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

¹³ <u>Maturity Model</u> (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

¹⁴ <u>Maturity Survey</u> (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

¹⁵ Energy Safety revised the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model and Maturity Survey in January 2024. The revisions did not result in any changes to Maturity Survey questions, therefore the responses from 2024 are directly comparable to the responses from 2023. See the Maturity Survey issued by Energy Safety to the electrical corporations in 2023:

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

¹⁷ Maturity Model, Section 3.1, "Capabilities and Categories," pp. 7-8

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

cross-category themes, and the overall WMP, based on the electrical corporation's answers to Maturity Survey questions and the scoring system described in the Maturity Model.¹⁸

Appendix F summarizes Liberty's 2024 Maturity Survey results and changes in Liberty's maturity compared to its 2023 Maturity Survey results.

3.3 Areas for Continued Improvement

Energy Safety's Decisions on the 2023-2025 Base WMPs focused on each electrical corporation's strategies for reducing the risk of utility-related ignitions. In those Decisions, Energy Safety identified areas where the electrical corporation must continue to improve its wildfire mitigation capabilities in future plans. For some areas, the electrical corporation was required to report its progress in its 2025 WMP Update. Energy Safety discusses the results of its evaluation of the electrical corporation's progress in each of those areas in Sections 5 through 9 of this Decision.

3.4 Errata

Liberty submitted a corrected version of its revised 2023-2025 Base WMP incorporating nonsubstantive self-identified errata on August 9, 2024.¹⁹

Energy Safety considered Liberty's corrected version of its revised 2023-2025 Base WMP in its evaluation.

3.5 Revision Notice

Public Utilities Code section 8386.3(a) states, "Before approval, [Energy Safety] may require modifications of the [WMP]." If Energy Safety requires modifications to a WMP, it does so by issuing a Revision Notice to an electrical corporation.²⁰

Energy Safety did not issue Liberty a Revision Notice for its 2025 WMP Update.

¹⁸ <u>Maturity Model</u>, Section 4, "Maturity Level Determination," pp. 39-42 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

¹⁹ <u>Liberty Non-Substantive Errata to 2023-2025 Base WMP R4 - Cover Letter</u> and <u>Liberty 2023-2025 Base WMP (R5)</u> (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57171&shareable=true, accessed October 16, 2024), (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57172&shareable=true, accessed October 16, 2024).

²⁰ <u>Revised WMP Process Guidelines</u>, Section 4.4, "Revision Notice," pp. 6-8

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56255&shareable=true, accessed May 6, 2024).

3.6 Decision

In its evaluation of an electrical corporation's 2025 WMP Update, Energy Safety considers the information provided by the electrical corporation regarding its reportable updates and the associated justifications. Energy Safety's approval of a 2025 WMP Update constitutes collective approval of the reported items in the electrical corporation's 2025 WMP Update. The approval therefore authorizes the updates to the electrical corporation's 2023-2025 Base WMP, as shown in the "Redlined 2023-2025 Base WMP" and "Clean Updated 2023-2025 Base WMP" provided as part of the electrical corporation's 2025 WMP Update submission.²¹

Energy Safety recognizes that planning for wildfire risk is a maturing capability and expects that electrical corporations will continue to improve year over year. Therefore, Energy Safety's Decision includes areas for continued improvement, identifying areas where the electrical corporation must continue to mature in its capabilities.

Liberty's reported updates reduce risk, increase efficiencies, improve its risk modeling capabilities, and improve its decision-making framework. Therefore, Energy Safety approves Liberty's 2025 WMP Update.

Energy Safety invited stakeholders, including members of the public, to provide comments on Energy Safety's draft Decision for Liberty's 2025 WMP Update (published for comment on January 27, 2025). One stakeholder provided comments, as noted in Appendix E. Energy Safety considered all comments prior to issuing its Decision.

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

²¹ 2025 WMP Update Guidelines, pp. 3-4

4. Liberty 2025 WMP Update

In accordance with the 2025 WMP Update Guidelines,²² Liberty provided the following for its 2025 WMP Update submission:

- 1. **2025 WMP Update**: A standalone 2025 WMP Update document that describes Liberty's reportable updates, or confirmation of no updates to the approved 2023-2025 Base WMP.
- 2. **Redlined 2023-2025 Base WMP**: A redlined version of Liberty's 2023-2025 Base WMP showing reportable updates to the approved 2023-2025 Base WMP.
- 3. **Clean Updated 2023-2025 Base WMP**: A clean, updated copy of Liberty's 2023-2025 Base WMP (i.e., without any updates marked in redline) incorporating the reportable updates from Liberty's 2025 WMP Update as demonstrated in the redlined version.

Specifically, in response to the five categories of reportable updates of the 2025 WMP Update Guidelines, Liberty provided the required information for each category. Energy Safety discusses each reportable update under the relevant mitigation initiative in Sections 5 through 9 of this Decision.

²² 2025 WMP Update Guidelines, pp. 3-4

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

5. Overview of the Service Territory

In its 2025 WMP Update, Liberty did not report any updates to the overview of the service territory section of its 2023-2025 Base WMP.

6. Risk Methodology and Assessment

In its 2025 WMP Update, Liberty reported significant risk model updates, as discussed below.²³

6.1 Risk Model Updates

Liberty reported the following significant risk model updates:

- Working with two third-party vendors to develop a new risk-based decision-making platform and risk assessment tools.²⁴
- Developing a composite risk score comprised of wildfire risk and asset failure risk. In order to calculate these risks, Liberty has introduced models to determine fire probability, fire consequence, asset failure probability, and asset failure consequence.²⁵
- Improving its vegetation and asset data management systems through improved data collection processes and internal data storage.²⁶
- Changing and updating its data sources for topography, vegetation-based fuels, climatology, demographics, historic fire weather days, as well as live and dead fuel moisture sampling.²⁷

²³ 2025 WMP Update Guidelines, Section 1, "Updates to Risk Models," p. 6

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254& shareable=true, accessed May 6, 2024).

²⁴ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 11

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

²⁵ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 10

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

²⁶ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), p. 10

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

²⁷ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 6

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

Energy Safety finds that these updates meet the reportable update criteria set forth in the 2025 WMP Update Guidelines.²⁸

6.1.1 Energy Safety Evaluation

As a result of these significant risk model updates, Liberty's wildfire mitigation prioritization has changed. Liberty provided a list of its new top 20 riskiest circuits based on the composite risk score, which also includes a breakout of the wildfire risk and asset failure risk scores.²⁹ Prior to its 2025 WMP Update, Liberty provided the top 20 riskiest circuits based on overall utility risk score, which comprised wildfire risk and PSPS risk.³⁰ Out of the original top 20 riskiest circuits, 13 remain within the new top 20. The ranking of these 13 circuits that remain in the new top 20 also changed. For example, based on the new model, the previous first riskiest circuit is now the second riskiest circuit, while the previous fourteenth riskiest circuit is now ranked as the first riskiest circuit.

In response to these risk model updates, Energy Safety finds Liberty's new risk models and decision-making framework will likely improve Liberty's understanding of its risk across its system. At the time of its 2025 WMP Update submission, Liberty reported that it was still transitioning to various aspects of its new models. Liberty stated that it plans to operationalize the new risk assessment tools by the end of 2024.³¹ As discussed in the areas of continued improvement in Sections 6.2.2.1and 6.2.3.1, Liberty must continue to report on its progress improving these models, including details on additional risk factors such as PSPS risk.

6.1.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in the risk methodology and assessment section. In its 2026-2028 Base WMP, Liberty must report its

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

²⁸ 2025 WMP Update Guidelines, "Reportable Updates," p. 3

²⁹ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), Table 1-1: Liberty Top-Risk Circuits (from 2025 WMP Update Submission), p. 8 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

³⁰ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), Table 1-2: Liberty Top-Risk Circuits (from 2023 WMP submission), pp. 8-9 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

³¹ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 33

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

progress on any existing areas for continued improvement specified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP.³²

6.2 2023 Areas for Continued Improvement

Liberty reported its progress on three areas for continued improvement in the risk methodology and assessment section in its 2025 WMP Update.

6.2.1 LU-23B-01:³³ Cross-Utility Collaboration on Risk Model Development

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty and other investor-owned utilities (IOUs)³⁴ must continue participating in the Energy Safety-led risk modeling working group, as established by the 2021 WMP Action Statements.³⁵

In response, Liberty discussed its continued participation in the risk modeling working group meetings and noted that it has found participation in the risk model working group to be beneficial by providing additional perspectives from other experts on risk modeling.³⁶

6.2.1.1 Energy Safety Evaluation

By continuing to attend Energy Safety's risk modeling working group and discussing its participation, Liberty sufficiently responded to this area for continued improvement; no

³³ Energy Safety is instituting a new naming convention for its areas for continued improvement. Moving forward, areas for continued improvement identified in Energy Safety's evaluation of Base WMPs will be designated with a "B" and areas for continued improvement identified in Energy Safety's evaluation of WMP Updates will be designated with a "U." Accordingly, areas for continued improvement that were identified in Energy Safety's evaluation of 2023-2025 Base WMPs are retitled "23B" and new areas for continued improvement identified in Energy Safety's evaluation of 2025 Update WMPs herein are titled "25U."

³⁴ The IOUs include Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E), Bear Valley Electric Service (BVES), Liberty Utilities (Liberty), and PacifiCorp.

³⁵ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 73

³² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 73-74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

³⁶ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 30

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

6.2.2 LU-23B-02: PSPS and Wildfire Risk Trade-Off Transparency

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not provide adequate transparency on its analysis of trade-offs between PSPS risk and wildfire risk.³⁷ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to provide information on how it prioritizes PSPS risk compared to wildfire risk, and to provide the ranking of its planned mitigation initiatives compared to the ranking of mitigation initiatives based on risk buy-down estimates.³⁸

In response, Liberty stated that it is still in the process of developing its PSPS risk model, and therefore is not able to compare PSPS risk and wildfire risk by calculating trade-offs.³⁹ This included providing rankings in comparison to risk buy-down estimates. While still in the process of developing estimates for PSPS risk, Liberty stated that it currently prioritizes mitigations based on wildfire risk and asset failure risk, and considers PSPS risk to be low since it had not implemented any PSPS events at the time of its 2025 WMP Update submission.⁴⁰

6.2.2.1 Energy Safety Evaluation

Since its 2023-2025 Base WMP, Liberty has undertaken major risk model improvements to better quantify wildfire risk along its system, and did not prioritize the development of its PSPS risk model given the likelihood that PSPS risk is low compared to wildfire risk. At the time of the 2025 WMP filing, Liberty had not historically initiated a PSPS event. Given Liberty's historically low amount of PSPS risk, Liberty adequately justified its prioritization of modeling asset risk before modeling PSPS risk. However, Liberty does have PSPS risk, as Liberty had

³⁷ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 73

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

³⁸ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 73

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

³⁹ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), pp. 30-31

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁴⁰ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), pp. 30-31

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

multiple PSPS events in November 2024.⁴¹ Given that Liberty is in the process of developing and implementing its PSPS risk model, Liberty must provide additional information on how it plans to quantify and integrate PSPS risk into its overall risk assessment and into its prioritization of mitigation activities.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

6.2.3 LU-23B-03: Collaboration Between Vendor and Utility Risk Teams

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not properly demonstrate how its internal team and risk model vendor share risk modeling and mitigation related duties.⁴² As a result, Energy Safety required Liberty to provide more information on how Liberty differentiates activities conducted by internal staff compared to vendor staff, including supporting documentation to demonstrate the collaboration process.⁴³ Additionally, Energy Safety required Liberty to identify activities that require vendor discretion and whether final approval from Liberty's risk team is required, including decisions such as mitigation selection.⁴⁴ Energy Safety also required Liberty to indicate data sources where a description of data is required, including whether data was internally or

⁴¹ As of January 2, 2024, Liberty has submitted five PSPS post-event reports to the CPUC in November 2024, provided in the <u>CPUC's Utility PSPS Reports</u>, (<u>Utility Company PSPS Reports</u>: <u>Post-Event</u>, <u>Post-Season and Pre-Season</u>, accessed January 2, 2024).

⁴² Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁴³ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁴⁴ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

vendor generated, or an explanation as to why it cannot indicate any data sources, if applicable.⁴⁵

In response, Liberty stated that it collaborates with vendors on its overall risk models, including providing a platform to the vendors to run simulations and analyze different scenarios.⁴⁶ Liberty also stated that its employees regularly meet with its risk model vendors to discuss and understand technical aspects of models.⁴⁷ During these meetings Liberty employees provide input and approve methodology for risk models.⁴⁸ Additionally, Liberty provided a preliminary diagram demonstrating where Liberty subject matter experts provide input versus where risk model vendors provide input within its risk-based decision framework. For instance, the diagram depicted that vendors provide research and risk modeling relating to fire science, while Liberty subject matter experts provide research on utility assets, analysis on risk portfolios and mitigation strategies, and implementation of risk reduction monitoring.⁴⁹ Lastly, Liberty provided a list of its data sources used in its updated 2023-2025 Base WMP, including details on data sources.⁵⁰

6.2.3.1 Energy Safety Evaluation

As required, Liberty provided a description of the various ways its internal staff engages with its risk model vendors. Additionally, Liberty discussed how its internal staff ultimately refine and approve models and use models as tools to internally determine prioritization and select mitigation activities. Liberty also stated that it uses its internal data, such as asset data and vegetation management data, to inform models and determine associated risks. Liberty's

⁴⁵ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁴⁶ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 31

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁴⁷ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), p. 31

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁴⁸ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), p. 31

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁴⁹ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), Figure 5-1: Liberty High Level Risk-Based Decision-Making Framework Process, p. 32 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁵⁰ Liberty 2023-2025 Base WMP (R6) (redlined) (Sept. 3, 2024), p. 125

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57296&shareable=true, accessed October 16, 2024).

response demonstrated that Liberty is actively engaged in tuning risk models to its known territory and needs, is not relying disproportionately on its vendors to perform its risk modeling, and is ultimately deciding how to execute its plan based on risk model outputs.

With that, Liberty sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

7. Wildfire Mitigation Strategy Development

In its 2025 WMP Update, Liberty provided two total updates related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP. The updates Liberty provided related to this section included reporting required progress on two areas for continued improvement.

7.1 2023 Areas for Continued Improvement

Liberty reported its progress on two areas for continued improvement in the wildfire mitigation strategy development section in its 2025 WMP Update.

7.1.1 LU-23B-04: Vendor Fire Risk Model Implementation Milestones and Dates

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not provide a schedule for its transition to a new risk modeling platform, nor did it transparently explain how this new risk model may significantly change Liberty's approach to identifying, evaluating, and prioritizing risks.⁵¹ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to provide a description of how it is using the vendor's risk modeling software to improve its risk analysis for operations and planning, including a plan with milestones and dates for achieving those improvements.⁵²

In response, Liberty provided a description of the risk models and improvements it is in the process of implementing, including expected milestones and dates.⁵³ Many of these risk modeling improvements are described in Section 6.1 above. Liberty included a timeline showing various steps in its risk modeling plan at a high level, including steps it is taking to improve data analysis, storage, and collection. The timeline spans from 2024 to beyond 2025

⁵¹ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), pp. 27-28 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁵² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 74

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁵³ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), pp. 34-35

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

and shows which steps will be completed during which quarters of the year.⁵⁴ Examples of these steps include operationalizing various models by Q3 2024, redesigning its vegetation management system by 2025, improving data collection by Q3 2024, and adding additional asset types by Q2 2024.⁵⁵

7.1.1.1 Energy Safety Evaluation

While Liberty provided a high-level summary of its risk modeling updates, it needs to provide a more detailed breakdown of the steps it plans to implement and more specific target completion dates for each of these steps to better report on the progress and impact. This is particularly important given that Liberty is planning on implementing many of its new modeling capabilities by the end of 2024.⁵⁶ Liberty must be able to report its progress on implementing its risk modeling platform and the impact the new capabilities have on its risk modeling and mitigation selection prioritization. Liberty must be able to explain its selection of initiative activities and the associated impacts these activities will have on its risk evaluation process.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

⁵⁴ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), pp. 34-35

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁵⁵ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), Figure 5-2: Timeline of Liberty's Risk Modeling Plan, p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁵⁶ <u>Liberty 2025 WMP Update (R1)</u> (Sept. 3, 2024), Figure 5-2: Timeline of Liberty's Risk Modeling Plan, p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

7.1.2 LU-23B-05: Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not make substantive efforts to collaborate with other IOUs⁵⁷ in the areas of climate change forecasts in consequence modeling, community vulnerability in consequence modeling, and utility vegetation management for wildfire safety.⁵⁸

Accordingly, Energy Safety required Liberty to participate in all Energy Safety-organized activities related to best practices for:⁵⁹

- Inclusion of climate change forecasts in consequence modeling.
- Inclusion of community vulnerability in consequence modeling.
- Utility vegetation management for wildfire safety.

Energy Safety also required Liberty to collaborate with the other IOUs on the abovementioned best practices.⁶⁰ Energy Safety required Liberty to provide a status update on any cross-utility collaboration on the topics listed above, including a list of any resulting updates to its WMP since its 2023-2025 Base WMP.⁶¹

In its 2025 WMP Update, Liberty stated that it continued to participate in Energy Safetysponsored scoping meetings and other relevant workshops as required, such as the Energy

⁵⁷ The IOUs include Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E), Bear Valley Electric Service (BVES), Liberty Utilities (Liberty), and PacifiCorp.

⁵⁸ Energy Safefty Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), p. 29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 14, 2024).

⁵⁹ Energy Safefty Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), p. 75 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 14, 2024).

⁶⁰ Energy Safefty Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), p. 75 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 14, 2024).

⁶¹ Energy Safefty Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), p. 75.

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 14, 2024).

Safety-led risk modeling working group meetings.⁶² Liberty also listed participation in crossutility best practice sharing through forums such as the Utility Arborist Association, the California Utility Forecasters Meeting, and the Western Utilities Weather Forecast Discussion.⁶³ Liberty stated that at the time of its 2025 WMP Update submission, it had no additional instances of collaboration with the other IOUs on these topics in 2024.⁶⁴

7.1.2.1 Energy Safety Evaluation

The 2023 area for continued improvement directed all the IOUs to collaborate. The IOUs include SDG&E, PG&E, and SCE, but also include BVES, Liberty, and PacifiCorp. While Liberty participated in the forums and Energy Safety-organized activities and listed above, it should additionally document and report any WMP-related collaboration with the other California IOUs. Accordingly, in its 2026-2028 Base WMP, Liberty must document and report on its WMP-related collaboration efforts with the five other California IOUs where relevant and appropriate to each IOU's interests.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

7.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP.

⁶³ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 36

⁶² Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 36

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

⁶⁴ Liberty 2025 WMP Update (R1) (Sept. 3, 2024), p. 36

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed October 16, 2024).

7.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty did not report any updates to approved targets, objectives, or projected expenditures related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP.

8. Wildfire Mitigation Initiatives

This section provides Energy Safety's evaluation of Liberty's reportable updates related to the following wildfire mitigation initiatives:

- Grid design, operations, and maintenance, including grid design and system hardening, asset inspections, equipment maintenance and repair, and grid operations and procedures
- Vegetation management and inspections
- Situational awareness and forecasting
- Emergency preparedness
- Community outreach and engagement

Energy Safety discusses its evaluation of Liberty's reportable updates related to PSPS in Section 9. Energy Safety includes discussion of any reportable updates affecting Liberty's process for continuous improvement in Section 10.

8.1 Grid Design, Operations, and Maintenance

In its 2025 WMP Update, Liberty provided 32 total updates related to the grid design, operations, and maintenance section of its 2023-2025 Base WMP. The updates Liberty provided related to this section included reporting required progress on 11 areas for continued improvement and reporting updates to seven approved targets, one objective, and 13 projected expenditures.

8.1.1 Grid Design and System Hardening

8.1.1.1 2023 Areas for Continued Improvement

Liberty reported its progress on two areas for continued improvement in the grid design and system hardening section in its 2025 WMP Update.

LU-23B-06. Effectiveness of Sensitive Relay Profile (SRP) and Traditional Hardening

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not adequately justify its plan to increase SRP, increase traditional hardening coverage, and decrease the rate of covered conductor installation.⁶⁵ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to provide its ignition reduction calculations for covered conductor compared to SRP, traditional hardening, and SRP in combination with traditional hardening.⁶⁶ The calculations had to account for ignition risk drivers, deployment time and resources, performance comparison in forested versus non-forested areas, and risk model output of riskiest areas.⁶⁷ Energy Safety also required Liberty to adjust its covered conductor targets based on the analysis provided.⁶⁸

In its response, Liberty stated that it is continuing the installation of covered conductor as part of its WMP and clarified that it is implementing SRP as an expedited mitigation measure alongside covered conductor, not as an alternative.⁶⁹ Liberty reported delays in permitting for covered conductor projects and stated that it is using SRP to reduce risk while it is in the process of planning and permitting covered conductor projects.⁷⁰ Liberty noted that due to its limited history of utility-caused ignitions, it used reliability data as a proxy for ignition reduction effectiveness.⁷¹ Liberty provided a plot of System Average Interruption Frequency

⁶⁷ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 75

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁶⁸ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76

⁶⁹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 34

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷⁰ Liberty 2025 WMP Update (R1) (clean version, September 2024), pp. 34-35

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷¹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 35

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁶⁵ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 75

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁶⁶ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 75

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

Index (SAIFI) and System Average Interruption Duration Index (SAIDI) on ten circuits before and after traditional and covered conductor hardening.

Liberty stated that it had not implemented SRP in its system or incorporated SRP into its risk model for ignition reduction calculations. Liberty stated it relied on data from other electrical corporations, particularly SDG&E, which has used SRP for over a decade without experiencing ignitions downstream of SRP-enabled devices.⁷² Liberty provided a table identifying the cost, implementation time, resource needs, and effectiveness of SRP, traditional hardening, and covered conductor and in it identified that the effectiveness of each was "high."

Liberty did not provide the required detailed calculations of ignition reduction effectiveness for SRP, covered conductor, and traditional hardening. Further, Liberty did not report any adjustments to covered conductor targets based on the required analysis.

Energy Safety Evaluation

The plot of SAIFI and SAIDI Liberty provided to demonstrate that reliability increases for traditional hardening and covered conductor deployment does not specify which initiative activity was implemented, when the initiative activity was implemented, or which ignition risk drivers were present on the charted circuits. As a result, the plot is of limited use for evaluating effectiveness. The comparison of SRP, traditional hardening, and covered conductor provided by Liberty implies that Liberty considered SRP, traditional hardening, and covered conductor equivalently effective, while differing in cost per mile, time to implement, and resource needs. Liberty did not support this conclusion with any analysis or ignition reduction calculations for SRP, traditional hardening, covered conductor, or SRP in combination with traditional hardening. Energy Safety is not convinced that SRP, traditional hardening, and covered conductor are equally effective.

Liberty must continue to improve in this area and report how it has made additional progress in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

LU-23B-07. Further Design Considerations

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not project comparable maturity growth to its peers, in part due to Liberty not considering grid

⁷² Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 35

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

localization in its grid design.⁷³ Energy Safety required Liberty to provide a plan demonstrating how it would consider grid localization features and non-electrical corporation equipment as part of its grid design, design evaluation, and grid impact evaluations.⁷⁴

In its response, Liberty stated that it does consider both grid localization features and nonelectrical corporation equipment in its grid design, design evaluation, and grid impact evaluations.⁷⁵ Liberty explained that any perceived lack of maturity in these areas, as indicated by the 2023 WMP Maturity Survey, may have been due to a misunderstanding of the survey questions.⁷⁶ Liberty stated that upon further review, its subject matter experts would have revised the survey responses to reflect a higher level of maturity.⁷⁷

Liberty further stated that it considers grid localization features in establishing PSPS zones, implementing SRP, and improving its outage management system.⁷⁸ Regarding non-electrical corporation equipment, Liberty stated that it includes communication equipment in pole loading calculations according to current standards.⁷⁹

Energy Safety Evaluation

Energy Safety finds that Liberty's explanation of how it considers grid localization features and non-electrical corporation equipment in its grid evaluation sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

⁷⁵ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷⁶ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷⁸ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁷³ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁷⁴ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁷⁹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 37

8.1.1.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the grid design and system hardening section of its 2023-2025 Base WMP.

8.1.1.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided updates to approved targets, objectives, and projected expenditures related to the grid design and system hardening section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, Liberty provided updates to its targets and projected expenditures for the following initiatives: undergrounding of electric lines and/or equipment (WMP-GDOM-GH-02), traditional overhead hardening (WMP-GDOM-GH-05), and substation equipment replacement (WMP-GDOM-GH-12f).

Liberty increased its projected expenditures for tree attachment removal (WMP-GDOM-GH-12a) and open wire/grey wire (WMP-GDOM-GH-12e) from \$740,000 to \$1,102,000 and \$2,055,000 to \$3,000,000, respectively.⁸⁰ Liberty stated that both increases are due to changes in the labor market as well as increasing overhead and material costs.⁸¹

Liberty provided an update to its "Swedish neutral" pilot (WMP-GDOM-GH-06) objective completion date, stating that the pilot was delayed due to cost and resources.⁸²

Energy Safety Evaluation

Liberty's updates to its target and projected expenditure for undergrounding of electric lines and/or equipment (WMP-GDOM-GH-02) will reduce the number of circuit miles targeted for mitigation in 2025 from 1.3 to 0.4 while increasing the projected expenditures from \$7 million to \$9.1 million. Liberty's updates will reduce its scope of undergrounding in 2025 by 70 percent with a projected cost of \$22.75 million per mile.

Liberty stated the target reduction is due to its inability in 2023 to "find a civil contractor that would meet the budget for the Tahoe Vista Rule 20 project."⁸³ Liberty stated that projected expenditures increased due to uncertainties highlighted by contractors during the 2023

⁸¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 19-21

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁸² Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 14

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁸³ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 18

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁸⁰ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 19-21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

bidding process, including the presence of granite, managing tourism traffic, weather conditions, permitting, and environmental concerns.⁸⁴ Liberty's projected expenditure increase raises concerns about the cost-benefit ratio of undergrounding compared to alternative mitigation methods.

Liberty stated that the undergrounding planned for 2025 is associated with its Tahoe Vista Rule 20 Project, and Liberty is no longer targeting undergrounding associated with its Stateline Resiliency Project.⁸⁵ Both the Tahoe Vista and Stateline Resiliency projects are entirely in the HFTD Tier 2, but the composite risk score of the Stateline Resiliency Project circuits is 30% higher than the Tahoe Vista Project.⁸⁶ Liberty stated the Stateline Resiliency Project is planned for completion November 1, 2026.⁸⁷ Liberty plans to mitigate wildfire risk on the two circuits originally planned to be hardened in 2025 by the Stateline Resiliency Project through vegetation and asset patrol inspections. Liberty stated that detailed inspections will be performed on circuit STL2200, one of the two impacted circuits.⁸⁸

Liberty's provided target and projected expenditure change for traditional overhead hardening (WMP-GDOM-GH-05) will reduce the number of circuit miles it expects to harden in 2025 from 2.0 to 0 miles and reduce the projected expenditures from \$2.5 million to \$0. Liberty stated that it exceeded its 2023 target by 4.2 miles and will shift the resources to other grid hardening projects in 2025.⁸⁹ Energy Safety finds this target change consistent with the continued progress Liberty identified in its 2023-2025 Base WMP given that with the reduction, Liberty plans to harden 2.2 more miles from 2023 to 2025 than the total traditional overhead hardening targets approved in its 2023-2025 Base WMP.

Liberty's provided target and projected expenditure changes for substation equipment replacement (WMP-GDOM-GH-12f) will adjust the target from TBD to one substation in 2025 and the projected expenditure from TBD to \$608,000, demonstrating a clearer action plan to reduce risk.

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁸⁴ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 18

⁸⁵ Liberty 2023-2025 Base WMP (R6) (redlined) (Sept. 3, 2024), p. 204

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57296&shareable=true, accessed October 16, 2024).

⁸⁶ OEIS DR LU-005, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57528&shareable=true

⁸⁷ OEIS DR LU-006, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57542&shareable=true

⁸⁸ OEIS DR LU-006, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57542&shareable=true

⁸⁹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

In accordance with the 2025 WMP Update Guidelines,⁹⁰ Liberty appropriately reported projected expenditure increases of 49 and 46 percent for tree attachment removal (WMP-GDOM-GH-12a) and open wire/grey wire replacement (WMP-GDOM-GH-12e), respectively.

Liberty's objective change for its resonant grounding pilot (WMP-GDOM-GH-06) changes the completion date from December 31, 2025, to TBD. Liberty stated it changed this completion date to assess future cost and resource needs. Though Liberty's approved 2023-2025 Base WMP did not have targets associated with this objective, Energy Safety expects Liberty to provide updates regarding this technology, such as the outcomes of the cost and resource assessments and how it is considering resonant grounding during substation design, in its 2026-2028 Base WMP.

Areas for Continued Improvement

Liberty must continue to improve in the following areas and report its progress in its 2026-2028 Base WMP. Additionally, in its 2026-2028 Base WMP, Liberty must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP.⁹¹

LU-25U-01. Cost-Benefit Analysis for the Stateline Resiliency Project

Liberty's provided target, projected expenditure, and project changes related to its undergrounding program raise concerns about the cost-benefit ratio of undergrounding in Liberty's service territory. In its 2026-2028 Base WMP, Liberty must provide its undergrounding cost-benefit analysis evaluation and decision-making process, and costbenefit analysis calculations for undergrounding compared to alternate mitigations.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

8.1.2 Asset Inspections

8.1.2.1 2023 Areas for Continued Improvement

Liberty reported its progress on five areas for continued improvement in the asset inspections section in its 2025 WMP Update.

⁹⁰ 2025 WMP Update Guidelines, Section 2 "Changes to Approved Targets, Objectives, and Expenditures," pp. 13-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

⁹¹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 76-77

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

LU-23B-08. Halting Detailed Distribution Inspections

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not explain how it would manage its work order backlog after resuming detailed distribution inspections.⁹² Energy Safety required Liberty to provide an update on the effectiveness of its decision to halt detailed distribution inspections in 2023 by comparing the number of work orders closed each year from 2021 to 2023 to the number created.⁹³ Energy Safety also required Liberty to discuss how it would continue to reduce its backlog after resuming detailed distribution inspections, including a forecast of the number of work orders Liberty expects to open and close in 2024 and 2025. If Liberty expected to close 10 percent or more tags in either 2024 or 2025 than the average annual tags closed from 2020 to 2022, it was required to provide its reasoning.⁹⁴

In its 2025 WMP Update, Liberty stated that it elected to not halt detailed distribution inspections in 2023; it had considered halting detailed inspections to focus on reducing its work order backlog, but ultimately decided to continue detailed inspections in 2023. Liberty stated that it completed 181.4 miles of detailed inspections in 2023.⁹⁵

Liberty provided a graph of the number of work orders created and closed each year from 2021 to 2023, and projected work orders closed in 2024 and 2025. Liberty created 470 work orders in 2021; 2,752 work orders in 2022; and 588 work orders 2023. Liberty projected creating 1,190 and 1,118 work orders in 2024 and 2025, respectively.⁹⁶ Liberty closed 1,516 work orders in 2021; 1,440 in 2022; and 1,171 in 2023. Liberty projected closing 1,456 in both 2024 and 2025.⁹⁷

⁹³ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76-77

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁹⁴ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76-77

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁹⁵ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 40

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁹⁶ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 40

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁹⁷ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 41

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁹² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 76-77

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

Liberty stated that it expects to eliminate its work order backlog by the end of 2025⁹⁸ by closing six percent more work orders in 2024 and 2025 than the three-year average from 2021 to 2023.⁹⁹

Energy Safety Evaluation

Liberty closed an average of 1,376 work orders each year from 2021 to 2023, with the greatest number of closures being 1,516 in 2021. Liberty's projection of 1,456 work order closures in 2024 and 2025 is higher than the yearly average closures from 2021 to 2023 but is lower than the closures in 2021 and only one percent more than it closed in 2022.¹⁰⁰ Energy Safety finds this to be a feasible projection given that Liberty closed a comparable number of tags in 2021 and 2022.

Liberty created an average of 1,270 work orders from 2021 to 2023, with 72 percent of the total work orders created in 2022. Liberty's projection that it will create 1,190 work orders in 2024 and 1,118 work orders in 2025 is lower than the three-year average from 2021 to 2023 but is substantially higher than the number created in 2021 and 2023.¹⁰¹ Energy Safety finds this to be a feasible projection as Liberty created less tags in 2021 and 2023.

Given that Liberty did not halt detailed inspections in 2023 and projects to eliminate its work order backlog by the end of 2025, Energy Safety finds that Liberty sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

LU-23B-09. Covered Conductor Inspections and Maintenance

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty's inspection programs did not include checks specific to covered conductor.¹⁰² Energy Safety required Liberty to explain how its inspections would account for failure modes such as water

⁹⁹ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), p. 40

¹⁰⁰ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 41 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹⁰¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 41
(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁹⁸ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 41

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹⁰² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 77

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

intrusion, splice covers, and surface damage.¹⁰³ If Liberty determined changing its inspection programs was unnecessary, Energy Safety required Liberty to discuss how its current practices address covered conductor failure modes.¹⁰⁴

In its response, Liberty stated that its current maintenance and inspection activities address covered conductor failure modes.¹⁰⁵ Liberty provided its post installation checklist for spacer cable covered conductors and stated it is adding water intrusion, splice covers, surface damage/bulging, and bracket placement to its detailed inspection checklist for regularly performed maintenance.¹⁰⁶

Energy Safety Evaluation

While Liberty stated it is adding water intrusion, splice covers, surface damage/bulging, and bracket placement to its detailed inspection checklist, these criteria had not been added as of October 8, 2024.¹⁰⁷

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

LU-23B-10. Distribution Detailed Inspection Frequency

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty performed the minimum frequency of detailed inspections required by General Orders (GOs) 95 and

¹⁰⁷ Data Request <u>OEIS-P-WMP_2024-LU-004</u>, Question 1

¹⁰³ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 77

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁰⁴ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 77

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁰⁵ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 42 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹⁰⁶ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 42 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57482&shareable=true, accessed October 16, 2024).

165.¹⁰⁸ Energy Safety required Liberty to outline a plan to update its detailed inspections in higher risk areas, including: an analysis for determining the updated frequency of detailed inspections, prioritization of higher risk areas, updates to inspection checklists for equipment or configurations posing greater wildfire risk, and a plan to obtain any workforce required to complete more frequent inspections.¹⁰⁹ Energy Safety required that, if Liberty elected to not adjust its inspection frequences, Liberty must instead demonstrate its existing program adequately addresses risk through an analysis of Level 1 and critical issues found during distribution detailed inspections.¹¹⁰

Liberty stated that its existing detailed inspection program adequately addresses risk and increasing the inspection frequency would not significantly reduce risk.¹¹¹ Liberty stated that 0.04 percent of detailed inspections in the HFTD Tier 3 resulted in a Level 1 condition, 8.82 percent resulted in a Level 2 condition, and 91.14 percent of inspections resulted in low or no risk findings.¹¹²

Energy Safety Evaluation

Liberty's evaluation of its detailed inspections focused on findings in the HFTD Tier 3. In its 2025 WMP Update, Liberty discussed using new models and data sources to develop its circuit risk rankings.¹¹³ As a result of Liberty's risk model changes, eight circuits that were previously ranked outside of the top 20 riskiest circuits have moved into the top 20.¹¹⁴ Given the magnitude of changes to Liberty's risk models, it is likely that Liberty will be able to identify

¹⁰⁸ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 77-78

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁰⁹ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 77-78

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹¹⁰ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 77-78

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹¹¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 42-43 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹¹² Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 43 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹¹³ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), p. 8 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹¹⁴ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 8-9

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

high risk circuits outside of the HFTD Tier 3, and possibly outside of the HFTD Tier 2. By focusing on only the HFTD Tier 3, Liberty's analysis does not provide the most accurate evaluation of inspection find rates on its highest risk circuits.

Liberty stated that 8.86 percent of inspections in the HFTD Tier 3 resulted in Level 1 and 2 conditions. Both Level 1 and 2 conditions can pose a wildfire risk, with Level 1 conditions requiring immediate remediation regardless of location and Level 2 conditions requiring remediation within six months in the HFTD Tier 3.¹¹⁵ Liberty's current detailed inspection frequency can leave such issues unidentified for five years, even in its highest risk circuits.

Liberty's peer utilities have committed to increasing the frequency of detailed distribution inspections based on risk.¹¹⁶

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

LU-23B-11. QA/QC Sample Size and Pass Rates

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not establish quality assurance/quality control (QA/QC) targets for 2024 and 2025 and required Liberty to establish a pass rate target for 2025.¹¹⁷

In response Liberty stated it established a pass rate target of 90 percent for 2024 and 2025.¹¹⁸

Energy Safety Evaluation

By establishing a 2025 pass rate target of 90 percent, Liberty sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

¹¹⁸ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 44

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹¹⁵ General Order 95, Rule 18.

¹¹⁶ Bear Valley 2025 WMP Update, p. 18; PacifiCorp 2025 WMP Update, p. 35.

¹¹⁷ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 78

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

LU-23B-12. Additional Inspection Practices

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not provide sufficient information regarding its plans to incorporate LiDAR, infrared, and drone technologies into its inspection program.¹¹⁹ Energy Safety required Liberty to define the pilot scope for each technology and provide a milestone timeline for each technology.¹²⁰

Liberty stated that in 2023 it piloted drone infrared inspections on 0.1 mile of transmission assets, and that its assessment of this technology is ongoing.¹²¹ Liberty stated it will pilot one mile of drone inspections in 2024 to support outage management.¹²² Liberty stated it will perform a one-time LiDAR inspection in 2024 to map tree attachments and secondary wires.¹²³

Energy Safety Evaluation

Liberty provided the pilot program scope for infrared, drone, and LiDAR technologies, but did not provide timelines or milestones for these technologies. Liberty's 0.1-mile transmission infrared inspection pilot is unlikely to yield many findings, given the transmission infrared inspection find rates observed by PG&E and SCE from 2020 to 2023 are lower than one percent per mile inspected.¹²⁴

In its 2026-2028 Base WMP, Liberty must provide timelines and milestones for each pilot. This must include at a minimum the start and end dates for planning, execution, and analysis phases of each pilot. For each pilot, Liberty must provide and explain the project scope, define how it will determine success, and provide the criteria for deciding if the pilot should become a continuous program.

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²² Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹¹⁹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 78-79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹²⁰ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 78-79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹²¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 44

¹²³ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²⁴ PG&E data request OEIS_023-Q002; SCE data request OEISPWMP_2024SCE05_Q02.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

8.1.2.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the asset inspections section of its 2023-2025 Base WMP.

8.1.2.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided quarterly targets (end of Q2 and end of Q3) for six of its 2025 asset inspection programs, as required by the 2025 WMP Update Guidelines.¹²⁵

Additionally, Liberty provided updates to approved targets and projected expenditures related to the asset inspections section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, Liberty provided updates to the target and projected expenditure for discretionary inspections of distribution lines and equipment (WMP-GDOM-AI-04).¹²⁶

Additionally, Liberty updated its projected expenditures for the following initiatives: detailed inspection of distribution electric lines and equipment (WMP-GDOM-AI-01), intrusive pole inspections (WMP-GDOM-AI-02), patrol inspections of distribution electric lines and equipment (WMP-GDOM-AI-03), QA/QC of inspections (WMP-GDOM-AI-05), and substation inspections (WMP-GDOM-AI-06).¹²⁷

For its discretionary inspections of distribution lines and equipment initiative (WMP-GDOM-AI-04), Liberty updated its target from TBD to one mile and decreased its projected expenditure from \$1,000,000 to \$150,000.¹²⁸ Liberty stated it established a target of one mile of drone inspections as a continuation of its 2024 pilot program to support outage restoration

¹²⁶ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²⁷ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 16-17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²⁸ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 23-24

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²⁵ 2025 WMP Update Guidelines, Section 3, "Quarterly Inspection Targets for 2025," p. 15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed April 9, 2023)

in inaccessible areas.¹²⁹ Liberty stated that it included a portion of the cost of repairs from the full system survey conducted in 2020 in its original projected expenditure, and the 2025 projected expenditure reduction resulted from removing these costs from initiative WMP-GDOM-AI-04.

Liberty increased its projected expenditures for detailed distribution inspections (WMP-GDOM-AI-01), intrusive pole inspections (WMP-GDOM-AI-02), patrol inspections (WMP-GDOM-AI-03), QA/QC of inspections, and substation inspections (WMP-GDOM-AI-06). Liberty stated it improved its cost projection methodology for asset inspection initiatives by tracking and reviewing costs at a more granular level.¹³⁰ Liberty provided its projected hours and cost per hour to be spent on detailed distribution inspections,¹³¹ QA/QC of inspections,¹³² and substation inspections¹³³ in 2025.

Energy Safety Evaluation

Liberty established a target for discretionary inspections of distribution lines and equipment, demonstrating a clearer action plan to reduce risk. This initiative is expected to slightly reduce outage risk by supporting outage restoration.

In accordance with the 2025 WMP Update Guidelines,¹³⁴ Liberty appropriately reported projected expenditure increases of:

- 567 percent for distribution detailed inspections,
- 900 percent for patrol inspections,
- 200 percent for QA/QC of inspections, and
- 350 percent for substation inspections.¹³⁵

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

- ¹³⁰ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 22
- (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹³¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹³² Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹³³ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹²⁹ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), p. 23

 ¹³⁴ 2025 WMP Update Guidelines, Section 2 "Changes to Approved Targets, Objectives, and Expenditures," pp.
13-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

¹³⁵ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), pp. 16-17

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

Liberty also appropriately reported a projected expenditure reduction of 85 percent for discretionary inspections and a projected expenditure increase of \$175,000 for intrusive pole inspections.¹³⁶

While the percentage increases of these projected expenditures are substantial, Energy Safety finds that this is likely a reflection of the quality of the original projections and not necessarily an indication of extreme increases in the cost of inspections. Liberty originally projected that it would perform 260.9 miles of distribution detailed inspections for \$75,000. At Liberty's stated cost of \$90 per hour for distribution detailed inspections, Liberty's original projection implies one mile of detailed inspections could be completed in 3.2 hours. Given that Liberty has approximately 30 utility poles per overhead circuit mile,¹³⁷ the original estimate assumed that more than 10 distribution detailed inspections could be performed per hour. Liberty's updated projection of \$500,000 for 260.9 miles of inspections amount to 0.7 inspections per hour. Liberty's patrol inspection increased amounts to \$140 per mile patrolled, QA/QC to 300 hours of QA/QC work at \$100 per hour, and the substation inspection increased to 6 hours of inspections per substation at \$150 per hour.¹³⁸

Liberty's quarterly targets for its 2025 asset inspections are consistent with quarterly targets for 2023 and 2024 and meet the requirements of the 2025 WMP Update Guidelines.

Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in asset inspections. In its 2026-2028 Base WMP, Liberty must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP.¹³⁹

8.1.3 Equipment Maintenance and Repair

8.1.3.1 2023 Areas for Continued Improvement

Liberty reported its progress on two areas for continued improvement in the equipment maintenance and repair section in its 2025 WMP Update.

¹³⁶ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), pp. 16-17

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹³⁷ Liberty 2023-2025 Base WMP, Table 5-2.

¹³⁸ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 22-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹³⁹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 76-78

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

LU-23B-13. Lightning Arrester Replacement

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not provide a timeline or plan for replacing non-exempt lightning arrestors with CAL FIRE exempt arresters.¹⁴⁰ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to provide a timeline for the evaluation and pilot phase of exempt lightning arrestor installation and a plan to identify and track installed non-exempt arrestors.¹⁴¹

In its response, Liberty provided a timeline for the evaluation and pilot phase. Liberty stated that its evaluation and selection of the exempt lightning arresters are scheduled for the third quarter of 2024, to be followed by an engineering standards committee review and development of engineering/construction standards in the fourth quarter of 2024 through the first quarter of 2025.¹⁴² Liberty stated that procurement of the selected lightning arrester is planned for the first through second quarter of 2025, with installation and pilot implementation set for the third through fourth quarter of 2025.¹⁴³ Lastly, regarding the identification and tracking of non-exempt arresters, Liberty stated that it will use its asset tracking application to identify and track arresters in the field.¹⁴⁴

Energy Safety Evaluation

By providing a timeline for the evaluation and pilot phase of its lightning arrester replacement program and its plan to track currently installed, non-exempt arresters, Energy Safety finds that Liberty sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP. Given Liberty's stated plans to install pilot lightning arrestors in the third and fourth quarters of 2025, Energy Safety expects Liberty to set lightning arrestor replacement targets in its 2026-2028 Base WMP.

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁴⁰ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁴¹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁴² Liberty 2025 WMP Update (R1) (clean version, September 2024), pp. 42-43

¹⁴³ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 43

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁴⁴ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 43

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

LU-23B-14. Expulsion Fuse Replacement Targets

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty did not provide expulsion fuse replacement targets for 2024 and 2025.¹⁴⁵ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to provide an expulsion fuse replacement target for 2025.¹⁴⁶

In its response, Liberty stated it is targeting 500 expulsion fuse replacements in 2024 and 500 replacements in 2025.¹⁴⁷

Energy Safety Evaluation

By establishing an expulsion fuse replacement target of 500 fuses in 2025, consistent with PacifiCorp's target of 500¹⁴⁸ and SDG&E's target of 700,¹⁴⁹ Liberty sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

8.1.3.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the equipment maintenance and repair section of its 2023-2025 Base WMP.

8.1.3.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided an update to an approved target and projected expenditure related to the equipment maintenance and repair section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

¹⁴⁵ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁴⁶ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁴⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 43

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁴⁸ PacifiCorp 2023-2025 Base WMP, Table 8-3.

¹⁴⁹ SDG&E 2023-2025 Base WMP, Table 8-3.

Specifically, Liberty provided an update to its target and projected expenditure for expulsion fuse replacement (WMP-GDOM-GH-12b). Liberty updated its 2025 target TBD to 500 fuses and the projected expenditures from TBD to \$2,000,000.¹⁵⁰

Energy Safety Evaluation

Liberty's provided target changes for expulsion fuse replacements will likely reduce wildfire risk by replacing non-exempt expulsion fuses with CAL FIRE exempt alternatives. The design and operation of CAL FIRE exempt equipment is reviewed and tested by both professional third-party electrical engineers and the CAL FIRE Wildfire Planning and Engineering Division to ensure arcs, sparks, and hot particles are not created during operation.¹⁵¹ Liberty established this target in response to area for continued improvement LU-23B-14.

Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in equipment maintenance and repair. In its 2026-2028 Base WMP, Liberty must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP.¹⁵²

8.1.4 Grid Operations and Procedures

8.1.4.1 2023 Areas for Continued Improvement

Liberty reported its progress on two areas for continued improvement in the grid operations and procedures section in its 2025 WMP Update.

LU-23B-15. Reliability Impacts of SRP

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety required Liberty to provide detailed information on the reliability impacts of using SRP in its 2025 WMP Update.¹⁵³ Energy

¹⁵⁰ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), p. 20

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

¹⁵¹ 2021 Power Line Fire Prevention Field Guide, pp. 23-24 (https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdnendpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-andmitigation/prevention-field-guides/2021-power-line-fire-prevention-field-guide-ada-final_jf_20210125.pdf).

¹⁵² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 79

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁵³ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 79-80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

Safety required Liberty to submit a spreadsheet of its 2023 outages that occurred while SRP settings were enabled, including:

- Circuit and circuit segment impacted
- Cause of the outage, aligned with drivers in quarterly data report (QDR) Table 6
- Number of customers impacted
- Number of impacted customers in vulnerable populations, such as those with access and functional needs and Medical Baseline customers
- Outage duration
- Response time
- Customer minutes of interruption

Liberty also needed to provide calculations on SRP effectiveness, comparing how many ignitions Liberty avoided to how many outages SRP caused.¹⁵⁴ Finally, Energy Safety required Liberty to discuss anticipated changes in SRP implementation based on the above data, including coverage percentages across its territory and the SRP enablement thresholds.¹⁵⁵

In its response, Liberty reported that it did not implement the SRP program or enable fast-trip settings in 2023, resulting in no SRP-related outages during that year.¹⁵⁶ Consequently, Liberty did not provide the required calculations on SRP effectiveness or avoided ignitions. Liberty explained that it monitors SRP implementations by other IOUs in California and participates in joint discussions on wildfire mitigation technologies.¹⁵⁷ Liberty noted that it plans to implement SRP on 15 circuits in 2024 and seven circuits in 2025, covering 67.45 percent of its primary distribution conductor by the end of 2025.¹⁵⁸ SRP settings will be enabled during Red Flag Warnings or when the Severe Fire Danger Index reaches a "Severe"

¹⁵⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 44

¹⁵⁴ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 79-80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁵⁵ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 79-80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁵⁶ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 44

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁵⁸ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 44

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

rating, which is estimated to be about 10-12 days annually based on historical weather patterns.¹⁵⁹

Energy Safety Evaluation

Liberty did not provide 2023 outage information or effectiveness calculations for SRP implementation, as it did not enable SRP settings in 2023. However, Liberty outlined its 2024 SRP implementation plan, aligning with its 2024 Change Order to implement SRP settings in 15 circuits.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

LU-23B-16. Evaluation of High Impedance Fault Detection

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found Liberty did not provide adequate justification for not pursuing High Impedance Fault Detection (HIFD) technology.¹⁶⁰ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to submit a list detailing the types of faults that HIFD covers and does not cover, demonstrating the 70 percent effectiveness discussed in its 2023-2025 Base WMP (R4).¹⁶¹ Energy Safety also required Liberty to evaluate the effectiveness of HIFD in preventing ignitions, both on its own and in combination with SRP.¹⁶² Additionally, Energy Safety required Liberty to provide an analysis of the percentage of unnecessary faults caused by HIFD that incorporated both qualitative and quantitative results from the implementation along the Liberty Meyers 3400 circuit,

¹⁶⁰ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 80

¹⁵⁹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 44

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁶¹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁶² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

including a spreadsheet listing faults and their causes.¹⁶³ Energy Safety also required Liberty to discuss its coordination with other electrical corporations on HIFD implementation and observed effectiveness, and to adjust its HIFD implementation targets based on these findings.¹⁶⁴

In its response, Liberty provided the Fire Mitigation Protection System Study, conducted by the University of Nevada, Reno (UNR), in September 2022. Liberty reported that UNR's Schweitzer Engineering Laboratories relay detected 67.6 percent out of the 1,476 high impedance fault cases, with an average detection time of 50 seconds, rendering it less effective for wildfire mitigation due to the delay.¹⁶⁵ Liberty highlighted the study's conclusion that fast-tripping schemes and settings would significantly reduce fault clearing time, which in turn would lower wildfire risks in high-fire-risk areas.¹⁶⁶ The study recommended that Liberty cease pursuing HIFD and instead implement a fast-tripping scheme to mitigate wildfire risks.¹⁶⁷

Liberty stated that, as a result of the UNR study, it did not provide the detailed evaluation of HIFD's effectiveness in preventing ignitions, nor did it include a comprehensive analysis of unnecessary faults caused by HIFD.¹⁶⁸ Moreover, Liberty did not discuss its coordination with other electrical corporations on HIFD implementation, and did not provide any adjustments to implementation targets based on the required analysis.

Energy Safety Evaluation

Liberty's response aligns with the UNR's recommendation against HIFD and advocates for fast tripping as a more effective wildfire mitigation approach. However, Liberty did not provide the detailed evaluation of HIFD's effectiveness or the analysis of unnecessary faults

¹⁶⁵ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 45

¹⁶³ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁶⁴ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁶⁶ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 45 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁶⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 51

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁶⁸ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 45

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

as originally required by Energy Safety. If Liberty is pursuing a fast-tripping scheme, it must demonstrate how these settings will mitigate wildfire risk¹⁶⁹ given that it only plans to enable SRP settings 10-12 days per year.¹⁷⁰ In addition, Liberty must continue to find solutions to detect fallen conductors since SRP settings alone cannot mitigate this problem.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

8.1.4.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the grid operations and procedures section of its 2023-2025 Base WMP.

8.1.4.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided updates to approved targets and projected expenditures related to the grid operations and procedures section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, Liberty provided updates to its target and projected expenditure for equipment settings to reduce wildfire risk (WMP-GDOM-GO-01). Liberty increased its target from 0 circuits to 7 circuits with SRP and increased its projected expenditure from \$150,000 to \$500,000.¹⁷¹ Liberty stated that at the time of its 2023-2025 Base WMP submission, it did not have a 2025 target established for this initiative and the projected expenditures increased due to additional experience gained in developing its SRP program.¹⁷²

¹⁷⁰ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 46

¹⁶⁹ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 47

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁷¹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 15

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁷² Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 23

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

Energy Safety Evaluation

Energy Safety finds that Liberty's target and projected expenditure increase will allow Liberty to perform the required SRP effectiveness calculations and will likely result in a decrease in wildfire risk.

Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in grid operations and procedures. In its 2026-2028 Base WMP, Liberty must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP.¹⁷³

8.2 Vegetation Management and Inspections

In its 2025 WMP Update, Liberty provided 12 updates related to the vegetation management and inspections section of its 2023-2025 Base WMP. The updates Liberty provided related to this section included reporting quarterly targets for three 2025 vegetation management inspection programs, one new program, and updates to two approved targets and six projected expenditures.

8.2.1 2023 Areas for Continued Improvement

Energy Safety's Decision on Liberty's 2023-2025 Base WMP¹⁷⁴ did not require Liberty to report progress on any areas for continued improvement in the vegetation management and inspections section in its 2025 WMP Update. Therefore, Liberty has no reportable updates in this area.

8.2.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty reported creating one new program related to the vegetation management and inspections section of its 2023-2025 Base WMP. Energy Safety finds that this update meets the reportable update criteria set forth in the 2025 WMP Update Guidelines.

¹⁷³ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 79-80

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

¹⁷⁴ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 81

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

In July 2023, Liberty launched a new QA component within its vegetation management QA/QC program.¹⁷⁵ Liberty conducted QA inspections at statistically random sample points for both distribution and transmission lines to ensure compliance with both regulatory clearance and Liberty's internal clearance standards.¹⁷⁶ Liberty uses the new QA process to assess the combined effectiveness of all inspection and fuels treatment initiatives.¹⁷⁷

8.2.2.1 Energy Safety Evaluation

In response to Liberty's reported new program, as summarized above, Energy Safety finds Liberty's updates are improvements to its QA/QC program. The field component of the QA/QC process described in Liberty's 2023-2025 Base WMP focused on individual categories of work (e.g., evaluating the quality of tree-trimming activities) without evaluating conductor clearance as a whole. The new QA component samples for the presence or absence of sufficient transmission and distribution line vegetation clearance. When clearance is absent, the QA component determines which VM program caused the deficiency. While it does not directly impact wildfire risk, the new QA component supports risk reduction efforts by providing statistically valid feedback to Liberty's vegetation management contractors and adds additional coverage and feedback to Liberty's existing QA/QC process.

8.2.2.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in vegetation management and inspections.

8.2.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided quarterly targets (end of Q2 and end of Q3) for its three 2025 vegetation management inspection programs, as required by the 2025 WMP Update Guidelines.¹⁷⁸

Additionally, Liberty provided updates to two approved targets and six projected expenditures related to the vegetation management and inspections section of its 2023-2025

¹⁷⁵ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 29

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁷⁶ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁷⁷ Data Request <u>OEIS-P-WMP_2024-LU-002</u>, Questions 1a and 1b, <u>Attachment DR002 - Question 1a and 1b</u>, pp. 1-2 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57106&shareable=true, accessed October 2, 2024, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57107&shareable=true, accessed October 2, 2024).

¹⁷⁸ <u>2025 WMP Update Guidelines</u>, Section 3 "Quarterly Inspection Targets for 2025," p. 15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed April 9, 2023).

Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, Liberty provided updates to the target for its substation defensible space initiative (VM-VFM-03) from N/A to 12 substations, and its clearance initiative (VM-VFM-05) from N/A to 700 miles. Liberty updated its projected expenditures for six programs, increasing projected expenditures for all but one program. Projected expenditures for the vegetation management inspection program – patrol (VM-INSP-02) increased from \$265,000 to \$330,000.¹⁷⁹ Projected expenditures for substation defensible space (VFM-INSP-03) increased from \$21,000 to \$84,000.¹⁸⁰ Projected expenditures for fire-resilient rights-of-way (VM-VFM-04) increased from \$271,000 to \$577,000.¹⁸¹ Projected expenditures for its clearance initiative (VM-VFM-05) increased from \$941,000 to \$1,406,000.¹⁸² Projected expenditures for fall-in mitigation (VM-VFM-06) decreased from \$8,222,000 to \$4,810,000.¹⁸³ Projected expenditures for vegetation management enterprise management system (VM-ESG-01) increased from \$431,000 to \$844,000.¹⁸⁴

8.2.3.1 Energy Safety Evaluation

Liberty's quarterly targets for its 2025 vegetation management inspections are consistent with quarterly targets for 2023 and 2024 and meet the requirements of the 2025 WMP Update Guidelines.

Liberty's updates to approved targets for its substation defensible space (VM-VFM-03) and clearance (VM-VFM-05) initiatives meet the requirements of the 2025 WMP Update Guidelines. The update for substation defensible space increased the initiative target from N/A to 12, which includes all substations Liberty operates.¹⁸⁵ Likewise, the update for the clearance initiative increased the target from N/A to 700 miles, which includes all transmission and

¹⁸⁰ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

- ¹⁸² Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).
- ¹⁸³ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), pp. 25-26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁷⁹ Liberty 2025 WMP Update (R1) (clean version, September 2024), pp. 23-24

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁸¹ Liberty 2025 WMP Update (R1) (clean version, September 2024), pp. 24-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁸⁴ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 26

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295& shareable=true, accessed Sept. 3, 2024).

¹⁸⁵ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 24

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

primary distribution circuit miles Liberty operates.¹⁸⁶ Energy Safety finds both updates will likely result in a decrease in wildfire risk.

Liberty appropriately reported a 25 percent increase in projected expenditures for its vegetation management inspection program – patrol (VM-INSP-02).¹⁸⁷ Liberty's updated projection better aligns with spending from previous years and reflects arborist rates for current contracts.

Liberty appropriately reported a 300 percent increase in projected expenditures for substation defensible space (VM-INSP-03).¹⁸⁸ At the time of its 2023-2025 Base WMP, Liberty had not established a target for this program. The updated projected expenditure is based on two inspections and subsequent vegetation treatments annually for each of Liberty's 12 substations.¹⁸⁹ Energy Safety finds an increase in spending on this program will likely result in a decrease in wildfire risk.

Liberty appropriately reported a 113 percent increase in projected expenditures for fireresilient rights-of-way (VM-VFM-04).¹⁹⁰ The updated projected expenditure includes projects that have been approved by the US Forest Service since Liberty's 2023-2025 Base WMP.¹⁹¹ Additionally, some costs from other initiatives have been shifted to fire-resilient rights-ofway.¹⁹²

Liberty appropriately reported a 49 percent increase in projected expenditures for clearance initiative (VM-VFM-05).¹⁹³ Liberty's updated projection better aligns with spending for previous years and reflects arborist rates for current contracts.

¹⁸⁸ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁸⁹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹⁰ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹¹ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁸⁶ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 25

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁸⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹² Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹³ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 25

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

Liberty appropriately reported a 41 percent decrease in projected expenditures for fall-in mitigation (VM-VFM-06).¹⁹⁴ The updated projected expenditure reflects a decrease in work orders as this program has matured. Additionally, some costs from Liberty's clearance initiative (VM-VFM-05) were previously included in the fall-in mitigation projected expenditure.¹⁹⁵ Energy Safety finds the decrease in spending on this program is not likely to result in a change in wildfire risk.

Liberty appropriately reported a 96 percent increase in projected expenditures for vegetation management enterprise management system (VM-ESG-01).¹⁹⁶ The updated projected expenditure better aligns with enterprise management spending from previous years. Additionally, the updated projected expenditure includes costs for project permitting, community outreach, communications, and vegetation management program development.¹⁹⁷ These costs were previously included in the projected expenditures of other vegetation management initiatives.¹⁹⁸ Since this transfer of projected expenditure between initiatives does not represent an increase in overall projected expenditure, Energy Safety finds it is unlikely to change wildfire risk.

8.2.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in vegetation management and inspections.

8.3 Situational Awareness and Forecasting

In its 2025 WMP Update, Liberty provided three total updates related to the situational awareness and forecasting section of its 2023-2025 Base WMP. The updates Liberty provided related to this section included reporting required progress on three areas for continued improvement.

¹⁹⁸ Data Request <u>OEIS-P-WMP_2024-LU-003</u>, Question 2

¹⁹⁴ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), p. 25

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹⁵ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹⁶ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

¹⁹⁷ Liberty 2025 WMP Update (R1) (clean version, September 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57340&shareable=true, accessed October 2, 2024).

8.3.1 2023 Areas for Continued Improvement

Liberty reported its progress on three areas for continued improvement in the situational awareness and forecasting section in its 2025 WMP Update.

8.3.1.1 LU-23B-18: Weather Station Optimization

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety required Liberty to describe its plans to use a weather station optimization tool to identify spatial gaps in its weather station network and determine if additional weather stations are needed. Liberty was also required to report on its progress as it completed the assessment.¹⁹⁹

Specifically, Energy Safety required Liberty to submit with its 2025 WMP Update a description of how the weather optimization tool was used to assess the density of weather stations in its service territory. Energy Safety required the documentation to include locations identified for additional weather stations installations and the number of weather stations planned for future installation based on its assessment.

Liberty provided an update regarding an ongoing analysis from Eagle Rock Analytics. In the update, Liberty stated that it expects to receive the final analysis by the end of 2024.²⁰⁰

Energy Safety Evaluation

Liberty did not provide the required assessment in its 2025 WMP Update.

Energy Safety has modified the area for continued improvement to provide additional guidance for Liberty. Liberty must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for Liberty, including the specific required progress that Liberty must address in its 2026-2028 Base WMP.

¹⁹⁹ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required

Areas for Continued Improvement," p. 81

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰⁰ Data Request <u>OEIS-P-WMP_2024-LU-003</u>, Question 1a

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57340&shareable=true, accessed October 2, 2024).

8.3.1.2 LU-23B-19: Weather Station Maintenance, and Calibration

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty had not performed maintenance or calibration on its weather stations in three years.²⁰¹ As a result, Energy Safety required Liberty, in its 2025 WMP Update, to continue maintaining a log of all the annual maintenance and calibration for each weather station, including the station name, location, and conducted maintenance.²⁰² Energy Safety also required Liberty to document the length of time from initiation to completion of a repair ticket, and the corrective maintenance performed to bring the station back into functioning condition.²⁰³

Specifically, Energy Safety required Liberty, in its 2025 WMP Update, to submit documentation indicating the number of weather stations that received annual calibration, along with the number of stations that were unable to undergo annual maintenance and/or calibration due to factors such as remote location, weather conditions, customer refusals, environmental concerns, and safety issues.²⁰⁴ Energy Safety required the documentation to include: station name and location, the reason for the inability to conduct maintenance and/or calibration, the length of time since the maintenance and calibration, and the number of attempts made to complete the maintenance and calibration.²⁰⁵

In its 2025 WMP Update, Liberty provided information detailing the annual calibrations of its 39 weather stations for the 2024 calendar year.²⁰⁶ Liberty also provided details about multiple

²⁰¹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 81-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰² Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 81-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰³ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 81-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰⁴ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 81-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰⁵ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 81-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²⁰⁶ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 48-49

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

stations that received numerous instrumentational replacements and upgrades.²⁰⁷ Included in its submission was a highly detailed link to a spreadsheet that provided all the information required by Energy Safety's Decision on Liberty's 2023-2025 Base WMP.²⁰⁸

Energy Safety Evaluation

Liberty sufficiently responded to this area for continued improvement by providing the information requested in a highly detailed, easy to view, and understandable format; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

8.3.1.3 LU-23B-20: Early Detection of Ignitions with HD Cameras

In its Decision on Liberty's 2023-2025 Base WMP, Energy Safety found that Liberty has continually reported, since its 2021 WMP Update, that it would partner/adopt HD wildfire cameras each year for early detection of wildfires.²⁰⁹ However, Liberty still did not have any equipment installed that could detect or monitor ignitions on the grid.

Energy Safety required Liberty to submit with its 2025 WMP Update its plan for the adoption of eight HD cameras, what factors caused the delay and how Liberty is working to resolve the delay, and the number and locations of the HD cameras that have been adopted.²¹⁰ Energy Safety also required Liberty to provide an explanation, including any challenges or roadblocks Liberty may face if the adoption, operationalization, or development of policies and procedures for HD cameras do not get implemented by the time of Liberty's 2025 WMP Update submission.²¹¹ Liberty was also required to provide an outline of the development

²⁰⁷ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 48-49

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

²⁰⁸ <u>Liberty 2025 WMP Update (R1)</u> (clean version, September 2024), Appendix E: Weather Station Calibrations Completed in 2024 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

²⁰⁹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²¹⁰ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

²¹¹ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

and implementation of its policy and procedures for the HD cameras within its service territory.²¹²

In its 2025 WMP Update, Liberty provided information related to the ongoing delays due to its working agreement with University of Nevada Reno (UNR) to fund the maintenance of existing HD cameras through the Alert Wildfire program. While Liberty stated that there was an initial delay in executing this agreement due to UNR exploring privatization of the Alert Wildfire program, UNR ultimately did not proceed with privatization.²¹³ UNR provided Liberty with a view shed analysis for proposed locations of existing cameras for Liberty to adopt into its system, as well as locations where current coverage is lacking for future HD camera consideration.²¹⁴ Given the initial delay, Liberty is currently waiting for an updated proposal from UNR that will outline the future development of policy and procedures for the HD cameras.²¹⁵ In its 2025 WMP Update, Liberty provided an outline of initial policies and procedures that Liberty is in the process of developing for the Alert Wildfire program.²¹⁶

Energy Safety Evaluation

With the information Liberty provided from its work with UNR thus far, Liberty has sufficiently responded to this area for continued improvement. The information on their proposed HD camera locations and the detailed outline of the future policy and procedures that will be implemented were complete and thorough; no further reporting is required on this area for continued improvement in Liberty's 2026-2028 Base WMP.

8.3.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the situational awareness and forecasting section of its 2023-2025 Base WMP.

- ²¹³ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 50 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).
- ²¹⁴ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 49-52 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).
- ²¹⁵ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 49-52 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).
- ²¹⁶ Liberty 2025 WMP Update (R1) (redline version, September 2024), pp. 49-52 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57295&shareable=true, accessed Sept. 3, 2024).

²¹² <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," p. 82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

8.3.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty did not report any updates to approved targets, objectives, or projected expenditures related to the situational awareness and forecasting section of its 2023-2025 Base WMP.

8.4 **Emergency Preparedness**

In its 2025 WMP Update, Liberty provided four total updates related to the emergency preparedness section of its 2023-2025 Base WMP. The updates Liberty provided related to this section included reporting updates to three objectives and one projected expenditure.

8.4.1 2023 Areas for Continued Improvement

Energy Safety's Decision on Liberty's 2023-2025 Base WMP²¹⁷ did not require Liberty to report progress on any areas for continued improvement in the emergency preparedness section in its 2025 WMP Update. Therefore, Liberty has no reportable updates in this area.

8.4.2 New or Discontinued Programs

In its 2025 WMP Update, Liberty did not report any new or discontinued programs related to the emergency preparedness section of its 2023-2025 Base WMP.

8.4.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, Liberty provided updates to objectives and projected expenditures related to the emergency preparedness section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, Liberty provided updates to its 3- and 10-year objectives for ongoing maintenance of emergency response plans (WMP-EP-02); continued engagement with local stakeholders to prepare for and respond to fire-related events (WMP-EP-03); and enhanced documentation and use of lessons learned to update plans (WMP-EP-04). Liberty updated its 3-year objective completion dates from June 2024 to "Annual – June 2024 and June 2025"

²¹⁷ <u>Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan</u> (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 73-82

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

and updated its 10-year objective completion dates from "None" to "Ongoing."²¹⁸ Liberty stated that it intends for these objectives to be annual and ongoing.²¹⁹

Liberty also updated the projected expenditure for its wildfire and PSPS emergency preparedness Plan (WMP-EP-01), establishing a 2025 projected expenditure of \$35,000.²²⁰ Liberty stated that it did not have a 2025 projected expenditure established for this initiative at the time of its 2023-2025 Base WMP submission and that its updated projected expenditure was established based on relevant historical spend data.²²¹ Liberty does not establish targets for this initiative.²²²

8.4.3.1 Energy Safety Evaluation

Energy Safety finds Liberty's updates to the objective completion dates are appropriate given these initiative activities are ongoing process improvements that require annual and recurrent action.

Energy Safety also finds Liberty's projected expenditure update for its wildfire and PSPS emergency preparedness plan appropriate and meets the reportable update criteria set forth in the 2025 WMP Update Guidelines.²²³

8.4.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for Liberty in emergency preparedness.

8.5 **Community Outreach and Engagement**

In its 2025 WMP Update, Liberty did not report any updates to the community outreach and engagement section of its 2023-2025 Base WMP.

²¹⁸ <u>Liberty 2025 WMP Update (R1)</u> (redline version, September 2024), p. 14

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

²¹⁹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

²²⁰ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 18 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

²²¹ Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

²²² Liberty 2025 WMP Update (R1) (redline version, September 2024), p. 29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57294&shareable=true, accessed Sept. 3, 2024).

 ²²³ <u>2025 WMP Update Guidelines</u>, Section 2 "Changes to Approved Targets, Objectives, and Expenditures," pp.
13-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

9. Public Safety Power Shutoff

In its 2025 WMP Update, Liberty did not report any updates to the Public Safety Power Shutoff section of its 2023-2025 Base WMP.

10. Liberty's Process for Continuous Improvement

Liberty did not indicate any changes to the lessons learned or corrective action program sections of its 2023-2025 Base WMP.

11. Required Areas for Continued Improvement

Energy Safety's WMP evaluations focus on each electrical corporations' strategies for reducing the risk of utility-related ignitions. The list below comprises all of Liberty's areas for continued improvement and the required progress that Liberty must address in its 2026-2028 Base WMP. This includes areas for continued improvement from Energy Safety's Decision on Liberty's 2023-2025 Base WMP as well as new areas for continued improvement from Energy Safety's evaluation of Liberty's 2025 WMP Update, as discussed in Sections 5 through 9 of this Decision.

11.1 Risk Methodology and Assessment

• LU-25U-01. PSPS and Wildfire Risk Trade-Off Transparency

- Description: Liberty's PSPS risk model is still in development. Liberty has not provided sufficient detail on how PSPS risk impacts its decision-making compared to wildfire risk.
- o Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide a description of how it plans to quantify PSPS risk and integrate PSPS risk into its overall risk assessment once its PSPS risk model is in place. This must include how Liberty plans on analyzing the trade-offs between PSPS risk and wildfire risk.
 - Develop and provide a timeline and milestones for implementing PSPS risk calculations into its suite of risk modeling tools. This must include a description of where PSPS risk impacts Liberty's current decisionmaking framework and process.
 - Describe how Liberty expects PSPS risk will impact the outputs (circuit risk rankings) of its overall risk model and associated prioritization of mitigation initiatives.
- Discussed in Section 6, "Risk Methodology and Assessment."

11.2 Wildfire Mitigation Strategy Development

LU-25U-02. Vendor Fire Risk Model Implementation Milestones and Dates

 Description: While Liberty provided a high-level summary of its risk modeling updates, it did not provide a detailed, concrete breakdown of the steps it plans to implement or specific target completion dates for each of the steps involved in updating its models.

- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide updates on the progress made for implementing new models as shown in Figure 5-2: Timeline of Liberty's Risk Modeling Plan of its 2025 WMP Update,²²⁴ including dates of actual completion and any new updates not captured in this timeline.
 - Provide Liberty's latest timeline for risk model implementation with milestones and associated target dates of completion, including a detailed breakdown of the various components and objectives required to complete a given task, and interim measures used for decisionmaking while implementation is in progress.
 - Explain how Liberty is using the results from the Direxyon Risk Assessment Tool (DRAT) to determine the prioritization of its mitigations, including the determination of highest risk circuits and selection of mitigation activities.
- Discussed in Section 7, "Wildfire Mitigation Strategy Development."
- LU-25U-03. Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety
 - Description: In response to LU-23-05, Liberty participated in past Energy Safety-sponsored scoping meetings on these topics. However, Liberty did not report on any additional WMP-related collaboration with the other California IOUs as of its 2025 WMP Update submission.
 - Required Progress: In its 2026-2028 Base WMP, Liberty must continue its existing collaboration efforts and demonstrate that it has made efforts to specifically collaborate with PG&E, SDG&E, SCE, BVES, and PacifiCorp, where appropriate and relevant to each IOU's interests. Liberty must also document how its collaboration efforts with the other California IOUs impacted the WMP initiatives presented in its 2026-2028 Base WMP.

Liberty must also continue to participate in all Energy Safety Safety-organized activities related to best practices for:

- Inclusion of climate change forecasts in consequence modeling.
- Inclusion of community vulnerability in consequence modeling.
- Utility vegetation management for wildfire safety.

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²²⁴ Liberty's 2025 WMP Update, p. 33.

Discussed in Section 7, "Wildfire Mitigation Strategy Development."

11.3 Grid Design, Operations, and Maintenance

- LU-23B-06. Effectiveness of Sensitive Relay Profile (SRP) and Traditional Hardening
 - Description: Liberty stated that it is not pursuing more installation of covered conductor due to implementation of SRP and the use of traditional hardening but does not adequately demonstrate the effectiveness or comparability of SRP versus covered conductor.
 - Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide its calculations for ignition reduction effectiveness for covered conductor compared to SRP, traditional hardening, and SRP in combination with traditional hardening. This must demonstrate considerations of various ignition risk drivers, deployment time and resources, performance comparison in forested versus non-forested areas, and risk model output of riskiest areas.
 - Use the analysis performed to set its covered conductor targets as appropriate.
 - Discussed in Section 8.1.1, "Grid Design and System Hardening."

• LU-25U-04. Cost-Benefit Analysis for the Stateline Resiliency Project

- Description: Liberty's updated target, projected expenditure, and project changes to its undergrounding initiative in 2025 raise concerns about the costbenefit ratio of undergrounding in its service territory.
- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Discuss its undergrounding cost-benefit analysis evaluation and decision-making process, including consideration of feasibility and resource use efficiency, and its plan to improve on this process based on lessons learned. This discussion must include lessons learned from the Tahoe Vista project.
 - Provide cost-benefit analysis and cost-benefit ratios for hardening the Stateline Resiliency Project through undergrounding, covered conductor, SRP, covered conductor in combination with SRP, and traditional hardening in combination with SRP. This analysis must consider the risk drivers present on the affected circuits, the effectiveness of each mitigation at addressing the present risk drivers, the estimated capital cost of each initiative activity, and the time required to implement each initiative activity. For each hardening

scenario, Liberty must provide the estimated circuit risk scores after hardening. Liberty must also provide documentation to support the methodology, calculations, and estimates used to determine the cost values applied in its cost benefit analysis.

Discussed in Section 8.1.1, "Grid Design and System Hardening."

• LU-25U-05. Covered Conductor Inspections and Maintenance

- Description: In its 2025 Update, Liberty stated that it is adding water intrusion, splice covers, surface damage/bulging, and bracket placement to its detailed inspection checklist. These criteria had not been added as of October 8, 2024. Liberty must tailor its inspection practices to address failure modes specifically related to covered conductor.
- Required Progress: In its 2026-2028 Base WMP, Liberty must demonstrate that it has added checks for water intrusion, splice covers, surface damage/bulging, and bracket placement to its detailed inspection checklist. If Liberty determines any or all the preceding changes are unnecessary, then it must provide how its current inspection and maintenance processes address covered conductor failure modes.
- Discussed in Section 8.1.2, "Asset Inspections."

LU-23B-10. Distribution Detailed Inspection Frequency

- Description: Liberty performs the minimum frequency of detailed inspections required by GOs 95 and 165. Liberty must strive to adopt a risk-based approach by increasing the frequency of detailed inspections on assets that have the highest risk according to its risk model.
- Required Progress: In its 2026-2028 Base WMP, Liberty must either:
 - Outline a plan to update its detailed inspections in higher risk areas, including:
 - An analysis for determining the updated frequency for performing detailed inspections.
 - Prioritization of higher risk areas based on risk analysis and risk model output, including HFTD Tier 3 lands.
 - Updates to inspection checklists to account for equipment or configurations that may pose greater wildfire risk.
 - A plan to obtain any needed workforce for performing more frequent inspections; OR
 - Demonstrate that its existing inspection program adequately addresses risk. This must include analysis of the following:

- Number of Level 1 and Level 2 issues found during detailed inspections of its highest risk circuits.
- Discussed in Section 8.1.2, "Asset Inspections."

• LU-25U-06. Additional Inspection Practices

- Description: In its 2023-2025 Base WMP, Liberty stated that it planned to incorporate three technologies (LiDAR, infrared, and drone inspections) during the 2023-2025 WMP cycle. Energy Safety required Liberty to define the pilot program scopes and provide timelines and milestones for each technology. In its 2025 WMP Update, Liberty did not provide timelines and milestones.
- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide a timeline for each technology. The timeline must include start and end dates for the planning, execution, and analysis phases of each pilot.
 - Provide and explain the pilot scope for each technology, including how the scope is selected to ensure that Liberty has timely and usable outputs.
 - Define how it will determine the success of each pilot and provide the criteria that it will use for each pilot to determine whether to make the pilot a continuous program.
- Discussed in Section 8.1.2, "Asset Inspections."

• LU-25U-07. Reliability Impacts of SRP

- Description: Liberty has not demonstrated an understanding of the reliability impacts of using SRP.
- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide the following information for 2024 outages that occurred while SRP settings were enabled in a spreadsheet format:
 - Circuit impacted by outage.
 - Circuit segment impacted by outage.
 - Cause of outage (in line with QDR Table 6 drivers).
 - Number of customers impacted.
 - Number of customers impacted belonging to vulnerable populations (such as customers with access and functional needs and Medical Baseline customers).
 - Duration of outage.
 - Response time to outage.
 - Customer minutes of interruption.

- Provide Liberty's calculations on the effectiveness of the SRP implementation. This must demonstrate calculations of avoided ignitions based on outages that occurred.
- Discuss any expected changes in SRP implementation based on the above, including percentages of coverage across Liberty's territory and SRP enablement thresholds used by Liberty.
- Discussed in Section 8.1.4, "Grid Operations and Procedures."

• LU-25U-08. Evaluation of High Impedance Fault Detection

- Description: In response to LU-23-16, Liberty cited the University of Nevada Reno (UNR) study's recommendation to pursue a fast-tripping scheme and not pursue High Impedance Fault Detection (HIFD) technology. Liberty has not demonstrated how this approach will effectively mitigate high impedance faults, like fallen conductors, given its limited plan to enable SRP settings for only 10-12 days per year. Additionally, Liberty has not presented a comprehensive solution for detecting fallen conductors, an issue that SRP settings alone cannot resolve.
- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Provide a detailed explanation of how the fast-tripping scheme will detect fallen conductors without HIFD, particularly how relay thresholds and settings will be used to detect fallen conductors.
 - Provide a detailed explanation of how enabling SRP settings 10-12 days per year provides sufficient reduction of wildfire risk due to fallen conductors.
 - Present alternative or complementary strategies to detect fallen conductors and describe how these approaches will be integrated with the current fast-tripping scheme.
 - Outline a clear, measurable implementation plan to address fallen conductor detection, including a timeline to implement, the strategies or combination of strategies to be implemented, how strategies will be validated, and coordination with other electrical corporations to adopt best practices and technologies for mitigating this risk.
- Discussed in Section 8.1.4, "Grid Operations and Procedures."

11.4 Situational Awareness and Forecasting

• LU-25U-09. Weather Station Optimization

- Description: Liberty plans to use a weather station optimization tool to identify spatial gaps in its weather station network and determine if additional weather stations are needed. Liberty must report on its progress as it completes the assessment.
- Required Progress: In its 2026-2028 Base WMP, Liberty must:
 - Describe how the weather optimization tool was used to assess the density of weather stations in its service territory.
 - Summarize the results of the assessment.
 - Provide any locations identified for additional weather station installations.
 - Include the number of weather stations planned for future installations of weather stations, based on the assessment.
- o Discussed in Section 8.3, "Situational Awareness and Forecasting."

12. Conclusion

12.1 Discussion

Each electrical corporation must construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment.²²⁵ When Energy Safety approves a WMP, it does so with the aim of continued improvement and may list areas for continued improvement which the electrical corporation must address.

Energy Safety's Decision on Liberty's 2023-2025 Base WMP identified 19 areas for continued improvement for which Liberty was required to report specific progress in its 2025 WMP Update. Of those 19 areas, 10 are identified as areas that continue to require improvement:

- LU-25U-01. PSPS and Wildfire Risk Trade-Off Transparency
- LU-25U-02. Vendor Fire Risk Model Implementation Milestones and Dates
- LU-25U-03. Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety
- LU-23B-06. Effectiveness of Sensitive Relay Profile (SRP) and Traditional Hardening
- LU-23B-09. Covered Conductor Inspections and Maintenance
- LU-23B-10. Distribution Detailed Inspection Frequency
- LU-25U-06. Additional Inspection Practices
- LU-25U-07. Reliability Impacts of SRP
- LU-25U-08. Evaluation of High Impedance Fault Detection
- LU-25U-09. Weather Station Optimization

In some instances, Liberty justified its lack of complete response to an area of continued improvement by identifying how a changing circumstance prevented it from fully responding. For instance, LU-23B-15 (Reliability Impacts of SRP) required Liberty to provide details of the 2023 outages that occurred while its SRP settings were enabled, but Liberty hadn't enabled its SRP settings in 2023. For others, the response Liberty provided in its 2025 WMP Update demonstrated progress, but did not fully resolve the issues identified in Energy Safety's Decision on Liberty's 2023-2025 Base WMP (e.g., "LU-23B-12. Additional Inspection Practices" for which Liberty provided the pilot program scope for infrared, drone, and LiDAR technologies, but Liberty did not provide timelines or milestones for these technologies). Of those in the latter category, in some areas, Liberty nearly completed the required progress

²²⁵ Public Utilities Code § 8386(a).

but did not complete requirements that would only necessitate minimal effort or resources (e.g., "LU-23B-09. Covered Conductor Inspections and Maintenance" for which Liberty stated it is adding water intrusion, splice covers, surface damage/bulging, and bracket placement to its detailed inspection checklist for regularly performed maintenance but could not provide evidence that it had added those criteria).

At this point in Liberty's maturity, Energy Safety expects Liberty to be able to deliver plans that demonstrate forward-looking growth and address the areas for continued improvement identified by Energy Safety. Energy Safety will closely review Liberty's progress on the areas identified for continued improvement herein in its evaluation of Liberty's 2026-2028 Base WMP and whether Liberty has demonstrated continued progress and forward-looking growth between its prior WMPs and its 2026-2028 Base WMP.

12.2 Approval

Liberty's 2025 WMP Update is approved.

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electrical corporations, including Liberty, must continue to make progress toward reducing utility-related ignition risk.

Energy Safety expects Liberty to effectively implement its wildfire mitigation activities to reduce the risk of utility-related ignitions and the potential catastrophic consequences if an ignition occurs, as well as to reduce the scale, scope, and frequency of PSPS events.

Liberty must meet the commitments in its WMP and fully address the areas for continued improvement identified within this Decision to ensure it meaningfully reduces utility-related ignition and PSPS risk within its service territory over the plan cycle.

DATA DRIVEN FORWARD-THINKING INNOVATIVE SAFETY FOCUSED



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APPENDICES



APPENDICES

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Appendix A. Glossary of Terms

Term	Definition
AFN	Access and functional needs
BVES	Bear Valley Electric Service
CAISO	California Independent System Operator
Cal Advocates	The Public Advocates Office at the California Public Utilities Commission
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
САР	Corrective action program
СВО	Community-based organization
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEJA	California Environmental Justice Alliance
CNRA	California Natural Resources Agency
CPUC	California Public Utilities Commission
D.	Prefix to a proceeding number designating a CPUC decision
DR	Data request
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
EFD	Early fault detection

Term	Definition
EPUC	Energy Producers and Users Coalition
EVM	Enhanced vegetation management
FERC	Federal Energy Regulatory Commission
FPI	Fire potential index
FWI	Fire weather index
GFN	Ground-fault neutralizers
GIS	Geographic information systems
GO	General order
GPI	Green Power Institute
GRC	General rate case
HD	High definition
HFRA	High Fire Risk Area
HFTD	High fire threat district
HWT or Horizon West	Horizon West Transmission
Ι.	Prefix to a proceeding number designating a CPUC Order Instituting Investigation (OII)
ICS	Incident command system or structure
ΙΟυ	Investor-owned utility
IR	Infrared
ISA	International Society of Arboriculture
ΙΤΟ	Independent transmission owner
kV	Kilovolt

Term	Definition
Liberty	Liberty Utilities
Lidar	Light detection and ranging
Maturity Model	Electrical Corporation Wildfire Mitigation Maturity Model
Maturity Survey	Electrical Corporation Wildfire Mitigation Maturity Survey
MAVF	Multi-attribute value function
MBL	Medical Baseline
MGRA	Mussey Grade Road Alliance
ML	Machine learning
NDVI	Normalized difference vegetation index
NERC	North American Electric Reliability Corporation
NFDRS	National Fire Danger Rating System
NOD	Notice of defect
NOV	Notice of violation
ОСМ	Overhead circuit miles
OEIS or Energy Safety	Office of Energy Infrastructure Safety
PG&E	Pacific Gas and Electric Company
PoF	Probability of failure
Pol	Probability of ignition
PRC	Public Resources Code
PSPS	Public Safety Power Shutoff

Term	Definition
Pub. Util. Code or PU Code	Public Utilities Code
QA	Quality assurance
QC	Quality control
QDR	Quarterly Data Report
R.	Prefix to a proceeding number designating a CPUC rulemaking
RAMP	Risk Assessment and Mitigation Phase
RCRC	Rural County Representatives of California
REFCL	Rapid earth fault current limiter
RFW	Red Flag Warning
RSE	Risk-spend efficiency
SAWTI	Santa Ana Wildfire Threat Index
SCADA	Supervisory control and data acquisition
SCE	Southern California Edison Company
SDG&E	San Diego Gas & Electric Company
S-MAP	Safety Model Assessment Proceeding, now the Risk- Based Decision-Making Framework Proceeding
SMJU	Small and multijurisdictional utilities
ТАТ	Tree Assessment Tool
ТВС	Trans Bay Cable
TURN	The Utility Reform Network
USFS	United States Forest Service
VM	Vegetation management

Term	Definition
VRI	Vegetation risk index
WMP	Wildfire Mitigation Plan
WRRM	Wildfire Risk Reduction Model
WSAB	Wildfire Safety Advisory Board
WUI	Wildland-urban interface

Appendix B. Status of 2023 Areas for Continued Improvement

Energy Safety's 2023 Decision¹ for Liberty identified areas for continued improvement and associated required progress. Areas for continued improvement are where Liberty must continue to improve its wildfire mitigation capabilities. As part of the 2025 WMP Update evaluation process, Energy Safety reviewed the progress reported by Liberty on areas for continued improvement that Energy Safety required progress on by the 2025 WMP Update. Energy Safety is not satisfied that Liberty has made sufficient progress in all the identified areas for continued improvement.

Liberty's 2023 areas for continued improvement that Energy Safety required progress on by the 2025 WMP Update are listed in Table A-1. The status column indicates whether each has been fully addressed. If not, the column notes where to find more information in this Decision.

¹ Energy Safety Decision on Liberty 2023-2025 Base Wildfire Mitigation Plan (Feb. 5, 2024), Section 11 "Required Areas for Continued Improvement," pp. 73-82 (https://ofiling.opergysafety.ca.gov/oEiling/Cotfile.aspx?fileid=56276%shareable=true_ascessed October 2

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed October 2, 2024).

ID	Title	Status
LU-23B-01 (LU-23-01)	Cross-Utility Collaboration on Risk Model Development	Liberty sufficiently addressed the required progress.
LU-23B-02 (LU-23-02)	PSPS and Wildfire Risk Trade-Off Transparency	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 6.2.2 and 11 of this Decision.
LU-23B-03 (LU-23-03)	Collaboration Between Vendor and Utility Risk Teams	Liberty sufficiently addressed the required progress.
LU-23B-04 (LU-23-04)	Vendor Fire Risk Model Implementation Milestones and Dates	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 7.1.1 and 11 of this Decision.
LU-23B-05 (LU-23-05)	Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 7.1.2 and 11 of this Decision.
LU-23B-06 (LU-23-06)	Effectiveness of SRP and Traditional Hardening	Liberty sufficiently addressed the required progress thus far; Energy Safety will continue to monitor progress. For related areas for continued improvement, see Sections 8.1.1.1 and 11 of this Decision.

ID	Title	Status
LU-23B-07 (LU-23-07)	Further Design Considerations	Liberty sufficiently addressed the required progress.
LU-23B-08 (LU-23-08)	Halting Detailed Distribution Inspections	Liberty sufficiently addressed the required progress.
LU-23B-09 (LU-23-09)	Covered Conductor Inspections and Maintenance	Liberty sufficiently addressed the required progress thus far; Energy Safety will continue to monitor progress. For related areas for continued improvement, see Sections 8.1.2.1 and 11 of this Decision.
LU-23B-10 (LU-23-10)	Distribution detailed inspection frequency	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.2.1 and 11 of this Decision.
LU-23B-11 (LU-23-11)	QA/QC sample size and pass rates	Liberty sufficiently addressed the required progress.
LU-23B-12 (LU-23-12)	Additional Inspection Practices	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.2.1 and 11 of this Decision.
LU-23B-13 (LU-23-13)	Lightning arrester replacement	Liberty sufficiently addressed the required progress.

ID	Title	Status
LU-23B-14 (LU-23-14)	Expulsion fuse replacement targets	Liberty sufficiently addressed the required progress.
LU-23B-15 (LU-23-15)	Reliability Impacts of SRP	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.4.1 and 11 of this Decision.
LU-23B-16 (LU-23-16)	Evaluation of High Impedance Fault Detection	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.4.1 and 11 of this Decision.
LU-23B-18 (LU-23-18)	Weather Station Optimization	Liberty did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.3.1.1 and 11 of this Decision.
LU-23B-19 (LU-23-19)	Weather Station Maintenance, and Calibration	Liberty sufficiently addressed the required progress.
LU-23B-20 (LU-23-20)	Early detection of Ignitions with HD Cameras	Liberty sufficiently addressed the required progress.

Appendix C. Stakeholder Data Request Responses Used in WMP Evaluation

No stakeholder data request responses were cited in this Decision.

Appendix D. Stakeholder Comments on the 2025 WMP Updates

Energy Safety invited stakeholders, including members of the public, to provide comments on the electrical corporations' 2025 WMP Updates. Opening comments on Group 2 WMPs were due on August 12, 2024, and reply comments were due on August 22, 2024. Comments received on the 2025 WMP Updates can be viewed in the 2023-2025 Wildfire Mitigation Plan (2023-2025-WMPs) docket log.

The following individuals and organizations submitted comments that Energy Safety considered in this Decision:

- California Department of Fish and Wildlife (CDFW)
- Rural County Representatives of California (RCRC)
- The Green Power Institute (GPI)
- The Public Advocates Office at the California Public Utilities Commission (Cal Advocates)

Energy Safety invited stakeholders, including members of the public, to provide comments on Liberty's resubmitted 2025 WMP Update. Comments were due on September 13, 2024, and reply comments were due on September 20, 2024.

No comments were received on Liberty's resubmitted 2025 WMP Update.

Energy Safety concurred with and incorporated the following stakeholder comments into Energy Safety's findings on Liberty's 2025 WMP Update:

- Cal Advocates commented that Energy Safety require Liberty to:
 - Report on the progress of its Sensitive Relay Profile (SRP) program.
 - Estimate the reliability impacts and projected risk reduction caused by SRP, using Liberty's own SRP parameters.
 - Report on the developments of its Risk-Based Decision-Making framework.
 - Calculate and report the trade-off between PSPS risk, wildfire risk, and assetfailure risk.
 - Report on new updates related to its implementation of its new risk-based decision-making framework.
- GPI commented that Energy Safety require Liberty to:

- Establish risk model implementation milestones and dates per the requirements in LU-23-04.
- Provide and substantiate its method for assessing mitigation effectiveness of SRP, traditional overhead hardening, and covered conductor.
- Assess the risk mitigation effectiveness of risk rank informed detailed inspection frequencies above GO95 standards via aerial or ground inspection methods.
- Benchmark with other utilities' infrared and drone inspection programs as well as perform more meaningful pilots.
- Provide an update on its resonant grounding pilot.
- RCRC commented that Energy Safety require Liberty to:
 - Report on the implementation of its Sensitive Relay Profile (SRP) program.
 - Balance and plan system hardening (i.e., installation of covered conductor) with the customer impacts, compared with SRP implementation.

Appendix E. Stakeholder Comments on the Draft Decision

Energy Safety invited stakeholders, including members of the public, to provide comments on Energy Safety's draft Decision for Liberty's 2025 WMP Update, published on January 27, 2025. Opening comments on the draft Decision were due on February 18, 2025, and reply comments were due on February 28, 2025.

The following individuals and organizations submitted opening comments:

• The Green Power Institute (GPI)

Energy Safety did not receive any reply comments.

All comments received can be viewed in the 2023-2025 Wildfire Mitigation Plan (2023-2025-WMPs) docket log.

Energy Safety made the following changes to the draft Decision as a result of comments received from stakeholders:

- GPI commented that Section 6.2.2.1 should incorporate minor revisions to Energy Safety's evaluation of area for continued improvement "LU-23B-02: PSPS and Wildfire Risk Trade-Off Transparency."
 - a. Energy Safety modified Section 6.2.2.1 to incorporate GPI's recommendation for added clarity.
- 2. GPI commented that Appendix D should reference GPI's contribution provided in its comments on Liberty's 2025 WMP Update, which recommended that Energy Safety require Liberty to provide an update on its resonant grounding pilot.
 - a. Energy Safety modified Appendix D to include GPI's comment on Liberty's resonant grounding pilot.
- 3. GPI commented that Energy Safety should update area for continued improvement "LU-23B-12. Additional Inspection Practices" to require Liberty to justify its pilot projects scopes of work.
 - a. Energy Safety modified LU-23B-12 (LU-25U-06) to include additional required progress, requiring Liberty to provide and explain its pilot scope for each technology.

Appendix F. Maturity Survey Results

Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model² (Maturity Model) and Electrical Corporation Wildfire Mitigation Maturity Survey³ (Maturity Survey) together provided a quantitative method to assess the maturity of each electrical corporation's wildfire risk mitigation program.

The Maturity Model consists of 37 individual capabilities describing the ability of electrical corporations to mitigate wildfire risk within their service territory. The 37 capabilities are aggregated into seven categories. The seven mitigation categories are:

- A. Risk Assessment and Mitigation Selection
- B. Situational Awareness and Forecasting
- C. Grid Design, Inspections, and Maintenance
- D. Vegetation Management and Inspections
- E. Grid Operations and Protocols
- F. Emergency Preparedness
- G. Community Outreach and Engagement

Maturity levels range from 0 (below minimum requirements) to 4 (beyond best practice). Electrical corporations' responses to the Maturity Survey, listed by mitigation category, are depicted in the figures and tables below.

Figure A-1 displays Liberty's 2024 response to the Maturity Survey across mitigation categories showing minimum and average values. Figure A-2 compares Liberty's 2024 response to the Maturity Survey to its 2023 response to the Maturity Survey, depicting values that increased, decreased, or had no change (indicated by "NC").

² Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (revised and adopted Jan. 2024, published Feb. 2024)

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

³ Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (adopted Jan. 2024, revised and published Feb. 2024)

⁽https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

		1. Capability					2. Cap	ability		3. Capability					4. Cap	ability			5. Capa	bility	6	oility		
		2023 2024 2025 2026				2023	2024	2025	2026	2023 2024 2025 2026				2023 2024 2025 2026				2023	2024	2025 2026	2023 2024 2025 2026			
A. Risk Assessment and		1. Statis	tical weat wildfire r	modeling		2. Calculation of wildfire and PSPS risk exposure for societal values					lculation bility to w y Power S	ildfire and hutoffs (I		lculation o			integrat	tion of le	racking and ssons learned	miti	6. Risk-informed wildfire mitigation strategy			
Mitigation Strategy	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0			0.0 0.0	
	Average of Sub-Cap.	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.4	0.8	0.8	0.8	0.1	0.1	0.1	0.1	1.3	1.3	1.4 1.4			0.4 0.5	
B. Situational Awareness and		7. Ignit	tion likelil	hood esti	mation	8. We	ather for	ecasting	abilit y	9. Wi	ldfire spre	ad foreca	sting	10. Da	ta collecti time coi		ar-real-	11. Wildf	ire detec syste	tion and alarm ms			monitoring onditions	
Forecasting	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0 1.0	0.0	0.0	0.0 0.0	
	Average of Sub-Cap.	0.4	0.8	1.5	2.3	0.7	0.7	1.0	1.1	0.4	0.7	1.4	1.9	0.9	1.1	2.7	2.9	0.0	0.0	2.7 2.8	1.4	1.8	2.6 2.6	
C. Grid Design, Inspections,		13. Asse	13. Asset inventory and condition database				4. Asset i	nspection	ıs	15. Ass	et mainte	nance and	d repair	16. G	rid design	and resi	liency		et and gr iining and	id personnel d quality				
and Maintenance	Minimum of Sub-Cap.	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0 0.0				
	Average of Sub-Cap.	2.5	2.8	2.8	2.8	0.3	3.0	3.0	3.0	0.8	0.8	0.8	1.5	1.3	1.3	2.3	2.3	1.5	1.5	1.5 3.0				
D. Vegetation Management			egetation condition		19.	/egetatio	n inspec	tions	20.	Vegetatio	on treatm	ent	21. Veg	etation pe and q		training								
and Inspections	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0							
	Average of Sub-Cap.	3.0	3.0	3.0	3.0	2.3	2.3	3.3	3.3	2.0	2.5	2.5	3.5	1.5	3.0	3.0	3.0				-			
E. Grid Operations and		22. Pr	otective of device	equipmer settings	nt and	23. Incorporation of ignition risk factors in grid control					PSPS ope	rating mo	del	25.	Protocols energi		re-	26. Ign	ition pre suppres	vention and ssion				
Protocols	Minimum of Sub-Cap.	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0 2.0				
	Average of Sub-Cap.	2.0	2.3	3.3	3.3	0.0	1.2	1.4	1.4	2.0	3.3	3.7	3.7	2.5	3.0	3.0	3.0	2.3	3.0	3.0 3.3				
F. Emergency Preparedness			dfire and saster pre		• •		boration public sa		rdination tners	1	9. Public e mmunicat		•		oaredness service re			1		port in wildfire ergencies			er wildfires cidents	
1. Emergency riepareuness	Minimum of Sub-Cap.	2.0	4.0	4.0	4.0	0.0	1.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	1.0	1.0	1.0 1.0	
	Average of Sub-Cap.	3.5	4.0	4.0	4.0	2.0	2.5	3.0	3.0	0.8	0.8	0.8	0.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0 0.0	1.5	1.5	1.5 1.5	
G. Community Outreach and Engagement				eness		corpo		dfire miti ning	gation	35. Engagement with AFN and socially vulnerable populations					aboration mitigation	planning	3	practio elec	ce sharin trical cor	on and best g with other porations				
	Minimum of Sub-Cap.	2.0	2.0	2.0	2.0	1.0	1.0	3.0	3.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	3.0	3.0	3.0 3.0				
	Average of Sub-Cap.	3.0	3.0	3.0	3.0	2.7	2.7	3.7	3.7	2.3	2.3	2.3	2.3	2.0	2.5	2.5	2.5	3.7	3.7	3.7 3.7				

Figure A 1 Liberty 2024 Decreases to the 2022 2025 Maturity Company
Figure A-1. Liberty 2024 Response to the 2023-2025 Maturity Survey

		1. Capability					2. Cap	ability			3. Cap	ability			4. Cap	ability									
	-	2023 2024 2025 2026			2023 2024 2025 2026				2023 2024 2025 2026				2023	2024	2025	2023	2023 2024 2025 2026								
A. Risk Assessment and Mitigation Strategy		1. Statis	tical weat wildfire n				lation of posure fo	3. Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS)				4. Ca		of risk and onents	5. Risk integrati		6. Risk-informed wildfire mitigation strategy								
Witigation Strategy	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC		NC
	Average of Sub-Cap.	NC	+0.1	+0.1	+0.1	NC	+0.25	+0.25	+0.25	NC	+0.38	+0.38	+0.38	NC	NC	NC	NC	NC	-0.1	NC	NC	NC	NC	NC	NC
B. Situational Awareness and		7. Igni	tion likelih	nood esti	mation	8. We	ather for	ecasting	ability	9. Wi	dfire spre	ad forec	asting	10. Da		on for ne nditions	ar-real-	11. Wildfi	re detec syster		d alarm		ntralized al-time o		•
Forecasting	Minimum of Sub-Cap.	NC	NC	NC	-1.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	+1	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Average of Sub-Cap.	NC	+0.3	-0.1	NC	NC	NC	NC	NC	NC	+0.22	-0.1	-0.1	NC	+0.29	+0.57	NC	NC	-0.3	-0.3	-0.3	NC	+0.4	-0.6	-0.6
C. Grid Design, Inspections,		13. Asse	et invento data	1	4. Asset i	nspectior	IS	15. Ass	et mainte	nance an	d repair	16. G	rid desigr	n and resil	iency		et and gr ining and								
and Maintenance	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	+1	+1	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	+0.25	+0.25	+0.25	NC	+2.67	+1.33	+1	NC	NC	-0.8	NC	NC	NC	NC	NC	NC	NC	NC	NC				
D. Vegetation Management			egetation condition		•	19.	/egetatio	n inspect	ions	20. Vegetation treatment				21. Veg		ersonnel Juality									
and Inspections	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	+1	+1	NC	NC	NC	+2	NC	+2	+2	+2								
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	+1	+1	NC	+0.5	+0.5	+1.5	NC	+1.5	+1.5	+1.5								
E. Grid Operations and		22. Pi	otective e device s	nt and			on of ignit grid contr		24.	PSPS ope	rating mo	odel	25.	Protocol energ	s for PSPS ization	re-	26. Igni	ition pre suppres		and					
Protocols	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	+2	NC	-1.0	NC	NC	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	+0.33	+0.17	NC	NC	+1.2	+0.8	NC	NC	+1.33	+0.33	-0.2	NC	+0.5	+0.17	NC	NC	+0.67	-0.3	NC				
F. Emergency Preparedness			dfire and saster pre		•			and coor afety part			9. Public e nmunicat					and plan storation		31. Custo and	mer sup PSPS em				arning af d PSPS i		
1. Emergency riepareuness	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	-0.2	-0.2	-0.2	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
G. Community Outreach and		33. Pub	lic outread aware		lucation	1		ement in e dfire miti ning			igagemen y vulnera					n on local n planning		37. Co practic elect	ther						
Engagement	Minimum of Sub-Cap.	NC	NC	-1.0	-1.0	NC	NC	+2	+2	NC	NC	NC	NC	NC	+1	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	NC	-0.5	-0.5	NC	NC	+1	+1	NC	NC	NC	NC	NC	+0.5	NC	NC	NC	NC	NC	NC				

	I the events of Marthautic with	C Channe	iges from 2023 to 2024
FIGURE A-7	ΤΠΡΕΓΕΥ ΙΜΠΕΠΕΓΕ	ν δμένεντ παρ	1065 from 2023 fo 2024
inguicitz.	LIDCITY MATATI	y Survey Chan	