



December 12, 2024

Dear Stakeholders,

Enclosed is the Office of Energy Infrastructure Safety's (Energy Safety's) Annual Report on Compliance regarding Trans Bay Cable's execution of its 2022 Wildfire Mitigation Plan.

This Annual Report on Compliance is hereby published as of the date of this letter. Trans Bay Cable 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 2022 Annual Report on Compliance docket.¹

Sincerely,

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¹ Submit responses to the 2022-ARC docket via the Office of Energy Infrastructure Safety's E-Filing system here: <https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2022-ARC>



OFFICE OF ENERGY INFRASTRUCTURE SAFETY
2022 ANNUAL REPORT ON
COMPLIANCE
TRANS BAY CABLE

December 2024

TABLE OF CONTENTS

Executive Summary	1
1. Introduction	2
1.1 Compliance Process.....	2
2. Trans Bay Cable 2022 Wildfire Mitigation Plan Update	3
3. Trans Bay Cable Annual Report on Compliance	4
3.1 EC ARC Information on Initiative Completion.....	5
3.2 EC ARC Information on Initiative Funding.....	5
4. Independent Evaluator ARC for Trans Bay Cable	5
5. Energy Safety Evaluation of WMP Initiative Completion.....	6
5.1 Trans Bay Cable 2022 WMP Update Initiative Activities Assessed by Energy Safety... 6	
5.2 Energy Safety Analysis of Substantial Vegetation Management Audits	7
5.3 Energy Safety Field Inspection Analysis.....	7
5.4 Trans Bay Cable WMP Initiative Activity Attainment in 2022	8
6. Wildfire Risk Reduction: Performance Metrics, and Overall WMP Execution	8
6.1 Ignition Risk and Outcome Metrics	9
6.2 Issues Related to Trans Bay Cable Execution, Management, or Documentation of its WMP Implementation	9
7. Conclusion.....	9
8. References	11
9. Appendices.....	14
Appendix A: Energy Safety Analysis of WMP Reporting Inconsistencies.....	14
Appendix B: TBC EC ARC Information on WMP Initiatives	15
Appendix C: TBC EC ARC Information on WMP Initiative Expenditures.....	16

LIST OF TABLES

Table 1: TBC’s Planned Initiative Activities in its 2022 WMP Update 7

Table 2: TBC WMP Initiative Attainment in 2022..... 8

Table 3: TBC Information of WMP Initiative Attainment 15

Table 4: TBC ARC Information on WMP Initiative Expenditures..... 16

Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) is tasked with evaluating and either approving or denying Wildfire Mitigation Plans (WMP) 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 plans.

Energy Safety's evaluation found that Trans Bay Cable (TBC) completed one of three initiative activities in its 2022 WMP Update during the 2022 compliance period. TBC's failure to complete the two initiative activities hindered its ability to mitigate its wildfire risk in 2022. However, work completed in 2023 regarding these initiatives will be evaluated by Energy Safety in its 2023 Annual Report on Compliance.

Pursuant to Government Code section 15475.1, Energy Safety's primary objective is to ensure that electrical corporations reduce wildfire risk and comply with energy infrastructure safety measures. Energy Safety's annual compliance evaluation of TBC's execution of its 2022 WMP Update is a comprehensive look at whether TBC's execution of its 2022 WMP Update reduced the risk of TBC equipment igniting a catastrophic wildfire.

Energy Safety conducted its compliance review process through a variety of means including audits, and analysis of data submitted by TBC to Energy Safety.

Energy Safety's evaluation found that TBC completed one of three initiative activities in its 2022 WMP Update during the 2022 compliance period. Therefore, Energy Safety found that TBC was mostly unsuccessful in executing its plan for wildfire risk mitigation during the 2022 compliance year. TBC must execute its WMP activities in the year designated by the WMP.

1. Introduction

This Annual Report on Compliance presents the Office of Energy Infrastructure Safety's (Energy Safety's) statutorily mandated assessment of Trans Bay Cable's (TBC's) compliance with its 2022 Wildfire Mitigation Plan (WMP) Update. (Pub. Util. Code § 8386.3(c)(4).)

In the sections that follow, Energy Safety describes the statutory regulatory basis for its reporting, the information supplied by TBC, and the independent analysis conducted by Energy Safety to examine TBC's execution of its 2022 WMP Update and how its infrastructure performed in 2022 relative to wildfire risk. Finally, Energy Safety provides its conclusions, observations, and recommendations for further actions by TBC.

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. (Pub. Util. Code § 8386(a)). The objective of a WMP, and consequently the focus of Energy Safety's assessment of compliance, is wildfire risk reduction. An electrical corporation's obligations extend beyond meeting WMP targets.

Energy Safety's 2022 Compliance Process establishes the parameters for this Annual Report on Compliance. Consistent with the 2022 Compliance Process, this report considers the totality of all compliance assessments completed with respect to TBC's 2022 WMP Update. 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. (Compliance Process, p. 6.)

Energy Safety evaluated whether the electrical corporation implemented the initiatives in its 2022 WMP Update, looking specifically at whether the electrical corporation funded and performed the work stated for each initiative. (Compliance Process, p. 7.)

Energy Safety also considered the electrical corporation's stated goals and objectives of its plan, its performance of initiatives essential to reducing wildfire risk and achieving its objectives, and the ultimate performance of its infrastructure relative to its wildfire risk, as measured by changes in the occurrence of events that correlate to wildfire risk. (Compliance Process, p. 7.)

2. Trans Bay Cable 2022 Wildfire Mitigation Plan Update

TBC submitted a WMP in 2020 covering a three-year term from 2020 through the end of 2022. TBC submitted annual updates to the original 2020 WMP, including a 2022 Update to its 2020 WMP that is the subject of this Annual Report on Compliance.

Energy Safety approved TBC's 2022 Update to its 2020 WMP (hereinafter 2022 WMP Update) on August 30, 2022. (2022 WMP Approval.)

TBC's 2022 WMP Update noted it "is committed to continuous improvement of its overall fire prevention plans and processes which have the added benefit of mitigating wildfire risk." (2022 WMP Update, p. 14.)

TBC's primary objective for 2022 was to continue to harden its Pittsburg facility through capital improvements for enhanced fire suppression and to harden substation infrastructure elements to mitigate ignition risk. As a secondary objective, TBC also noted it planned to periodically evaluate new technologies, materials, and methods for further reducing fire risk at its facilities. (2022 WMP Update, p. 46.)

Because TBC's Pittsburg substation is located near a Tier 2 High Threat Fire District (HFTD) and is in a seismically active area, TBC considers seismic hardening of its facilities to be the main mitigation action to reduce ignition risk. Its WMP initiatives are primarily focused on infrastructure seismic hardening, increased situational awareness, and effectiveness of fire-suppression capabilities.

For 2022, TBC planned to complete two grid operations projects for which it encountered vendor sourcing challenges in 2021:

- Installation of a fire suppression system to complement the fire detection system in its spare parts building, and
- Relocation and construction of a protected compressed gas cylinder enclosure out of its spare parts building. (2022 WMP Update, p. 76.)

Additionally, TBC planned to engage with a third-party fire consultant to conduct a second level review of recommended fire hardening measures identified in the 2020 wildfire assessment. This project was accounted for in the risk and mapping WMP category.

Descriptions of the three initiative activities contained in TBC's 2022 WMP Update are listed in Section 5.1, Table 1.

3. Trans Bay Cable 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 its WMP during a compliance year. This document is known as the Electrical Corporation Annual Report on Compliance (EC ARC).

Energy Safety's 2022 Compliance Process outlines the requirements for an EC ARC. The EC ARC must detail the electrical corporation's self-assessment of its compliance with the 2022 WMP Update during the 2022 compliance period. Energy Safety's 2021 Compliance Operational Protocols also apply to EC ARCs for the 2022 compliance period. These protocols outline the requirements for EC ARCs, including an assessment by the electrical corporation of whether it met its intended risk reduction by implementing each approved WMP initiative (i.e., the degree to which initiative activities have reduced ignition probabilities), descriptions of all planned WMP initiative spending versus actual WMP initiative spending, and an explanation of any differentials between the planned and actual spending. (Compliance Operational Protocols, p. 10.)

TBC submitted its EC ARC to Energy Safety on March 31, 2023. The following is a narrative summary of the EC ARC.

In general, TBC asserted that while it does not maintain a program specifically dedicated to wildfire mitigation, it did have several operational initiatives that had the benefit of incorporating fire mitigation elements. TBC stated it originally identified two such operational initiatives in the 2022 WMP Update. In its EC ARC, TBC reported completion of one of two initiatives:

- **Risk Mapping:** In 2022 TBC engaged a third-party to provide a second level review of a previous third-party study completed in 2020. The 2022 review recommended TBC move forward with the planned work described in Grid Operations and Protocols below. (EC ARC, p. 3.)
- **Grid Operations and Protocols:** TBC projected to complete two site improvement projects within this initiative that were under development in 2022. These were to add a fire suppression system to the Spare Parts Building and remove gas cylinders from the Spare Parts building and construct a protected housing for the cylinders outside the building. TBC did incur expenditures on both of these projects, but availability of vendors and supply chain issues delayed completion of both of these initiative activities. TBC forecasted completion in Q2 2023. (EC ARC, p. 3.)

In addition to the three initiative activities committed to in its 2022 WMP Update, TBC voluntarily installed a weather station for situational awareness at its facilities after considering feedback received from Energy Safety. (EC ARC, p. 3.)

3.1 EC ARC Information on Initiative Completion

TBC self-reported missing two initiative activities: 1) installation of a fire suppression system in its spare parts building, and 2) relocation of gas cylinders housed in its spare parts building and construct outside protected housing. TBC reported that, while it did incur expenditures on both of these projects, vendor and supply chain issues delayed completion. TBC reported its self-assessment of its compliance with its 2022 WMP Update initiatives within the EC ARC, primarily in narrative format. A summary table of TBC's self-reported compliance is in Table 3 Appendix B to this document.

3.2 EC ARC Information on Initiative Funding

Information supplied by TBC on its initiative funding appears in Appendix C. While a narrative description appears below, please refer to Appendix C for more detail.

In general, TBC spent below planned amounts on its 2022 WMP initiatives by \$371,700. This constitutes over half of TBC planned expenditures for 2022. TBC noted that actual expenditure was lower than planned due to its inability to complete two site improvement projects.

4. Independent Evaluator ARC for Trans Bay Cable

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. (Pub. Util. Code § 8386.3(c)(2)(A).) Each electrical corporation is then required to hire an independent evaluator from the list to perform an independent WMP compliance assessment. (Pub. Util. Code § 8386.3(c)(2)(B)(i).)

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

On July 1st of each year, the independent evaluator issues its Independent Evaluator's Annual Report on Compliance (IE ARC) for a given electrical corporation. (Pub. Util. Code § 8386.3(c)(2)(B)(i).)

The 2022 IE ARC for TBC was prepared by Bureau Veritas North America Inc. The IE ARC reviewed the wildfire mitigation initiatives and activities implemented by TBC in 2022 and accounted for whether TBC met its performance objective targets, had underfunded any of those targets and followed its quality assurance and quality control (QA/QC) processes. The independent evaluator (IE) found that TBC completed each of the three initiatives from its 2022 WMP. The IE also determined that TBC funded all of its commitments and initiatives

targeted in the 2022 WMP. Finally, the IE concluded that the Grid Operations and Protocols initiative activities were largely completed but were pending QA/QC and that vendor availability and supply chain issues were the cause of the delays. (IE ARC, pp. 5, 23.)

The IE did not utilize any sampling methods for verifying WMP initiatives, as all activities were inspected through a single site visit in May 2023. For example, to test TBC's assertion that it constructed a fire suppression system in the spare parts building, the IE visited the location and inspected the system. The IE observed partial installation of the fire suppression system. TBC stated that the final testing and inspection of the system had not yet been completed. As such, the IE considered this activity largely validated pending fire department inspections. (IE ARC, pp. 17-18, 23.)

At the site inspection, the IE visually verified that TBC had completed the initiative of relocating compressed gas cylinders from the Spare Parts building to a secured outside location. (IE ARC pp. 14-15.)

The IE concluded that TBC met "the intent of reducing or eliminating the impact of the fire that would have a likelihood of extending from the TBC Facility and engaging off-site fuels" by implementing its risk mapping initiative activity and beginning to implement its two grid operations initiative activities. (IE ARC, pp. 24-25.)

5. Energy Safety Evaluation of WMP Initiative Completion

Energy Safety's evaluation of TBC's performance in 2022 is that TBC attained one of its three WMP initiative activities during the 2022 compliance period. The subsections below describe Energy Safety's independent examination of TBC's execution of its WMP in 2022.

5.1 Trans Bay Cable 2022 WMP Update Initiative Activities Assessed by Energy Safety

Energy Safety evaluated the totality of the compliance data available including its 2022 WMP Update, the EC ARC, the IE ARC and TBC's Quarterly Data Reports (QDRs). The three initiative activities that Energy Safety assessed in this ARC are itemized in Table 1.

Table 1: TBC's Planned Initiative Activities in its 2022 WMP Update

2022 WMP Update Initiative	2022 Activity (2022 WMP Update, pp. 63-78)
Initiative mapping and estimation of wildfire and public safety power shutoff (PSPS) risk-reduction impact (7.3.1.4)	Engage with a third-party fire consultant to conduct a second level review of recommended fire hardening measures identified in the 2020 wildfire assessment.
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Add a suppression system to compliment the fire detection system in the spare parts building.
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Remove gas cylinders from the spare parts building and construct protected housing for them outside of the building.

5.2 Energy Safety Analysis of Substantial Vegetation Management Audits

Public Utilities Code section 8386.3(c)(5) requires Energy Safety to perform an audit to determine whether the electrical corporation “substantively complied with the substantial portion” of its vegetation management requirements in its WMP. Energy Safety refers to this audit as the Substantial Vegetation Management (SVM) audit.

TBC’s facilities do not have overhead transmission or distribution lines. Because of this, it does not have a vegetation management plan, and Energy Safety did not conduct an SVM audit of TBC for 2022.

5.3 Energy Safety Field Inspection Analysis

Due to TBC’s facilities being mostly underground or submerged in water, Energy Safety did

not conduct any WMP or general wildfire safety inspections of TBC’s WMP initiative activity work executed during the 2022 compliance period.

5.4 Trans Bay Cable WMP Initiative Activity Attainment in 2022

The table below summarizes the 2022 WMP initiative activity that TBC did not complete in 2022. This is based on the analysis of TBC’s EC ARC, the IE ARC, as well as data submitted by TBC for the 2022 compliance year. Based on its analysis, Energy Safety believes that any activity not described in Table 2 is complete for the 2022 compliance year.

Table 2: TBC WMP Initiative Attainment in 2022

2022 WMP Initiative	2022 Initiative Activity	Details of Non-Attainment and Rationale
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Add a suppression system to compliment the fire detection system in the spare parts building.	The fire suppression system was installed as of the IE’s inspection on May 18, 2023. Final testing and inspections were pending as of the IE’s inspection on May 18, 2023. TBC reported vendor and supply chain issues as the reason for construction delays. (EC ARC, p. 3.)
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Remove gas cylinders from the spare parts building and construct protected housing for them outside of the building.	Gas cylinders were not removed in 2022. TBC reported vendor and supply chain issues as the reason for construction delays. (EC ARC, p. 3.)

Energy Safety’s finding that TBC did not complete two of its three initiative activities, and therefore was mostly unsuccessful in executing its 2022 WMP, differs from the IE’s conclusion. This is because the IE credits TBC for work on the two unmet targets that began in 2022 and was completed in 2023. Because Energy Safety’s evaluation concerns itself exclusively with the 2022 compliance year, and not TBC activities in 2023, Energy Safety finds that TBC was mostly unsuccessful in executing its 2022 WMP during the 2022 compliance period. Energy Safety will consider TBC’s 2023 WMP work in the context of its 2023 ARC for TBC.

6. Wildfire Risk Reduction: Performance Metrics, and Overall WMP Execution

6.1 Ignition Risk and Outcome Metrics

Energy Safety did not conduct an ignition risk and outcome metric analysis for TBC in 2022. TBC does not foresee circumstances in which it would issue a PSPS event. Energy Safety reviewed TBC's data and found that no risk events (i.e., ignitions, wire-down events, PSPS events, and unplanned or vegetation caused outages) occurred on TBC's infrastructure in 2022.

6.2 Issues Related to Trans Bay Cable Execution, Management, or Documentation of its WMP Implementation

This section considers whether TBC exhibited issues related to its execution, management, or documentation in the implementation of its 2022 WMP Update. To accomplish this, Energy Safety undertook a holistic evaluation of all relevant information sources and assessments for any systemic failings that may have hindered HWT's ability to reduce the risk of igniting a catastrophic wildfire.

Of TBC's three initiative activities planned for completion in 2022, one was achieved. Energy Safety did not find any systemic issues that hindered TBC's ability to adequately implement its WMP in 2022, although two initiative activities were not completed. An analysis of TBC's performance in 2022 revealed that TBC was successful in managing and documenting its data.

7. Conclusion

In 2022, TBC met its targets for one of the three planned initiative activities. Because Energy Safety's evaluation concerns itself exclusively with the 2022 compliance year, and not EC activities in 2023, Energy Safety finds that TBC was mostly unsuccessful in executing its 2022 WMP during the 2022 compliance period. However, work completed in 2023 regarding the two missed initiatives will be evaluated by Energy Safety in its 2023 Annual Report on Compliance.

The failure to fully complete its initiative activities in 2022 hindered TBC's ability to mitigate wildfire risk during the 2022 compliance year.

In the future, TBC should make operational, organizational, or procurement changes to ensure that it is able to complete planned wildfire mitigation activities consistent with successfully executing its WMP.

Energy Safety will continue to monitor TBC's implementation of its ongoing wildfire mitigation activities and push TBC to improve its ability to ultimately achieve the elimination of utility-caused catastrophic wildfires in California.

8. References

Reference	Citation
2022 WMP Approval	Office of Energy Infrastructure Safety, " Final Decision on 2022 WMP ," August 30, 2022. Available: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53894&shareable=true .
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Pub. Util. Code § 8386	California Public Utilities Code Section 8386 . Available: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8386.&lawCode=PUC .
Q4 QDR 2022	Trans Bay Cable, " Tabular Wildfire Mitigation Data Tables 1-15 for Q4 2022 ," March 1, 2023. Available: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53408&shareable=true .

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APPENDICES

9. Appendices

Appendix A: Energy Safety Analysis of WMP Reporting Inconsistencies

Energy Safety receives data from the electrical corporations in the form of Quarterly Data Reports (QDR). These QDR submissions include information on the electrical corporation's progress toward meeting its WMP initiatives. By analyzing the entire QDR dataset for 2022, Energy Safety can determine if the electrical corporation's data reflect attainment or non-attainment of its WMP initiatives.

Energy Safety did not find significant differences in how TBC reported its initiative performance in its QDR and EC ARC for the 2022 compliance period.

Appendix B: TBC EC ARC Information on WMP Initiatives

Summarized in Table 3 is each of TBC's three initiative targets from its 2022 WMP Update, and TBC's self-reporting on compliance contained in its EC ARC.

Table 3: TBC Information of WMP Initiative Attainment

2022 WMP Initiative	2022 Activity Target	2022 Actual (EC ARC, p. 3.)
Initiative mapping and estimation of wildfire and PSPS risk-reduction impact (7.3.1.4)	Engage with a third-party fire consultant to conduct a second level review of recommended fire hardening measures identified in the 2020 wildfire assessment.	A third-party fire consultant was commissioned in early 2022. Two priority projects were recommended.
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Add a suppression system to compliment the fire detection system in the spare parts building.	TBC reported it did not complete this project due to vendor and supply chain issues. This project is forecasted to be completed by mid-2023.
Stationed and on-call ignition prevention and suppression resources and services (7.3.6.7)	Remove gas cylinders from spare parts building and construct protected housing for them outside of the building.	TBC reported it did not complete this project due to vendor and supply chain issues. This project is forecasted to be completed by mid-2023.

Appendix C: TBC EC ARC Information on WMP Initiative Expenditures

Summarized in Table 4 is the forecast and actual expenditure for each category of initiatives from TBC's 2022 WMP Update, and TBC's self-reporting on expenditure contained in its EC ARC.

Table 4: TBC ARC Information on WMP Initiative Expenditures

2022 WMP Initiative Category	2022 WMP Identifier	2022 Expense Forecast	2022 Expense Actual	2022 Expense (Over)/Under Spend
Risk and Mapping	N/A	\$10,000	\$10,000	\$0
Situational Awareness	N/A	\$0	\$37,600	(\$37,600) ¹
Grid Operations and Protocols	N/A	\$600,000	\$190,700	\$409,300
TOTAL		\$610,000	\$238,300	\$371,700

¹ This line refers to the weather station (referenced in Section 3 of this report) installed by TBC that was not originally included in its 2022 WMP Update, and did not have a forecast expenditure.