



April 2, 2025

To: Liberty Utilities
Dan Marsh
Senior Manager, Rates and Regulatory Affairs
Liberty Utilities
701 National Avenue Tahoe Vista, CA 96148

SUBJECT: Office of Energy Infrastructure Safety's Audit on Liberty's Substantial 2023 Vegetation Management Work

Pursuant to the requirements of California Public Utilities Code section 8386.3(c)(5)(A), the Office of Energy Infrastructure Safety (Energy Safety) completed its audit of Liberty's 2023 vegetation management work pursuant to its 2023-2025 Wildfire Mitigation Plan.

Energy Safety found that Liberty Utilities did not provide information consistent with the completion of the work required for five of the 13 vegetation management initiatives. Liberty must submit its Corrective Action Plan response to the 2023 SVM docket¹ in Energy Safety's E-filing system within 30 days from the issuance of this audit. If you have any questions concerning this audit, please e-mail Karen McLaughlin (Karen.McLaughlin@energysafety.ca.gov) and provide a copy to Julie Rueckheim (Julie.Rueckheim@energysafety.ca.gov) and environmentalsciencedivision@energysafety.ca.gov.

Sincerely,

Sheryl Bilbrey
Program Manager, Environmental Science Division
Office of Energy Infrastructure Safety

¹ All documents related to Liberty's 2023 SVM audit are available on Energy Safety's e-filing under the "[2023-SVM](#)" docket and available here: <https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2023-SVM>

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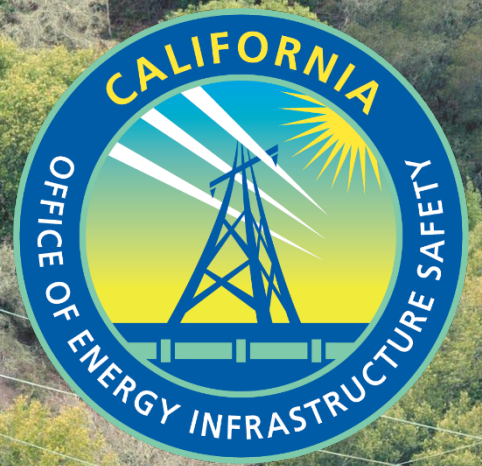
Forest Kaser, CPUC

Leslie Palmer, CPUC

Peter Stoltman, Liberty

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Attachment: Liberty Utilities 2023 SVM Audit



OFFICE OF ENERGY INFRASTRUCTURE SAFETY

**2023 SUBSTANTIAL VEGETATION
MANAGEMENT AUDIT**

LIBERTY UTILITIES

April 2025

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EXECUTIVE SUMMARY

The Office of Energy Infrastructure Safety (Energy Safety) completed an audit of Liberty Utilities' (Liberty) vegetation management commitments from its 2023-2025 Wildfire Mitigation Plan (WMP).¹ The Liberty 2023-2025 WMP had 13 vegetation management initiatives in six programmatic areas. Liberty provided documentation or information demonstrating it performed all work in eight vegetation management initiatives. However, Energy Safety found that Liberty did not provide information consistent with the completion of all work commitments for five of its 13 vegetation management initiatives.

For each audit finding for which Energy Safety determined Liberty did not provide information supporting completion of all work commitments in a vegetation management initiative in the WMP, Liberty must address that deficiency as part of a corrective action plan. Liberty must title its response "Liberty Utilities 2023 SVM Audit Corrective Action Plan" and submit the response on the 2023 SVM Docket in Energy Safety's E-Filing System within 30 days of receipt of this audit. Requirements for the response are discussed in Section 4 of this document.

Energy Safety is available to meet with Liberty to discuss the audit findings and provide any clarification necessary for Liberty to timely respond to Energy Safety's audit.

¹ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024)
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

1. OVERVIEW

Pursuant to Public Utilities Code section 8386.3(c)(5), Energy Safety must, on an annual basis, audit the vegetation management work performed by an electrical corporation upon notification that the electrical corporation has completed a substantial portion of the vegetation management requirements in its Wildfire Mitigation Plan (WMP). The vegetation management and inspections requirements audited in this document are in Section 8.2 of the WMP. Vegetation management and Inspections include the following programmatic areas:

- Vegetation inspections (1 Initiative)
- Vegetation and fuels management (8 Initiatives)
- Vegetation management enterprise system (1 Initiative)
- Quality assurance / quality control (1 Initiative)
- Open work orders (1 Initiative)
- Workforce planning (1 Initiative)

The WMP identifies the electrical corporation's objectives in each of these programmatic areas as well as the initiatives that will achieve the stated objectives. Initiatives include one or more specific work commitments. These commitments include both quantitative targets (e.g., completion of a specified number of inspections) and verifiable narrative statements (e.g., implementation of personnel training programs). Work commitments for each initiative may include only quantitative targets, both quantitative targets and narrative statements, or only narrative statements. Energy Safety assessed completeness of all relevant targets and statements.

The substantial vegetation management (SVM) audit includes Energy Safety's analysis of the electrical corporation's work products during the compliance year and determines if the electrical corporation provided documentation sufficient to confirm that all work commitments were completed for each initiative in its WMP. While the WMP lists the initiatives under programmatic headings, Energy Safety assessed work completion at the initiative level.

2023 Liberty Utilities Substantial Vegetation Management Audit

Liberty submitted its SVM 2023 completion notification on February 14, 2024.²

Energy Safety has completed its SVM audit of Liberty's vegetation management program activities for 2023. As part of the SVM audit process, Energy Safety identified both quantitative targets and verifiable statements from Section 8.2 of the Liberty 2023-2025 WMP. Energy Safety then compared the WMP vegetation management targets and statements to the work performed by Liberty in 2023 using Quarterly Data Reports (QDR), non-spatial data tables, and data request responses submitted by Liberty.

Table 1 of this report includes a list of all vegetation management initiatives and Energy Safety's findings of whether Liberty completed all required work.

The appendix includes a summary of targets and/or narrative statements, supporting information and analysis, conclusions, and findings for each initiative.

² [Liberty's 2023 Notification of Substantial Completion of Vegetation Management Initiatives](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56317&shareable=true) (February 14, 2024), <https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56317&shareable=true>

2. 2023 SVM AUDIT FINDINGS

The Liberty 2023-2025 WMP had 13 vegetation management initiatives in six programmatic areas. Energy Safety's findings regarding completion of work for each initiative are shown in Table 1. Audit findings in bold indicate that Liberty was unable to provide sufficient documentation demonstrating that all work was completed for that initiative. A detailed analysis of quantitative targets and narrative statements, supporting information, conclusions and findings for each initiative are included in the appendix.

Table 1. Liberty 2023 SVM Audit Finding Summary

Programmatic Area	Vegetation Management Initiative	Audit Finding
8.2.2. Vegetation Management Inspections	8.2.2.1- 8.2.2.3 Vegetation Management Inspections	Completed all work
8.2.3. Vegetation and Fuels Management	8.2.3.1 Pole Clearing	Completed all work
8.2.3. Vegetation and Fuels Management	8.2.3.2 Wood and Slash Management	Completed all work
8.2.3. Vegetation and Fuels Management	8.2.3.3 Clearance	Completed all work
8.2.3 Vegetation and Fuels Management	8.2.3.4 Fall-In Mitigation	Did not complete all work
8.2.3. Vegetation and Fuels Management	8.2.3.5 Substation Defensible Space	Did not complete all work
8.2.3 Vegetation and Fuels Management	8.2.3.6 High-Risk Species	Did not complete all work
8.2.3 Vegetation and Fuels Management	8.2.3.7 Fire Resilient Right-of-Ways	Completed all work
8.2.3 Vegetation and Fuels Management	8.2.3.8 Emergency Response Vegetation Management	Completed all work

Programmatic Area	Vegetation Management Initiative	Audit Finding
8.2.4 Vegetation Management Enterprise System	8.2.4. Vegetation Management Enterprise System	Completed all work
8.2.5 Quality Assurance and Quality Control	8.2.5. Quality Assurance and Quality Control	Did not complete all work
8.2.6 Open Work Orders	8.2.6 Open Work Orders	Did not complete all work
8.2.7 Workforce Planning	8.2.7 Workforce Planning	Completed all work

3. 2023 SVM AUDIT CONCLUSION

Energy Safety reviewed the 13 vegetation management initiatives in Liberty's 2023-2025 WMP and found Liberty provided documentation or information demonstrating it performed all work in eight vegetation management initiatives. However, Liberty was unable to provide supporting documentation or information demonstrating completion of work described in statements and/or targets for the remaining five vegetation management initiatives.

For each audit finding for which Energy Safety determined Liberty did not provide documentation or information demonstrating completion of all work in its vegetation management commitments, Liberty must submit a response per the requirements outlined in Section 4 to Energy Safety within 30 days of receipt of this audit.

This audit is not an assessment of the quality of Liberty's execution of its vegetation management program.

4. LIBERTY AUDIT RESPONSE

Liberty must provide Energy Safety with a response for each initiative in Table 1 with a finding of “did not complete all work” that includes a response addressing the following criteria as described in the Compliance Guidelines³:

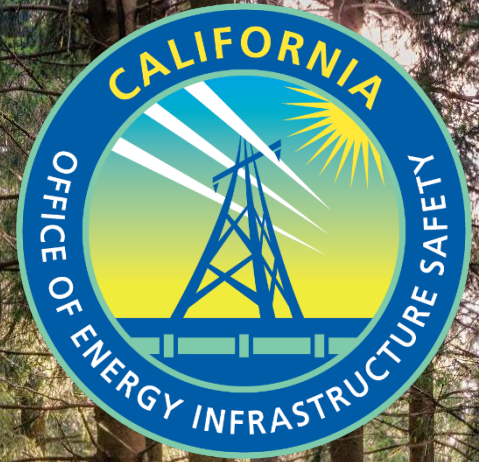
1. Should Liberty disagree with an audit finding that all work was not performed per the WMP, Liberty must provide the basis for that conclusion including detailed supporting documentation and rationale for that response.
2. If Liberty contends that the intent of the initiative was met because either a large percentage of the work was completed and/or other vegetation management actions taken by Liberty addressed the wildfire risk at issue, Liberty must provide specific details and documentation supporting that conclusion.
3. Should Liberty agree with the audit finding that all work was not performed for a vegetation management initiative, Liberty must provide the following in a corrective action plan:
 - a. Data and/or supporting documents explaining why a commitment was missed,
 - b. The circumstances or mitigating factors as to why a commitment was missed,
 - c. If Liberty was aware of the missed commitment during the compliance period, a detailed accounting of any corrective action measures implemented since the end of the compliance period to avoid future missed commitments including long term strategies to reduce or eliminate wildfire risk, and
 - d. Additional actions Liberty plans to implement to ensure commitments of a similar nature are not missed in the future.
4. The response must be titled “Liberty Utilities 2023 SVM Audit Corrective Action Plan YYYYMMDD”.⁴

³ [Energy Safety Compliance Guidelines \(September 2024\)](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57320&shareable=true), pgs. 12-13
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57320&shareable=true>)

⁴ “YYYYMMDD” represents the date of submission.

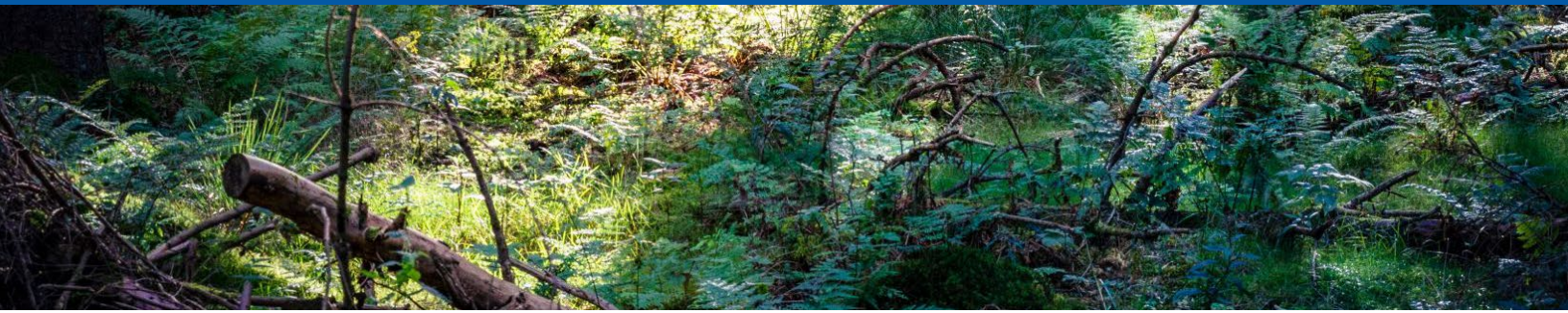
DATA DRIVEN
FORWARD-THINKING
INNOVATIVE
SAFETY FOCUSED





APPENDIX

WORK COMMITMENTS, SUPPORTING INFORMATION AND ANALYSIS, CONCLUSIONS, AND FINDINGS



APPENDIX SUMMARY

Energy Safety analyzed each of the 13 vegetation management initiatives listed in Liberty Utilities' 2023-2025 Wildfire Mitigation Plan (WMP) as part of this audit. Energy Safety identified the vegetation management work commitments, including quantitative targets and narrative statements, relevant to each initiative and compared that to the work performed by Liberty in 2023. Determination of whether all work was completed for each initiative was based on documentation submitted by Liberty. For any commitment or statement for which Liberty was not able to provide supporting documentation or information to support completion, Liberty must submit a response as part of a corrective action plan per the requirements outlined in Section 4.

INITIATIVE ANALYSIS

For each initiative in Section 8.2 (Vegetation Management and Inspections) of Liberty's 2023-2025 WMP, Energy Safety assessed completion of all quantitative targets as well as verifiable, narrative statements. For each target/statement, Energy Safety reviewed and analyzed the supporting information provided by Liberty and reached a conclusion regarding completion of work described by the target/statement. Energy Safety then provided a finding for each initiative. A finding of "Completed all work" was given only if Liberty provided sufficient documentation or supporting information demonstrating completion of all targets and/or statements within that initiative. If any target or statement was incomplete or insufficiently documented, the overall finding for the initiative was "did not complete all work."

8.2.2 Vegetation Management Inspections

The purpose of this initiative is to describe the “Inspections of vegetation around and adjacent to electrical facilities and equipment that may be hazardous by growing, blowing, or falling into electrical facilities or equipment”.⁵ Inspection activities included Detailed Vegetation Inspections, Off-Cycle Patrol Inspections, and LiDAR Inspections which are analyzed in the sections below.

8.2.2.1 Detailed Vegetation Inspections

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided the detailed vegetation inspection targets in its 2023-2025 WMP.⁶ For ease of comparison, the WMP target and work completed are summarized below:

Initiative Activity	Liberty’s 2023 Target	Completed in 2023
Vegetation Management Inspection Program – Detailed	220 circuit miles	236 circuit miles

Supporting Information and Analysis: Liberty provided an Excel file of their detailed inspections which included the circuit ID, number of circuit miles that were planned, number of circuit miles that were inspected, inspection status, and inspection start and end dates.⁷ According to this file, Liberty conducted detailed inspections along 236 circuit miles in 2023. Thus, Liberty exceeded its VM-INSP-01 target associated with its Detailed Vegetation Management Program.

Conclusion: Liberty provided information consistent with the completion of work identified for this target associated with detailed inspections.

⁵ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-24 (https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁶ [Liberty's 2023-2025 WMP](https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 208 (https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁷ Data Request 272, Question 30; attachment: “2023 Detailed Inspection Plan.xlsx.”

8.2.2.2 Patrol Inspections

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 1

Statement: “Supplemental ground-based inspections are performed by qualified Electric Operations personnel throughout the year. Identified conditions that may require vegetation-related work are documented and reported to VM personnel and scheduled for inspection or remediation. ... Liberty performs patrol inspections (high-risk, off-cycle, post event inspections) to locate and remove obvious hazard trees.”⁸

Supporting Information and Analysis: Liberty’s 2023-2025 WMP did not have a quantitative target for patrol inspection circuit miles. Furthermore, Liberty’s WMP references both patrol inspections and ground-based inspections and the WMP does not distinguish between the two types of inspections. However, Liberty did provide supporting information for both circuit line miles which received patrol inspections⁹ and point data for ground-based inspections.¹⁰ Liberty also provided the qualification standards for the Linemen who perform these inspections.¹¹

The WMP language indicated that patrol inspections would be completed on an “as needed basis” and triggered by known local conditions identified during LiDAR inspections or reported to Liberty by the public or its Linemen. Liberty provided an Excel file demonstrating that it completed 78 circuit miles of patrol inspections. The file included the circuits inspected, number of miles inspected, inspection status, and planned and actual inspection start and end dates.¹² Liberty also provided an Excel file demonstrating that it inspected 5,626 ground-based locations in 2023. The file included inspection dates, circuit IDs, work type, vegetation threat (fall-in, grow-in, snow-load).¹³ The Excel file also documented work completion dates to address the grow-in and fall-in threats identified by the ground inspections at 4,402 locations in 2023. Completion of the work associated with grow-in and fall-in mitigation is addressed in section 8.2.3.4 Fall-In Mitigation.

Conclusion: Liberty provided information demonstrating they completed work consistent this statement and the objective of the initiative.

⁸ [Liberty’s 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 215-218

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

⁹ Data Request 272, Question 31; attachment: “2023 Patrol Inspection Plan.xlsx.”

¹⁰ Data Request 272, Question 1; attachment: “Req 1 Ground Inspections.csv.”

¹¹ Data Request 315, Question 1; attachment: “Liberty Response to DR No. Energy Safety-DR-315.”

¹² Data Request 272, Question 31; attachment: “2023 Patrol Inspection Plan.xlsx.”

¹³ Data Request 272, Question 1; attachment: “Req 1 Ground Inspections.csv.”

8.2.2.3 LiDAR Inspections

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided the following target in its 2023-2025 WMP.¹⁴ For ease of comparison, the WMP target and work completed are summarized below:

Initiative Activity	Liberty's 2023 Target	Completed in 2023
Vegetation Management Inspection Program – LiDAR	700 circuit miles	702 circuit miles

Supporting Information and Analysis: Liberty provided an Excel file containing LiDAR inspection results from 2023. The Excel file was organized by span and included the date each span was inspected by LiDAR, the length of each span, risk score, tree species, and vegetation characteristics from each span including tree height, tree health, tree lean angle, and whether vegetation was clear of conductors.¹⁵ According to this file, Liberty inspected 702 circuit miles via LiDAR in 2023 for vegetation compliance. Thus, Liberty exceeded its target associated with its Vegetation Management Inspection Program using LiDAR.

Conclusion: Liberty provided information consistent with the completion of work identified for this target associated with LiDAR inspections.

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 2

Statement: “System-wide LiDAR inspections are completed on an annual basis to assess compliance with applicable vegetation to conductor clearance regulations and identify any vegetation concerns.”¹⁶

Supporting Information and Analysis: Liberty provided an Excel file listing all LiDAR inspections completed in 2023 which included inspection dates, circuit IDs, work type, vegetation threat (fall-in, grow-in, snow-load).¹⁷ According to this file, Liberty identified 4,084 total vegetation compliance issues using LiDAR in 2023. The Excel file also documented work

¹⁴ [Liberty's 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 208

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

¹⁵ Data Request 272, Question 25; attachment: “2023_LiDAR_Inspections.xlsx.”

¹⁶ [Liberty's 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 223

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

¹⁷ Data Request 272, Question 2; attachment: “Req 2 LiDAR Inspections.csv.”

completion dates to address the grow-in and fall-in threats identified by the LiDAR inspections at 1,787 locations in 2023. Completion of the work associated with grow-in and fall-in mitigation is addressed in section 8.2.3.4 Fall-In Mitigation.

Liberty's service area includes 33 circuit miles of overhead transmission lines, 672 circuit miles of overhead distribution lines, and 791 circuit miles of overhead secondary distribution lines.¹⁸ Therefore, Liberty has 1,496 circuit miles of overhead infrastructure system wide. Liberty completed 702 circuit miles of LiDAR inspections within all nine counties in Liberty's service territory, consistent with the approved 2023 WMP target. However, the statement assessed under this initiative identifies that Liberty will conduct LiDAR inspections system-wide, but did not include a defined number for "system-wide" circuit miles. Liberty did provide documentation to support completion of the approved WMP target which is reflected in our determination that all work was completed. Because the 702 circuit miles occurred throughout Liberty's service area, Energy Safety concludes that it satisfied the "system-wide" LiDAR inspection target commitment in this statement; however, in the future, Liberty should more clearly define its commitments.

Conclusion: Liberty provided information consistent with the completion of work associated with the WMP approved target.

Finding – 8.2.2 Vegetation Management Inspections

Liberty provided information consistent with the completion of work associated with initiative 8.2.2 Vegetation Management Inspections targets.

¹⁸ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 36
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

8.2.3.1 Vegetation and Fuels Management- Pole Clearing

The purpose of this initiative is to describe the “Plan and execution of vegetation removal around poles per Public Resources Code section 4292 and outside the requirements of Public Resources Code section 4292 (e.g., pole clearing performed outside of the State Responsibility Area).”¹⁹

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided the following target in its 2023-2025 WMP.²⁰ For ease of comparison, the WMP target and work completed are summarized below:

Initiative Activity	Liberty’s 2023 Target	Completed in 2023
Pole Clearing (PRC 4292 only)	4,960 subject poles	4,998 subject poles

Supporting Information and Analysis: Liberty provided an Excel file listing all poles subject to PRC 4292 that were inspected and cleared in 2023 and included the pole number, circuit ID, type of inspection, completion status, and completion date.²¹ The file showed that Liberty inspected 4,998 total poles and completed subsequent clearing work for 4,774 poles (96%) in 2023. Of the total number of poles, 224 poles (4%) did not have work completion status because 202 poles did not require work or were exempt due to landscaping and 22 poles could not be cleared due to landowner refusal.

Conclusion: Liberty provided information consistent with the completion of work identified for this target associated with pole clearing.

Finding – 8.2.3.1 Pole Clearing

Liberty provided information consistent with the completion of work identified in initiative 8.2.3.1 Pole Clearing.

¹⁹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

²⁰ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 208 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

²¹ Data Request 272, Question 3; attachment: “Req 3 Pole Clearing Report.csv.”

8.2.3.2 Vegetation and Fuels Management- Wood and Slash Management

The purpose of this initiative is to take actions “to manage all downed wood and “slash” generated from vegetation management activities.”²²

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided the following target in its 2023-2025 WMP.²³ For ease of comparison, the WMP target and work completed are summarized below:

Initiative Activity	Liberty’s 2023 Target	Completed in 2023
Wood and Slash Management	280 acres	577 acres

Supporting Information and Analysis: Liberty’s 2023-2025 WMP states “Liberty has implemented a Fuel Management Program as a precautionary measure, where feasible, to reduce wildfire risks by removing wood and treating brush and slash after vegetation maintenance is performed.”²⁴ Liberty provided an Excel file showing that it cleared wood and slash debris across approximately 577 acres using various techniques, such as bucking and stacking and chip and haul,²⁵ exceeding its target associated with wood and slash management. Liberty also provided an Excel file listing all wood and slash management work orders in 2023, which included circuit IDs, work type identified, landowner type, location, species, quantity, and location.²⁶ According to file, Liberty created 1,203 work orders and completed various work activities such as wood removal, chip and haul, and bucking and stacking in 2023 as part of its Fuel Management Program.

Conclusion: Liberty provided information consistent with the completion of work identified for target associated with wood and slash management.

²² [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

²³ [Liberty’s 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 208 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

²⁴ [Liberty’s 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 225 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

²⁵ Data Request 272, Question 4; attachment: “Req 4 Wood and Slash Management.xlsx.”

²⁶ Data Request 272, Question 5; attachment: “Req 5 Wood and Slash Management.xlsx.”

Finding – 8.2.3.2 Wood and Slash Management

Liberty provided information consistent with the completion of work identified in initiative 8.2.3.3 Wood and Slash Management.

8.2.3.3 Clearance

The purpose of this initiative is to take actions “after inspection to ensure that vegetation does not encroach upon electrical equipment and facilities, such as tree trimming.”²⁷

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty did not provide a quantitative target for clearance work for 2023 in their 2023-2025 WMP.²⁸ The WMP only states the clearance requirements it implements based on voltage of the electrical infrastructure. However, Liberty’s Q2-Q4 non-spatial QDR included a target of 671 line miles associated with Clearance.²⁹ The WMP also noted that “Liberty completed 701 miles of vegetation management to achieve clearances around electric lines and equipment out of its target of 701 miles of vegetation management to achieve clearances around electric lines and equipment in 2022.”³⁰ While this statement was not a WMP approved commitment for 2023, it provided context for previous work completed related to this initiative.

Supporting Information and Analysis: In the absence of a WMP target for Clearance, Energy Safety did not make a determination regarding the sufficiency of work completed relative to this initiative. However, the non-spatial QDR indicated that Liberty conducted clearance activities along 707 line miles in 2023, exceeding both the internal target Liberty included in its QDR as well as its 2022 target. Additionally, Liberty provided an Excel file of its LiDAR Plan which documented the completion of clearance work along approximately 707 line miles in 2023.³¹ In future WMPs, Energy Safety requests Liberty include quantitative commitments in its WMP for clearance work.

²⁷ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

²⁸ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 227-229 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

²⁹ Liberty’s Non-Spatial 2023 Quarterly Data Report, Table 1, row 34, TN13715_20240214T082650_Liberty_2023_Q4_Tables115_R0 (7).xlsx. (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56307&shareable=true)

³⁰ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 229 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

³¹ Data Request 315, Question 2; attachment: “2023 LiDAR Plan.xlsx.”

Conclusion: Liberty provided information consistent with the completion of work associated with the objective of this initiative.

Finding – 8.2.3.3 Clearance

Liberty provided all information consistent with the completion of work identified in initiative 8.2.3.3 Clearance.

8.2.3.4 Fall-In Mitigation

The purpose of this initiative is to take actions “to identify and remove or otherwise remediate trees that pose a high risk of failure or fracture that could potentially strike electrical equipment.”³²

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided the following target in its 2023-2025 WMP.³³ For ease of comparison, the WMP target and work completed are summarized below:

Initiative Activity	Liberty’s 2023 Target	Completed in 2023
Fall-In Mitigation	220 circuit miles	375 circuit miles

Supporting Information and Analysis: Liberty provided an Excel file indicating that it conducted 64 routine maintenance projects for fall-in mitigation which represent the removal and remediation of trees with strike potential along approximately 375-circuit miles in 2023.³⁴ Thus, Liberty exceeded its target of 220 circuit miles for fall-in mitigation in 2023. However, Energy Safety has identified inconsistencies in work completion for mitigation of hazardous vegetation which will be addressed in Statement 3 below. The documentation provided by Liberty does not indicate how work identified during inspections is related to the mitigation projects identified along these line miles, if at all.

³² [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

³³ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 208 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

³⁴ Data Request 272, Question 6; attachment: “Req 6 Fall In Mitigation Circuit Miles.csv.”

Conclusion: Liberty provided documentation that demonstrating that it exceeded this target for fall-in mitigation.

Statement 3

Statement: Liberty's WMP includes several statements stating they will mitigate vegetation risks following inspections:

From Section 8.2.2.2: "Liberty performs patrol inspections (high-risk, off-cycle, post event inspections) to locate and remove obvious hazard trees." ³⁵

From Section 8.2.2.3: "Liberty mitigates vegetation encroachments identified by LiDAR inspections within maintenance action thresholds ("MAT") before the next fire season after inspections." ³⁶

From Section 8.2.3.4: "Liberty has developed a Hazard Tree Management Plan (VM-03) for the purpose of identifying, documenting, and mitigating trees that are located within the utility strike zone and are expected to pose a risk to electric facilities based on the tree's observed structural condition and site considerations." ³⁷

Supporting Information and Analysis: While Liberty met its quantitative target for fall-in mitigation projects as discussed above, Liberty's 2023-2025 WMP also stated that it will locate and remove obvious vegetation hazards per the statements listed above. Liberty provided several Excel files which document the inspection and removal of tree hazards; however, Energy Safety has identified inconsistencies in work completion for these hazards. For example, Liberty provided an Excel file of its LiDAR inspections which identified 4,084 total vegetation compliance issues in 2023, of which 4,063 identifications showed grow-in vegetation threats and 20 fall-in threats. The file also provided completion dates for 1,782 of the grow-in locations and 17 of the fall-in; all other locations did not have a completion date.³⁸ This documentation suggests that 2,281 vegetation threats were identified by Liberty and were not mitigated.

Liberty also provided an Excel file of its ground-based inspections work which identified 5,626 instances of vegetation compliance issues in 2023, of which 2,312 identifications showed

³⁵ [Liberty's 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 223
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

³⁶ [Liberty's 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 223
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

³⁷ [Liberty's 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 229
(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

³⁸ Data Request 272, Question 2; attachment: "Req 2 LiDAR Inspections.csv."

grow-in vegetation threats and 3,256 fall-in threats.³⁹ The file also provided completion dates for 1,482 of the grow-in locations and 2,867 of the fall-in; all other locations did not have a completion date. This documentation suggests that 1,219 vegetation threats were identified by Liberty and were not mitigated.

Additionally, Liberty provided Excel files⁴⁰ that document the trees identified by its Hazard Tree Management Plan, which identifies, documents, and mitigates trees that are expected to pose a risk to Liberty's electrical infrastructure.⁴¹ Identified trees were mitigated according to priority designation which is specifically evaluated in section 8.2.6 Open Work Orders. These files indicate that Liberty assessed 2 P1 trees, 45 P2 trees, 2,522 P3 trees, and 312 P4 trees (2,881 trees total). There is no documentation explaining if these trees are related to those identified by LiDAR or ground-based inspections or projects completed along the line miles described in the quantitative target for fall-in mitigation/ high-risk species.

Given what appears to be conflicting documentation on the total number of trees that required fall-in or hazard tree mitigation, and which trees received mitigation work, Liberty must provide a CAP response to clarify the total number of trees that were identified, how they were identified (i.e. LiDAR or ground inspection) and mitigation completion dates.

Conclusion: Liberty did not provide information consistent with the completion of work identified in this statement.

Finding – 8.2.3.4 Fall-In Mitigation

Liberty provided information consistent with the completion of work identified for its quantitative target for in initiative 8.2.3.4 Fall-In Mitigation, but a number of documents provided by Liberty appear to have conflicting information about number of trees identified as hazards and how much work was completed to mitigate those hazards. Therefore, Liberty did not provide information consistent with completion of all work for this initiative. In its CAP response, Liberty must explain the differences in numbers provided in these files. Liberty must also provide documentation clarifying the total number of trees identified for grow-in and fall-in mitigation, the program under which the trees were identified, and the date of mitigation, or an explanation for why the trees did not require mitigation in its CAP response.

³⁹ Data Request 272, Question 1; attachment: "Req 1 Ground Inspections.csv."

⁴⁰ Data Request 272, Question 7; attachment: "Req 7 Fall In Mitigation P1.csv'," Question 8; attachment: "Req 8 Fall In Mitigation P2.csv'," Question 9; attachment: "Req 9 Fall In Mitigation P3.csv'," Question 10; attachment: "Req 10 Fall In Mitigation P4.csv'."

⁴¹ [Liberty's 2023-2025 WMP](https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 229

(<https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

8.2.3.5 Substation Defensible Space

The purpose of this initiative is to take actions “to reduce ignition probability and wildfire consequence due to contact with substation equipment.”⁴²

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 4

Statement: “Liberty performs routine inspections, vegetation management, and other maintenance activities for 12 substations. Control methods include manual, mechanical, and chemical methods. Work occurs at regular intervals to maintain accessibility, safety, and adherence to all appropriate governmental regulations and Liberty policies... A minimum of two site visits will occur per facility, per year. Herbicide applications and vegetation management activities will occur under the direction of the PCA. Additional cycle visits may be required for sites that do not receive herbicide applications.”⁴³

Supporting Information and Analysis: Liberty provided Excel files, images, and spatial QDR data⁴⁴ recording the inspections and maintenance activities performed at its substations in 2023.⁴⁵ According to this documentation, Liberty inspected and treated, when treatment was necessary, 12 substations with chemical, mechanical, and/or pre-emergent chemical treatments in June of 2023.⁴⁶ Liberty also included the chemical use reports and images for 11 out of 12 substations before and after receiving treatment and routine maintenance demonstrating the work was completed.⁴⁷

The documentation also demonstrated that Liberty inspected 10 of the 12 substations in October 2023. Liberty explained that the Stampede and Portola substations were not inspected a second time due to maintenance and construction activities performed at these substations in the fall of 2023.⁴⁸ Liberty did not provide any documentation or justification for why construction activities at the Portola and Stampede locations would negate the need for

⁴² [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁴³ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 233 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁴⁴ Liberty's geospatial 2023 quarter 1-4 Quarterly Data Report (QDR), Liberty Asset Inspection Point, 8.1.3.6. and Liberty's Quarterly Data Report (QDR) for Fourth Quarter 2023, submitted on April 4, 2024, Table 1.

⁴⁵ Data Request 272, Question 11; attachment: “2023 Substation Treatments.xlsx.”

⁴⁶ Data Request 315, Question 3; attachment: “2023 Substation Treatment.xlsx.”

⁴⁷ Data Request 272, Question 11; attachments: “Liberty Chem Use Reports June 2023.pdf,” “Liberty Utilities Chem Use Report Pre-Emergent Fall 2023,” “June 2023 Before and After Substation Treatments.pdf,” and “Liberty Pre-Emergent Application Photos Fall 2023.”

⁴⁸ Data Request 298, Question 1; attachment: “Liberty's Response to Energy Safety-DR-298_12182024.pdf.”

vegetation management at these sites during the fall cycle. Therefore, Liberty only provided documentation that 10 substations had the minimum of two site visits.

Conclusion: Liberty did not provide information consistent with the completion of work identified in this statement.

Finding – 8.2.3.5 Substation Defensible Space

Liberty did not provide information consistent with the completion of work identified in initiative 8.2.3.5 Substation Defensible Space. In its CAP response, Liberty should include information for why vegetation management work was not needed at the Stampede and Portola locations due to maintenance during October 2023.

8.2.3.6 High-Risk Species

The purpose of this initiative is to take actions “to reduce the ignition probability and wildfire consequence attributable to high-risk species of vegetation.”⁴⁹

Liberty’s 2023-2025 WMP states that “Liberty’s methodology of addressing high-risk species does not differ from that described in initiative 8.2.3.4, Fall-In Mitigation.”⁵⁰ Therefore, Energy Safety did not conduct a separate analysis of the work performed for this initiative.

Finding – 8.2.3.6 High-Risk Species

See the finding for Initiative 8.2.3.4 Fall-In Mitigation.

⁴⁹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁵⁰ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 234 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁵¹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

8.2.3.7 Fire-Resilient Right-of-Ways

The purpose of this initiative is to take actions “to promote vegetation communications that are sustainable, fire-resilient, and compatible with the use of the land as an electrical corporation right-of-way.”⁵¹

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 5

Statement: “Liberty continues to work with the National Forests on enhanced right of-way maintenance projects, to target encroaching and hazardous trees and to preventatively remove incompatible tree species from the right-of-way. The enhanced maintenance projects reduce future maintenance entries, protect infrastructure, increase fire-resiliency and are the initial step of the integrated vegetation management (“IVM”) program.”⁵²

Supporting Information and Analysis: Liberty provided an Excel file listing 517 work orders created in 2023 to target encroaching and hazardous trees in forest resilience corridors.⁵³ Each work order identified the tree and/or pole ID, circuit, work order creation date, work status, ownership (USFS, Private), priority level designation, and status of tree health. According to the Excel file, 515 of the 517 total work orders designated the vegetation as a priority 3 level threat, while the two remaining work orders identified the vegetation as a priority 2 and 4 level threat, respectively.

Additionally, Liberty provided three invoice records from its vendors for work performed in 2023 related to fire-resilient right-of-ways and program development / community outreach in association with the National Forest Foundation (NFF).⁵⁴ Liberty also included images of cleared electrical lines located along its 60kV 625 line as part of its Forest Resilience Corridor project in coordination with the NFF and Lake Tahoe Basin Management Unit.⁵⁵ These images displayed the results of fuel management and mastication inside and outside of the right-of-way as well as forest thinning and tree spacing.⁵⁶

⁵¹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁵² [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), pp. 234-235

(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁵³ Data Request 272, Question 15; attachment: “Req 15 FRC Work Order Report.xlsx.”

⁵⁴ Data Request 272, Question 15; attachment: “Req 15 Liberty NFF Contributions 2023 from Invoice Sheet.xlsx.”

⁵⁵ Data Request 272, Question 15; attachment: “Req 15 Forest Resilience Corridors.pdf.”

⁵⁶ Data Request 315, Question 4; attachment: “Liberty Response to DR No. Energy Safety-DR-315.pdf”

These work orders, invoices, and images indicate that Liberty and its vendors conducted right-of-way maintenance in fire resilient corridors in coordination with the National Forests in 2023.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Statement 6

Statement: “The Liberty IVM program continues to be developed with the intent of promoting a stable, low growing community of compatible shrub species. Liberty VM staff and contractors are trained to identify and collect data to document native and culturally significant shrub species.”⁵⁷

Supporting Information and Analysis: Liberty provided a copy of a syllabus and course curriculum from Liberty’s Grow With Trees (instructional source) crew level vegetation monitoring training, which was conducted in Spring 2023.⁵⁸ This 21-hour course trained crews to conduct Rapid Assessment Surveys of ROW vegetation and identify and distinguish between the following plant categories: mosses, ferns, forbs, grasses, sedges, rushes, and wood shrubs and trees.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Finding – 8.2.3.7 Fire Resilient Right-of-Ways

Liberty provided information consistent with the completion of work identified in initiative 8.2.3.7 Fire-Resilient Right-of-Ways.

⁵⁷ [Liberty’s 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 235

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

⁵⁸ Data Request 272, Question 16; attachments: “Req 16 2023 Online Plant ID Course Contents.pdf,” Req IVM Training.pdf,” and “Req 16 Plant ID syllabus.pdf.”

8.2.3.8 Emergency Response Vegetation Management

The purpose of this initiative is the “planning and execution of vegetation activities in response to emergency situations including weather conditions that indicate an elevated fire threat and post-wildfire service restoration.”⁵⁹

Liberty stated that it did not experience any Red Flag Warning or elevated fire risk conditions in 2023⁶⁰ and none were reported in Liberty’s Tabular Wildfire Mitigation Data⁶¹. Therefore, no actions on any work commitments under this initiative were required or implemented and Energy Safety did not assess activities related to this initiative.

⁵⁹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁶⁰ Data Request 272, Questions 19-23; attachment: “Liberty’s Response to Energy Safety-DR-272.pdf.”

⁶¹ [Liberty’s Tabular Wildfire Mitigation Data Tables, Q1 2023](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53753&shareable=true) (May 2, 2023), (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53753&shareable=true), [Liberty’s Tabular Wildfire Mitigation Data Tables, Q2 2023](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=54434&shareable=true) (August 3, 2023), (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=54434&shareable=true), [Liberty’s Tabular Wildfire Mitigation Data Tables, Q3, 2023](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55921&shareable=true) (November 3, 2023), (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55921&shareable=true), [Liberty’s Tabular Wildfire Mitigation Data Tables, Q4, 2023](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56313&shareable=true) (February 14, 2024), (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56313&shareable=true).⁶² [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

8.2.4 Vegetation Management Enterprise System

The purpose of this initiative is to describe the “Operation of and support for centralized vegetation management and inspection enterprise system(s) updated based upon inspection results and activities such as hardening, maintenance, and remedial work.”⁶²

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 7

Statement: “Liberty also utilizes supplemental third-party inventory management software to analyze and review LiDAR acquisition data, inventory clearance-exempt trees, emergency response, and vegetation caused outage investigations.”⁶³

Supporting Information and Analysis: Liberty provided a screenshot image from its inventory management software, Fulcrum, showing a dashboard of the tree caused outage investigation form.⁶⁴ Liberty also provided a supplemental Excel file which documented 13 reports of tree caused outages Liberty investigated in 2023.⁶⁵ Additionally, Liberty provided an Excel file of its Vegetation Management inventory, which included LiDAR, emergency response, and inventory clearance-exempt data identified during remote sensing, patrol, and detailed inspections in 2023.⁶⁶ These documents show that Liberty utilized the third-party inventory management software consistent with the commitment in this statement.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Statement 8

Statement: “Liberty exports vegetation management inspection data and work orders from its software quarterly for regulatory reporting. This data is saved on Liberty’s internal server access database and Liberty’s GIS system.”⁶⁷

⁶² [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁶³ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 239 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁶⁴ Data Request 272, Question 24; attachment: “Req 24 Outage Investigations.pdf.”

⁶⁵ Data Request 272, Question 24; attachment: “Req 24 tree_caused_outage_investigation_form.xlsx.”

⁶⁶ Data Request 272, Question 24; attachment: “Req 24 VM Inventory Data.xlsx.”

⁶⁷ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 240 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

Supporting Information and Analysis: Liberty provided quarterly reports related to LiDAR inspections, vegetation management inspections, and work completed in 2023.⁶⁸ The quarterly reports included inspection details such as inspection date, location, work status, tree ID, and HFTD designation.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Statement 9

Statement: “Asset and span data derived from Liberty’s annual LiDAR inspections of vegetation is integrated with Liberty’s GIS to update changes made to Liberty’s electrical system as needed. Vegetation density along circuits and other attributes found from LiDAR inspections are analyzed in combination with Reax data and HFTD regions to identify areas of the electrical system that are the highest risk.”⁶⁹

Supporting Information and Analysis: Liberty provided an Excel file of its asset, span, and vegetation risk results identified during LiDAR inspections in 2023; these inspections identified high risk electrical areas based on vegetation density and various attributes, such as tree health and HFTD designation. Additionally, these inspections identified Reax risk scores for spans which are produced by Reax Engineering, Liberty’s fire and weather scientific consultant who conducted wildfire risk assessments across Liberty’s service area.⁷⁰ The file indicated how many trees were “healthy”, “stressed”, or “very stressed” and provided REAX risk scores all spans inspected; classifying spans from “low” risk to “very high” risk.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Statement 10

Statement: “Liberty integrates tree and work order inventory data with a third-party program management tracking system to oversee schedules, project status, workloads, identify

⁶⁸ Data Request 272, Question 25; attachments: “2023_LiDAR_Inspections.xlsx,” “Q1_QDR_VM_Final.xlsx,” “Q2_2023_VM_Inspections.xlsx,” “Q3_2023_VM_Inspections.xlsx,” “Q4_2023_VM_Inspections.xlsx,” “Q2_2023_VM_Completed_Work.xlsx,” “Q3_2023_VM_Completed_Work.xlsx,” and “Q4_2023_VM_Completed_Work.xlsx.”

⁶⁹ [Liberty’s 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 240

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

⁷⁰ [Liberty’s 2023-2025 WMP](#) (Rev. #3, Feb. 15, 2024), p. 101-107

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

project owners, and overall vegetation management annual workplan implementation and completion.”⁷¹

Supporting Information and Analysis: Liberty provided an Excel file of its 2023 Maintenance Plan, which detailed its overall vegetation management workplan and completion. The plan included circuit ID, line miles, project status, workloads, project owners, work start and end dates, and notes.⁷² According to this plan and data, Liberty completed maintenance activities on a total 3,794 project units scheduled in 2023. Liberty verified that there are no open work orders remaining from 2023. Energy Safety’s assessment of Liberty’s completion of work orders is described in Section 8.2.6 Open Work Orders below.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Finding – 8.2.4 Vegetation Management Enterprise System

Liberty provided information consistent with the completion of work identified in initiative 8.2.4 Vegetation Management Enterprise System.

⁷¹ [Liberty’s 2023-2025 WMP](https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 240

(<https://efiling.energy.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

⁷² Data Request 326, Question 2; attachment: “2023 Maintenance Plan.xlsx.”

8.2.5 Quality Assurance and Quality Control

The purpose of this initiative is to describe the “Establishment and function of audit process to manage and confirm work completed by employees or contractors, including packaging QA/QC information for input to decision-making and related integrated workforce management processes.”⁷³

Quantitative Target or Commitment, Supporting Information & Analysis, and Conclusion

Liberty provided a comprehensive list of targets for both its QA/QC statistical sampling⁷⁴ and pass rates⁷⁵ to ensure the quality of their VM work in its 2023-2025 WMP.⁷⁶ For ease of comparison, the WMP targets and work completed are summarized for each activity below. Missed targets are in bold.

COMPLETED TREE WORK

Initiative Activity	Liberty’s 2023 Target	Completed in 2023
Completed Tree Work	229 circuit miles	300 circuit miles
Completed Tree Work- MCD Achieved	98% Pass Rate	Not listed
Completed Tree Work- Work Performed	99% Pass Rate	92% Pass Rate
Completed Tree Work- 18-Month Clearance Hold	98% Pass Rate	96% Pass Rate

Supporting Information and Analysis: Liberty provided its QA/QC Project Tracker, which listed quality checks (QCs) Liberty performed of completed tree work in 2023 and included the lead field tech, circuit, number of circuit miles that were assessed for quality control, start and completion dates, and the rework date, if applicable.⁷⁷ According to this tracker, Liberty conducted quality control assessments of completed tree work along approximately 300

⁷³ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁷⁴ Data Request 272, Question 38; attachment: “2023_QC_Summary_(1).xlsx.” and “QAQC_Project_Tracking_2023.xlsx.”

⁷⁵ Data Request 272, Question 38; attachment: “2023_QC_Summary_(1).xlsx.”

⁷⁶ [Liberty’s 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 242-246 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

⁷⁷ Data Request 272, Question 38; attachment: “QAQC_Project_Tracking_2023.xlsx.”

circuit miles in 2023. Thus, Liberty exceeded its QA/QC target associated with completed tree work circuit miles in 2023.

Liberty also provided a summary of its quality control assessments Completed Tree Work.⁷⁸ This file indicated that Liberty did not meet its target pass rates for Work Performed, nor 18-Month Clearance Hold and did not provide information for MCD Achieved.

DETAILED PRE-INSPECTION

Initiative Activity	Liberty's 2023 Target	Completed in 2023
Detailed Pre-Inspection	77 circuit miles	125 circuit miles
Detailed Inspection- Location Description	99% Pass Rate	96% Pass Rate
Detailed Inspection- Species ID	98% Pass Rate	99% Pass Rate
Detailed Inspection- Work Type	98% Pass Rate	96% Pass Rate
Detailed Inspection- Clean-up Prescription	99% Pass Rate	95% Pass Rate
Detailed Inspection- MCD Prescription	99% Pass Rate	Not listed

Supporting Information and Analysis: Liberty provided its QA/QC Project Tracker, which listed the quality control assessments Liberty performed for detailed inspections in 2023 and included the lead field technician, circuit ID, number of circuit miles that were assessed, start and completion dates, and the rework date, if applicable.⁷⁹ According to this file, Liberty conducted quality control assessments of completed detailed inspections along approximately 125 circuit miles in 2023. Thus, Liberty exceeded its QA/QC target associated with detailed pre-inspection circuit miles in 2023.

Liberty also provided a summary of its quality control assessments for Detailed Inspections.⁸⁰ This file indicated that Liberty did not meet its target pass rates for Location Description, Work Type, and Clean-up Prescription and did not provide information for MCD Prescription. It did meet its target pass rate for Species ID.

⁷⁸ Data Request 272, Question 38; attachment: "2023_QC_Summary_(1).xlsx."

⁷⁹ Data Request 272, Question 37; attachment: "QAQC_Project_Tracking_2023.xlsx."

⁸⁰ Data Request 272, Question 37; attachment: "2023_QC_Summary_(1).xlsx."

HAZARD TREE WORK

Initiative Activity	Liberty's 2023 Target	Completed in 2023
Hazard Tree Work ⁸¹	524 trees	654 trees
Hazard Tree Work- Potential Hazard	99% Pass Rate	100% Pass Rate
Hazard Tree Work- Site Cleanup	97% Pass Rate	93% Pass Rate
Hazard Tree Work- ANSI Standard	99% Pass Rate	97% Pass Rate
Hazard Tree Work- Other Trees Impacted	99% Pass Rate	97% Pass Rate
Hazard Tree Work- Site Conditions Post-Work	99% Pass Rate	94% Pass Rate

Supporting Information and Analysis: Liberty provided an Excel file of its QC Summary results, which included the total number of quality control assessments performed in 2023.⁸² According to this file, Liberty conducted quality assurance assessments on approximately 654 hazard trees in 2023. Thus, Liberty exceeded its QA/QC target associated with hazard tree work in 2023.

Liberty also provided a summary of its quality control assessments for Hazard Tree Work.⁸³ This file indicated that Liberty did not meet its target pass rates for Site Clean-up, ANSI Standard, Other Trees Impacted, and Site Conditions Post-work. It did meet its target pass rate for Potential Hazard.

⁸¹ Liberty's 2023 WMP states this is an "Estimate only. Hazard Tree Work can vary significantly each year depending on various field conditions." p.243.

⁸² Data Request 272, Question 38; attachment: "2023_QC_Summary_(1).xlsx."

⁸³ Data Request 272, Question 38; attachment: "2023_QC_Summary_(1).xlsx."

POLE CLEARING

Initiative Activity	Liberty's 2023 Target	Completed in 2023
Pole Brushing	585 poles	748 poles
Pole Brushing- Location Description	99% Pass Rate	96% Pass Rate
Pole Brushing- Non-Exempt Pole	98% Pass Rate	95% Pass Rate
Pole Brushing- Pole Tag Correct	97% Pass Rate	92% Pass Rate
Pole Brushing- 10-Foot Radial Clearance	99% Pass Rate	87% Pass Rate
Pole Brushing- No Fuel Remains in Cylinder	99% Pass Rate	92% Pass Rate
Pole Brushing- 0-8' Vertical Clearance	98% Pass Rate	84% Pass Rate
Pole Brushing- Above 8' Clearance	99% Pass Rate	99% Pass Rate
Pole Brushing- ANSI Standard	99% Pass Rate	100% Pass Rate
Pole Brushing- Site Clean-up	97% Pass Rate	100% Pass Rate

Supporting Information and Analysis: Liberty provided an Excel file of its Quality Control (QC) inspection results of completed pole clearing work in 2023, which included the pole ID, location, completion dates, and inspection status.⁸⁴ According to Quality Control (QC) inspection results file, Liberty performed 748 total quality control assessments on subject poles in 2023, of which 505 poles (68%) passed the initial quality check ("completed pass"). Of the remaining poles, 56 poles (7%) failed their initial quality control assessment but were later found to be complete due to data entry errors, or mis-categorization, and 187 poles (25%) required corrective action before they could be considered complete. Additionally, Liberty provided an Excel file of its QC Summary results, which included the total number of quality control assessments performed in 2023.⁸⁵ According to these files, Liberty performed QC assessments on 748 poles⁸⁶ in 2023. Thus, Liberty exceeded its QA/QC target associated with pole brushing in 2023.

Liberty also provided a summary of its quality control assessments for Pole Brushing (Clearing).⁸⁷ This file indicated that Liberty did not meet its target pass rates for Location

⁸⁴ Data Request 326, Question 3; attachment: "2023_liberty_pole_brushing_qc.xlsx."

⁸⁵ Data Request 326, Question 3; attachment: "2023 QC Summary (1)"

⁸⁶ Data Request 326, Question 3; attachment: "2023 QC Summary (1)"

⁸⁷ Data Request 326, Question 3; attachment: "2023 QC Summary (1)"

Description, Non-Exempt Pole, Pole Tag Correct, 10-Foot radial Clearance, No Fuel Remains in Cylinder, and 0-8' Vertical Clearance. It did meet its target pass rate for Above 8' Clearance, ANSI Standard, and Site Clean-up.

Conclusion: Liberty provided information consistent with the completion of work identified for the targets associated with quality assurance and quality checks, but did not provide information consistent with achievement of quality control pass rates for all activities.

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 11

Statement: “Liberty provides exports of vegetation inspections and completed work to the qualified vendor to conduct QC reviews of the work. The QC vendor incorporates inspection and completed work data into a separate third-party database to perform and document their QC reviews.”⁸⁸

Supporting Information and Analysis: Liberty provided Excel files of QC reviews conducted related to work completed, poles brushed, inspections (Detailed, Patrol, and remote sensing), and hazard trees in 2023.⁸⁹ The QC reviews included detailed information, including but not limited to, species, work status, span and/or tree ID, geospatial location, HFTD designation, tree health, priority level, and project type.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Statement 12

Statement: “Liberty conducts post work verification and reviews third-party QC inspection results as part of its Post Work Verification Procedure, VM-04. QC inspections are performed by the qualified vendor using a third-part data collection software (see Section 8.2.4: Vegetation Management Enterprise System). Errors identified during QA/QC review are communicated to the contractor as needed. Inadequate work is remediated and objective evidence to support remediation is provided to Liberty VM personnel.”⁹⁰

⁸⁸ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 241

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

⁸⁹ Data Request 272, Question 28; attachments: “2023_liberty_work_complete_qc.xlsx,”

“2023_liberty_pole_brushing_qc.xlsx,” “2023_liberty_inspection_qc.xlsx,” and “2023_hazard_tree_qc.xlsx.”

⁹⁰ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 245

(<https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true>).

Supporting Information and Analysis: Liberty provided copies of emails with its contractors discussing errors, or findings, identified during Liberty’s QA/QC review of inspections, poles cleared, hazard trees, and poles brushed.⁹¹

Additionally, Liberty provided Excel files extracted from its internal database which documented findings from the QC review of inspections, poles cleared, hazard trees, and poles brushed by contractors in 2023.⁹² The files included information such as the status, work order ID, priority level, and comments.

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Finding – 8.2.5 Quality Assurance and Quality Control

Liberty did not provide information consistent with the completion of all work identified in Initiative 8.2.5 Quality Assurance and Quality Control. Energy Safety recognizes the comprehensiveness of Liberty’s QA/QC reporting, and the high target pass rates Liberty has implemented to achieve a high quality of work. In its CAP response, Liberty must explain why the targeted pass rates were not met and what actions it will implement to ensure that they will be met in future years.

⁹¹ Data Request 272, Question 35; attachments: “QC Inspection Findings Correspondence with Contractors.pdf,” “QC Hazard Tree Findings Correspondence with Contractors.pdf,” “QC Pole Clearing Findings Correspondence with Contractors.pdf,” and “QC Work Complete Findings Correspondence with Contractors.pdf.”

⁹² Data Request 272, Question 36; attachments: “2023_hazard_tree_qc.xlsx,” “2023_liberty_inspection_qc.xlsx,” “2023_liberty_pole_brushing_qc.xlsx,” and “2023_liberty_work_complete_qc.xlsx.”

8.2.6 Open Work Orders

The purpose of this initiative is to describe the “Actions taken to manage the electrical corporation’s open work orders resulting from inspections that prescribe vegetation management activities.”⁹³

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 13

Statement: “Trees that have been identified are mitigated based on risk. VM-05, Vegetation Threat Procedure, describes the criteria for work priority determination:

- Priority 1 Conditions: Any observed tree, or parts thereof, that is failing or expected to imminently fail and contact electric facilities or any observed tree, or parts thereof, where it appears that contact has occurred with electric facilities.
 - P1 Mitigation: Clear the threat within 24 hours.
- Priority 2 Conditions: Any observed tree, or parts thereof, that is not a Priority 1 condition but is likely to fail and impact electric facilities prior to issuing a planned maintenance work order (failure may be expected within 6 months).
 - P2 Mitigation: Clear the threat within 30 days.
- Priority 3 Conditions: Any observed tree, or parts thereof, that is not a Priority 1 or Priority 2 condition but there is a probability of failure and contact with electric facilities within 2 years.
 - P3 Mitigation: Add to the tree inventory for creating and scheduling a planned maintenance work order. The threat shall be re-assessed or mitigated within 9 months.
- Priority 4 Conditions: Any observed tree, or parts thereof, that is not considered a Priority 1, Priority 2, or Priority 3 condition, is currently stable, may be in decline or defective, but is not expected to fail and contact electric facilities.”⁹⁴

Supporting Information and Analysis: Liberty provided Excel files listing all the Priority 1, 2, 3, and 4 trees identified in 2023 and included the respective inspection date, location, circuit ID, work type, vegetation condition identified, and work completion date.

⁹³ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

⁹⁴ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), pp. 231-233 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

PRIORITY 1 (P1) TREES

Liberty identified two P1 trees in 2023 which were subsequently mitigated for fall-in vegetation. One was mitigated within the 24-hour time frame, but the other was not.⁹⁵ Per Liberty's Vegetation Threat Procedure, Liberty must clear the P1 threat within 24 hours. Thus, Liberty did not meet its P1 mitigation commitment for one of the P1 trees in 2023.

PRIORITY 2 (P2) TREES

Liberty identified 45 P2 trees in 2023, which were subsequently mitigated for fall-in vegetation within an average of 66 days following the inspection date.⁹⁶ Further, 30 of the 45 P2 trees were mitigated between 34 and 251 days following the inspection date. Per Liberty's Vegetation Threat Procedure, Liberty must clear the P2 threat within 30 days. Thus, Liberty did not meet its P2 mitigation commitment in 2023.

PRIORITY 3 (P3) TREES

Liberty identified 2,522 P3 trees in 2023 which were subsequently mitigated for fall-in threat. P3 trees were mitigated between 1 and 333 days, with an average of 130 days following the inspection date.⁹⁷ Per Liberty's Vegetation Threat Procedure, Liberty must mitigate or reevaluate P3 trees within nine months (~270 days). Thus, Liberty achieved its P3 mitigation commitment in 2023. Energy Safety noted that there were numerous instances where work completion dates occurred prior to the inspection date, indicating that mitigation of these P3 trees occurred in the field prior to when data was entered into the system.

PRIORITY 4 (P4) TREES

Liberty identified 312 P4 trees. Three out of the 312 were mitigated in 2023. While Liberty has an internal program to identify and mitigate P4 trees, the WMP does not include a specific target for mitigation timeframes for P4 trees. Accordingly, Energy Safety did not assess completion timeframes for P4 trees.⁹⁸

Conclusion: Liberty did not provide information consistent with the completion of work identified in this statement for P1, P2, P3 trees.

⁹⁵ Data Request 272, Question 7; attachment: "Req 7 Fall In Mitigation P1.csv."

⁹⁶ Data Request 272, Question 8; attachment: "Req 8 Fall In Mitigation P2.csv."

⁹⁷ Data Request 272, Question 9; attachment: "Req 9 Fall In Mitigation P3.csv."

⁹⁸ Data Request 272, Question 10; attachment: "Req 10 Fall In Mitigation P4.csv."

Finding – 8.2.6 Open Work Orders

Liberty did not provide information consistent with the completion of work identified in Initiative 8.2.6 Open Work Orders. In its CAP response, Liberty should explain why targeted mitigation timeframes for P1, P2, and P3 trees were not met and how Liberty intends to ensure that they will be met in the future.

8.2.7 Workforce Planning

The purpose of this initiative is to describe “Programs to ensure that the electrical corporation has qualified vegetation management personnel and to ensure that both employees and contractors tasked with vegetation management responsibilities are adequately trained to perform relevant work”⁹⁹

Narrative Statements, Supporting Information & Analysis, and Conclusion

Statement 14

Statement: “Liberty continually seeks opportunities to host field trainings, benchmarking, and tailboards on utility arboriculture topics among VM groups to align on industry practices and obtain continuing education units (“CEU”) to keep professional certifications in good standing. Depending on the subject and learning objectives, training will be developed by a combination of Liberty’s highly qualified utility arborists and consultants who are subject matter experts in specific fields within utility vegetation management.”¹⁰⁰

Supporting Information and Analysis: Liberty provided copies of agendas, syllabi, attendance records, and other training materials from the various training sessions Liberty hosted in 2023 related to fuel management benchmark field training and integrated vegetation management (IVM) practices as well as training related to internal policies and procedure, such as Liberty’s Statement of Work (SOW) on vegetation management and tree pruning and removal services.¹⁰¹ Additionally, Liberty provided documentation of the IVM training facilitated by industry subject matter experts.¹⁰²

⁹⁹ [Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true) (December 6, 2022), p. A-26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true).

¹⁰⁰ [Liberty's 2023-2025 WMP](https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true) (Rev. #3, Feb. 15, 2024), p. 252 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56327&shareable=true).

¹⁰¹ Data Request 315, Question 5; attachments: “CEU Agenda Summary Attendees 06142023.pdf,” “What is Fuel Management – Final.docx,” “Liberty and ECI Agenda 4-21-23.docx,” and “Liberty and ECI Sign In Sheet 4-21-23.pdf.”

¹⁰² Data Request 315, Question 5; attachments: “Req 16 IVM Training.pdf,” “2023.01.15 LUCA Spring – Plant ID training syllabus – Final.docx,” and “2023.01.15 Spring LUCA Monitoring Training syllabus – Final.docx.”

Conclusion: Liberty provided information consistent with the completion of work identified in this statement.

Finding – 8.2.7 Workforce Planning

Liberty provided information consistent with the completion of work identified in Initiative 8.2.7 Workforce Planning.