State of California – A Natural Resources Agency
Gavin Newsom, Governor

OFFICE OF ENERGY INFRASTRUCTURE SAFETY
715 P Street, 15th Floor | Sacramento, CA 95814
916.902.6000 | www.energysafety.ca.gov

Caroline Thomas Jacobs, Director

July 21, 2025

Dear Stakeholders,

Enclosed is the Office of Energy Infrastructure Safety's (Energy Safety's) Annual Report on Compliance regarding Liberty Utilities execution of its 2023 Wildfire Mitigation Plan.

This Annual Report on Compliance is published as of the date of this letter. Liberty Utilities may, if it wishes to do so, file a public response to this Annual Report on Compliance within 14 calendar days of the date of publication. Comments must be submitted to the Energy Safety's E-Filing system in the 2023 Annual Report on Compliance docket.[1]

Sincerely,

Patrick Doherty
Program Manager | Compliance Assurance Division
Electrical Infrastructure Directorate
Office of Energy Infrastructure Safety

[1] Submit responses to the 2023-ARC docket via the Office of Energy Infrastructure Safety's E-Filing system here: https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2023-ARC.

OFFICE OF ENERGY INFRASTRUCTURE SAFETY

2023 ANNUAL REPORT ON COMPLIANCE

LIBERTY UTILITIES

July 2025

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Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) is tasked with evaluating and either approving or denying Wildfire Mitigation Plans (WMPs) annually filed by electrical corporations pursuant to Public Utilities Code section 8386 *et seq*. The law also directs Energy Safety to ensure that the electrical corporations have complied with their WMPs.

Energy Safety's evaluation found that Liberty Utilities (Liberty) completed 33 of 39 (85%) of its 2023 targets for initiative activities and objectives in its 2023-2025 Base WMP (2023 WMP), including eight of the 10 initiatives with the largest planned expenditure. However, Liberty failed to meet targets for six of its 2023 WMP initiative activities and objectives.

In general, Liberty spent above the planned amounts on its 2023 WMP initiatives by over $19.6 million in capital expenditures and around $3 million below the planned amounts in operating expenditures for a total of approximately $16.7 million above the planned amounts in the aggregate. Liberty's actual expenditure, in excess of its planned expenditure, was attributed to completing more work than originally planned, higher costs for equipment and work, and projecting and recording work under different initiatives.

On average, ignitions in Liberty territory have occurred once a year from 2016 to 2023. The number of raw wires down and outages decreased in 2023 compared to the two previous years. Liberty reported no Public Safety Power Shutoff (PSPS) events, acres burned, or structures damaged in 2023.

Energy Safety conducted its compliance review process through a variety of means including field inspections and analysis of data submitted by Liberty to Energy Safety. Energy Safety also evaluated several performance metrics, including metrics that reveal the risk on Liberty's system. Energy Safety additionally reviewed Liberty's self-assessment in its Electrical Corporation Annual Report on Compliance (EC ARC) and the findings of its independent evaluator.

Taken together, Energy Safety has identified areas for improvement in Liberty's accuracy of documentation of its WMP implementation. Liberty's various sources of reporting on 2023 initiative progress were incomplete and inconsistent. Additionally, Energy Safety observed that 95% of Liberty's reports of unplanned outages were categorized as "unknown" without further explanation.

Energy Safety expects Liberty to improve the accuracy of its documentation going forward.

Energy Safety acknowledges that in 2023, Liberty undertook efforts to reduce its wildfire risk, and in several instances achieved its WMP initiative activity targets.

On balance, Liberty was successful in executing its plan for wildfire risk mitigation. However, there are still areas for improvement and continued learning.

1. Introduction

This Annual Report on Compliance presents the Office of Energy Infrastructure Safety's (Energy Safety's) statutorily mandated assessment of Liberty Utilities' (Liberty's) compliance with its 2023 targets for initiatives and objectives in its 2023-2025 Base Wildfire Mitigation Plan (2023 WMP). While the 2023-2025 Base WMP considers activities over a three- and ten-year horizon, this report only addresses targets established for initiatives and objectives for the 2023 compliance year. Therefore, this report uses the term "2023 WMP" to refer to portions of the 2023-2025 Base WMP addressed by this report.

In the sections that follow, Energy Safety describes the statutory and regulatory basis for its reporting, the information supplied by the electrical corporation, and the independent evaluation conducted by Energy Safety to examine Liberty's execution of its 2023 WMP and how its infrastructure performed in 2023 relative to wildfire risk. Finally, Energy Safety provides its conclusions, observations, and recommendations for further actions by Liberty.

1.1 Compliance Process

The statutory objective of electrical corporation wildfire mitigation planning efforts is to ensure that electrical corporations are constructing, maintaining, and operating their infrastructure in a manner that will minimize the risk of catastrophic wildfire.[1]

Energy Safety's 2024 Compliance Process, as approved by the California Public Utilities Commission, establishes the parameters for this Annual Report on Compliance. Consistent with the 2024 Compliance Process, this report considers the totality of all compliance assessments completed with respect to Liberty's 2023 WMP. This includes all inspection, audit, investigation, and data analysis work performed by Energy Safety, as well as separate electrical corporation and independent third-party evaluations of compliance.[2]

Energy Safety evaluated whether the electrical corporation met the 2023 WMP targets for initiatives and objectives, looking specifically at whether the electrical corporation funded and performed the work stated for each initiative.[3]

[1] Pub. Util. Code § 8386(a).
[2] Compliance Process, page 8.
[3] Compliance Process, page 8.

2. Liberty's 2023 Wildfire Mitigation Plan

Liberty submitted a comprehensive WMP in 2023 covering a three-year term from 2023 through the end of 2025.

Energy Safety approved Liberty's 2023 WMP on February 5, 2024.[4] Liberty's 2023 WMP highlighted its revised approach to assessing grid hardening efforts and vegetation management work to "… review holistically what is effectively working system-wide to reduce wildfire risk."[5] Additionally, Liberty planned to implement risk mitigation efforts by utilizing "… updated risk metrics and analyses available in conjunction with subject matter experts from operations, vegetation management, wildfire prevention and engineering."[6]

The 2023 WMP also contains three- and ten-year objectives.

Selected three-year objectives include:[7]

- Building out a Sensitive Relay Profile (SRP) program (initiatives GDOM-GO-01, GH-08, and SA-02).
- Complete vegetation risk modeling (initiatives VFM-05 and VFM-06); and
- Implement maintenance program for weather stations (initiative SA-01).

Selected ten-year objectives include:[8]

- Continue installing covered conductor in high fire risk areas (initiative GDOM-GH-01);
- Implement an Integrated Vegetation Management (IVM) monitoring program (initiatives VFM-04 and ESG-01); and
- Improve weather forecasting (initiative SA-01).

Of particular importance are the following objectives which have targets or goals for the 2023 compliance year:

- Determine weather station network capacity (initiative SA-01);[9]

[4] WMP Decision.
[5] 2023 WMP, page 6.
[6] 2023 WMP, page 6.
[7] 2023 WMP, pages 6-8.
[8] 2023 WMP, pages 135-137.
[9] 2023 WMP, page 258.

- Work with AlertWildfire to own and operate cameras to track smoke and fires (initiative SA-03);[10] and
- Update workforce training on Liberty's Incident Command System (ICS) (initiatives EP-01 and EP-02).[11]

Descriptions of the activities and objectives of the programs and initiatives contained in Liberty's 2023 WMP are listed in the table in Appendix A.

3. Liberty's Annual Report on Compliance

Public Utilities Code section 8386.3(c)(1) directs electrical corporations to file a report addressing the electrical corporation's compliance with their WMP during a compliance year. This document is known as the Electrical Corporation Annual Report on Compliance (EC ARC).

Energy Safety's 2023 Compliance Guidelines outlined the requirements for an EC ARC prepared to address the 2023 compliance year and filed by the electrical corporation in early 2024. The EC ARC was required to detail the electrical corporation's self-assessment of its compliance with the 2023 WMP during the 2023 compliance period.[12]

Liberty submitted its EC ARC to Energy Safety on March 29, 2024.[13] The following is a narrative summary of the EC ARC.

In general, Liberty asserted that it met the risk reduction goals outlined in its 2023 WMP. According to Liberty's 2023 EC ARC, Liberty implemented and tracked the progress of 37 different mitigations outlined in its 2023 WMP.[14]

Liberty stressed that through its WMP initiatives, it minimized societal consequences of wildfires and PSPS events, with special consideration to the impact of Access and Functional Needs (AFN) populations and marginalized communities.[15]

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[10] 2023 WMP, page 258.
[11] 2023 WMP, page 286. Liberty reported progress to this WMP activity work under initiative EP-02 instead of EP-01 as planned in the approved 2023 WMP.
[12] Compliance Guidelines, pages 6-10.
[13] EC ARC.
[14] EC ARC, pages 2-10.
[15] EC ARC, page 2.

3.1 EC ARC Information on Initiative Completion

In the EC ARC, Liberty maintained that it met or exceeded the risk reduction intent, as described in the 2023 WMP, for all 37 program initiatives. [16] Liberty highlighted the following as key accomplishments in 2023:

- Completing 9.2 miles of traditional overhead hardening, exceeding its target of four miles.
- Replacing 292 poles, exceeding its target of 200 transmission or distribution poles.
- Replacing 4,122 expulsion fuses, exceeding its target of 3,800 fuses.
- Replacing 4.4 miles of open/grey wire, exceeding its target of 2.5 miles.
- Completing 2,975 intrusive pole inspections, exceeding its target of 2,867 inspections.
- Completing wood and slash management on 625 acres, exceeding its target of 280 acres.

Additionally, of the 37 mitigations, Liberty included progress for three initiatives without established targets in its approved WMP:

- Completing 0.1 miles of drone infrared asset inspections for a pilot program.
- Completing 78 miles of vegetation patrol work.
- Completing 702 miles of vegetation management clearances.

Finally, Liberty did not report progress against the following five initiatives from its 2023 WMP:

- 8.2.3.6 High Risk Species (VM-VFM-06)
- 8.2.3.7 Fire Resilient Right of Ways (VM-VFM-04)
- 8.2.4 Vegetation Management Enterprise System (VM-ESG-01)
- 8.2.6 Open Work Orders (no initiative tracking ID assigned)
- 8.2.7 Workforce Planning (no initiative tracking ID assigned)

3.2 EC ARC Information on Initiative Funding

In general, Liberty indicated in the EC ARC that it spent above the planned amounts on its 2023 WMP initiatives by approximately $16.6 million in aggregate.[17] Liberty met targets for eight of the 10 initiatives with the largest planned expenditures. In total, Liberty spent more

[16] The 37 initiatives reported in the EC ARC vary from the 39 initiatives (from the approved WMP) that Energy Safety assessed in this ARC. An example of the differences is further described in this section 3.1.
[17] EC ARC, pages 11-14.

than projected on 17 initiatives due to various reasons, including: completing more work than planned, higher costs for equipment and projects, and projecting and recording work under different initiatives.

4. Independent Evaluator ARC for Liberty

Energy Safety, in consultation with the Office of the State Fire Marshal, annually publishes a list of entities qualified to serve as independent evaluators of WMP compliance.[18] Each electrical corporation is then required to hire an independent evaluator (IE) from the list to perform an independent WMP compliance assessment.[19]

The IE reviews and assesses the electrical corporation's compliance with its approved WMP. As part of its evaluation, the IE must determine whether the electrical corporation failed to fund any activities included in its plan.

On July 1st of each year, the IE issues its Independent Evaluator Annual Report on Compliance (IE ARC) for a given electrical corporation.[20]

The 2023 IE ARC for Liberty was prepared by Bureau Veritas North America, Inc. The IE ARC included a review of the wildfire mitigation initiatives and activities implemented in 2023, and an accounting of whether Liberty met its performance targets, underfunded any of the initiatives, and followed its quality assurance and quality control (QA/QC) processes.

The IE determined that Liberty met its initiative activities and objectives outlined in the approved Liberty 2023 WMP.[21] The IE also evaluated Liberty's funding of initiatives.

The IE ARC listed over 60 initiatives although only a subset of those initiatives had planned work and a planned expenditure applicable to Liberty's 2023 WMP.

The IE determined that Liberty spent less than planned on 20 initiatives across multiple categories with the most notable differences in Grid Design, Operations and Maintenance for a total of $1,729,000; Vegetation Management and Inspections for a total of $4,952,000; and Emergency Preparedness for a total of $1,192,000.

The IE also noted that Liberty had significant deviations on funding for capital projects of $100,000 or more while projects of $5,000 or less showed better alignment between planned

[18] Pub. Util. Code § 8386.3(c)(2)(A).
[19] Pub. Util. Code § 8386.3(c)(2)(B)(i).
[20] Pub. Util. Code § 8386.3(c)(2)(B)(i).
[21] IE ARC, page 83.

and actual expenditures.[22] The category with the largest capital expenditure that was less than planned was Grid Design, Maintenance and Operations, with a total underspend of $8,553,820.[23] Despite this determination, the IE stated that 19 of the 20 initiatives with less spending than planned nevertheless satisfied the risk reduction intent of the 2023 WMP.

The IE noted that in 2023, Liberty expanded wildfire mitigation work capabilities from previous years, made considerable improvement in wildfire modeling, and enhanced procedures for standards and overall governance process.[24]

5. Energy Safety Evaluation of WMP Initiative Completion

Energy Safety's evaluation of Liberty's performance in 2023 indicates that Liberty attained 33 of its 39 targets (85%) for its 2023 WMP initiative activities and/or objectives and did not attain six of 39 targets (15%) for its 2023 WMP initiative activities and objectives. The subsections below describe Energy Safety's evaluation of Liberty's execution of its 2023 WMP.

5.1 Liberty 2023 WMP Initiative Activities Assessed by Energy Safety

Energy Safety assessed 39 wildfire mitigation initiatives from the 2023 WMP. The initiatives are grouped into five main categories:

1. Grid Design, Operations and Maintenance with 14 initiatives assessed and a funding budget of $29.9 million for the assessed initiatives.
2. Vegetation Management and Inspections with 15 initiatives assessed and a funding budget of $13.5 million for the assessed initiatives.[25]
3. Situational Awareness and Forecasting with four initiatives assessed and a funding budget of $1.3 million for the assessed initiatives.
4. Emergency Preparedness with three initiatives assessed and a funding budget of $100,000 for the assessed initiatives.
5. Community Outreach and Engagement with three initiatives assessed and a funding budget of $90,000 for the assessed initiatives.

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[22] IE ARC, pages 65-73.
[23] IE ARC, pages 71 and 73
[24] IE ARC, page 64.
[25] Energy Safety's SVM Audit assessed 13 initiatives. For the purposes of this ARC, Energy Safety has itemized the Vegetation Management Inspection Program from one initiative to three initiatives. This brings the vegetation management and inspection initiative count to 15 initiatives.

A complete list of initiatives appears in Appendix A, Table 6.

The initiative assessment process included comparing the actual initiative completion figures reported by Liberty in the QDR, the EC ARC, and the IE ARC.[26] In some cases, a data request may have been issued by Energy Safety to answer specific questions. If information from a data request is used in the assessment, a citation is provided for the specific instance. Finally, the Substantial Vegetation Management (SVM) Audit and Report were also contributing sources to Energy Safety's ARC assessment.[27]

5.2 Energy Safety's Substantial Vegetation Management Audit

Public Utilities Code section 8386.3(c)(5) requires Energy Safety to perform an audit of the work performed by, or on behalf of, an EC with respect to the vegetation management requirements in its WMP.[28] Energy Safety refers to this audit as the SVM Audit. Pursuant to section 8386.3(c)(5), Energy Safety conducted an audit of Liberty's work with respect to its vegetation management requirements for the 2023 compliance year.

On April 2, 2025, Energy Safety issued its SVM Audit for Liberty.[29] In the SVM Audit, Energy Safety reviewed 13 vegetation management initiatives detailed in Liberty's 2023 WMP and found that Liberty did not perform all the work specified for five of 13 vegetation management initiatives and required Liberty to provide a Corrective Action Plan response within 30 days from the issuance of the SVM Audit.[30] On May 2, 2025 Liberty submitted its Corrective Action Plan to Energy Safety.[31] Energy Safety issued a SVM Audit Report on June 26, 2025, which found that Liberty had substantially complied with four out of the five deficient initiatives.

The specific findings from Energy Safety's SVM Audit Report are detailed in Appendix B.

5.3 Liberty WMP Objective and Initiative Activity Attainment in 2023

Energy Safety assessed 39 wildfire mitigation initiative activities from the 2023 WMP and found that six initiative activities were not completed (15%). The six incomplete initiative activities, or non-attainment initiative activities, accounted for 22% ($10 million) of the planned 2023 WMP budget. Of the ten largest initiatives by planned budgeted amount, two

[26] 2023 Q4 QDR; EC ARC; IE ARC.
[27] SVM Audit; SVM Audit Report.
[28] Pub. Util. Code § 8386.3(c)(5).
[29] SVM Audit.
[30] SVM Audit, page 6.
[31] SVM Audit Corrective Action Plan.

had targets that were not attained: undergrounding of electric lines or equipment, and installation of system automation equipment.

Energy Safety also assessed 2023 objectives that had targets associated with work performed in 2023. Energy Safety found that all the targets related to 2023 WMP objectives were met.

Liberty successfully completed 33 of its 2023 WMP initiative activities and objectives, and in some cases exceeded the planned targets, including the following examples:

- 8.1.2.2 – Covered Conductor Installation, met a target to install covered conductor on 5.7 miles of circuit.
- 8.1.2.3 - Distribution/Transmission pole replacements and reinforcements, installed 292 poles against a target of 200.
- 8.1.2.5 – Traditional Overhead Hardening, hardened 9.2 miles of circuit against a target of four miles.
- 8.1.2.12 – Expulsion fuse replacement, installed 4,122 fuses against a target of 3,800.
- 8.3.2 – Environmental Monitoring Systems, met a target to install five weather stations.

A descriptive list of the six 2023 WMP initiative activities not completed is shown below in Table 1. In the 2023 WMP, Liberty did not provide a percentage of risk impact for its target initiatives as it was in the process of designing a program to make such calculations.[32] For that reason, this report does not attempt to quantify the risk impact of the non-attained initiative targets, although it presumes that some amount of planned risk reduction did not occur due to those missed targets.

[32] In 2023 Liberty worked with Direxyon, a consultant, to design a program to calculate percentages of risk impacts. This program began with a pilot project for distribution pole replacement and repair as the test subject. While Liberty did not report on the effectiveness of the pilot project, Liberty stated it would continue to test the program with other initiatives and will continue to use the results from its first-generation wildfire risk model. 2023 WMP, page 138.

Table 1. Liberty 2023 WMP Initiative Activities That Were Not Attained[33]

2023 WMP Initiative Name and Tracking IDs	2023 Initiative Activity	Details of Non-attainment and Rationale	Risk Goal Achieved
Undergrounding of Electric Lines or Equipment 8.1.2.2 GDOM-GH-02	Undergrounding 1.37 miles of electrical equipment to mitigate wildfire risks	Liberty reported completing 0.1 miles.[34] Liberty stated it was unable to find a civil contractor that could meet the planned budget of approximately $7.7 million.[35]	No, only 6% of target completed.
Installation of System Automation Equipment 8.1.2.8 GDOM-GH-08	Install eight reclosers	Liberty installed five reclosers in 2023. Based on the University of Nevada-Reno's study and recommendations to Liberty, it was determined there was no added value beyond the five reclosers.[36] Liberty overspent on this initiative by $312,490.	No, only 63% of target completed.

[33] EC ARC, pages 2-10.
[34] EC ARC, page 4.
[35] 2023 WMP, page 161; EC ARC, page 11.
[36] EC ARC, pages 4-5.

2023 WMP Initiative Name and Tracking IDs	2023 Initiative Activity	Details of Non-attainment and Rationale	Risk Goal Achieved
Tree Attachments Removals 8.1.2.12a GDOM-GH-12a	Remove conductors from 60 trees and reset to new poles	Liberty completed 37 tree attachment removals. Many of the tree attachments are on private property. Liberty stated it was unable to complete this initiative due to the need to obtain easements from customers. Liberty stated that it is working on a streamlined process. [37] This initiative spent more than planned by $197,557.[38]	No, only 62% of target completed.
Open Work Orders 8.2.6	Create and maintain a system to track, classify and address timely completion of vegetation management work with an emphasis on any work classified as Priority 1	Documentation provided by Liberty showed that it did not meet its mitigation commitments for the two highest priority categories.[39]	No.

[37] EC ARC, page 5.
[38] EC ARC, page 11.
[39] SVM Audit, pages A-23-A-25.

2023 WMP Initiative Name and Tracking IDs	2023 Initiative Activity	Details of Non-attainment and Rationale	Risk Goal Achieved
Grid Monitoring Systems 8.3.3 SA-02	Install fault indicators on 10 circuits	Liberty did not install any fault indictors as targeted in 2023.[40] Liberty spent more than planned on this initiative by $604,455. This is because the expenditure includes costs for its SRP program. Liberty stated that both the fault indicators and SRP settings were planned to implement in 2024 instead of 2023.[41]	No, 0% of target completed.
Fire Detection and Alarm Systems 8.3.4 SA-03	Install eight cameras	Liberty did not install any cameras in 2023. It did not have a planned expenditure for this initiative, and did not report on details or rationale of non-attainment.[42]	No, 0% of target completed.

6. Ignition Risk, Outcome Metrics, and Inspections

Energy Safety assessed the performance of Liberty's infrastructure relative to its wildfire risk, as measured by changes in the occurrence of events that correlate to wildfire risk.

Energy Safety requires electrical corporations to report data, such as ignitions, that help Energy Safety assess whether an electrical corporation reduced its wildfire risk while also reducing its reliance on Public Safety Power Shutoff (PSPS) events. For 2023, Energy Safety

[40] EC ARC, page 8.
[41] EC ARC, page 13.
[42] 2023 WMP, page 270.

assessed each electrical corporation's infrastructure performance for the calendar years 2016 through 2023 with particular attention on the 2023 outcomes.

The collection of metrics evaluated are grouped into two categories: Ignition Risk Metrics, and Outcome Metrics. A list of all the metrics in each category is described fully in their respective following sections. For these sections, Energy Safety relied on data reported in the third quarter 2022 QDR for the 2015 through 2021 values, and the fourth quarter 2023 QDR for the 2022 and 2023 values.[43]

Normalizing Metrics

For applicable performance metrics, the normalizing metrics Energy Safety uses are: "Overhead Circuit Miles" (OCM), "High Wind Warning Overhead Circuit Mile Days" (High Wind Warning Days or HWWOCMD), and "Red Flag Warning Overhead Circuit Mile Days" (Red Flag Warning Days or RFWOCMD). To see the values for each year used, see Appendix C, Figure 18 through Figure 26.

Energy Safety uses these normalizing metrics to ensure a more nuanced interpretation of wildfire risk outcomes. For example, the outcome metric of "acres burned" may be impacted by the presence of hot, dry winds and, thus, this metric is presented in both raw counts and normalized by RFWOCMD. In this way, the acres burned are presented "accounting for" year by year variances in weather conditions that may influence the outcome.

Findings

Ignition risk and outcomes metrics findings include:

- From 2016 to 2023, Liberty experienced approximately one ignition annually. Between 2016 and 2021, ignitions were primarily attributed to vegetation contact. In 2022, the leading risk driver shifted to equipment/facility failure or damage before returning to vegetation contact in 2023.
- Wire-down and outage event data indicate improvements in system reliability but highlight persistent risks in High Fire Threat District (HFTD) Tier 2 areas. Wire-down events peaked in 2022 and outage events in 2021, with both declining through 2023. However, HFTD Tier 2 areas remain the primary contributors to ignition events, underscoring the need for continued risk mitigation efforts in high-risk regions.
- Liberty had one PSPS event in 2018 and has not had another one as of the conclusion of the 2023 compliance period.
- For 2023, Liberty reported no acres burned, no injuries or fatalities, no structures destroyed, and no value of assets lost.

[43] 2023 Q4 QDR; 2022 Q3 QDR; Response to Data Request 281.

- Over 95% of unplanned outages are classified by Liberty as having causes that are "unknown." This creates difficulties in analyzing the risks posed by unplanned outages, and therefore Energy Safety finds that Liberty should allocate resources to improve cause identification for unplanned outages.

6.1 Ignition Risk Metrics

Energy Safety reviewed the following metrics associated with ignition risk:

1. *Ignitions* – Incidents in which electrical corporation infrastructure was involved in an ignition,
2. *Wire Down Events* – Incidents in which overhead electrical lines fall to the ground, land on objects, or become disconnected from their moors,
3. *Unplanned Outages* – All unplanned outages experienced,
4. *PSPS Events* – Planned outages called PSPS events.

6.1.1 Ignition Data Analysis

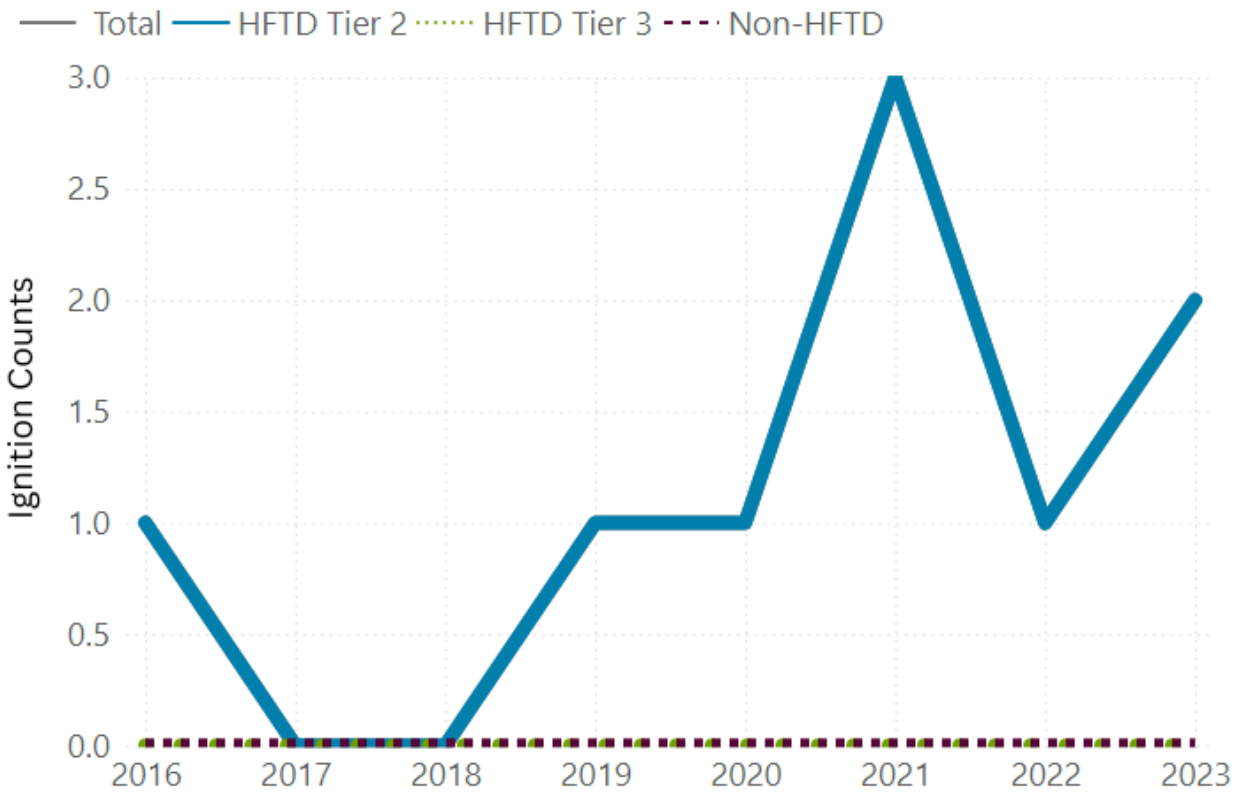
The ignition data analysis section examines ignitions stemming from distribution and transmission lines with particular attention paid to HFTD Tier 2 and HFTD Tier 3 areas.[44] In addition to showing raw ignition counts, ignitions are normalized by OCM, HWWOCMD, and RFWOCMD. Liberty's service territory is divided into three primary area designations: Non-HFTD, HFTD Tier 2, and HFTD Tier 3. For a sense of scale, the percent of Liberty's circuit miles for each territory type is as follows: non-HFTD = 6%, HFTD Tier 2 = 85%, and HFTD Tier 3 = 9%.[45]

[44] 2023 Q4 QDR, Table 6; .2022 Q3 QDR, Table 7.2.
[45] 2022 Q3 QDR, Tables 6 and 8; 2023 Q4 QDR, Tables 4 and 7.

Raw Ignition Counts

Raw ignition counts remained consistently low across the years. The lowest number recorded was zero in 2017 and 2018, while the highest was three in 2021 (Figure 1). As a result, the dynamics of the plot can be misleading, as differences between years of only one or two ignitions are not significant. This demonstrates that ignitions for Liberty have remained low from 2016 to 2023, with approximately one ignition occurring per year over this period.

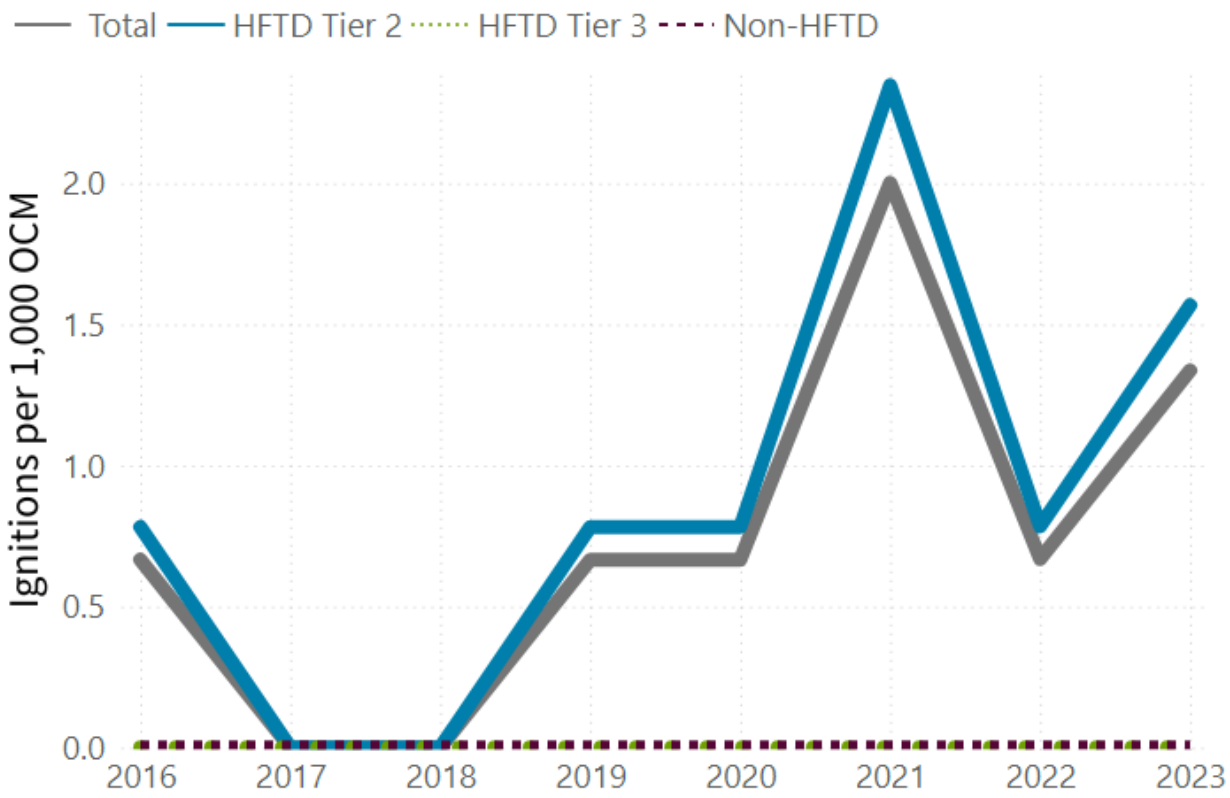
Figure 1. *Liberty Ignition Counts (2016-2023) by HFTD Tier*



Ignitions Normalized by Overhead Circuit Miles

The normalized ignition counts for HFTD Tier 2 areas follow a similar pattern to the raw ignition counts (Figure 2). Ignitions normalized by OCM remained generally constant from 2016 to 2023, with slight fluctuations from 2020 to 2023. In contrast, normalized ignition counts in HFTD Tier 3 and Non-HFTD areas remained consistently at zero over this period.

Figure 2. *Liberty Ignitions Normalized by Overhead Circuit Mile Days (2016-2023) by HFTD Tier*

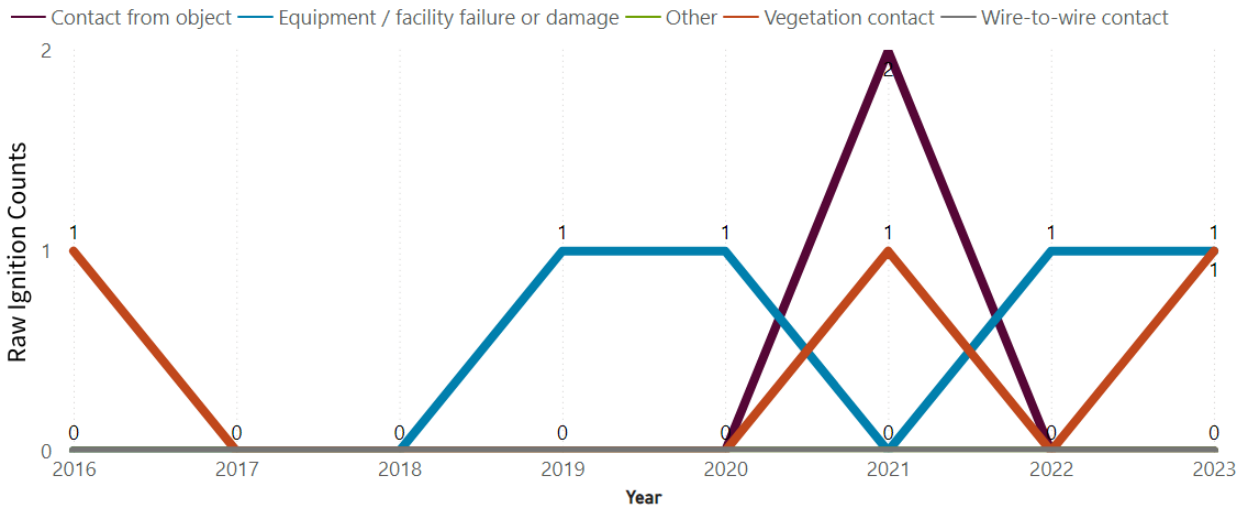


Ignition Counts Delineated by Risk Driver

For insights into the causes of ignitions, ignitions are categorized by risk driver (Figure 3). From 2016 to 2023, ignitions were primarily attributed to equipment/facility failures and vegetation contact.

The highest number of ignition events occurred in 2021, totaling three. Of these, 67% were caused by contact from objects, and 23% were attributed to vegetation contact.

Figure 3. *Liberty Ignition Counts (2016-2023) by Risk Drivers*



Ignitions by HFTD Tier Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

To see more detail on ignitions by HFTD tier normalized by HWWOCMD and RFWOCMD, see Appendix C (Figure 21 and Figure 22).

6.1.2 Wire Down Events Data Analysis

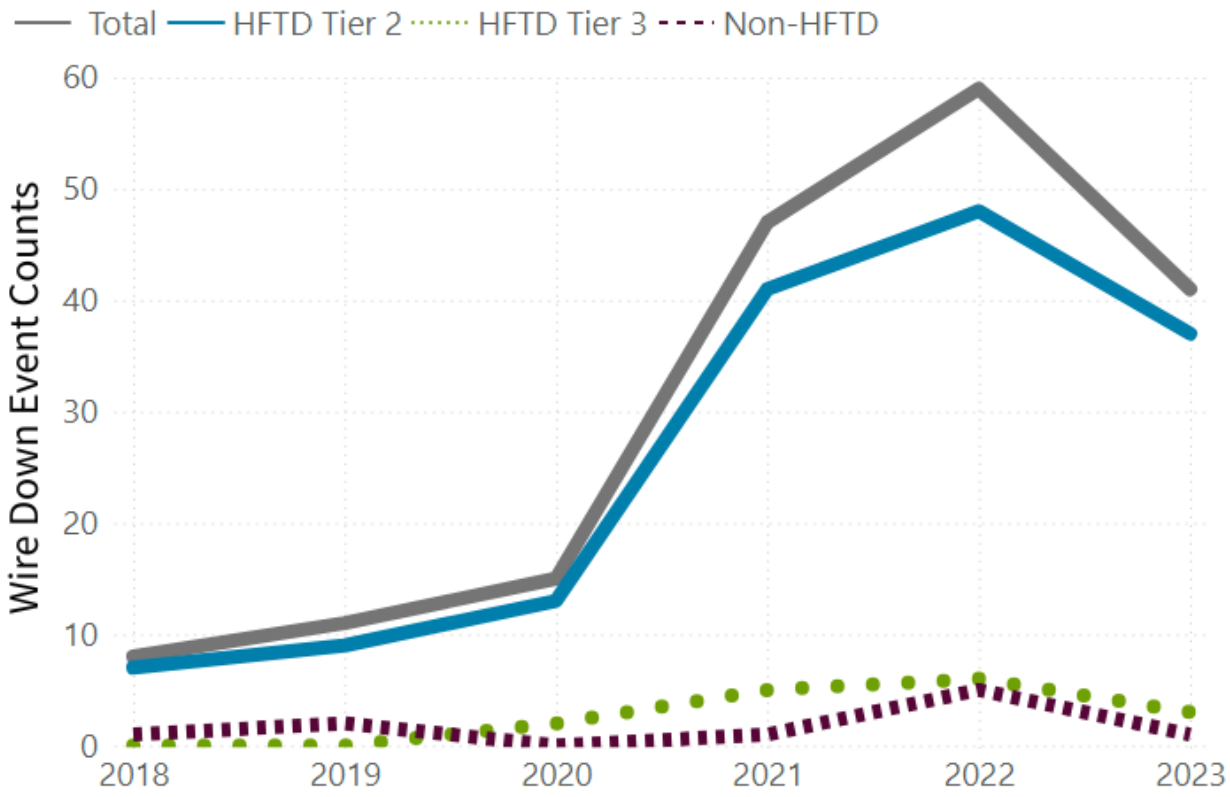
Wire down events are events where a wire is touching the ground, touching an object, or has become disconnected from its mooring. This type of event poses a risk of ignition or a danger to people if that wire is also energized with electricity. The data source for wire down event information is the QDRs.[46]

[46] 2022 Q3 QDR, Table 7.1; 2023 Q4 QDR, Table 5.

Raw Wire Down Events

The Liberty wire down event counts show increases across HFTD Tier 2 areas from 2018 to 2023 (Figure 4). Total wire down events peaked in 2022, followed by a decrease of approximately 30% in 2023. The non-HFTD areas consistently reported the lowest number of events, with a small increase in 2021. The HFTD Tier 3 areas remained relatively stable, with a slight rise in 2020 to 2022, and then decreasing in 2023.

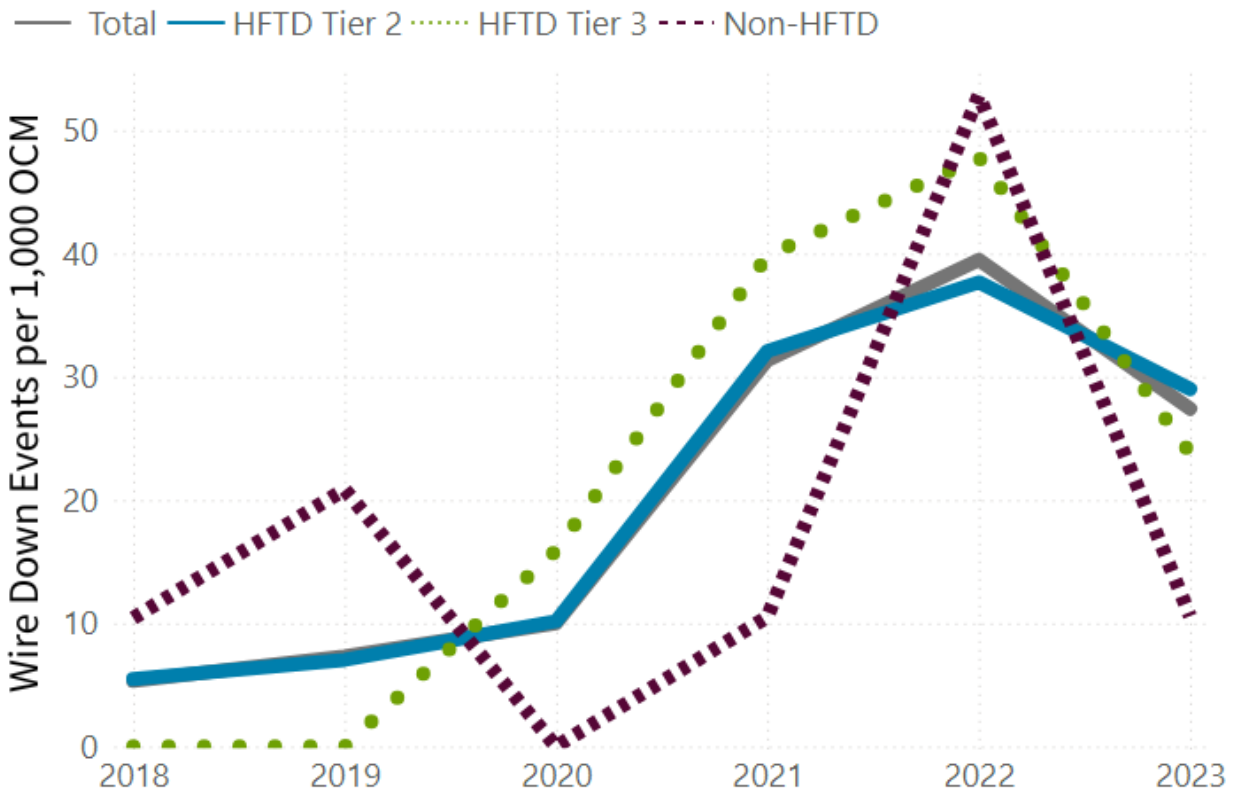
Figure 4. Liberty Wire Down Event Counts (2018-2023) by HFTD Tier



Wire Down Events Normalized by Overhead Circuit Miles

The Liberty wire-down events, normalized by OCM, show variations across HFTD Tier 2, HFTD Tier 3, and Non-HFTD areas from 2016 to 2023 (Figure 5). HFTD Tier 2 and 3 areas remained relatively low from 2018 to 2019, rose to their highest point in 2022, and then decreased in 2023. Non-HFTD areas experienced changes over the period, with the highest level occurring in 2022, alongside rises in 2019 and 2022 and declines in 2020 and 2023.

Figure 5. Liberty Wire Down Events Normalized by OCM (2018-2023) by HFTD Tier



Wire Down Events Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

Please see Appendix C (Figure 23 and Figure 24) for wire down events normalized by HWWOCMD and RFWOCMD.

6.1.3 Outage Event Data Analysis

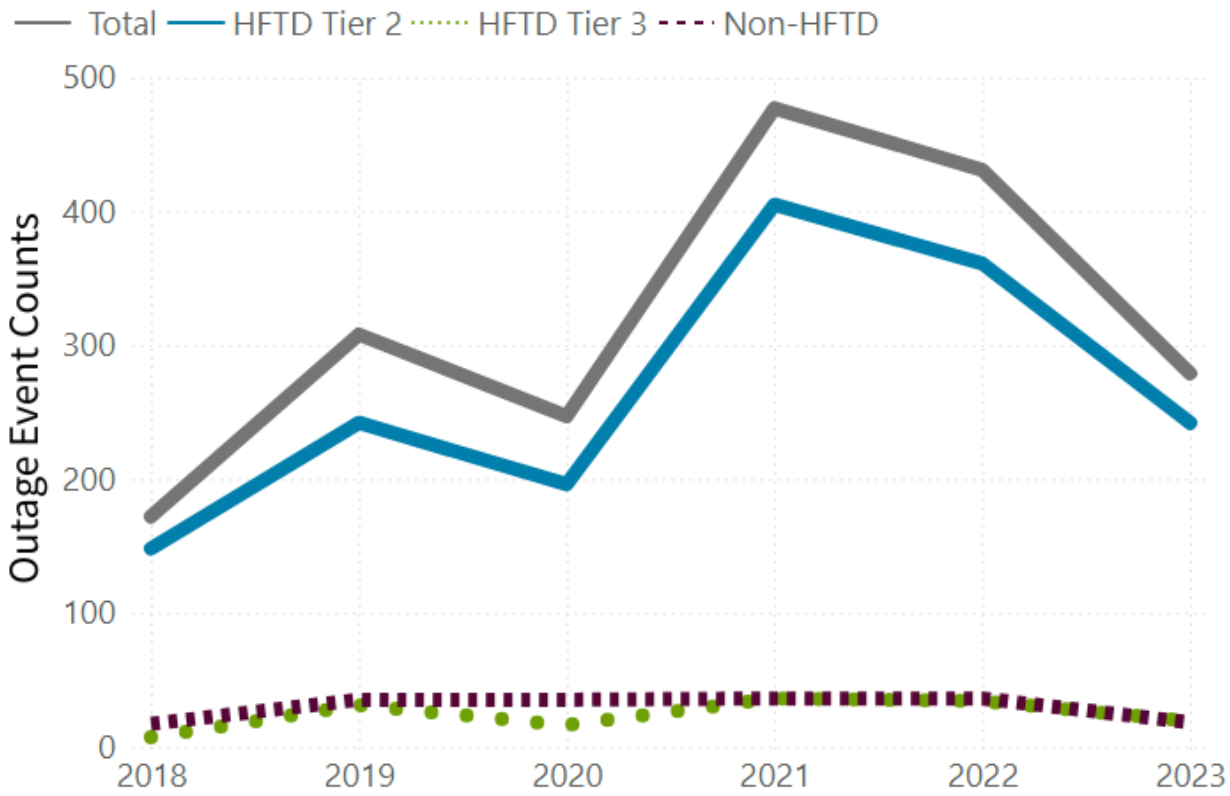
Power outages (outages) are unplanned power outage events (does not include PSPS events) tabulated by circuits and not by number of customers impacted. Outage events are tracked

as outcomes that both may cause ignitions and impact customer's quality of life. The data source for outage event information is the QDRs.[47] It should be noted that Figures 6 and 7 below depict this information by HFTD Tier, but do not display events for 2016 and 2017 because Liberty's submissions for 2016-2017 did not include HFTD classifications. Data consistency improves from 2018 onward.

Raw Outage Event Counts

Total unplanned outage event counts varied between 2018 and 2023, with noticeable rises in 2019 and 2021 (Figure 6). Outage events in HFTD Tier 2 areas were consistently greater than those in HFTD Tier 3 and Non-HFTD areas. Liberty saw a rise in unplanned outages from 2018 to 2021, followed by a decrease from 2022 to 2023 of approximately 35%. Outage counts in HFTD Tier 3 and Non-HFTD areas remained mostly steady, with slight changes over the period.

Figure 6. Liberty Outage Events (2018-2023) by HFTD Tier

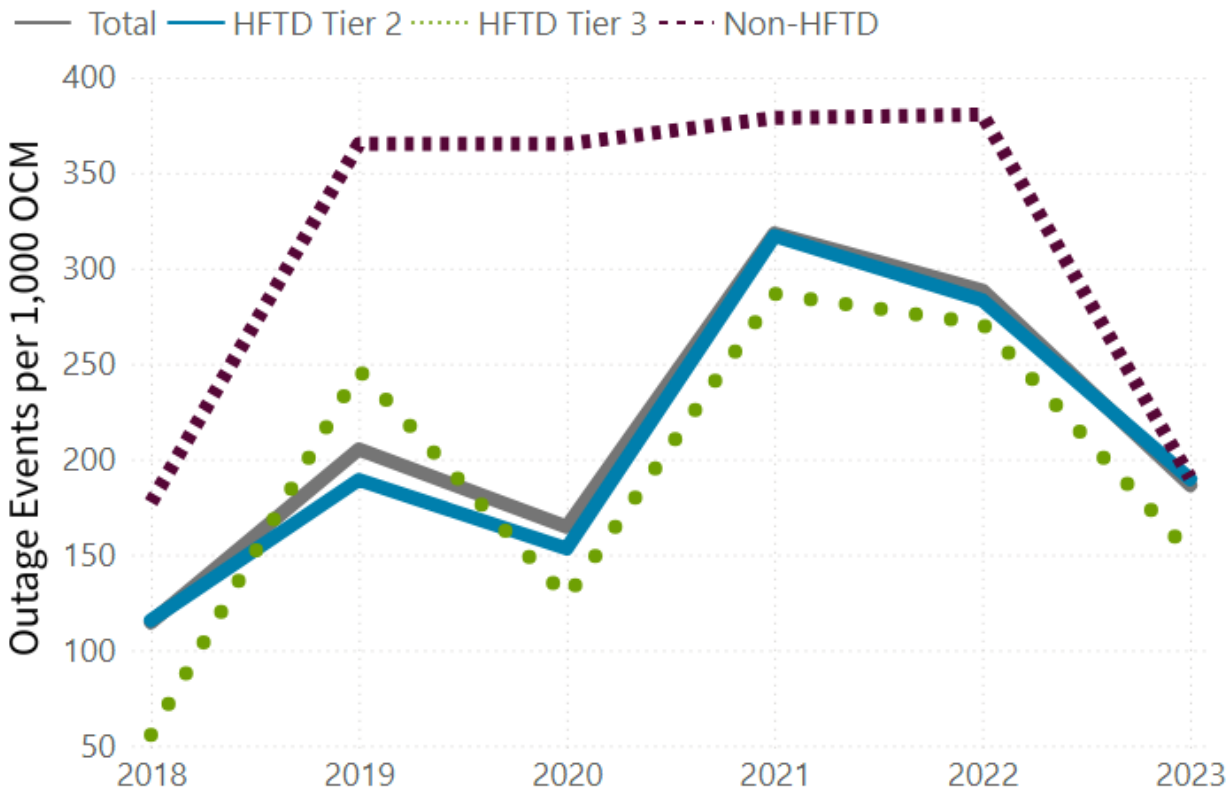


[47] 2022 Q3 QDR, Table 7.1; 2023 Q4 QDR, Table 5.

Outage Events Normalized by Overhead Circuit Miles

Normalized unplanned outage event counts showed changes between 2018 and 2023, with higher levels observed from 2021 to 2022 (Figure 7). Normalized outages in non-HFTD areas were consistently above those in HFTD Tier 2 and Tier 3 areas, with the most pronounced increase occurring from 2019 to 2023. In HFTD Tier 2 and 3 areas, normalized outage events declined in 2019 and from 2021 to 2023, after a steady rise from 2017 to 2021. Both HFTD Tier areas followed a comparable trajectory over this period.

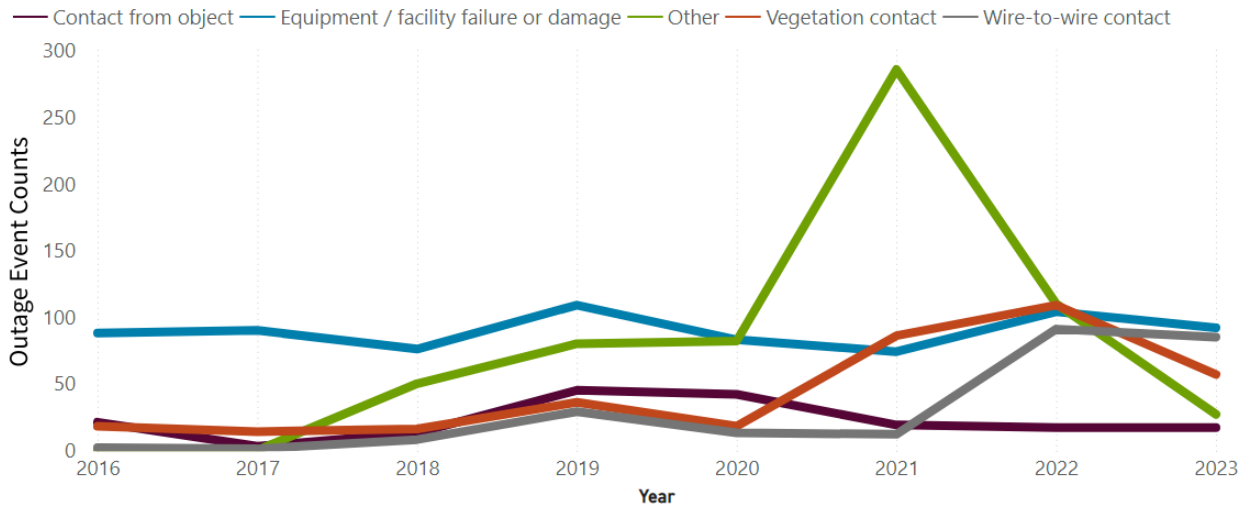
Figure 7. Liberty Outage Events Normalized by OCM (2018-2023) by HFTD Tier



Outage Events Delineated by Risk Driver

To show which causes are the largest contributors to unplanned outage events, the Risk Drivers are shown relative to each other (Figure 8). The largest drivers of unplanned outage events over the period are equipment and facility failures and the category of "Other." The category of "Other" contains several sub-categories such as emergency repairs, lightning, government requests, and vandalism. However, the "Other" category is dominated by the sub-category of unknown (>95%). Although 2023 outage events caused by the "Other" category decreased in 2023, Energy Safety expects that in the future Liberty will determine the cause of unplanned outages, in order to allow for an analysis of the causes that lead to solutions that ultimately reduce the number of unplanned outages.

Figure 8. Liberty Outage Events (2016-2023) by Risk Drivers[48]



Outage Events Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

Please see Appendix C (Figure 25 and Figure 26) for outage events normalized by HWWOCMD and RFWOCMD.

6.1.4 Public Safety Power Shutoff Event Data Analysis

PSPS events are planned outages used as a wildfire mitigation tool during extreme fire conditions such as hot, dry, and windy days. While useful as a wildfire mitigation measure,

[48] While Figure 8 shows outage events for 2016–2017, the previous figures depicting this information by HFTD Tier do not display events for those years because Liberty's submissions for 2016-2017 did not include HFTD classifications. Data consistency improves from 2018 onward.

PSPS events carry their own risks and adverse impacts on customers – particularly vulnerable customers who need electricity. As such, electrical corporations take mitigating actions to reduce the frequency, scope, duration, and impacts of PSPS events.

As PSPS events are typically implemented during extreme fire conditions, the PSPS outcomes are presented first in raw count form and then normalized by RFWOCMD to account for variances in weather across years.

The following five PSPS event parameters are presented by year and comprise the PSPS event data analysis:

- Frequency is measured as the number or count of all PSPS events,
- Scope is measured as the total number of utility circuits impacted because of all PSPS events,
- Duration is measured by the total number of customer-hours because of all PSPS events, and
- Customer Impacts - is measured as the total number of customers affected by all PSPS events, and
- Critical Infrastructure Impacts - Critical Infrastructure is measured as the total number of critical infrastructure locations affected by all PSPS events.

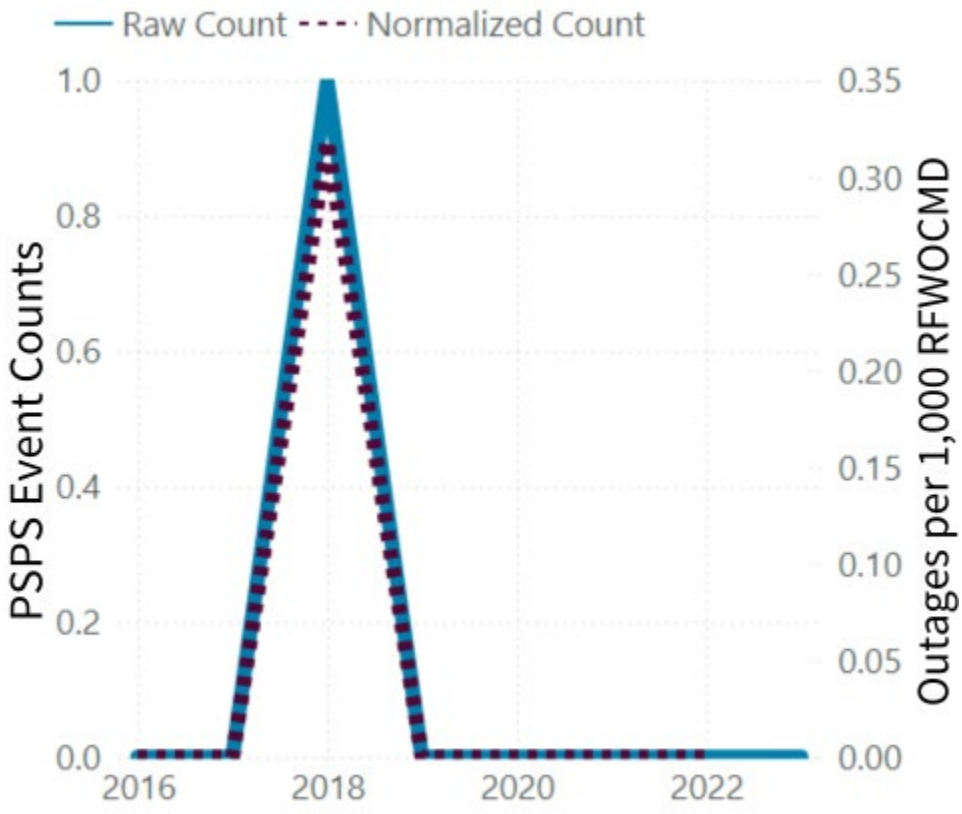
The data source for PSPS events information is the QDRs.[49]

[49] 2022 Q3 QDR, Table 11; 2023 Q4 QDR, Table 10.

Frequency of PSPS Events

Liberty had one PSPS event in 2018 and has not had another PSPS event through 2023 (Figure 9).

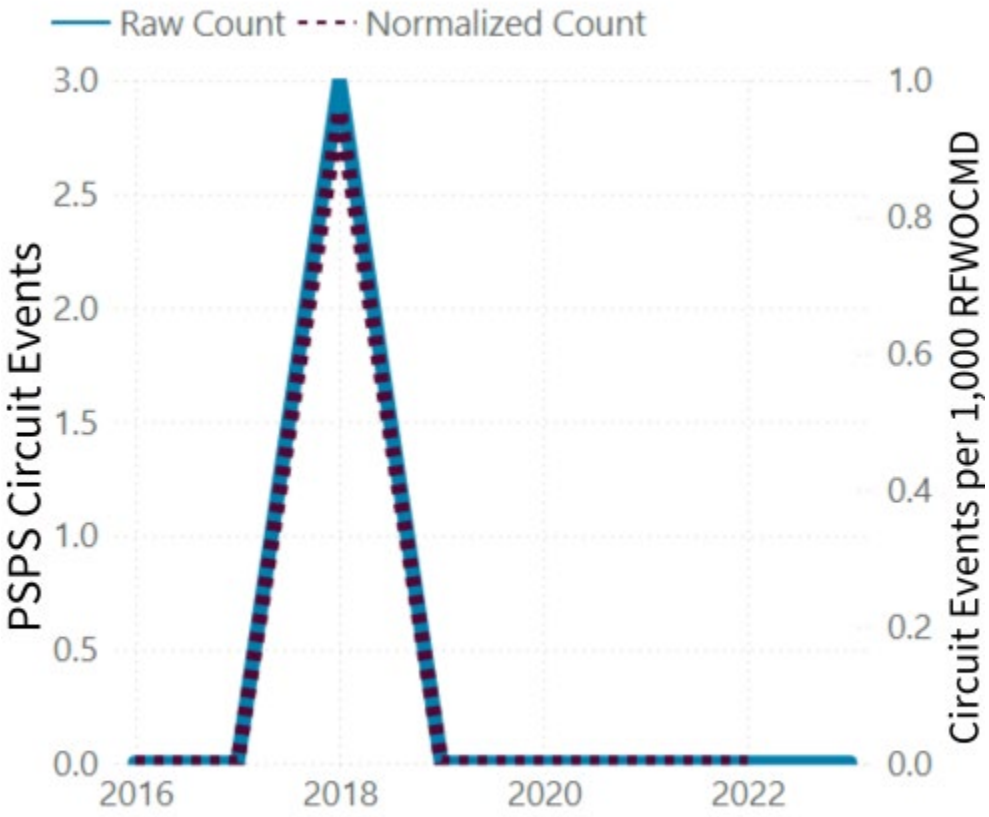
Figure 9. Liberty PSPS Events Frequency and Frequency Normalized by RFWOCMD (2016-2023)



Scope of PSPS Events

Liberty had one PSPS event in 2018 and has not had another PSPS event through 2023 (Figure 10).

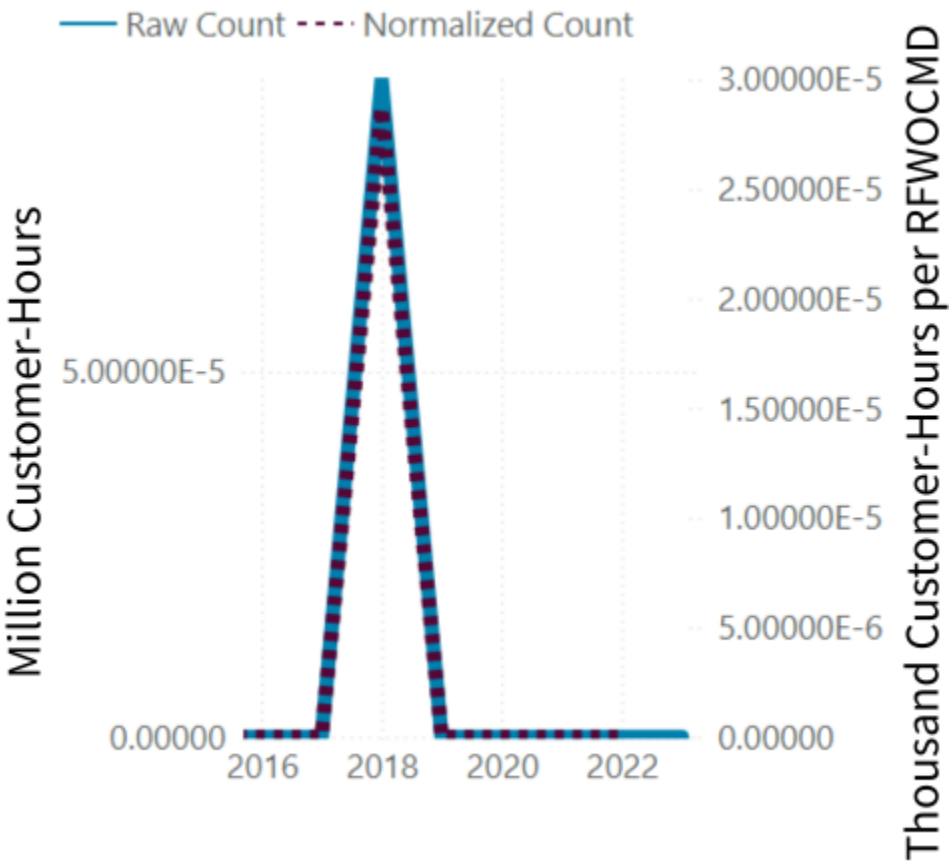
Figure 10. Liberty PSPS Event Scope and Event Scope Normalized by RFWOCMD (2016-2023)



Duration of PSPS Events

The total customer-hours affected by all PSPS events from 2016 to 2023 are displayed. The duration of PSPS events peaked in 2018, followed by a notable decline in subsequent years (Figure 11).

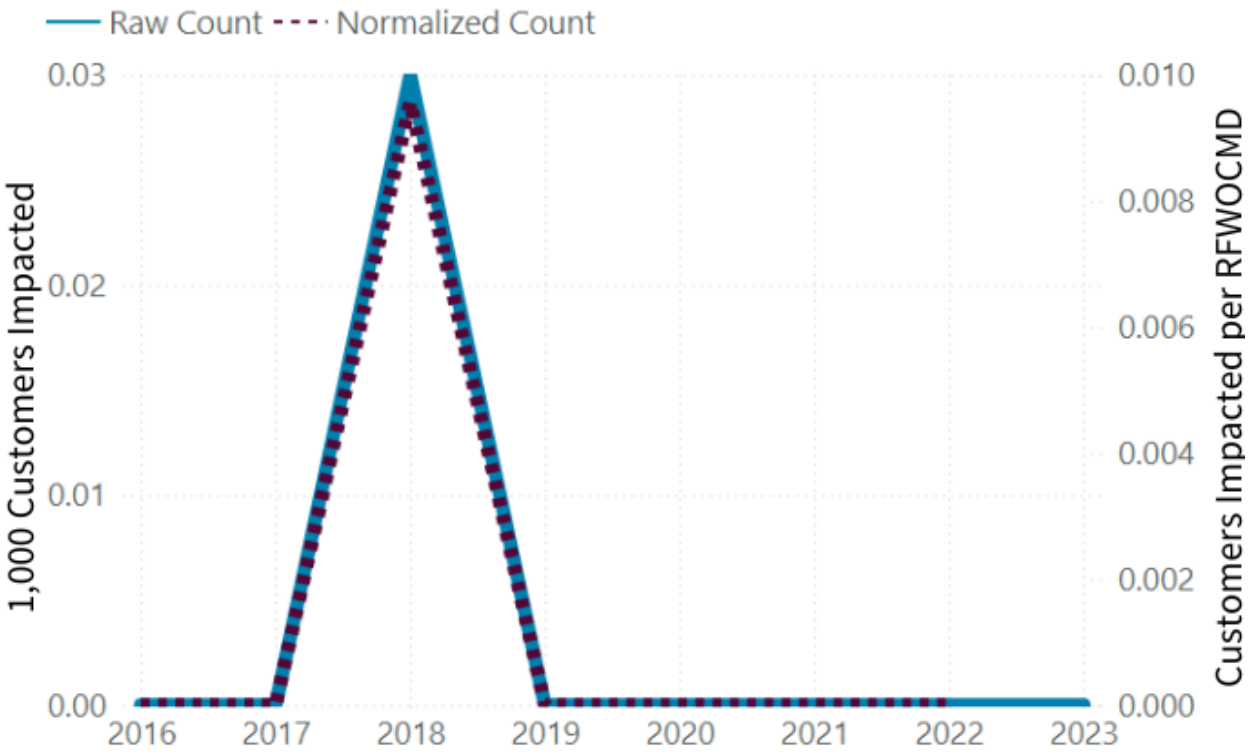
Figure 11. Liberty PSPS Event Duration and Duration Normalized by RFWOCMD (2016-2023)



Customer Impacts of PSPS Events

From 2016 to 2023, the number of customer impacts from PSPS decreased, peaking in 2018, and declining in the following years (Figure 12).

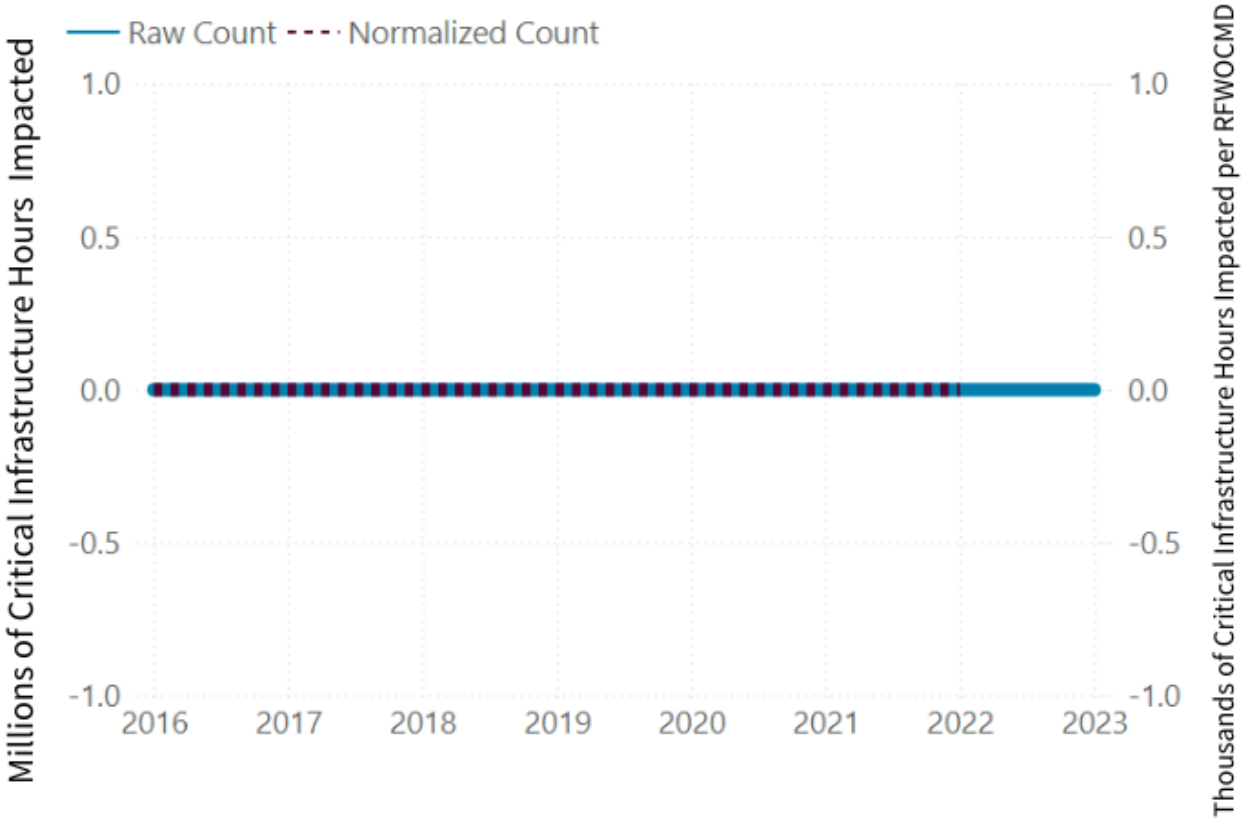
Figure 12. Liberty PSPS Event Impacts on Customers and Event Impacts on Customers Normalized by RFWOCMD (2016-2023)



Infrastructure Impacts of PSPS Events

From 2016 to 2023, the number of critical infrastructure impacts from PSPS stayed at zero (Figure 13).

Figure 13. Liberty PSPS Event Impacts on Critical Infrastructure and Event Impacts on Critical Infrastructure Normalized by RFWOCMD (2016-2023)



6.2 Outcome Metrics

This section presents outcome metrics on electrical corporation-related wildfires including:

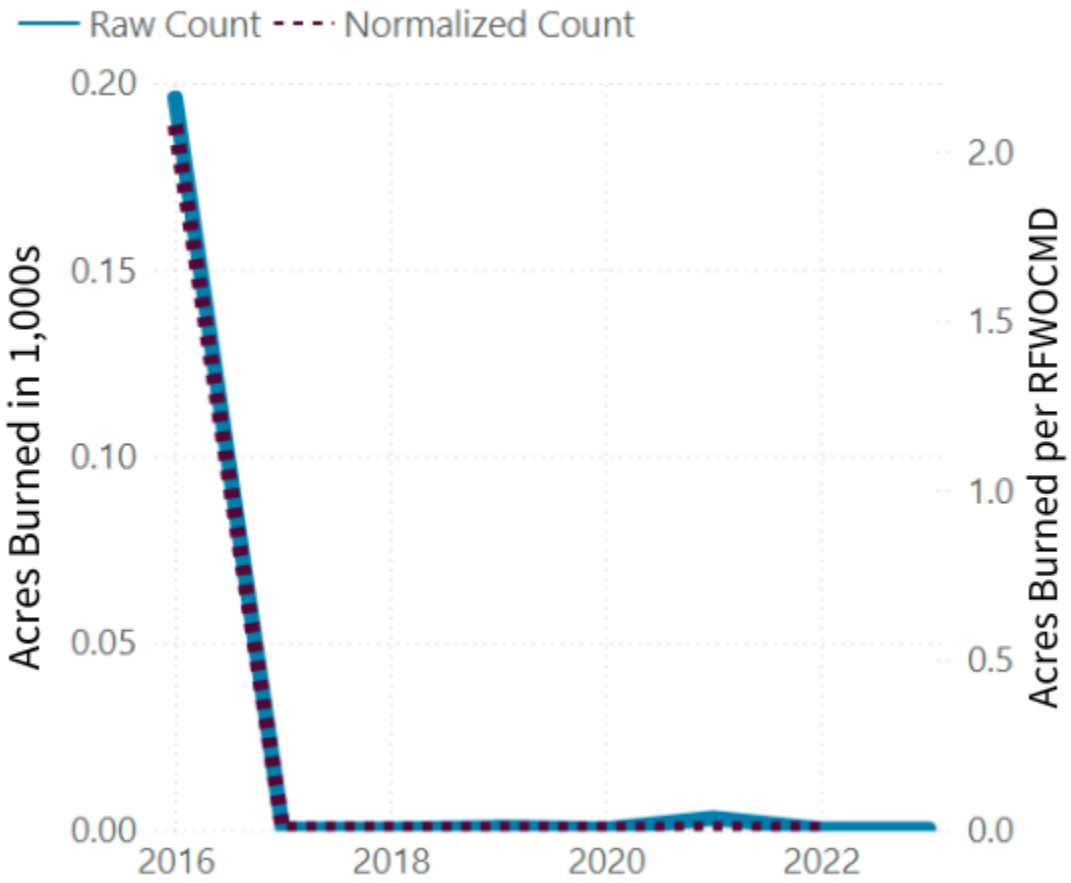
1. *Acres burned* – The total number of acres burned due to electrical corporation caused fires,
2. *Structures damaged/destroyed* - The total number of structures damaged or destroyed due to electrical corporation caused fires,
3. *Injuries/fatalities* - The total number of injuries and fatalities due to electrical corporation caused fires,
4. *Value of assets destroyed* - The total value of assets destroyed due to electrical corporation caused fires.

The data source for outcomes metrics information is the QDRs.[50]

Acres Burned

Acres burned had a value of 196 in 2016. Since then, acres burned were zero, with the exception of 2019 (half of an acre) and 2021 (three acres). In 2023, acreage burned was reported at zero (Figure 14).

Figure 14. Liberty Total Acres Burned and Acres Burned Normalized by RFWOCMD (2016-2023)

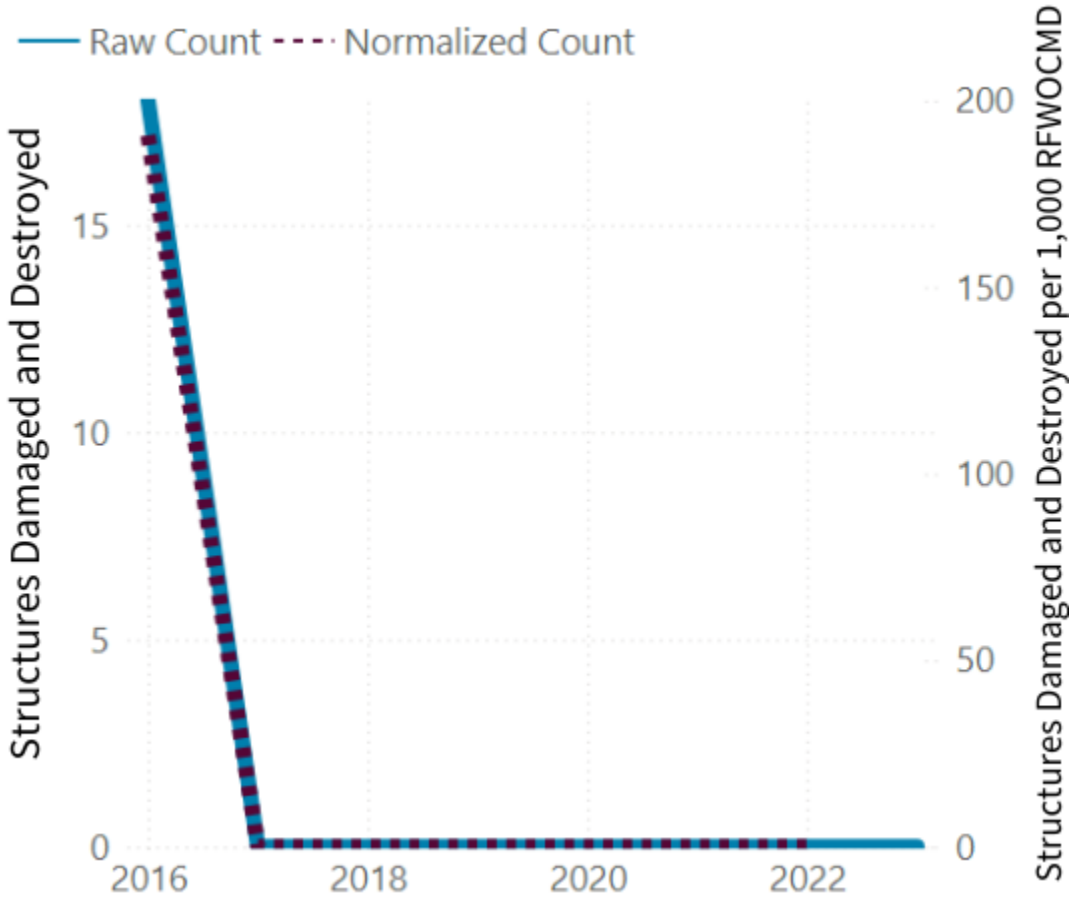


[50] 2023 Q4 QDR, Table 2; 2022 Q3 QDR, Table 2.

Structures Damaged or Destroyed

Liberty has only reported structure destruction once, with 18 structures destroyed in 2016 (Figure 15).

Figure 15. Liberty Structures Damaged or Destroyed and Structures Damaged or Destroyed Normalized by RFWOCMD (2016-2023)



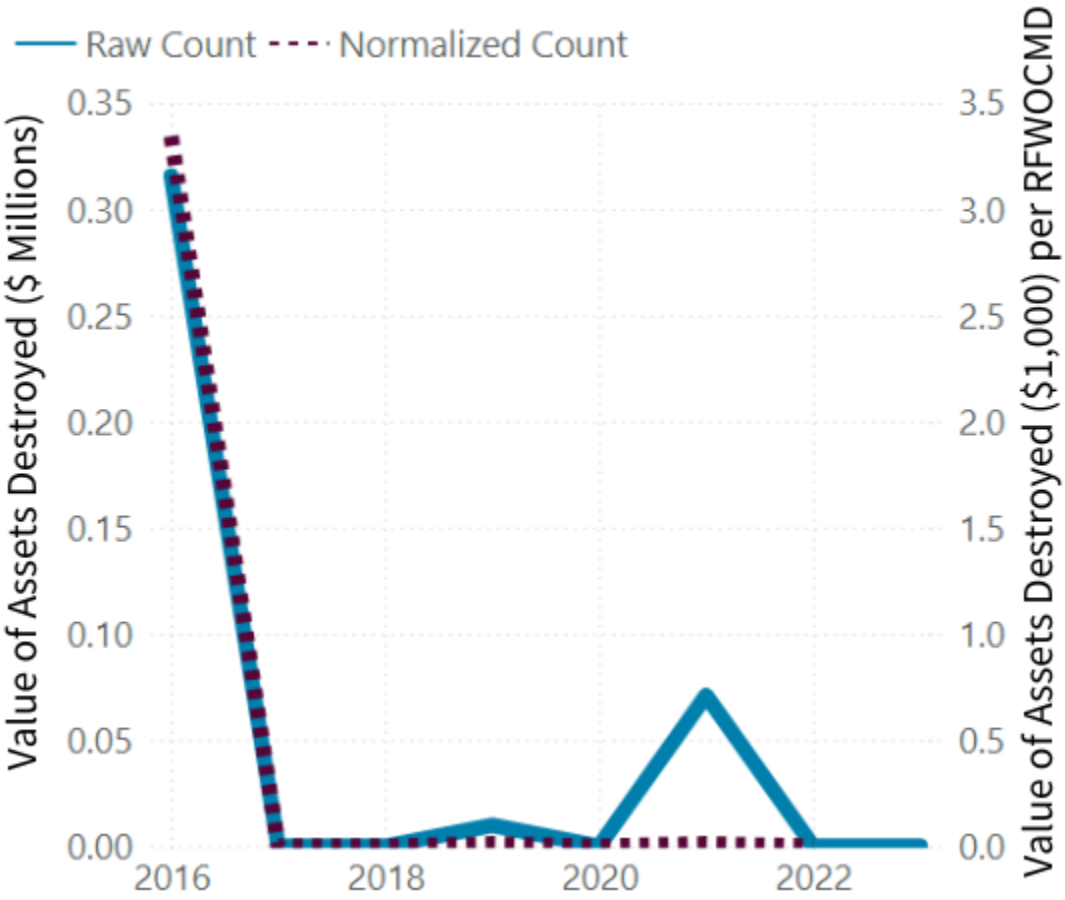
Injuries and Fatalities

No fatalities or injuries were reported in 2023, or in the previous seven years.

Value of Destroyed Assets

Liberty's value of destroyed assets peaked in 2016, and experienced stability until 2019, with an increase in 2021. Zero assets were reported as destroyed in 2023 (Figure 16).

Figure 16. Liberty Value of Destroyed Assets and Value of Destroyed Assets Normalized by RFWOCMD (2016-2023)



6.3 Energy Safety Field Inspection Analysis

Energy Safety performs inspections utilizing an electrical corporation's initiative activity data applicable to the 2023 calendar year. Energy Safety conducts two types of inspections: 1) inspections of grid hardening and other work related to WMP initiatives related to physical infrastructure, and 2) inspections of general wildfire safety (GWS) conditions at an inspection site. The second category of general wildfire safety conditions (GWS Inspections) is not

strictly related to WMP initiatives, and these inspections are additional to Energy Safety's WMP initiative-related inspection work.[51]

During the 2023 compliance period, Energy Safety conducted 4,192 GWS inspection activities and 741 Wildfire Mitigation Plan inspection activities across 279 distinct locations within Liberty's service territory. Energy Safety distinguishes its inspection activities related to WMP initiatives on grid hardening and physical infrastructure (WMP Inspections) and inspection activities related to GWS Inspections.[52] Energy Safety did not issue any Notices of Violation or Notices of Defect in 2023 for Liberty.

6.4 Energy Safety Analysis of Reporting Accuracy and Completeness

Liberty's inconsistent reporting and failure to report work on all of its WMP initiatives initially impeded Energy Safety's effort to analyze Liberty's compliance with its 2023 WMP. Liberty reported work differently in its 2023 WMP, QDR, and ARCs. Eventually, Energy Safety was able to analyze Liberty's WMP performance in 2023 through data requests and reconciliation of competing data sources, but there were initial challenges with the data reported by Liberty as described below.

In its 2023 WMP, Liberty had a total of 37 initiatives with targets and objectives for 2023. The Q4 QDR, Table 1, listed 61 initiatives but reported actual progress on 27 initiatives. Of the remaining 34 initiatives in the QDR without planned targets, four had work reported as "complete." These were primarily in the Emergency Preparedness WMP category. In its EC ARC, Liberty reported two different lists of 2023 initiatives where it states that it made progress. Section 1.C of the report narrated progress against 37 initiatives, and Section 3.A described financial progress against 40 initiatives with planned and/or actual expenditure.

Finally, the causes of more than 95% of unplanned outages in its QDRs were classified as "Unknown" within the "Other" category.

To improve reporting accuracy and completeness, Liberty should develop processes to enhance cause identification and accurate initiative tracking across reports.

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[51] If Energy Safety observes a general wildfire safety concern during an inspection activity, then that is recorded as a "Wildfire Safety Concern." Or as it was known prior to 2024, a "defect." If Energy Safety observes noncompliance with a WMP initiative during an inspection activity that an electrical corporation claimed to have occurred at a site, then that is recorded as a "violation."

[52] Energy Safety uses the term "inspection activity" to refer to a specific question or condition assessed during an inspection. For example, if Energy Safety is inspecting a particular utility pole and looking for eight different conditions associated with a WMP initiative, then that would count as eight WMP inspection activities. If a general wildfire safety inspection occurs at the same time at that utility pole, and 20 general wildfire safety conditions are assessed, then that would count as 20 general wildfire safety inspection activities. In this example, a single utility pole inspection would lead to 28 inspection activities.

7. Conclusion

Liberty completed 33 of 39 (85%) of its 2023 WMP initiatives, including eight of the top 10 initiatives with the largest planned expenditures. Liberty also exceeded the established WMP target for 12 of the initiatives in the WMP categories of Grid Hardening and Vegetation Management. Additionally, Liberty completed work on several initiatives that were pilot programs or had no original targets.

Liberty exceeded total planned expenditures for capital projects by over $19.6 million dollars (44%) but spent below planned expenditures for operational projects by over $3 million dollars (6.6%) for a total of $16.7 million (37%) spent above planned expenditures. The six missed initiatives totaled over $9.7 million in both capital and operating expenses, which equates to approximately 22% of Liberty's total planned expenditures.

On average, ignitions in Liberty territory have occurred once a year from 2016 to 2023. The number of raw wires down and outages decreased in 2023 compared to the two previous years. Liberty had no PSPS events in 2023 or reported outcome metrics, such as acres burned or structures damaged.

Energy Safety's analysis of the WMP, EC ARC, QDR and IE ARC discovered discrepancies in Liberty's reporting across the documents. The discrepancies included varying initiative targets, discrepancies reporting how much work had been completed, and differing reports on WMP expenditures. Additionally, performance metric data lacked explanations for outage risk drivers. This indicates reporting consistency and accuracy issues throughout the compliance year.

On balance, Liberty was successful in executing its plan for wildfire risk mitigation. While Energy Safety acknowledges that Liberty achieved some overreaching objectives, there are still areas for improvement and continued learning, primarily with properly documenting initiative progress and expenditures for the year. Energy Safety expects Liberty to improve the accuracy of its documentation going forward.

8. References

Table 2. References

Citation	Reference
2022 Q3 QDR	Liberty Utilities, "Liberty_2022_Q3_QDR," Published November 1, 2022, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53178&shareable=true).
2023 Q4 QDR	Liberty Utilities, "2023_Q4_Tables115_R0," Published January 31, 2024, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56313&shareable=true).
2023 WMP	Liberty Utilities, "Wildfire Mitigation Plan," Published October 6, 2023, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55765&shareable=true).
Compliance Guidelines	Office of Energy Infrastructure Safety, "Compliance Guidelines," Published September 2023, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55586&shareable=true).
Compliance Process	Office of Energy Infrastructure Safety, "Compliance Process," Published September 2024, URL:(https://energysafety.ca.gov/wp-content/uploads/2024/12//2024-wmp-compliance-process.pdf).
EC ARC	Liberty Utilities, "2023 Wildfire Mitigation Plan Annual Report on Compliance," Published March 29, 2024, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56438&shareable=true).
IE ARC	Bureau Veritas, "Final Independent Evaluator 2023 Annual Report on Compliance," Published June 30, 2024, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57099&shareable=true).
Pub. Util. Code §8386	Public Utilities Code section 8386, Effective January 1, 2022, URL:(https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PUC&sectionNum=8386).
Response to Data Request 281	Liberty Utilities, "Energy Safety DR-281_Liberty Response," Accessed November 22, 2024.

Citation	Reference
Response to Data Request 316	Liberty Utilities, "Energy Safety DR-316_Liberty Response," Accessed January 27, 2025.
SVM Audit	Office of Energy Infrastructure Safety, "Liberty Utilities 2023 Substantial Vegetation Management Audit," Published April 2, 2025, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=58202&shareable=true).
SVM Audit Corrective Action Plan	Liberty Utilities, "Substantial Vegetation Management Audit Response," Published May 2, 2025, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=58401&shareable=true).
SVM Audit Report	Office of Energy Infrastructure Safety, "Liberty Utilities 2023 Substantial Vegetation Management Audit Report," Published June 26, 2025, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=58785&shareable=true).
WMP Decision	Office of Energy Infrastructure Safety, "Decision on Liberty Utilities' 2023-2025 WMP," Published February 5, 2024, URL:(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true).

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APPENDICES

9. Appendices

Appendix A: Liberty Information on WMP Initiative Activity Attainment

Table 5, below, summarizes each of Liberty's 39 initiative activity targets from its 2023 WMP, and Liberty's self-reporting on compliance contained in its QDR, submitted in its Response to Data Request 316, its EC ARC, the IE ARC, and Energy Safety's SVM Audit and Report.[53]

[53] 2023 Q4 QDR; Response to Data Request 316; EC ARC; IE ARC; SVM Audit Report.

Table 3. Liberty WMP Initiative Activity Attainment Information[54]

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Covered Conductor Installation 8.1.2.2 GDOM-GH-01	5.72 Circuit Miles	Target: 5.7 Circuit Miles Actual: 5.7 Circuit Miles	Target: 5.7 Circuit Miles Actual: 5.7 Circuit Miles	Target: 5.7 Circuit Miles Actual: 5.65 Circuit Miles	Met	$3,284,760	$10,787,714
Undergrounding of electric lines and/or equipment 8.1.2.2 GDOM-GH-02	1.37 Circuit Miles	Target: 1.4 Circuit Miles Actual: 0.1 Circuit Miles	Target: 1.37 Circuit Miles Actual: 0.1 Circuit Miles	Target: 1.37 Circuit Miles Actual: 0.1 Circuit Miles	Not Met	$7,692,650	$170,828

[54] This table includes all initiative activities that had targets for the 2023 compliance year but does not include initiative activities for which Liberty had planned or actual expenditures and no targets for the 2023 compliance year.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Distribution/ Transmission pole replacements and reinforcements 8.1.2.3 GDOM-GH-03	200 Poles	Target: 200 Poles Actual: 292 poles	Target: 200 Poles Actual: 292 Poles	Target: 200 Poles Actual: 292 Poles	Met	$10,970,194	$16,591,807
Traditional Overhead Hardening 8.1.2.5 GDOM-GH-05	Four Circuit Miles	Target: Four Circuit Miles Actual: 9.2 Circuit Miles	Target: Four Circuit Miles Actual: 9.2 Circuit Miles	Target: Four Circuit Miles Actual: 9.2 Circuit Miles	Met	$4,961,889	$4,227,502
Installation of system automation equipment 8.1.2.8 GDOM-GH-08	Eight Automatic Reclosers	Target: Eight Reclosers Actual: Five Reclosers	Target: Eight Reclosers Actual: Five Reclosers	Target: Eight Reclosers Actual: Five Reclosers	Not Met	$1,200,000	$1,512,490

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Tree attachment removals 8.1.2.12 GDOM-GH-12a	60 Tree Attachments	Target: 60 Tree Attachments Actual: 37 Tree Attachments	Target: 60 Tree Attachments Actual: 37 Tree Attachments	Target: 60 Tree Attachments Actual: 37 Tree Attachments	Not Met	$701,112	$898,669
Expulsion fuse replacement 8.1.2.12 GDOM-GH-12b	3800 Expulsion Fuses	Target: 3800 Expulsion Fuses Actual: 4122 Expulsion Fuses	Target: 3800 Expulsion Fuses Actual: 4122 Expulsion Fuses	Target: 3800 Expulsion Fuses Actual: 4122 Expulsion Fuses	Met	$-	$6,338,432
Animal guards 8.1.2.12 GDON-GH-12c	Four Animal Guards	Target: Four Animal Guards Actual: Four Animal Guards	Target: Four Animal Guards Actual: Four Animal Guards	Target: Four Animal Guards Actual: Four Animal Guards	Met	$40,000	$262,589
Open wire/grey wire 8.1.2.12 GDOM-GH-12e	2.55 Circuit Miles	Target: 2.5 Circuit Miles Actual: 4.4 Circuit Miles	Target: 2.5 Circuit Miles Actual: 4.4 Circuit Miles	Target: 2.5 Circuit Miles Actual: 4.4 Circuit Miles	Met	$1,000,000	$8,092,598

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Detailed inspections of distribution electric lines and equipment 8.1.3.1 GDOM-AI-01	156.4 Circuit Miles	Target: 156.4 Circuit Miles Actual: 181.4 Circuit Miles	Target: 156.4 Circuit Miles Actual: 181.4 Circuit Miles	Target: 156.4 Circuit Miles Actual: 181.4 Circuit Miles	Met	$20,000	$58,744
Intrusive pole inspections 8.1.3.2 GDOM-AI-02	2,867 Poles	Target: 2,867 Poles Actual: 2,875 Poles	Target: 2,867 Poles Actual: 2,875 Poles	Target: 2,867 Poles Actual: 2,975 Poles	Met[55]	$209,228	$209,228

[55] Liberty initially reported conflicting target numbers for this initiative. To clarify the actual completion number, on January 17, 2025, Energy Safety sent DR-316. Liberty responded on January 27, 2025 and confirmed the actual target numbers. See Energy Safety DR-316_Liberty Response.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Patrol inspections of distribution electric lines and equipment 8.1.3.3 GDOM-AI-03	701.5 Circuit Miles	Target: 701.5 Circuit Miles Actual: 702.0 Circuit Miles	Target: 701.5 Circuit Miles Actual: 702.0 Circuit Miles	Target: 701.5 Circuit Miles Actual: 702.0 Circuit Miles	Met	$15,000	$-
Quality assurance / quality control of inspections 8.1.3.5 GDOM-AI-05	1.0%	Target: 0% inspections Actual: 12% Inspections	Target: 12% inspections Actual: 12% Inspections	Target: 1.0% inspections Actual:12% Inspections	Met	$10,000	$-
Substation Inspections 8.1.3.6 GDOM-AI-06	42 Substations	Target: 42 Substations Actual: 44 Substations	Target: 42 Substations Actual: 44 Substations	Target: 42 Substations Actual: 44 Substations	Met	$10,000	$-
Vegetation Management Inspection Program 1[56]- Detailed 8.2.2.1 VM-INSP-01	220 Circuit Miles	Target: 220 Circuit Miles Actual: 236 Circuit Miles	Target: 220 Circuit Miles Actual: 236 Circuit Miles	Target: 220 Circuit Miles Actual: 236 Circuit Miles	Met	$789,820	$982,788

[56] In the SVM Audit, all three Vegetation Management Inspection Program types were organized into one programmatic area and one initiative. For the purposes of this ARC, Energy Safety has itemized this program into three initiatives.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Vegetation Management Inspection Program 2-Patrol 8.2.2.2 VM-INSP-02	Conduct supplemental, ground-based inspections to locate and remove obvious hazards.[57]	Target: As necessary Actual: 78 Line Miles	Target: As necessary Actual: 78 Line Miles	Target: As necessary Actual: 78 Line Miles	Met	$250,000	$432,026

[57] SVM Audit, page A-3.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Vegetation Management Inspection Program 3 – LiDAR 8.2.2.3 VM-INSP-03	Quantitative: 700 Circuit Miles Qualitative: System-wide inspections completed on an annual basis[58]	Target: 700 Line Miles Actual: 707 Line Miles	Target: 700 Line Miles Actual: 702 Line Miles	Target: 700 Line Miles Actual: 707 Line Miles	Met	$700,000	$346,904
Pole Clearing 8.2.3.1 VM-VFM-01	4,960 Subject Poles	Target: 4,900 Subject Poles Actual: 4,957 Subject Poles	Target: 4,900 Poles Actual: 4,957 Poles	Target: 4,960 Poles Actual: 4,998 Poles	Met	$480,000	$392,405
Wood and Slash Management 8.2.3.2 VM-VFM-02	280 Acres	Target: 280 Acres Actual: 625 Acres	Target: 280 Acres Actual: 625 Acres	Target: 280 Acres Actual: 462 Acres	Met	$1,500,000	$988,223

[58] SVM Audit, pages A-4-A-5.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Clearance 8.2.3.3 VM-VFM-05	No target appears in the 2023 WMP; Energy Safety utilized the QDR target.	Target: 670.8 Acres Actual: 707 Acres	Target: 670.8 Acres Actual: 702 Acres	Target: 670.8 Acres Actual: 707.3 Acres	Met	$886,900	$1,360,525
Fall-In Mitigation 8.2.3.4 VM-VFM-06	220 Circuit Miles	Target: 220 Line Miles Actual: 313 Line Miles	Target: 220 Miles Actual: 303 Miles	Target: 220 Circuit Miles Actual: 313 Line miles	Met[59]	$7,750,000	$3,823,473
Substation Defensible Space 8.2.3.5 VM-VFM-03	Routine inspection and maintenance activities for 12 substations, twice per year, for a total of 24 inspections	Target: 12 substations Actual: 22 substations	Target: 12 substations Actual: 22 substations	Target: 12 substations Actual: 18 substations	Met[60]	$20,000	$33,056

[59] SVM Audit, pages A-8-A-11. As mentioned previously in the report, while the numeric target was surpassed, the work was conducted outside the time period approved by the 2023 WMP.
[60] SVM Audit, pages 4, A-12-A-13.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
High Risk Species 8.2.3.6 VM-VFM-06	Refer to 8.2.3.4[61]	Refer to 8.2.3.4	Refer to 8.2.3.4	Refer to 8.2.3.4	Met[62]	$-	$506,948
Fire Resilient Right of Ways 8.2.3.7 VM-VFM-04	Vegetation management done in accordance with applicable regulations to establish and maintain fire resilient right of ways	Target: Variable Actual: 13.7 miles	N/A	Target: Variable Actual: 13.7 miles	Met	$225,000	$775,890

[61] 2023 WMP, pages 229-233.
[62] SVM Audit, pages 4, A-13.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Emergency Response Vegetation Management 8.2.3.8 WMP-VM-VFM-08	Planning and execution of vegetation activities in response to emergency situations that indicate a wildfire threat and post wildfire restoration	N/A	N/A	N/A	Met[63]	$-	$-

[63] SVM Audit, pages 4, A-16.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Vegetation Management Enterprise System 8.2.4 VM-ESG-01	Create and maintain a database for tracking and life cycle management of vegetation management and inspection projects	N/A	N/A	N/A	Met[64]	$406,005	$353,287

[64] SVM Audit pages 4, A-16.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Quality Assurance & Quality Control 8.2.5 VM-QAQC-01	Quantitative: 229 Circuit Miles Qualitative: Third-party QC reviews and inspections of completed work, with corrective actions, as necessary[65]	Target: 229 miles Actual: 299.7 miles	Target: 229 miles Actual: 300 miles	Target: 229 miles Actual: 229.7 miles	Met[66]	$500,000	$440,198

[65] SVM Audit, pages A-24-A-25.
[66] SVM Audit, pages 5, A-20-A-27.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Open Work Orders 8.2.6	Create and maintain a system to track, classify and address timely completion of vegetation management work with an emphasis on any work classified as Priority One	N/A	N/A	N/A	Not Met[67]	$-	$-

[67] SVM Audit, pages 5, A-26-A-28.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Workforce Planning 8.2.7	Create and maintain programs that ensure both employees and contractors are adequately trained and qualified to preform vegetation management work	N/A	N/A	N/A	Met[68]	$-	$-

[68] SVM Audit, pages 5, A-28-A-29.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Environmental Monitoring Systems 8.3.2 SA-01	Installation of four weather stations	Target: 5 weather stations Actual: 5 weather stations	Target: 5 weather stations Actual: 5 weather stations	Target: 5 weather stations Actual: 5 weather stations	Met	$-	$216,573
Grid Monitoring Systems 8.3.3 SA-02	Fault indicators installed on 10 circuits	Target: 10 circuits with fault indicators Actual: 0	Target: 10 circuits with fault indicators Actual: 0	Target: 10 circuits with fault indicators Actual: 0	Not Met	$150,000	$754,455
Fire Detection and Alarm Systems 8.3.4 SA-03	Installation of eight cameras	Target: 0 Distribution Fault Anticipation (DFA) Units[69] Actual: 0	Target: Eight cameras Actual: 0	Target: Eight cameras Actual: 0	Not Met	$-	$-

[69] Energy Safety understands this reporting target and unit were reported in error for this initiative. DFA units are reported in the WMP with respect to initiative 8.3.3 (SA-02) Grid Monitoring Systems.

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Ignition likelihood calculation 6.2.2.1 SA-06	N/A	Target: Use Direxyon's Asset Failure Risk model and Technosylva's Fire Sight modeling tool Actual: In progress	Target: Use Direxyon's Asset Failure Risk model and Technosylva's Fire Sight modeling tool Actual: In progress	Validated	Met	$1,154,340	$881,804

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Collaboration and coordination with public safety partners 8.4.3 EP-02	Conduct emergency drills, continue engagement with local stakeholders, and Public Safety Partners to prepare for and respond to fire-related events, meet with Community Advisory Boards	Target: Continued Engagement with local stakeholders, Public Safety Partners and Community Advisory Boards Actual: Participated in or held various meetings and workshops such as PSP workshop on 4/13/2023	Target: Collaboration and coordination with public safety partners Actual: Hosted or attended 90 in person, virtual, and hybrid events associated with its WMP and continued additional engagement with Community Based Organization and Public Safety Partners	Target: Collaboration and coordination with public safety partners Actual: Developed restoration guidelines, conducted restoration exercises, and entered mutual aid agreements with other energy industry companies	Met	$-	$-

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Customer support in wildfire and PSPS emergencies 8.4.6 EP-05	Conduct incident command training for all identified Incident Command (IC) members and hold a virtual PSPS tabletop exercise, continued implementation of 2022 AFN plan, continued maintenance of emergency response plans, enhanced documentation and use of lessons learned to update plans	Target: Customer support in wildfire and PSPS emergencies Actual: Held table-top exercise on 5/25/2023 & full-scale exercise on 6/22/2023, held Palisades Tahoe Cup Tabletop Exercise	Target: Customer support in wildfire and PSPS emergencies Actual: Continued development and implementation of AFN plan, continued maintenance of emergency response plans	Target: Customer support in wildfire and PSPS emergencies Actual: Completed Incident Command System training, PSPS table-top exercise with after action report and planning on 5/25/2023	Met	$100,000	$54,787

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Learning after wildfire and PSPS events 8.4 EP-06	After action reports for each event	Target: After action reports for each event Actual: In progress	Target: After action reports for each event Actual: Held Incident Command System Training and PSPS Tabletop exercise on 5/25/2023 with after action reports and lessons learned, Incident System Training including Federal Emergency management Agency Incident Command System 100 & 200	Target: After action reports for each event Actual: Liberty did not have any PSPS or wildfires in their service territory in 2023 but dd hold training and exercises with various partners and stakeholders to plan and prepare	Met	$-	$-

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Public outreach and education awareness for wildfires, PSPS, outages from protective equipment and device settings, and vegetation management 8.4.3 CO-01	Two wildfire and PSPS outreach surveys	Target: Continue surveys, strengthen and expand AFN partnerships, improve communications through technology Actual: Hosted over 20 events, sent over 50 web-based notifications, and over 10 sets of print outs	Target: Public outreach and education for WMP initiative activities Actual: Hosted or attended 90 in person, virtual, and hybrid events associated with its WMP and continued additional engagement with CBOs and PSPs	Target: Public outreach and education for WMP initiative activities Actual: Wildfire messaging, survey results, communications & events	Met	$90,000	$86,894

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Engagement with AFN populations, local governments, and tribal communities 8.5.3 CO-03	Nine Events	Target: Engagement with AFN populations, local governments, and tribal communities Actual: In Progress	Target: Engagement with AFN populations, local governments, and tribal communities Actual: 10 sets of print or digital ads, implementation of an AFN plan, engagement and outreach with AFN communities, and participation in statewide AFN working groups and meetings	Target: Engagement with AFN populations, local governments, and tribal communities Actual: Wildfire and PSPS surveys for AFN self-identification, participated in nine community events from April to June, and participation in statewide AFN council meeting on 6/21/2023	Met	$-	$-

2023 WMP Initiative/ Objective	2023 WMP Activity Target	QDR	EC ARC	IE ARC	Attainment Status	Planned Expenditure	Actual Expenditure
Best practice sharing with other electrical corporations 8.5.5 CO-05	Participation in working groups & Joint Investor Owned Utilities Councils	Target: Participation in working groups & Joint IOU Councils Actual: In Progress	Target: Participation in working groups & Joint IOU Councils Actual: Continued engagement with various PSPs, municipalities, statewide councils & meetings	Target: Participation in working groups & Joint IOU Councils Actual: Participation in Wildfire Risk Modeling Working Group, Joint IOU Covered Conductor Working Group, Nevada Energy collaboration meetings and Wildfire Safety Advisory Board (WSAB) meetings	Met	$-	$-

Appendix B: Substantial Vegetation Management Audit of Liberty

On April 2, 2025, Energy Safety issued its Substantial Vegetation Management (SVM) Audit for Liberty.

In the SVM Audit, Energy Safety found five initiatives where Liberty did not perform all required work and required Liberty to provide a response in its Corrective Action Plan.

After reviewing Liberty's Corrective Action Plan, filed on May 2, 2025, Energy Safety issued its SVM Audit Report on Thursday, June 26, 2025.

The findings from Energy Safety's SVM Audit and SVM Audit Report are detailed in Table 4.

Table 4. Energy Safety Findings from Liberty 2023 SVM Audit and SVM Audit Report of WMP Vegetation Management Initiatives

2023 WMP Initiative Tracking ID	2023 WMP Initiative Name	SVM Audit Determination	SVM Audit Report Determination
VM-INSP-01, VM-INSP-02 & VM-INSP-03	Vegetation Management Inspections (Detailed, Patrol & LiDAR)	Completed all work	Not addressed in SVM Audit Report
VM-VFM-01	Pole Clearing	Completed all work	Not addressed in SVM Audit Report
VM-VFM-02	Wood and Slash Management	Completed all work	Not addressed in SVM Audit Report
VM_VFM-05	Clearance	Completed all work	Not addressed in SVM Audit Report
VM-VFM-06	Fall-in Mitigation	Did not complete all work	Substantially complied

2023 WMP Initiative Tracking ID	2023 WMP Initiative Name	SVM Audit Determination	SVM Audit Report Determination
VM-VFM-03	Substation Defensible Space	Did not complete all work	Substantially complied
VM-VFM-07	High Risk Species	Did not complete all work	Substantially complied
VM-VFM-04	Fire Resilient Right of Ways	Completed all work	Not addressed in SVM Audit Report
VM-VFM-08	Emergency Response Vegetation Management	Completed all work	Not addressed in SVM Audit Report
VM-ESG-01	Vegetation Management Enterprise System	Completed all work	Not addressed in SVM Audit Report
VM-QAQC-01	Quality Assurance and Quality Control	Did not complete all work	Substantially complied
8.2.6	Open Work Orders	Did not complete all work	Did not substantially comply
8.2.7	Workforce Planning	Completed all work	Not addressed in SVM Audit Report

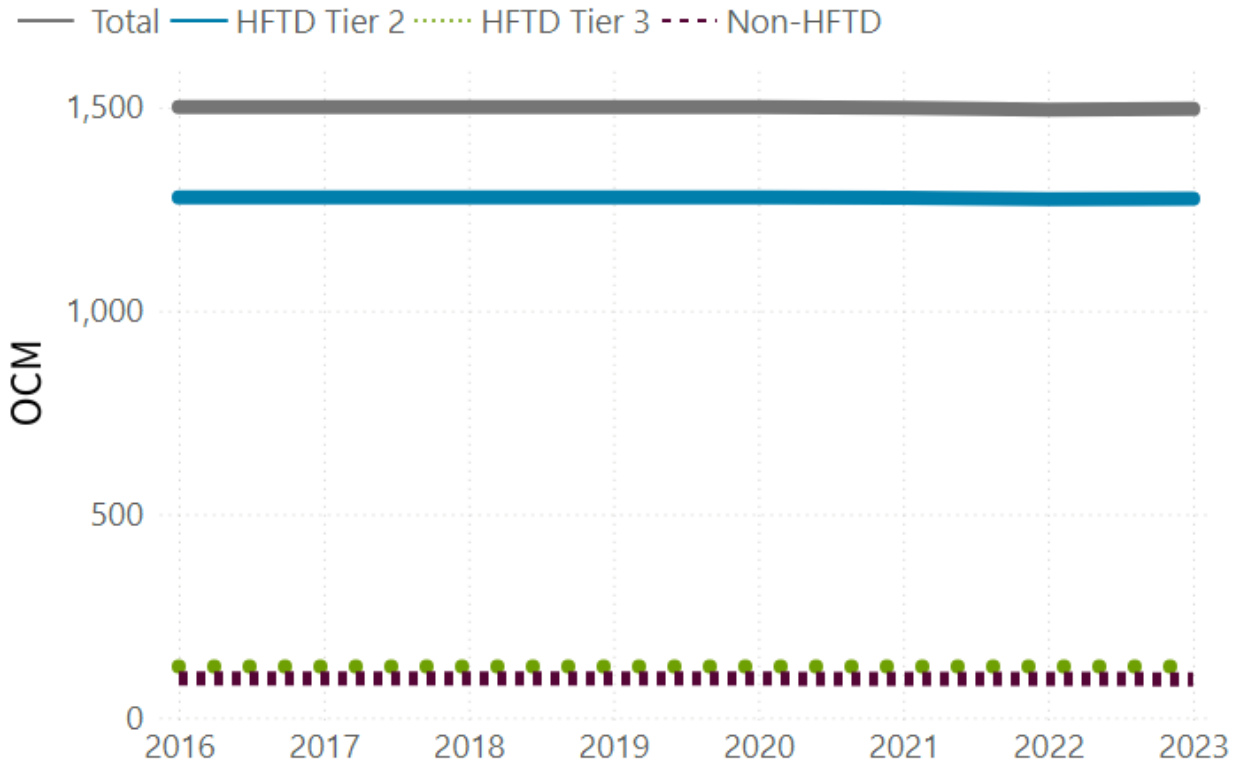
Appendix C: Additional Ignition Risk Analyses

Data for this appendix comes from the QDRs as reported by Liberty.[70]

Overhead Circuit Miles

The number of overhead circuit miles (OCM) has remained constant between 2016 and 2023 (Figure 17).

Figure 17. Liberty Overhead Circuit Miles (2016-2023) by HFTD Tier

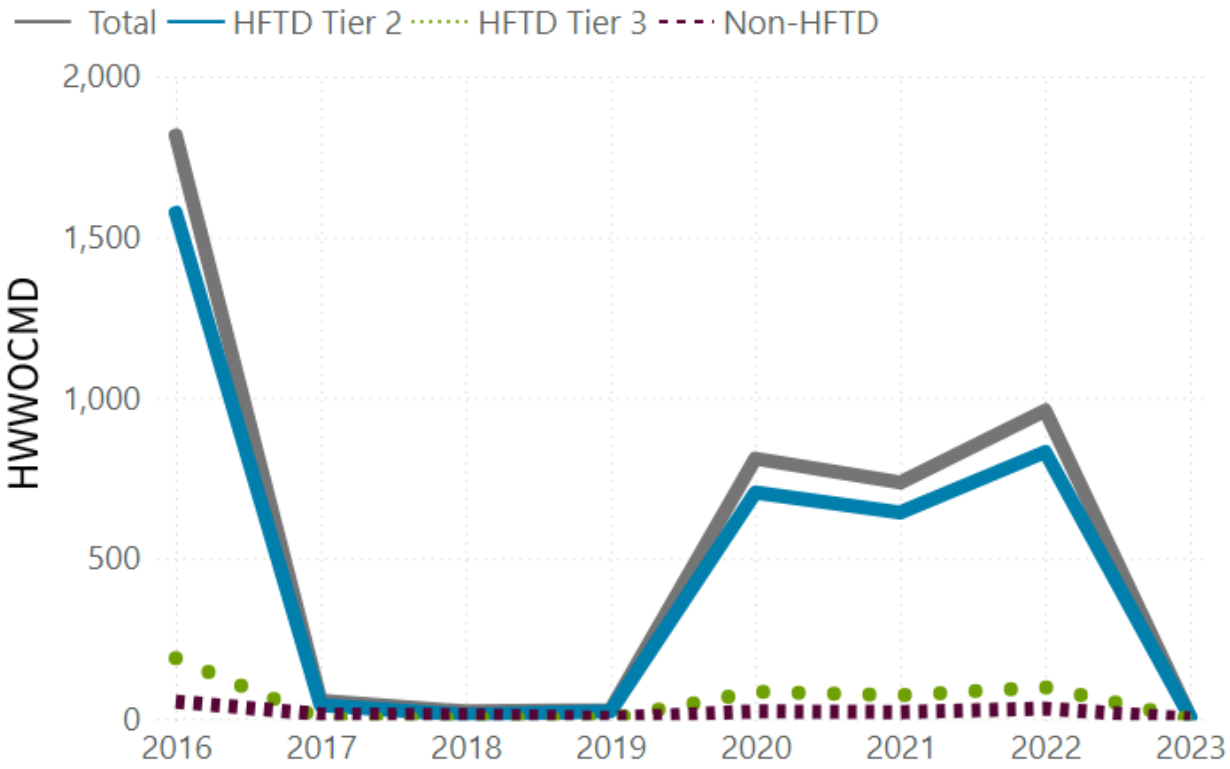


[70] 2022 Q3 QDR, Tables 6, 7.1, 7.2, 8; 2023 Q4 QDR, Tables 4-7.

High Wind Warning Overhead Circuit Mile Days

There has been a general decrease in the frequency of HWWOCMD after a peak in 2016. However, HWWOCMD experienced an increase from 2019 to 2022. This subsequently declined to a low count in 2023 (Figure 18).

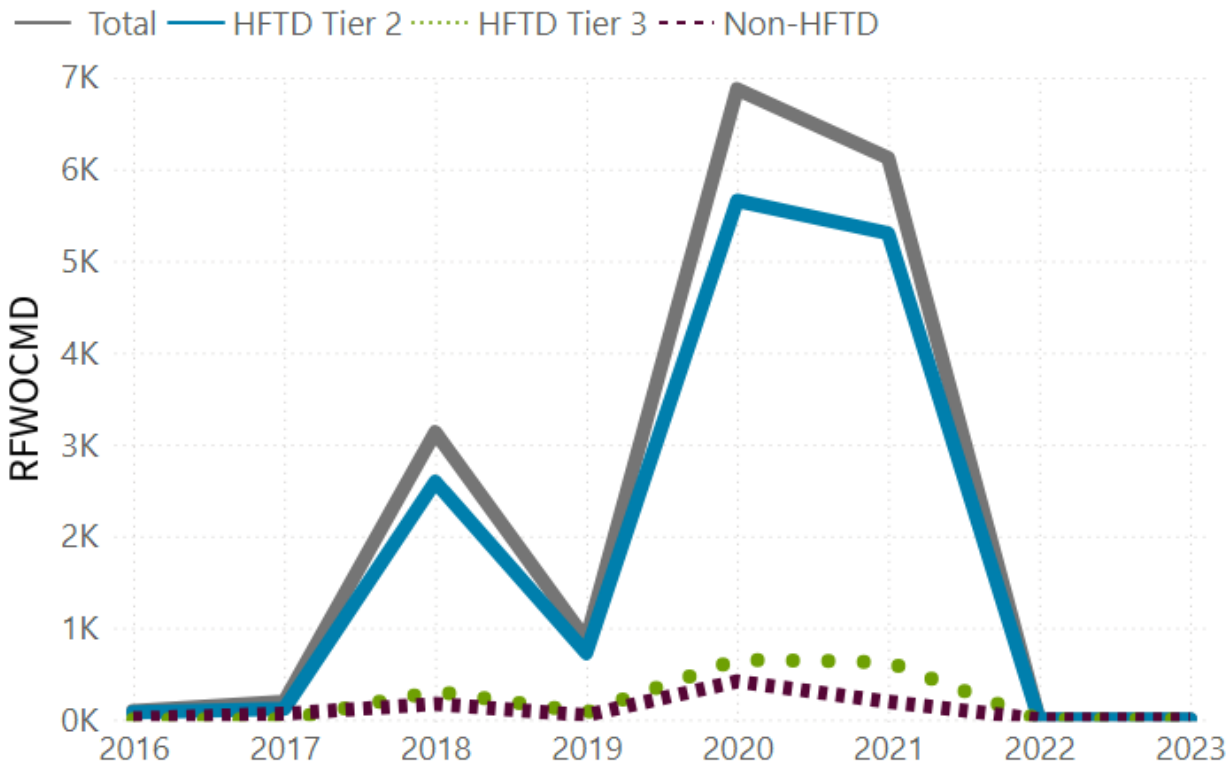
Figure 18. Liberty High Wind Warning Overhead Circuit Mile Days (2016-2023) by HFTD Tier



Red Flag Warning Overhead Circuit Mile Days

The annual number RFWOCMD varies over the last several years and decreased to zero in 2022 and 2023 (Figure 19).

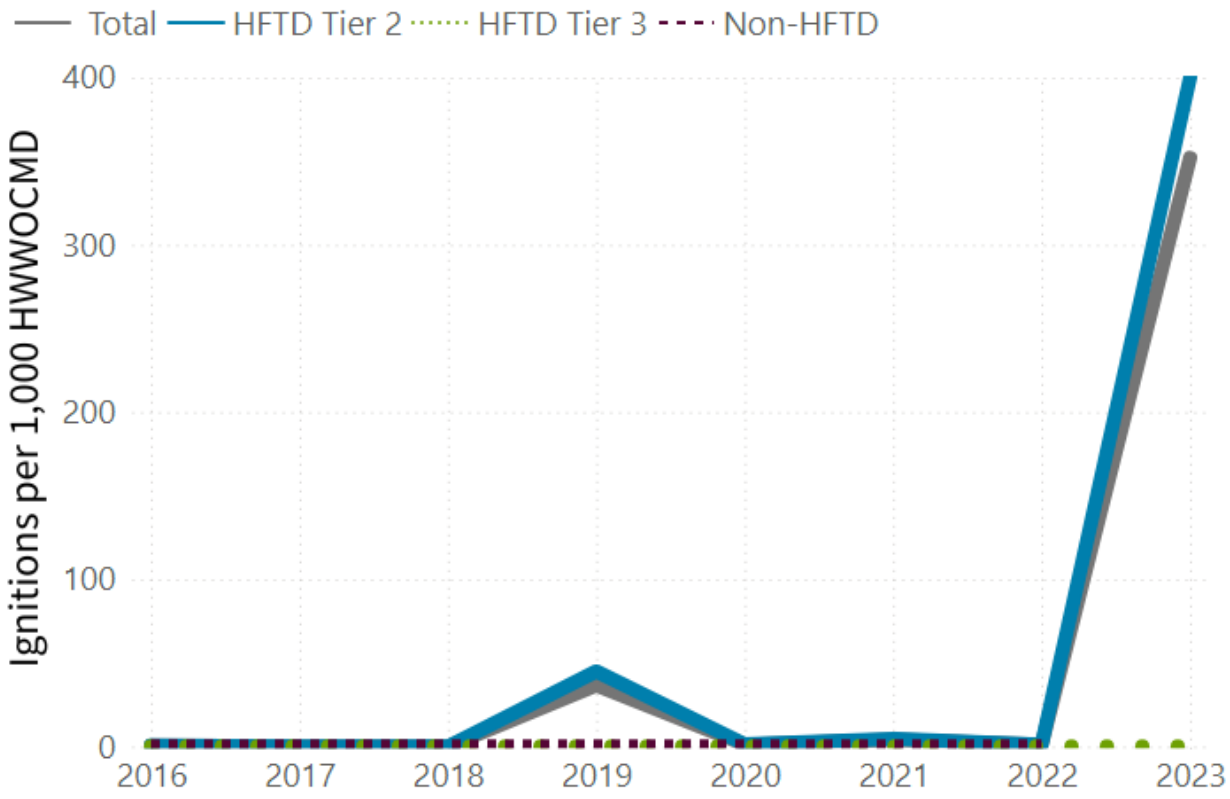
Figure 19. Liberty Red Flag Warning Overhead Circuit Mile Days (2016-2023) by HFTD Tier



Ignitions Normalized by High Wind Warning Overhead Circuit Mile Days by HFTD Tier

To account for year-by-year variations in wind conditions, ignitions were normalized using HWWOCMD (Figure 20). The normalized ignition totals showed an increase in 2019, with a similar pattern for HFTD Tier 2 areas. In contrast, HFTD Tier 3 and Non-HFTD areas maintained a relatively low count from 2016 through 2023. In years where the total number of HWWOCMDs is present, such as 2019, the normalized values appear relatively large due to division by a very small number. These large values do not reflect the actual number of raw ignitions but rather the normalization effect.

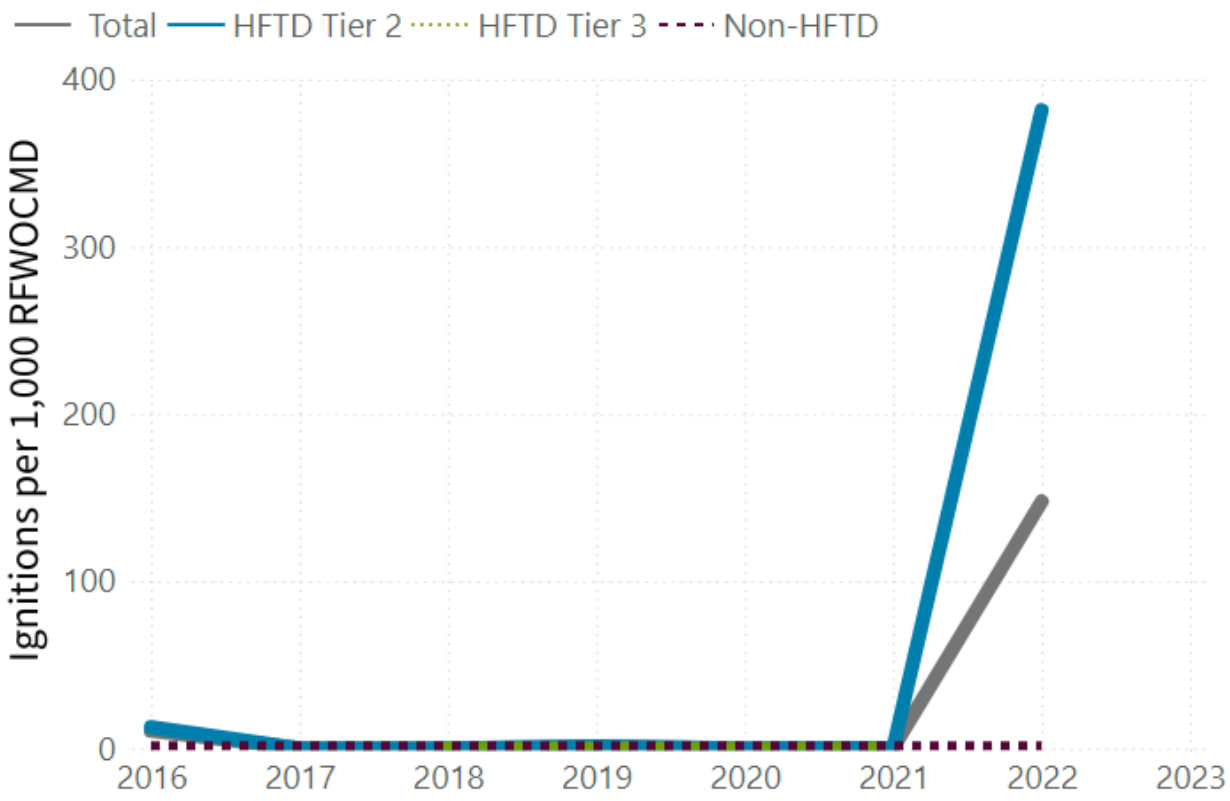
Figure 20. Liberty Ignitions Normalized by HWWOCMD (2016-2023) by HFTD Tier



Ignitions Normalized by Red Flag Warning Overhead Circuit Mile Days by HFTD Tier

Normalized ignitions by RFWOCMD rose from 2021 to 2022, largely due to increased ignitions in HFTD Tier 2 areas (Figure 21).

*Figure 21. Liberty Ignitions Normalized by RFWOCMD (2019-2023) by HFTD Tier**

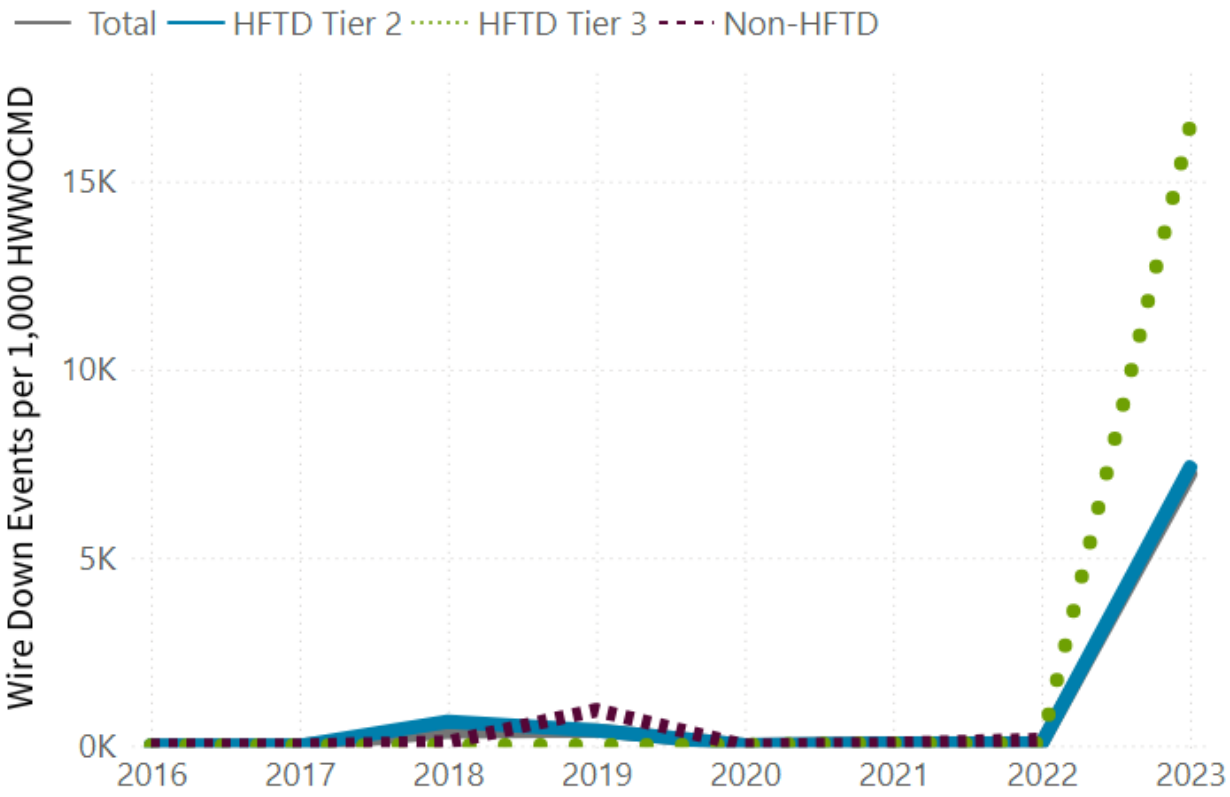


**No normalized ignition value is shown for 2023 due to zero reported RFWOCMDs.*

Wire Down Events Normalized by High Wind Warning Overhead Circuit Mile Days

When accounting for high wind conditions, wire-down events normalized by HWWOCMD remained consistent from 2016 to 2022, with minor fluctuations across HFTD Tier 2, HFTD Tier 3, and Non-HFTD categories. The data demonstrates variability in wire-down events relative to high-wind conditions, with distinct patterns observed for each tier. In 2023, an increase was noted for HFTD Tier 2 and 3 areas (Figure 22).

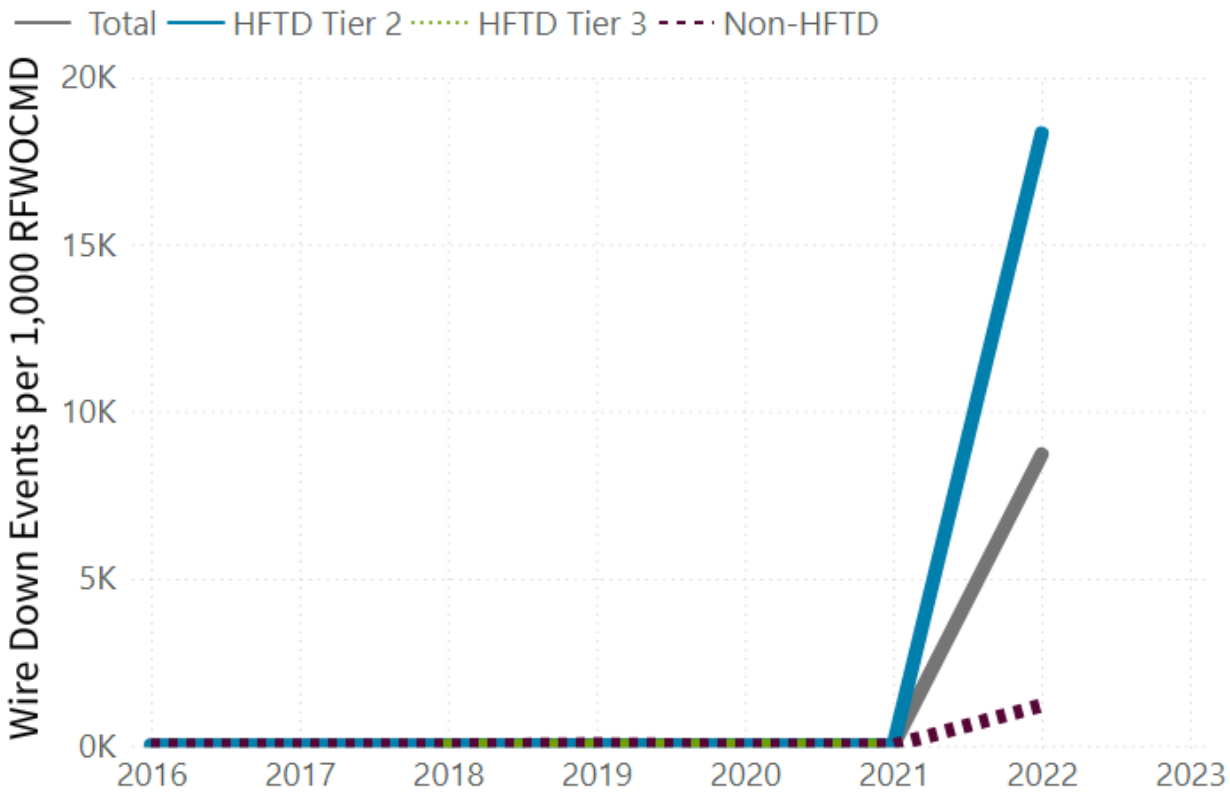
Figure 22. Liberty Wire Down Events Normalized by HWWOCMD (2016-2023) by HFTD Tier



Wire Down Events Normalized by Red Flag Warning Overhead Circuit Mile Days

Wire-down events normalized by RFWOCMD remained at zero from 2016 to 2021, followed by an increase across HFTD Tier 2 areas from 2021 to 2022. Non-HFTD areas experienced a similar but smaller increase during the same period, approximately seven times less in scale (Figure 23).

*Figure 23. Liberty Wire Down Events Normalized by RFWOCMD (2016-2023) by HFTD Tier**



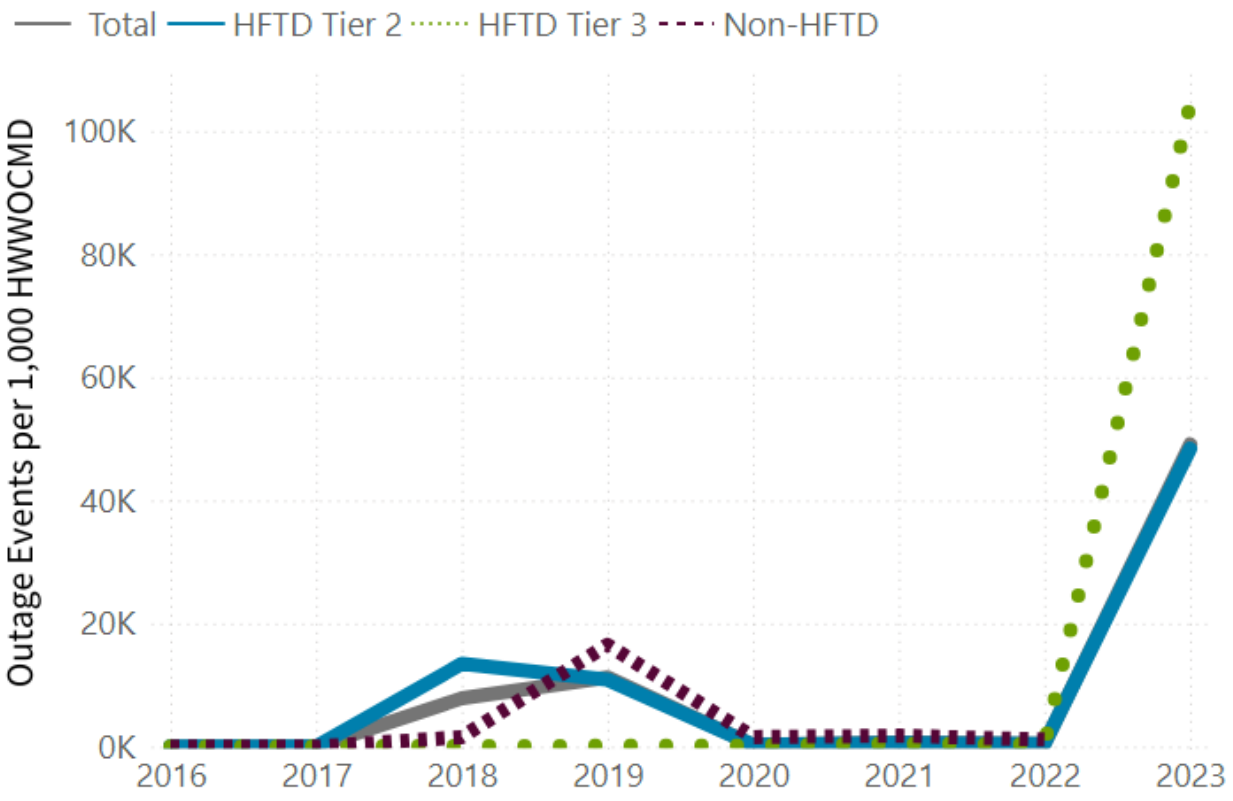
* *No normalized ignition value is shown for 2023 due to zero reported RFWOCMDs.*

Outage Events Normalized by High Wind Warning Overhead Circuit Mile Days

To view the outage event trends with respect to year-to-year variations in wind condition, outage event counts have been normalized by HWWOCMD.

In 2017, HFTD Tier 2 areas experienced an increase, which continued until 2018, followed by a decline to low counts from 2020 to 2022. Similarly, non-HFTD area counts saw an increase from 2018 to 2019, with a subsequent decrease to low counts from 2020 to 2022. From 2022 to 2023, outage events rose in both HFTD Tier 2 and Tier 3 areas, with Tier 3 areas showing a 2-to-1 scale ratio (Figure 24).

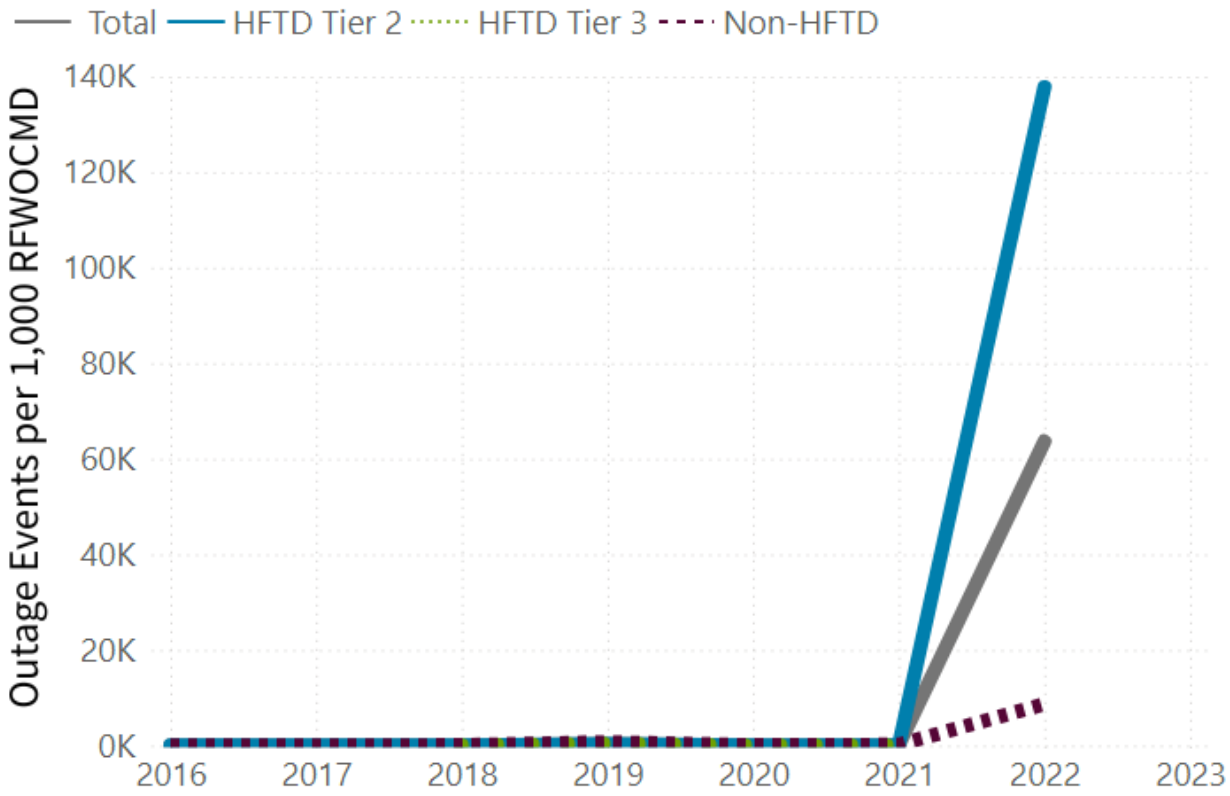
Figure 24. Liberty Outage Events Normalized by HWWOCMD (2016-2023) by HFTD Tier



Outage Events Normalized by Red Flag Warning Overhead Circuit Mile Days

Unplanned outage events normalized by RFWOCMD show no fluctuations from 2016 to 2021, with an increase observed from 2021 to 2023 (Figure 25). Between 2021 and 2022, the increase is caused by vegetation outage events on the distribution lines.

*Figure 25. Liberty Outage Events Normalized by RFWOCMD (2016-2023) by HFTD Tier**



* *No normalized ignition value is shown for 2023 due to zero reported RFWOCMDs.*