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

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Caroline Thomas Jacobs, Director

January 30, 2024

To: 2023-2025 Wildfire Mitigation Plans docket (2023-2025-WMPs)
Subject: Decision on Trans Bay Cable's 2023-2025 Wildfire Mitigation Plan

Dear Wildfire Mitigation Plan stakeholders:

Enclosed is the Office of Energy Infrastructure Safety's (Energy Safety's) Decision approving Trans Bay Cable's 2023-2025 Wildfire Mitigation Plan.

On December 8, 2023, a draft of this Decision was published on Energy Safety's website and released to Energy Safety's 2023-2025 Wildfire Mitigation Plans service list for public review and comment.

Opening comments on the draft Decision were due on January 2, 2024, and reply comments were due on January 12, 2024. No stakeholder comments were received during either of these comment periods. Energy Safety made non-substantive changes to correct typographical errors in the text.

Sincerely,

Shannon O'Rourke
Deputy Director | Electrical Infrastructure Directorate
Office of Energy Infrastructure Safety

OFFICE OF ENERGY INFRASTRUCTURE SAFETY

DECISION ON 2023-2025 WILDFIRE MITIGATION PLAN

TRANS BAY CABLE

January 2024

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1. Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) works to ensure electrical corporations take effective actions to reduce utility-related wildfire risk. Pursuant to Public Utilities Code section 8386.3(a), this Decision serves as Energy Safety's assessment and approval of Trans Bay Cable (TBC) 2023-2025 Wildfire Mitigation Plan, submitted on May 9, 2023.

TBC is an independent transmission owner. Independent transmission owners are transmission-only electrical corporations with no end-use customers. These corporations have smaller assets and footprints compared to the large investor-owned utilities and small and multi-jurisdictional utilities in California. TBC's Energy Safety jurisdictional assets consist of two substations connected by a 53-mile-long submarine cable that is entirely within Pacific Gas and Electric Company's service territory.

TBC's Wildfire Mitigation Plan is comparable to, and at times exceeds, the plans of the other Independent Transmission Operators. For example, within its Wildfire Mitigation Plan, TBC is strong in its grid design, operations, and maintenance. Regarding grid design, TBC has installed an outdoor compressed gas cylinder housing, addresses work orders in a timely fashion, and expects to complete a fire suppression system for its Pittsburg spare parts building by the end of 2023.

Despite its strengths, TBC currently does not have a formal process for sharing best practices. Energy Safety expects TBC to begin documenting examples of how it shares best practices.

2. Introduction and Background

TBC submitted its 2023-2025 Wildfire Mitigation Plan (Base WMP or WMP) covering a three-year term from 2023 through the end of 2025 (the current WMP cycle) on May 9, 2023, in response to the reporting requirements set forth in Energy Safety's 2023-2025 WMP Technical Guidelines (Technical Guidelines)[1] and the processes set forth in Energy Safety's WMP Process and Evaluation Guidelines (Process Guidelines).[2]

Pursuant to Public Utilities Code section 8386.3(a), this Decision is Energy Safety's assessment of TBC's 2023-2025 WMP.

Energy Safety approves TBC's 2023-2025 WMP. In 2024, TBC must submit a 2025 Update consistent with the 2025 WMP Guidelines. Energy Safety will approve or deny TBC's 2025 Update to its Base Plan.

2.1 Consultation with California Department of Forestry and Fire Protection

The Office of the State Fire Marshal is part of the California Department of Forestry and Fire Protection (CAL FIRE). Public Utilities Code section 8386.3(a) requires Energy Safety to consult with the Office of the State Fire Marshal in reviewing electrical corporations'[3] WMPs and WMP Updates. The Office of the State Fire Marshal provided meaningful consultation and input on the evaluation, but this Decision is solely an action of Energy Safety and not the Office of the State Fire Marshal or CAL FIRE.

2.2 Stakeholder Comments

Energy Safety invited stakeholders, including members of the public, to provide comments on the utilities' 2023-2025 WMPs. Opening comments on TBC's Base WMP were due on June 29, 2023, and reply comments were due on July 10, 2023. No comments directed toward ITO WMPs were received, see Appendix C for more information.

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[1] Energy Safety's 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (hereafter Technical Guidelines) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[2] Energy Safety's 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Dec. 2022) (hereafter Process Guidelines) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

[3] In this document, "utility" should be understood to mean "electrical corporation."

3. Energy Safety's 2023 Evaluation Process

Energy Safety issued the following guidelines for electrical corporations' 2023-2025 WMPs:

- **2023-2025 WMP Technical Guidelines**, which sets forth substantive and procedural requirements for electrical corporations to prepare and submit their WMPs.[4]
- **ITO Supplement to the 2023-2025 WMP Technical Guidelines**, which establishes the modified reporting requirements for independent transmission operators (ITOs).[5]
- **2023-2025 WMP Process and Evaluation Guidelines**, which outlines the process for Energy Safety's evaluation of WMPs, details the public participation process, and establishes submission requirements for the electrical corporations.[6]
- **2023-2025 Maturity Model and Survey**, which provides a quantitative method for assessing electrical corporation wildfire risk mitigation capabilities and examining how electrical corporations propose to continuously improve in key areas of their WMPs.[7, 8]

The WMP evaluation process includes some or all the following steps for each utility, which are described in more detail in the remainder of this section:

- Completeness check of the utilities' WMP pre-submissions.

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[4] Technical Guidelines (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[5] Energy Safety's Independent Transmission Operator Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53290&shareable=true, accessed May 5, 2023).

[6] (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

[7] Second Revised Final Maturity Model and Maturity Survey Letter (Feb. 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53393&shareable=true, accessed May 5, 2023);

2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Second Revised Final, Feb. 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53394&shareable=true, accessed May 5, 2023);

2023 Electrical Corporation Wildfire Mitigation Maturity Survey (Second Revised Final, Feb. 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53395&shareable=true, accessed May 5, 2023). This is the version that electrical corporations saw when filling out the survey.

[8] 2023 Electrical Corporation Wildfire Mitigation Maturity Survey Revised Final, April 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53708&shareable=true, accessed May 5, 2023). This is the version used by Energy Safety when scoring the survey.

- Energy Safety's evaluation of utilities' WMPs, including consideration of Maturity Survey results, areas where the utility has progressed, and areas where the utility must improve.
- Issuance of a Revision Notice if Energy Safety identifies critical issues associated with a utility's WMP.
- Publication of Energy Safety draft Decision.
- Publication of Energy Safety's Decision approving or denying a utility's WMP.
- Various forms of public participation throughout the process.

3.1 WMP Completeness

The first step in Energy Safety's WMP evaluation is a completeness check.[9] TBC provided its WMP pre-submission to Energy Safety on March 6, 2023.

Energy Safety determined that TBC's WMP pre-submission did not satisfy the completeness check and notified TBC on March 27, 2023, of what information was required to make its WMP complete.

TBC submitted its revised Base WMP on May 9, 2023.

3.2 Maturity Model and Survey

Energy Safety used the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model[10] (Maturity Model) and 2023 Electrical Corporation Wildfire Mitigation Maturity Survey[11] (Maturity Survey), which together provided a quantitative method to assess the maturity of each utility's wildfire risk mitigation program. The current version of the Maturity Model is an update to the original version that Energy Safety used to assess utility maturity during the first WMP cycle (2020-2022).

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

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[9] Process Guidelines, Section 4.1, pages 3-5 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

[10] 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Second Revised Final, Feb. 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53394&shareable=true, accessed May 5, 2023).

[11] 2023 Electrical Corporation Wildfire Mitigation Maturity Survey (Revised Final, April 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53708&shareable=true, accessed May 5, 2023). This is the version used by Energy Safety when scoring the survey.

category themes, and the overall WMP, based on the utility's answers to Maturity Survey questions and the scoring system described in the Maturity Model.

Energy Safety evaluated each utility's reported and projected wildfire mitigation maturity in the context of the utility's corresponding current and planned initiatives described in its WMP.

The results from the 2023 Maturity Survey establish a baseline for maturity as well as the utility's anticipated progress over this three-year plan period.

Energy Safety assessed the results of each utility's Maturity Survey and discussed how the utility is progressing—or not—in maturity relative to each mitigation initiative. TBC's results specific to each initiative are discussed in Sections 6 through 9 of this Decision, and overall results for TBC can be found in Appendix E.

3.3 Areas for Continued Improvement

Energy Safety's evaluation of the 2023-2025 WMPs focused on each utility's strategies for reducing the risk of utility-related ignitions. Energy Safety assessed the electrical corporation's progress on areas for improvement resulting from 2022 WMP evaluations, evaluating the feasibility of its strategies, and measuring year-to-year trends. As a result of this evaluation, Energy Safety identified areas where the utility must continue to improve its wildfire mitigation capabilities in future plans.[12]

Areas for continued improvement relative to each mitigation initiative are discussed in Sections 6 through 9 of this Decision. Specific areas for continued improvement prescribed by Energy Safety in 2023, including specific required progress, are listed in Section 11.

3.4 Revision Notice

Public Utilities Code section 8386.3(a) states, "Before approval, [Energy Safety] may require modifications of the [WMP]." If Energy Safety requires modifications to a WMP, it does so by issuing a Revision Notice to a utility.[13]

Energy Safety did not issue TBC a Revision Notice for its 2023-2025 WMP.

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[12] Process Guidelines, Section 4.7 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

[13] Process Guidelines, Section 4.4, page 6 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

3.5 Decision

In its evaluation of an electrical corporation's 2023-2025 WMP, Energy Safety considers the areas where the electrical corporation must improve, as well as the progress it plans to achieve in its areas of strength. As a result of its evaluation, Energy Safety determines whether the 2023-2025 WMP is approved or denied.[14] If the WMP is approved, Energy Safety finds the electrical corporation's WMP is sufficient and expects it to complete mitigation initiatives as described in its WMP. An approved WMP demonstrates adequate progress toward wildfire mitigation, while still showing areas where the electrical corporation must improve.

If the WMP is denied, Energy Safety finds the electrical corporation's WMP is not satisfactory or does not include sufficient detail within a section or sub-section of the WMP. There may still be areas of strength within a denied WMP, but the issues are critical enough to warrant denial.

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

Energy Safety also highlights in its Decision areas of strength where the electrical corporation plans noteworthy improvements to its wildfire mitigation programs, sets ambitious and feasible targets for its programs, and/or sets out to achieve more than what is required.

Pursuant to Public Utilities Code section 8386.3(a), this Decision is the totality of Energy Safety's review of TBC's 2023-2025 WMP. TBC's 2023-2025 WMP is approved.

3.6 Change Order Requests

For information regarding Energy Safety's change order process, refer to Section 12 of the Process Guidelines.

[14] Process Guidelines, Section 5.3, page 10 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53287&shareable=true, accessed May 5, 2023).

4. Introductory Sections of the WMP

In response to Sections 1 through 4 of the Technical Guidelines, TBC provided basic information regarding persons responsible for executing the plan and adherence to statutory requirements.[15]

TBC provided the required information for these sections:

- Section 1: Executive Summary (Summary of the 2020–2022 WMP Cycle, Summary of the 2023–2025 Base WMP).
- Section 2: Responsible Persons (titles and credentials for: executive-level owner with overall responsibility; program owners with responsibility for each of the main components of the plan; as applicable, general ownership for questions related to or activities described in the WMP).
- Section 3: Statutory Requirements Checklist.
    - This section provides a checklist of the statutory requirements for a WMP as detailed in Public Utilities Code section 8386(c).[16] By completing the checklist, the electrical corporation affirms that its WMP addresses each requirement. TBC completed this checklist.
- Section 4: Overview of WMP (Primary Goal; WMP Objectives; Proposed Expenditures; Risk-Informed Framework).

4.1 TBC's Wildfire Mitigation Expenditures

Section 4.3 of the Technical Guidelines requires electrical corporations to summarize projected expenditures for the current WMP cycle, as well as planned and actual expenditures from the previous WMP cycle (i.e., 2020–2022).[17]

TBC provided all required information regarding expenditures. A summary of this information is presented below. Figure 4.1-1 presents actual and planned WMP expenditures for TBC.

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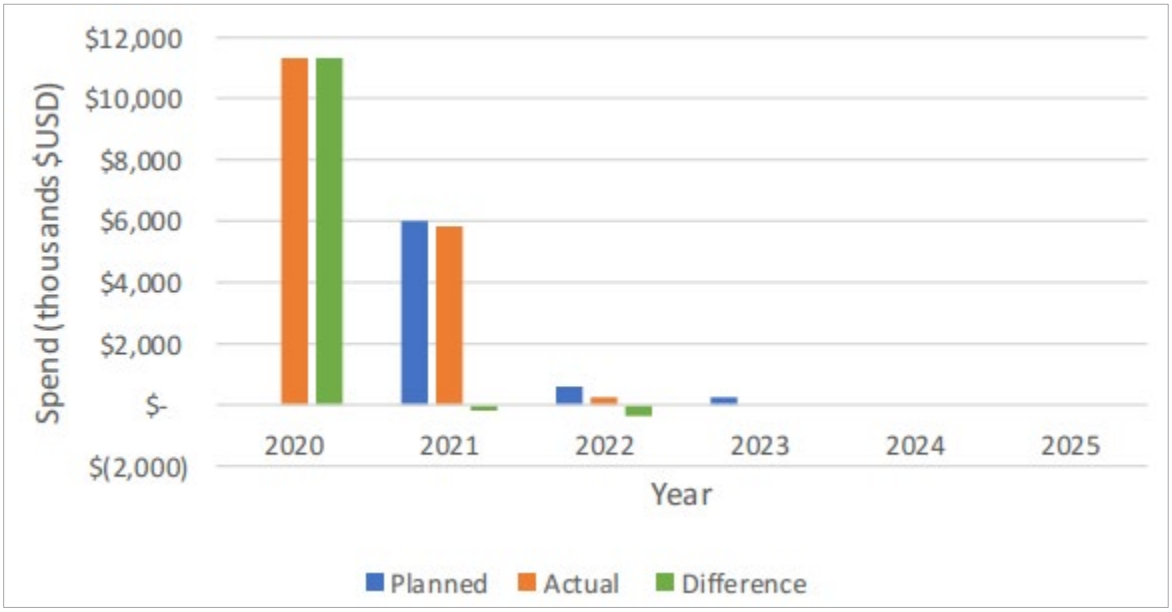
[15] Technical Guidelines, Sections 1 through 4, pages 6-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[16] Public Utilities Code section 8386 (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8386.&lawCode=PUC, accessed May 9, 2023).

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

Figure 4.1-1. TBC WMP Expenditures[18, 19]



[18] TBC's 2023-2025 WMP, Figure TBC 4.3-1 "Summary of Expenditures," page 32.

[19] Figure 4.1-1 has zero planned expenditures for 2024 and 2025, because TBC does not have any current proposed mitigation initiatives in its WMP for the 2023-2025 WMP cycle, other than two remaining initiatives from its 2020-2022 WMP cycle. TBC's plan objectives are to: 1) complete the installation of a fire suppression system in the spare parts building and installation of a outdoor compress gas cylinder container at the Pittsburg Converter Station; 2) maintain its currently emplaced processes and procedures with respect to fire safety, mitigation and preparedness to minimize the likelihood of an ignition event from its facility; and 3) periodically evaluate new technologies, materials, and methods for further reducing fire risk at TBC's Pittsburg Converter Station (TBC's 2023-2025 WMP, page 30).

5. Overview of the Operational Area

In response to Section 5 of the Technical Guidelines, TBC provided a high-level overview of its operational area that includes key characteristics of its electrical infrastructure, environmental settings, and community values at risk.[20]

Below are Energy Safety's summary and findings regarding TBC's reporting on its operational area.

5.1 Service Territory

Per the Independent Transmission Operator (ITO) Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (ITO Supplement), the reporting requirements associated with Sections 5.1, "Service Territory," of the 2023-2025 WMP Technical Guidelines do not apply to ITOs.[21]

5.2 Electrical Infrastructure

Section 5.2 of the Technical Guidelines requires TBC to provide a high-level description of its infrastructure, including all power generation facilities, transmission and distribution lines and associated equipment, substations, and other major equipment.[22]

TBC provided a description of its current electrical infrastructure and a table with an overview of its key electrical equipment, including two substations—converter stations—and 53 circuit miles of underground transmission and distribution lines, all located in non-HFTD areas.[23]

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[20] Technical Guidelines, Section 5, "Overview of the Service Territory," pages 15-29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[21] Energy Safety's Independent Transmission Operator Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53290&shareable=true, accessed May 5, 2023).

[22] Technical Guidelines, Section 5.2, "Electrical Infrastructure," pages 16-17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[23] TBC's 2023-2025 WMP, Table 5-2 "Overview of Key Electrical Equipment," pages 41-42.

5.3 Environmental Settings

Section 5.3 of the Technical Guidelines requires TBC to provide a high-level overview of the environmental settings within its service territory.[24]

5.3.1 Fire Ecology

Per the ITO Supplement, in Section 5.3.1, Fire Ecology, ITOs must provide a brief narrative describing the fire ecology or ecologies adjacent to their assets, rather than across its service territory.[25]

TBC provided a narrative describing the vegetative coverage across its operational area[26] TBC additionally provided a table describing the existing vegetation types in TBC's operational area.[27]

5.3.2 Catastrophic Wildfire History

Section 5.3.2 of the Technical Guidelines requires TBC to provide a brief narrative summarizing its wildfire history for the past 20 years as recorded by the electrical corporation, CAL FIRE, or another authoritative source.[28]

TBC reported zero catastrophic wildfires that were attributed to its facilities or equipment from 2015-2022. Energy Safety defines catastrophic wildfires as those that resulted in at least one death, damaged over 500 structures, or burned over 5,000 acres.

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[24] Technical Guidelines, Section 5.3, "Environmental Settings," pages 17-26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[25] Energy Safety's Independent Transmission Operator Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53290&shareable=true, accessed May 5, 2023).

[26] TBC's 2023-2025 WMP, pages 42-43.

[27] TBC's 2023-2025 WMP, Table 5.3 "Example of Existing Vegetation Types in the Service Territory" page 42.

[28] Technical Guidelines, Section 5.3.2, "Catastrophic Wildfire History," pages 18-20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

5.4 Community Values at Risk

Per the ITO Supplement, the reporting requirements associated with Sections 5.4.1, "Urban, Rural, and Highly Rural Customers," and 5.4.2, "Wildland-Urban Interfaces," of the 2023-2025 WMP Technical Guidelines do not apply to ITOs.[29]

Also, per the ITO Supplement, in Section 5.4.3, "Communities at Risk," ITOs must provide a high-level overview of individuals at risk, communities at risk, customers with access and functional needs (AFN) and social vulnerability, and communities vulnerable because of single access/egress conditions adjacent to their assets, rather than within their service territory.

TBC's Pittsburg substation is located in the northwest corner of the city, which borders a five acre decommission oil storage facility, light industrial business on the east and west sides, and a multi-family residential housing project has begun construction across the street at time of WMP publication. Cal Fire has designated communities with the City of Pittsburg as at risk; however, the areas immediately surrounding the Pittsburg substation are outside any identified area with at least a moderate ranking on the Fire Hazard Severity Zone.[30]

5.4.1 Environmental Compliance and Permitting

Section 5.4.5 of the Technical Guidelines requires TBC to summarize how it ensures it complies with applicable environmental laws and permits related to the implementation of its WMP, including its procedures/processes to ensure compliance, roadblocks it has encountered, and any notable changes to its environmental compliance and permitting procedures since the last WMP submission.[31]

New construction and/or large maintenance projects must comply, as necessary, with the California Environmental Quality Act, the Clean Water Act (sections 401 and 404), California Fish and Game Code (section 1602), the National Environmental Policy Act, the National Historic Preservation Act, Forest Practice Act and Rules, among other federal, state, and local requirements. Utilities must also obtain permits from land management agencies such as the National Forest Service, Bureau of Land Management, National Park Service, California Coastal Commission, among others.

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[29] Energy Safety's Independent Transmission Operator Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53290&shareable=true, accessed May 5, 2023).

[30] TBC's 2023-2025 WMP, page 58.

[31] Technical Guidelines, Section 5.4.5, "Environmental Compliance and Permitting," pages 28-29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

The linear nature of utility infrastructure often warrants several permits for one project, including different permit conditions, environmental requirements, and post-work reporting requirements. Compliance with permitting requirements add time and complexity to project planning, cost and mitigations related to environmental analysis and impact, and sometimes result in long-term monitoring or restoration projects. These are all considerations factoring into a utility's project planning and execution.

TBC summarized how it plans to ensure compliance with applicable environmental laws, regulations, and permitting requirements in planning wildfire mitigation projects.[32]

5.5 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the service territory overview section of its Base WMP.

[32] TBC's 2023-2025 WMP, pages 62-63.

6. Risk Methodology and Assessment

In response to Section 6 of the Technical Guidelines, TBC provided information on how it operates its grid to reduce wildfire risk, including in relation to equipment settings, grid response procedures and notifications, and personnel work procedures and training.[33]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in this area.

6.1 Methodology

Section 6.1 of the Technical Guidelines requires TBC to provide an overview of its risk calculation approach, including graphs showing the calculation process, a concise narrative explaining key elements, and definitions of risks and risk components.[34]

This section includes an overview of TBC's risk calculation approach.

TBC conducts its risk assessment using the failure mode and effects analysis (FMEA) process cycle, which TBC states is a standard practice in many industries.[35] The FMEA process has five steps and forms an iterative loop that allows for continuous improvements over time. By applying the FMEA process TBC identifies, prioritizes, mitigates, and continuously reassesses risks. One example of the operational impact of the FMEA process is the root cause analysis that is part of step 2, risk driver identification.[36] In step 2, TBC's subject matter experts generate potential root cause analysis of each failure mode, which informs risk prioritization, mitigations, and re-assessment in the rest of the five-step process.

TBC's infrastructure has a small footprint consisting of two substations, neither of which are located within an HFTD;[37] its cable is underwater with one of its substations in an urban area of San Francisco with no wildfire risk. TBC's small operational footprint and infrastructure layout allows it to focus its risk methodology, framework, and evaluation process on its Pittsburg substation.

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[33] Technical Guidelines, Section 6, "Risk Methodology and Assessment," pages 30-58 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[34] Technical Guidelines, Section 6.1, "Methodology," pages 30-35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[35] TBC's 2023-2025 WMP, page 66.

[36] TBC's 2023-2025 WMP, page 66.

[37] TBC's 2023-2025 WMP, page 64.

TBC's risk methodology and assessment is primarily focused on selecting and implementing mitigations such as infrastructure hardening, increased situational awareness, and fire-suppression efficacy, taking into account that its Pittsburg substation is located near HFTD Tier 2 lands,[38] in close proximity to vegetative fuels and in an area with seismic activity.

6.2 Risk Analysis Framework

Section 6.2 of the Technical Guidelines requires TBC to provide a high-level overview of its risk analysis framework, including a summary of key modeling assumptions, input data, and modeling tools used.[39]

This section includes an overview of TBC's risk analysis framework.

TBC's risk analysis framework has two main components, a comprehensive initial risk assessment and an on-going continuous risk assessment, both using the FMEA process. TBC conducted an internal comprehensive risk assessment of all its equipment and supplemented it with an independent vendor to model ignition event scenarios and identify possible mitigations. [40]

After completion of the initial comprehensive risk assessment, TBC is now applying the FMEA process to conduct an on-going risk evaluation which includes reevaluating and reprioritizing risk framework elements such as risk drivers and mitigations. The ongoing risk evaluation process is iterative, produces 'lessons learned' annually for continuous improvement, and involves assessing each component of TBC's infrastructure for failure, impacts from failure, conducting a root cause analysis, and implementing mitigations.[41]

6.3 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for risk assessment and mitigation strategy. TBC projects no maturity level change for 2024 or 2025 (Figure 6.3-1).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

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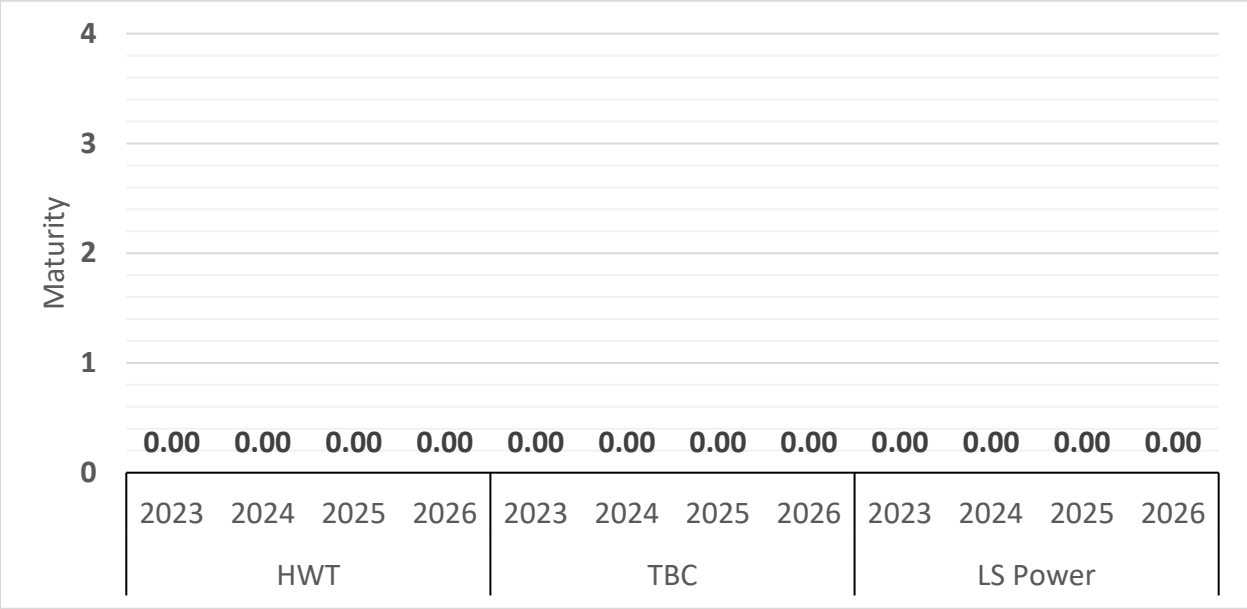
[38] TBC's 2023-2025 WMP, page 69-70.

[39] Technical Guidelines, Section 6.2, "Risk Analysis Framework," pages 36-44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[40] TBC's 2023-2025 WMP, page 65.

[41] TBC's 2023-2025 WMP, page 65.

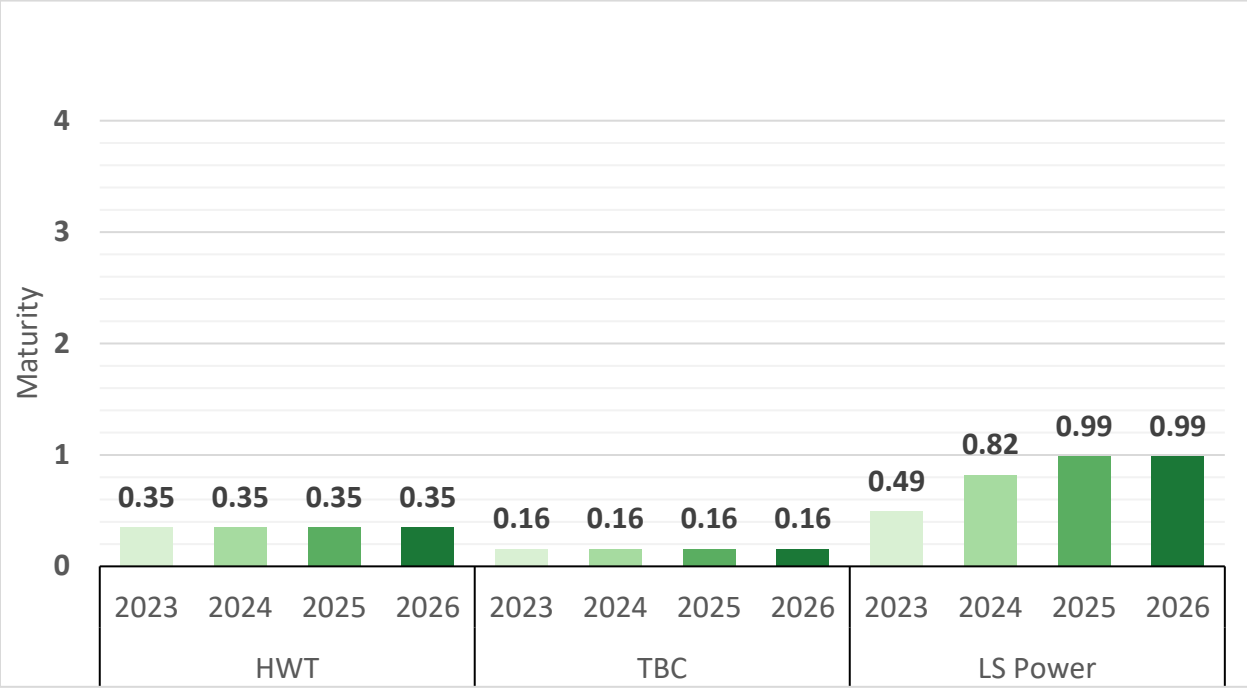
Figure 6.3-1. Cross-Utility Maturity for Risk Assessment and Mitigation Strategy (Minimum Values)



The utility's maturity level for the risk assessment and mitigation strategy category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at TBC's performance in risk assessment and mitigation strategy. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity.

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for risk assessment and mitigation strategy of 0.16 for 2023, 0.16 in 2024, and 0.16 in 2025 (Figure 6.3-2).

Figure 6.3-2. Cross-Utility Maturity for Risk Assessment and Mitigation Strategy (Average Values)



The rest of this section reports on maturity levels considering the minimum values.

TBC's current maturity level in this category is around the same as its peers, with HWT and LS Power reporting at levels 0.00 and 0.00, respectively. See Figure 6.1.

Based on its responses to the 2023 Maturity Survey, TBC reported its highest levels of projected maturity in the following capabilities for 2023 and 2024: Comprehensiveness[42,43]

Based on its responses to the 2023 Maturity Survey, TBC reported its lowest levels of projected maturity in the following capabilities for 2023 and 2024:

- Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS).[44]

[42] TBC's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 4 "Calculation of risk and risk components."

[43] The degree to which utility wildfire risk model includes various inputs, risk variables as an example, and outputs, such as risk impact to various stakeholders.

[44] TBC's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 3 "Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS)."

- Calculation of wildfire and PSPS risk exposure for societal values[45].

6.4 TBC's WMP Strengths

TBC projects improvement in risk methodology and assessment over the WMP cycle in the following areas: risk analysis results and presentation.

TBC conducts its risk assessment using the FMEA process cycle, which TBC states is a standard practice in many industries.[46] Given its small footprint, infrastructure proximity to HFTD, and inherent risk reduction resulting from undergrounded and submerged equipment,[47] the FMEA process cycle sufficiently addresses the present risks and the future risks considering the iterative loop built into the process which enables continuous improvements over time.

6.4.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

6.5 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the risk methodology and assessment section of its Base WMP.

[45] TBC's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Calculation of wildfire and PSPS risk exposure for societal values."

[46] TBC's 2023-2025 WMP, page 66.

[47] TBC's 2023-2025 WMP, page 69-70.

7. Wildfire Mitigation Strategy Development

In response to Section 7 of the Technical Guidelines, TBC provided a high-level overview of its risk evaluation and process for deciding on a portfolio of mitigation initiatives to achieve the maximum feasible risk reduction while meeting WMP goals and objectives.[48]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in this area.

7.1 Risk Evaluation

Section 7.1 of the Technical Guidelines requires TBC to describe its approach to risk evaluation based on risk analysis outcomes.[49] The approach should inform the development of a wildfire mitigation strategy that meets WMP goals and objectives.

TBC's only identified wildfire risk exposure is at its Pittsburg substation in Pittsburg. All other components of its network are either underground, underwater or in an urban setting without nearby vegetation.

The Pittsburg substation is a fire-hardened asset with a twelve-foot concrete wall surrounding asphalt and concrete subsurface. TBC reports that its primary fire risk is from building or transformer fires,[50] which have a limited likelihood of causing wildfires. TBC's mitigations include cameras for situational awareness, fire detection systems, fire suppression systems, and seismic base isolators for transformers.[51]

7.1.1 TBC's WMP Strengths

TBC projects improvement in its wildfire mitigation strategy development over the WMP cycle in the following area: mitigation selection process.

TBC's mitigation strategy is comprised of its fire prevention program and operational practices, such as using the FMEA process described in Section 6.4.[52] Considering TBC

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[48] Technical Guidelines, Section 7, "Wildfire Mitigation Strategy Development," pages 59-74 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[49] Technical Guidelines, Section 7.1, "Risk Evaluation," pages 59-66 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[50] TBC's 2023-2025 WMP, pages 69-70.

[51] TBC's 2023-2025 WMP, pages 80-83.

[52] TBC's 2023-2025 WMP, pages 69-70.

maintains transmission-only assets and that it does not have a service territory or end-use customers, its current mitigation selection approach is adequate to address its needs.

While TBC does not maintain programs specifically for wildfire mitigation, the overall fire prevention planning approach it applies has had the added impact of mitigating wildfire risk.

7.1.1.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

7.1.2 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the risk evaluation section of its Base WMP.

7.2 Risk-Informed Framework

Section 4.4 of the Technical Guidelines requires TBC to adopt and describe its framework for making risk-informed decisions.[53]

7.2.1 TBC's WMP Strengths

TBC projects improvement in its risk-informed decision making over the WMP cycle in the following area: wildfire mitigation strategy.

TBC's wildfire mitigation strategy strengths are a subset of those already noted in Sections 6.4 and 7.1.1. In brief, TBC describes industry-recognized best practices for risk identification, mitigation selection, and implementation. Given its small footprint, infrastructure proximity to HFTD, and inherent risk reduction resulting from undergrounded and submerged equipment,[54] its wildfire mitigation strategy practices are sufficient to address risks that are reasonably foreseeable.

7.2.1.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

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[53] Technical Guidelines, Section 4.4 "Risk-Informed Framework," pages 11-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[54] TBC's 2023-2025 WMP, pages 69-70.

7.2.2 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the risk-informed framework section of its Base WMP.

7.3 Wildfire Mitigation Strategy

Section 7.2 of the Technical Guidelines requires TBC to describe its proposed wildfire mitigation strategies based on the evaluation process identified in Section 7.1 of its WMP.[55]

7.3.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.14 for risk prioritization. For 2024, TBC projects no maturity level change for 2024 or 2025.

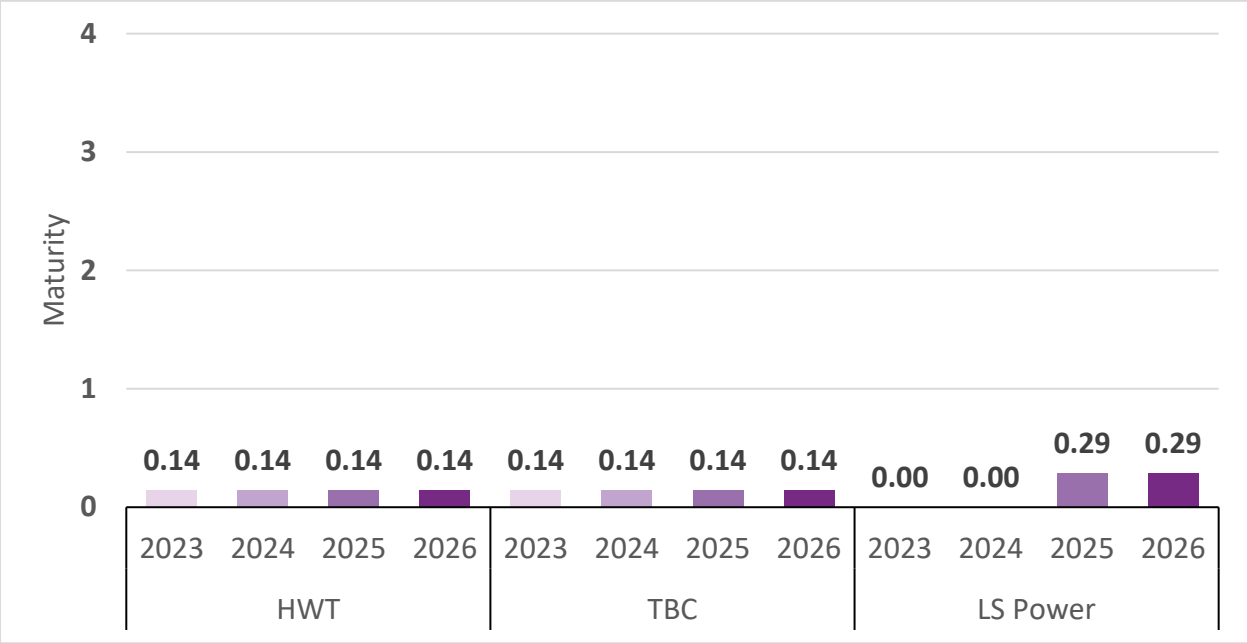
Note that cross-category themes are calculated by averaging the relevant sub-capability maturity levels.

TBC's current maturity level in this cross-category theme is around the same as its peers, with HWT and LS Power reporting at levels 0.14 and 0.00, respectively (See Figure 7.3-1).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

[55] Technical Guidelines, Section 7.2, pages 66-74 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023)

Figure 7.3-1. Cross-Utility Maturity for Risk Prioritization (Cross-Category Theme; Average Values)



Note that cross-category themes are only measured using the average maturity levels and not the minimum maturity levels.[56]

7.3.2 TBC's WMP Strengths

TBC projects improvement in its wildfire mitigation strategy over the WMP cycle in the following area: anticipated risk reduction.

TBC's anticipated risk reduction strengths are a subset of those already noted in Sections 6.4 and 7.1.1. In brief, TBC describes industry-recognized best practices[57] for risk identification, mitigation selection, and implementation. Given its small footprint, infrastructure proximity to HFTD, and inherent risk reduction resulting from undergrounded and submerged equipment,[58] its risk reduction strategies are adequate.

[56] 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Second Revised Final, Feb. 2023) page 13 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53394&shareable=true, accessed May 5, 2023).

[57] TBC's 2023-2025 WMP, pages 66.

[58] TBC's 2023-2025 WMP, pages 69-70.

7.3.2.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

7.3.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the wildfire mitigation strategy section of its Base WMP.

8. Wildfire Mitigation Initiatives

This section comprises Energy Safety's evaluation of the mitigation initiatives TBC undertakes to reduce the risk of catastrophic wildfire. For each mitigation initiative this section provides an analysis of TBC's maturity level, the ways TBC is progressing and specific areas where TBC must continue to improve.

The following mitigation initiatives, each with corresponding capabilities and maturity levels, are discussed in Sections 8.1 through 8.6:

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

TBC's approach to PSPS is discussed in Section 9. TBC's process for continuous improvement, including lessons learned, corrective action programs, and notices of violation and defect, are discussed in Section 10.

8.1 Grid Design, Operations, Maintenance

In response to Section 8.1 of the Technical Guidelines,[59] TBC provided information about its grid design and system hardening; asset inspections; equipment maintenance and repair; asset management and inspection enterprise systems; quality assurance and quality control; open work orders; grid operations and procedures; and workforce planning.

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in these areas. In addition, Energy Safety has identified areas where TBC must improve, described at the end of each subsection.

8.1.1 Objectives and Targets

As part of its Base WMP, TBC provided 3-year and 10-year objectives for its grid design, operations, and maintenance programs.[60]

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[59] Technical Guidelines, Section 8.1, pages 75-93 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[60] TBC's 2023-2025 WMP, pages 72-74.

TBC also defined quantitative targets for initiative activities for grid design, operations, and maintenance programs. TBC's Base WMP includes end-of-year targets for 2023. Selected targets are included in Table 8.1-1 to demonstrate the utility's projected progress.

Table 8.1-1. TBC Grid Design, Operations, and Maintenance – Selected Targets[61]

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Installation of a compressed gas cylinder housing	Housing	1	N/A	N/A
Installation of a spare parts building suppression system	System	1	N/A	N/A

8.1.2 Grid Design and System Hardening

Section 8.1.2 of the Technical Guidelines requires TBC to provide information on how it designs its system to reduce ignition risk and what it is doing to strengthen its distribution, transmission, and substation infrastructure to reduce the risk of utility-related ignitions resulting in catastrophic wildfires.[62]

8.1.2.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for grid design and resiliency. TBC projects no maturity level change for 2024 or 2025 (Figure 8.1-1).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

[61] TBC's 2023-2025 WMP, pages 74-76.

[62] Technical Guidelines, Section 8.1.2, page 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023)

Figure 8.1-1. Cross-Utility Maturity for Grid Design and Resiliency (Minimum Values)

The utility's maturity level for the grid design and resiliency capability described above is calculated using the minimum value of component sub-capabilities. The capability average is another way to look at TBC's performance in grid design and resiliency. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [63]

When the capability maturity is calculated using the average (rather than the minimum), TBC has a maturity level for grid design and resiliency of 0.00 for 2023 and projects no change for 2024 and 2025 (Figure 8.1-2).

[63] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.1-2. Cross-Utility Maturity for Grid Design and Resiliency[64] (Average Values)

The rest of this section reports on maturity levels considering the minimum values.

TBC's current maturity level in this capability is the same as its peers, with HWT and LS Power reporting at levels 0.00 and 0.00, respectively. See Figure 8.1-1.

8.1.2.2 TBC's WMP Strengths

TBC projects improvement in grid design and system hardening over the WMP cycle in the following areas: existing hardened system and completion of additional hardening measures.

TBC's existing system is well-hardened against wildfire risk. Most of its transmission line is either underground or submerged underwater. In 2021, TBC completed seismic upgrades to its transformers, including installing base isolators on the transformers.

To further reduce risk, TBC completed the installation of an outdoor compressed gas cylinder housing on April 1, 2023.[65] TBC is also in the process of completing a fire suppression system

[64] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 16 "Grid design and resiliency."

[65] Data Request OEIS-P-WMP_2023-TBC-001 (Question 1) https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55632&shareable=true, accessed November 16, 2023).

for its spare parts building at its Pittsburg Substation. As of September 20, 2023, TBC had completed installation of the system, but was still in the process of installing remote capabilities and final inspection.[66] TBC expects to complete the project by the end of 2023.

2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

8.1.2.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the grid design and system hardening section of its Base WMP.

8.1.3 Asset Inspections

Section 8.1.3 of the Technical Guidelines requires TBC to provide an overview of its procedures for inspecting its assets.[67]

8.1.3.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for asset inspections. TBC projects no maturity level change for 2024 or 2025 (Figure 8.1-3).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

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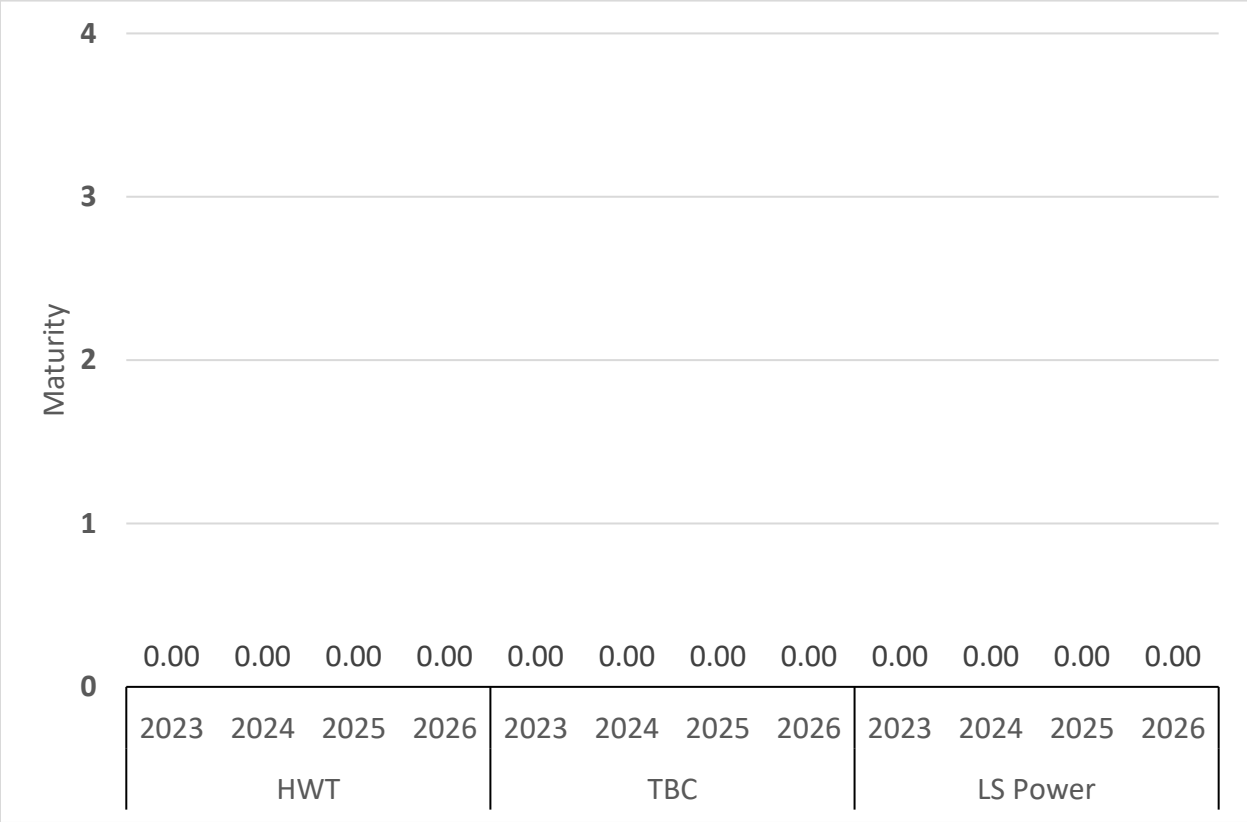
[66] Data Request OEIS-P-WMP_2023-TBC-001 (Question 1) https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55632&shareable=true, accessed November 16, 2023).

[67] Technical Guidelines, Section 8.1.3, page 83-85 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

Figure 8.1-3. Cross-Utility Maturity for Asset Inspections (Minimum Values)

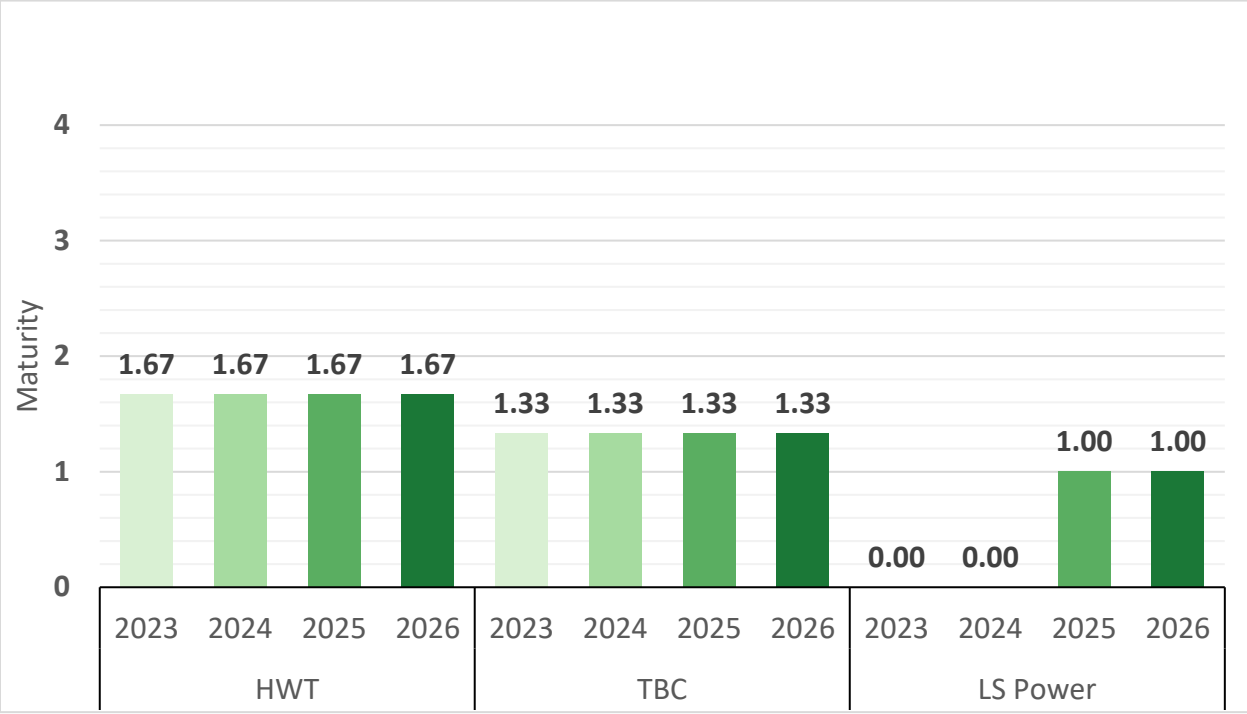


The utility's maturity level for the asset inspection capability described above is calculated using the minimum value of component sub-capabilities. The capability average is another way to look at TBC's performance in asset inspections. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [68]

When the capability maturity is calculated using the average (rather than the minimum), TBC has a maturity level for asset inspections of 1.33 for 2023. TBC projects no maturity level change in 2024 or 2025 (Figure 8.1-4).

[68] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.1-4. Cross-Utility Maturity for Asset Inspections[69] (Average Values)



The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this capability is between its peers, with HWT and LS Power reporting at levels 1.67 and 0.00, respectively. See Figure 8.1-4.

8.1.3.2 TBC's WMP Strengths

TBC projects improvement in asset inspections over the WMP cycle in the following area: inspection frequency.

Trans Bay Cable states that it performs weekly inspections of its converter stations and monthly inspections of land cable infrastructure.[70] Such frequent inspections allow for quick determinations of any potential issues or propagating risks.

2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

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[69] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 14 "Asset inspections."

[70] Trans Bay Cable's WMP, page 84.

8.1.3.3 Areas for Continued Improvement

TBC must continue to improve in the following areas.

Trans Bay Cable states that Maintenance Procedure TBC-MP-001 describes its QA process,[71] but has not provided document TBC-MP-001. In its 2025 Update, Trans Bay Cable must provide all documentation related to its QA/QC process.

Energy Safety sets forth specific areas for improvement and associated required progress in Section 11.

8.1.4 Equipment Maintenance and Repair

Section 8.1.4 of the Technical Guidelines requires TBC to provide a narrative of its maintenance programs, including its strategy for replacing/upgrading and for specific equipment types.[72]

8.1.4.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for asset maintenance and repair. TBC projects no maturity level change for 2024 or 2025 (Figure 8.1-5).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

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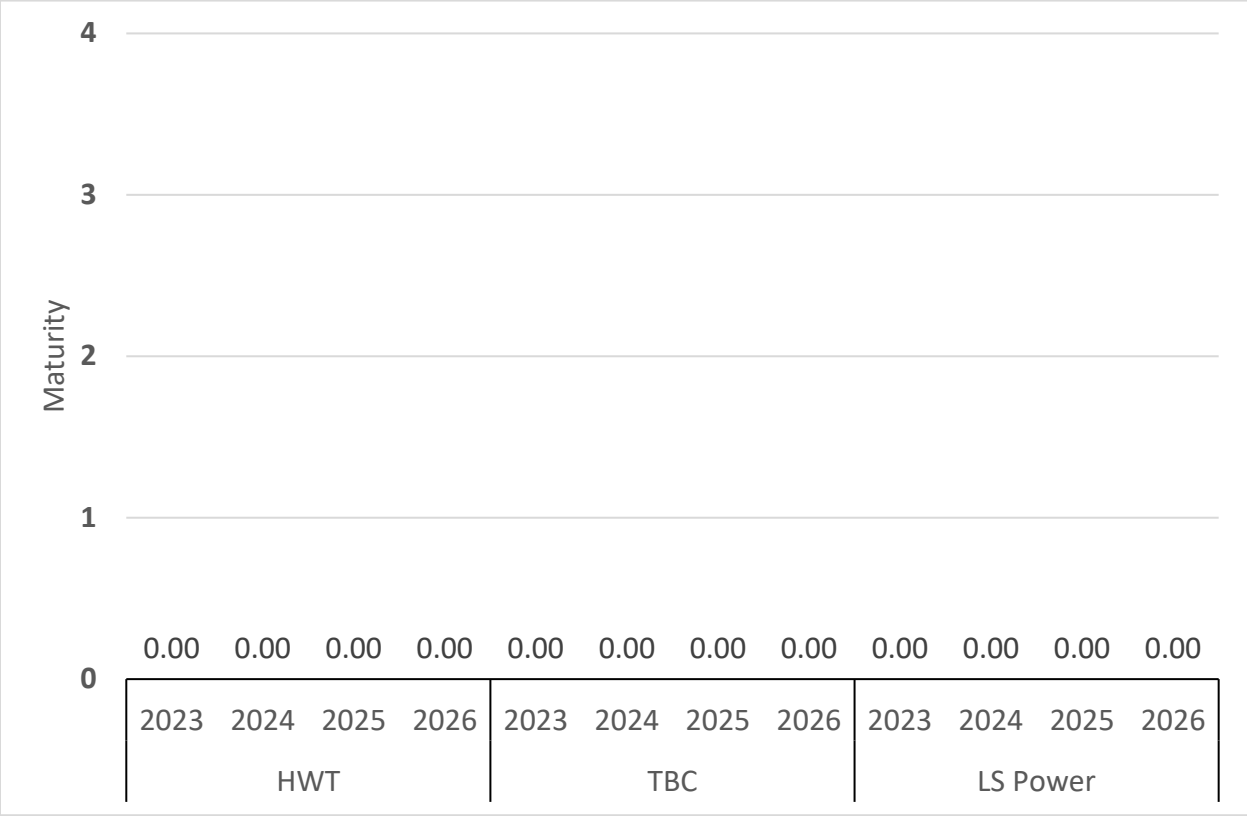
[71] Data Request OEIS-P-WMP_2023-TBC-001 (Question 1) https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55632&shareable=true, accessed November 16, 2023).

[72] Technical Guidelines, Section 8.1.4, pages 85-86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023)

Figure 8.1-5. Cross-Utility Maturity for Asset Maintenance and Repair[73] (Minimum Values)



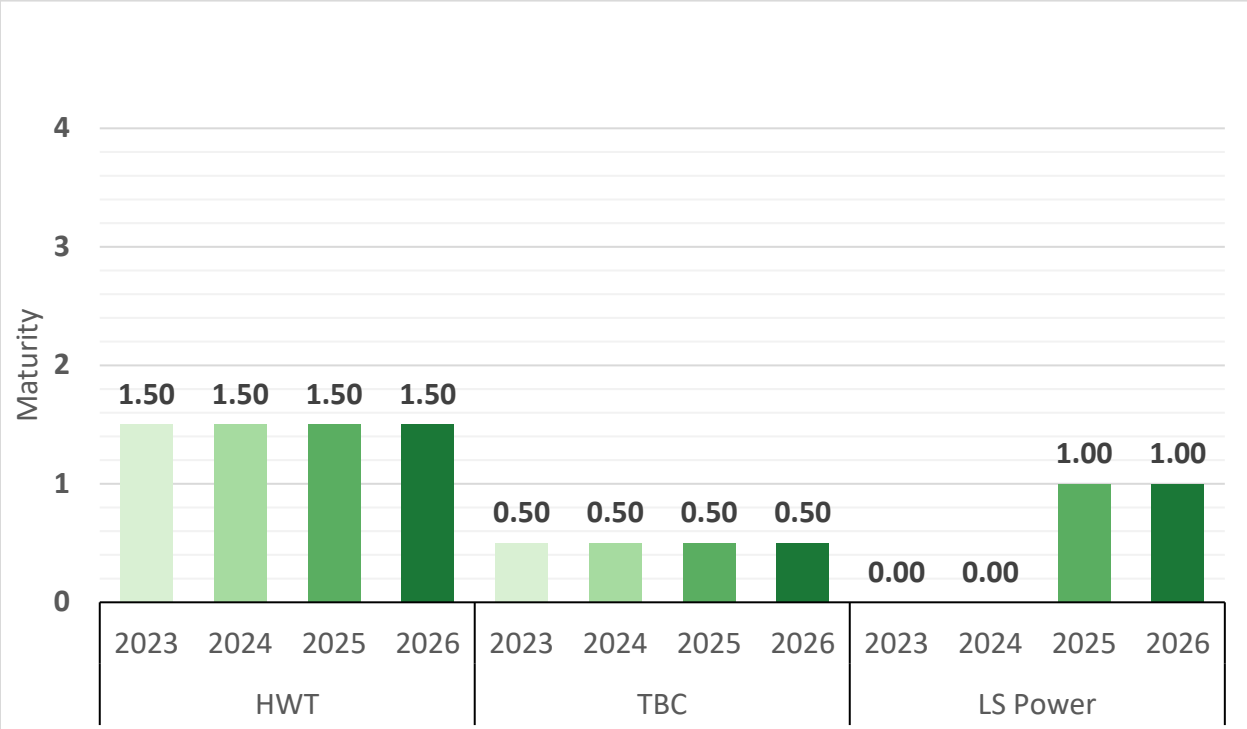
The utility's maturity level for the asset maintenance and repair capability described above is calculated using the minimum value of component sub-capabilities. The capability average is another way to look at TBC's performance in asset maintenance and repair. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [74]

When the capability maturity is calculated using the average (rather than the minimum), TBC has a maturity level for asset maintenance and repair of 0.50 for 2023. TBC projects no maturity level change in 2024 or 2025 (Figure 8.1-6).

[73] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 15 "Asset maintenance and repair."

[74] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.1-6. Cross-Utility Maturity for Asset Maintenance and Repair[75] (Average Values)



The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this capability is between its peers, with HWT and LS Power reporting at levels 1.50 and 0.00, respectively. See Figure 8.1-6.

8.1.4.2 TBC's WMP Strengths

TBC projects improvement in equipment maintenance and repair over the WMP cycle in the following area: completion of work orders.

Energy Safety recognizes TBC's commitment to the prompt completion of work orders. TBC states it had no overdue work orders at the time its 2023 WMP was composed.[76] TBC's ability to resolve work orders on time is a strength.

2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

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[75] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 15 "Asset maintenance and repair."

[76] TBC's 2023-2025 WMP, Table 8-8, page 90.

8.1.4.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the equipment maintenance and repair section of its Base WMP.

8.1.5 Grid Operations and Procedures

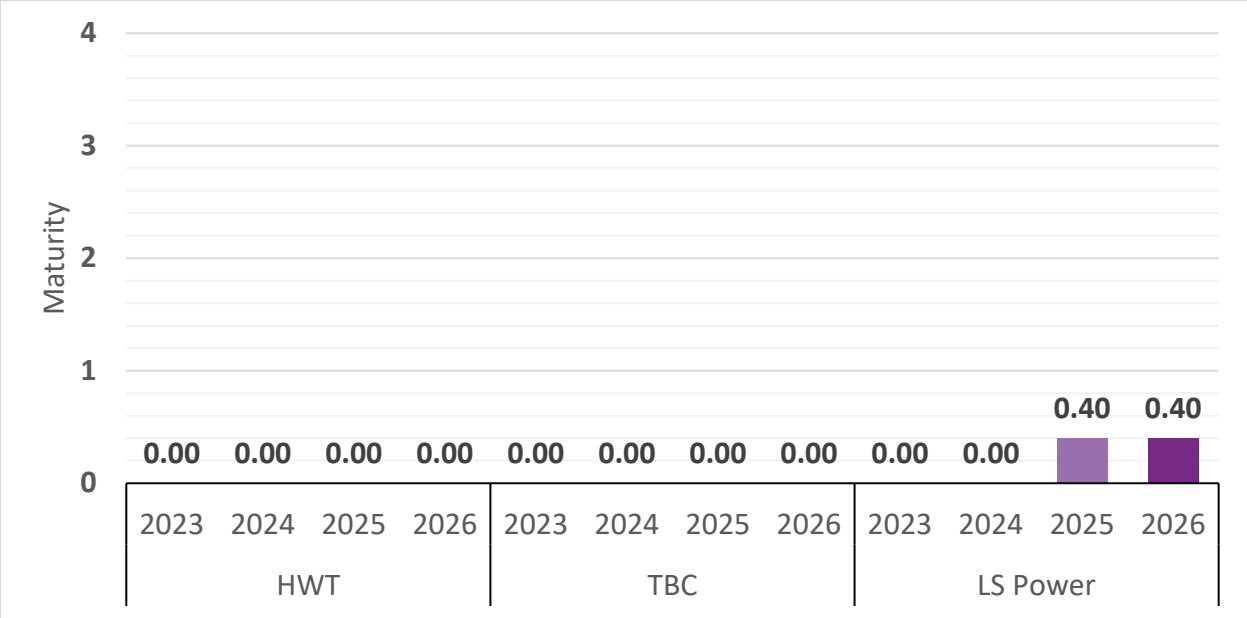
Section 8.1.8 of the Technical Guidelines requires TBC to describe how it manages and operates its grid to reduce wildfire risk, including in relation to equipment settings, grid response procedures and notifications, and personnel work procedures and training.[77]

8.1.5.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for grid operations and protocols. TBC projects no maturity level change for 2024 or 2025 (Figure 8.1-7).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

Figure 8.1-7. Cross-Utility Maturity for Grid Operations and Protocols[78] (Minimum Values)



The utility's maturity level for the grid operations and protocols category described above is calculated using the minimum value sub-capability of each capability. Using the capability

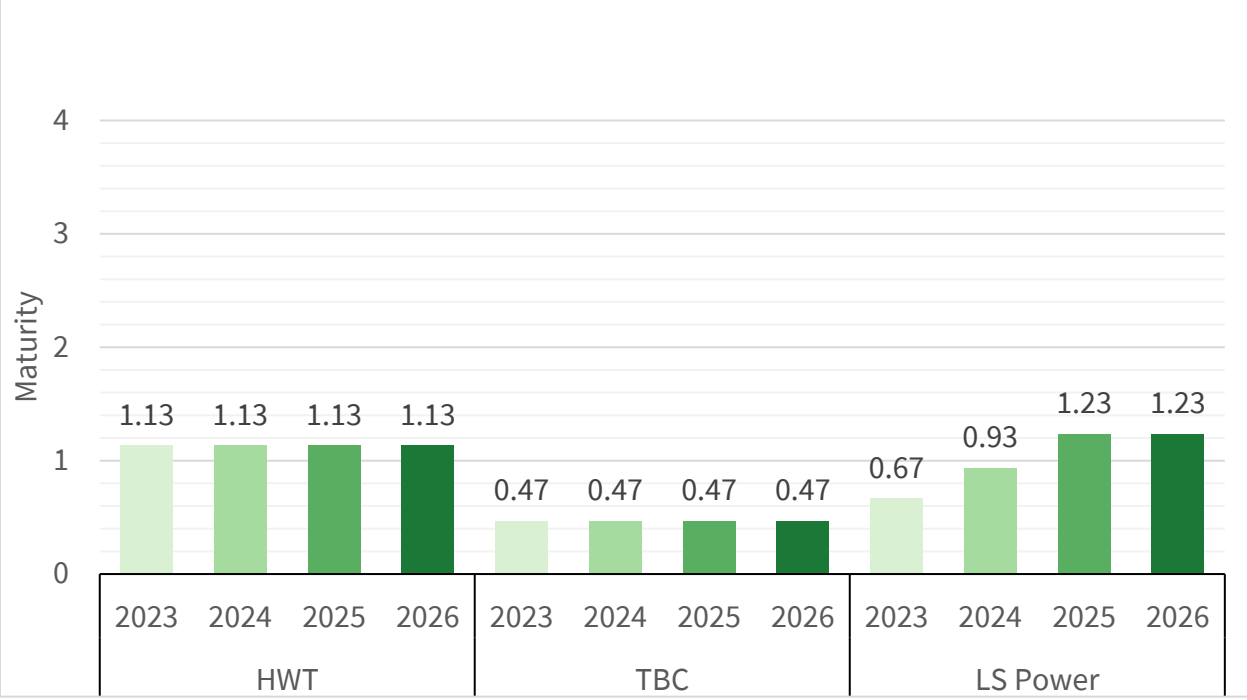
[77] Technical Guidelines, Section 8.1.8, pages 88-89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023)

[78] 2023 Maturity Survey Category E "Grid Operations and Protocols."

average is another way to look at TBC's performance in grid operations and protocols. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [79]

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for grid operations and protocols of 0.47 for 2023, and projects no change for 2024 or 2025 (Figure 8.1-8).

Figure 8.1-8. Cross-Utility Maturity for Grid Operations and Protocols[80] (Average Values)



The rest of this section reports on maturity levels considering the minimum values.

TBC's current maturity level in this category is around the same as its peers, with HWT and LS Power reporting at levels 0.00 and 0.00, respectively. See Figure 8.1-7.

8.1.5.2 TBC's WMP Strengths

TBC projects improvement in grid operations and procedures over the WMP cycle in the following areas:

TBC does not have any overhead lines, reclosers, or distribution assets, and therefore does not use protective equipment and device settings specific to reducing wildfire risk. TBC uses a

[79] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

[80] 2023 Maturity Survey Category E "Grid Operations and Protocols."

process-visualization system to monitor its system, which also coordinates with the California Independent State Operator (CAISO) and Pacific Gas and Electric Company (PG&E) to obtain situational awareness of local conditions. TBC also uses a protection feature that initiates an emergency shutoff within milliseconds of detecting a fault.

2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

8.1.5.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the grid operations and procedures section of its Base WMP.

8.2 Vegetation Management and Inspections

In response to Section 8.2 of the Technical Guidelines, TBC provided information on its vegetation management programs, including vegetation inspections, vegetation and fuels management, vegetation management enterprise systems, environmental compliance and permitting, quality assurance and quality control, open work orders, and workforce planning as applicable.[81]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in these areas.

8.2.1 Objectives and Targets

TBC did not provide 3-year and 10-year objectives for its vegetation management programs. TBC also did not define quantitative targets for initiative activities for its vegetation management programs.

TBC's substations are in an urban, industrial environment and its transmission facilities are either buried or submerged beneath the San Francisco Bay. At its above-ground substations, TBC reduces vegetative fuels as part of landscape maintenance.[82]

Considering that TBC does not have a formal vegetation management program and the limited scale and scope of TBC's infrastructure and wildfire risk exposure from vegetation contact, TBC has provided sufficient justification for marking objectives and targets for vegetation management and inspections as "Not Applicable."

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[81] Technical Guidelines, Section 8.2, "Vegetation Management and Inspections," pages 94-113 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

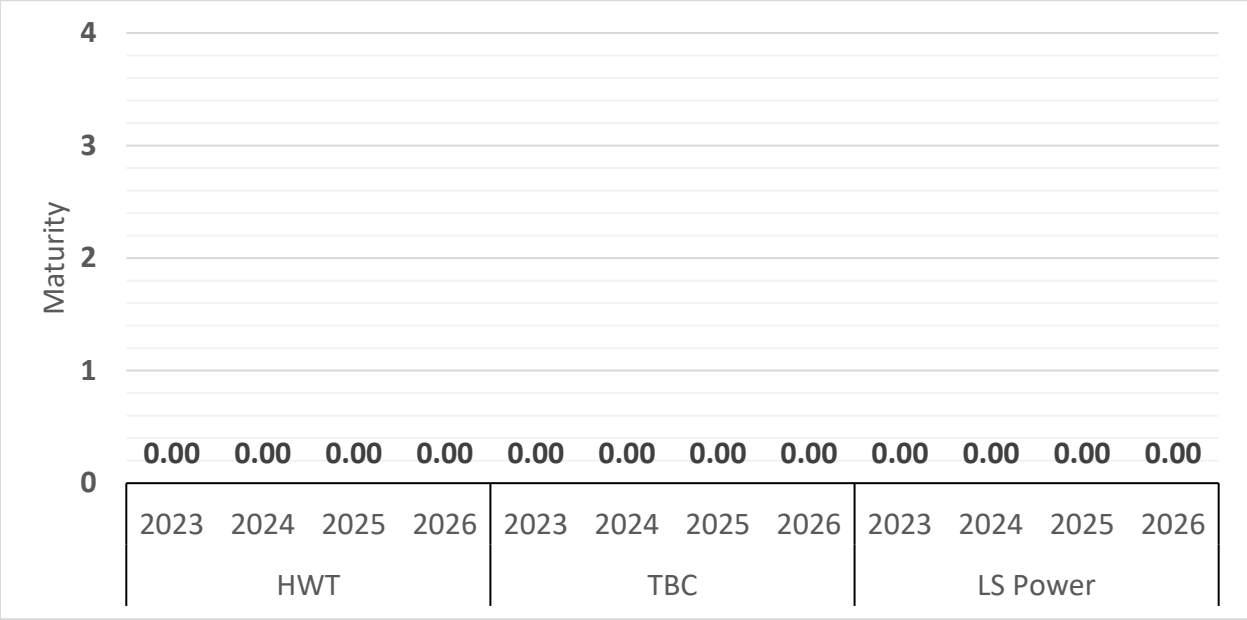
[82] TBC's 2023-2025 WMP, page 103.

8.2.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for vegetation management and inspections. TBC projects no maturity level change for 2024 or 2025 (Figure 8.2-1).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

Figure 8.2-1. Cross-Utility Maturity for Vegetation Management and Inspections (Minimum Values)

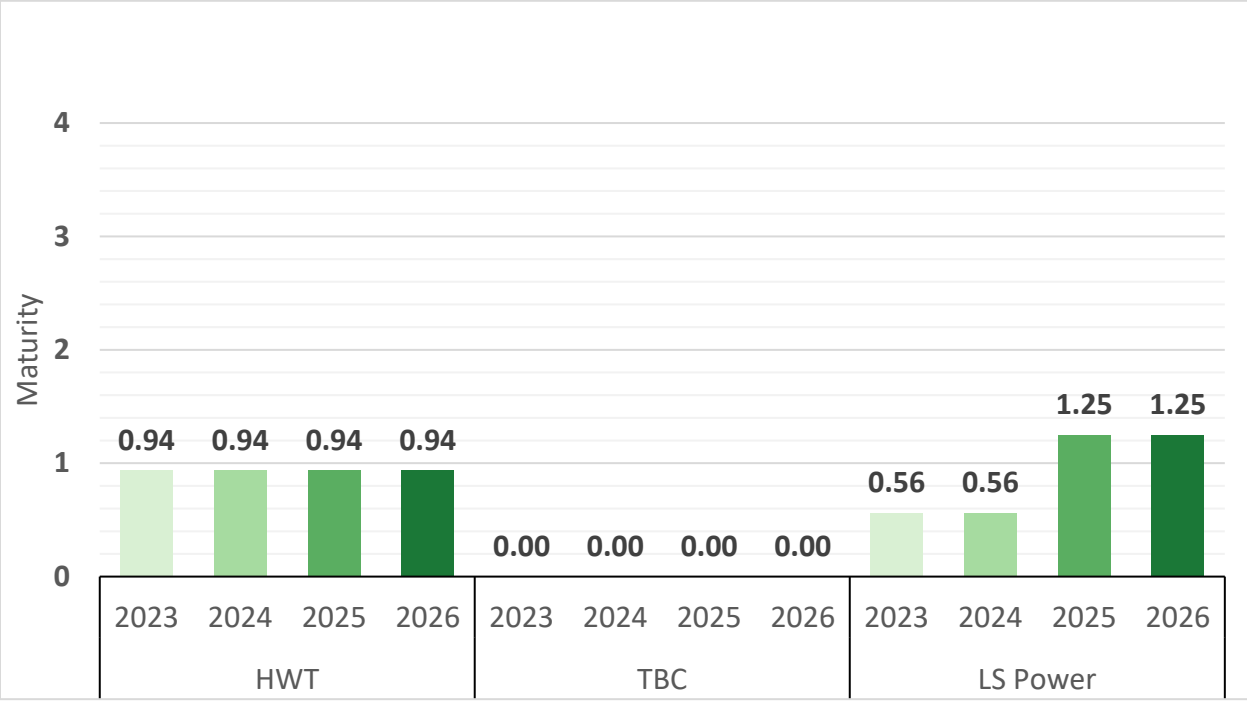


The utility's maturity level for the vegetation management and inspections category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at TBC's performance in vegetation management and inspections. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [83]

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for vegetation management and inspections of 0.00 for 2023 and projects no change for 2024 or 2025 (Figure 8.2-2).

[83] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.2-2. Cross-Utility Maturity for Vegetation Management and Inspections (Average Values)



The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this category is lower than its peers, with HWT and LS Power reporting at levels 0.94 and 0.56, respectively. See Figure 8.2-2.

Considering that TBC does not have a formal vegetation management program and given the limited scale and scope of TBC's infrastructure and wildfire risk exposure due to vegetation contact, TBC's low maturity level for vegetation management and inspections is adequate. An increase in maturity level for vegetation management and inspections would likely not reduce risk.

8.2.3 TBC's WMP Strengths

Considering that TBC does not have a formal vegetation management program and given the limited scale and scope of TBC's infrastructure and wildfire risk exposure from vegetation contact, Energy Safety finds that TBC has appropriately documented its vegetation management practices and protocols.

8.2.3.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

8.2.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the vegetation management section of its Base WMP.

8.3 Situational Awareness and Forecasting

In response to Section 8.3 of the Technical Guidelines, TBC provided information on its situational awareness and forecasting, including environmental monitoring systems, grid monitoring systems, ignition detection systems, weather forecasting, and fire potential index as applicable.[84]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in these areas.

8.3.1 Objectives and Targets

As part of its Base WMP, TBC did not provide 3-year and 10-year objectives for its situational awareness and forecasting programs, nor did it provide quantitative targets for its situational awareness and forecasting initiative activities.

Given the limited scale and scope of TBC's facilities as a transmission-only ITO without distribution or end-use customers and given that most of its assets are buried underground, submerged underwater or enclosed within concrete walls of its substations (which are clear of vegetation and situated outside the HFTD), TBC has provided sufficient justification with its existing situational awareness and forecasting initiatives for marking objectives and targets for situational awareness and forecasting as "Not Applicable."

8.3.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for situational awareness and forecasting (Figure 8.3-1).

TBC projects no maturity level change for 2024 or 2025.

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

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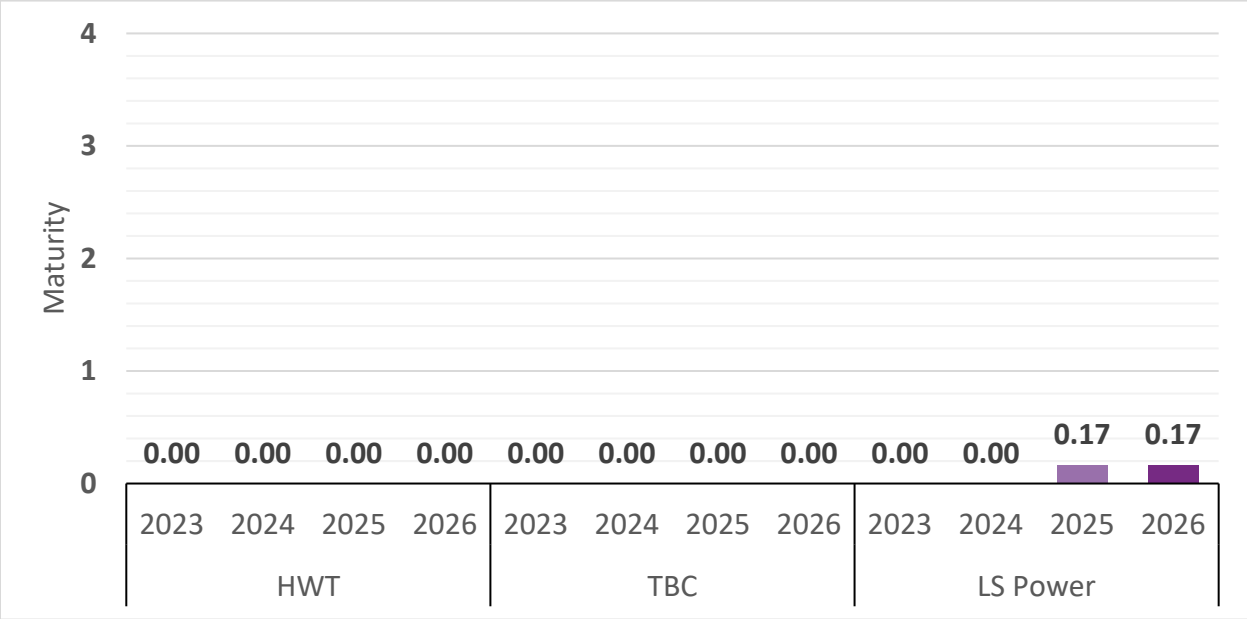
[84] Technical Guidelines, Section 8.3, "Situational Awareness and Forecasting," pages 114-135 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

Figure 8.3-1. Cross-Utility Maturity for Situational Awareness and Forecasting (Minimum Values)

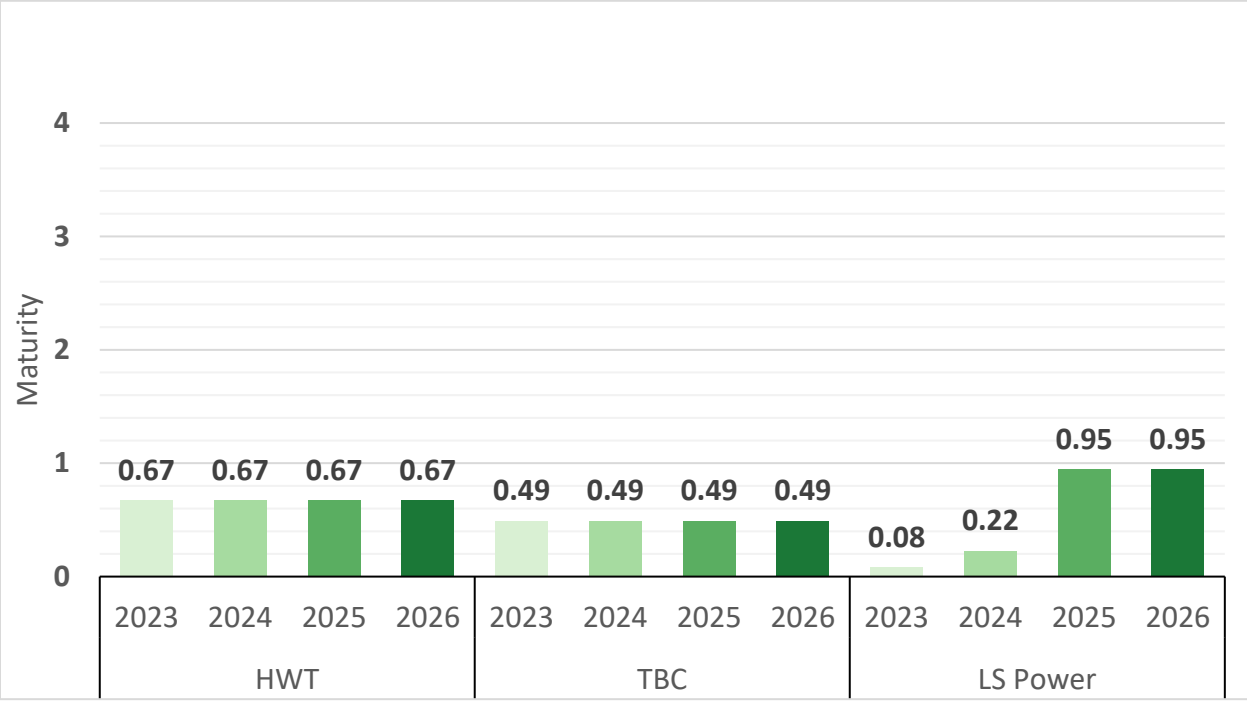


The utility's maturity level for the situational awareness and forecasting category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at TBC's performance in situational awareness and forecasting. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [85]

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for situational awareness and forecasting of 0.49 for 2023 and projects no change for 2024 or 2025 (Figure 8.3-2).

[85] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.3-2. Cross-Utility Maturity for Situational Awareness and Forecasting (Average Values)



The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this category is around the same as its peers, with HWT and LS Power reporting at levels 0.67 and 0.08, respectively. See Figure 8.3-2.

Considering the limited scale and scope of TBC's infrastructure and its low exposure to wildfire risks, its existing maturity level is in line with its peer ITOs and is adequate.

TBC operates two converter stations connected by a 53-mile submerged cable, with all aboveground transmission infrastructure enclosed by a twelve-foot concrete wall. TBC's system is equipped with real-time cable monitoring, transformer oil monitoring, motion sensors, cameras for ignition detection, and an on-site weather station.

TBC receives seven-day weather forecasts with a wildfire risk index. It uses the failure mode and effects analysis (FMEA) process for third-party wildfire assessments, evaluating potential failure points and proposing mitigations. The FMEA process is updated annually to ensure controls and processes function as intended, review potential failure modes of new equipment, and explore risk reduction opportunities through technology and best practices.

8.3.3 TBC's WMP Strengths

TBC intends to monitor the effectiveness of its existing processes, procedures, and capabilities and adjust as necessary. Overall, TBC's approach is adequate considering its minimal wildfire risk.

8.3.3.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

8.3.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the situational awareness and forecasting section of its Base WMP.

8.4 Emergency Preparedness

In response to Section 8.4 of the Technical Guidelines, TBC provided information on its emergency preparedness, including its wildfire and PSPS emergency preparedness plan; collaboration and coordinating with public safety partners; public notification and communications strategy; preparedness and planning for service restoration; customer support in wildfire and PSPS emergencies; and learning after wildfire and PSPS events as applicable.[86]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in these areas.

8.4.1 Objectives and Targets

As part of its Base WMP, TBC did not provide 3-year and 10-year objectives for its emergency preparedness programs nor did it provide quantitative targets for initiative activities for its emergency preparedness programs.[87]

Given the limited scale and scope of TBC's facilities as a transmission-only ITO without distribution or end-use customers, TBC has provided sufficient justification with its existing emergency preparedness initiatives for marking objectives and targets as "Not Applicable."

8.4.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for Emergency Preparedness (Figure 8.4-1).

TBC projects no maturity level change for 2024 or 2025.

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

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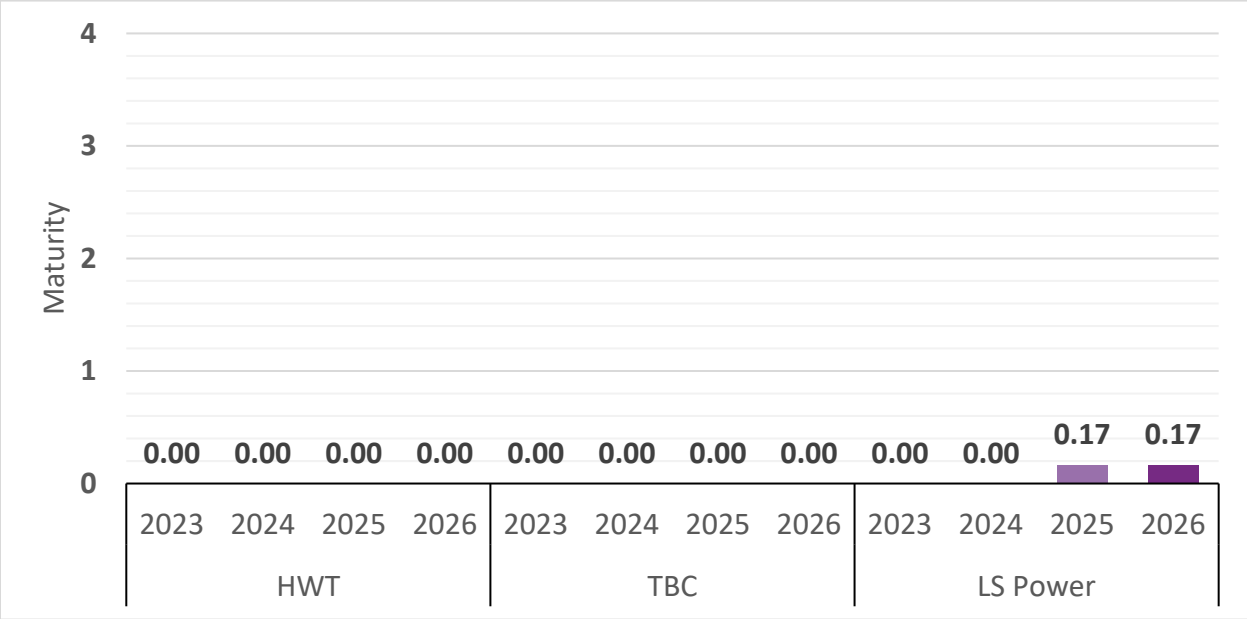
[86] Technical Guidelines, Section 8.4, "Emergency Preparedness," pages 135-179 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[87] TBC's 2023-2025 WMP, pages 148-150.

Figure 8.4-1. Cross-Utility Maturity for Emergency Preparedness (Minimum Values)

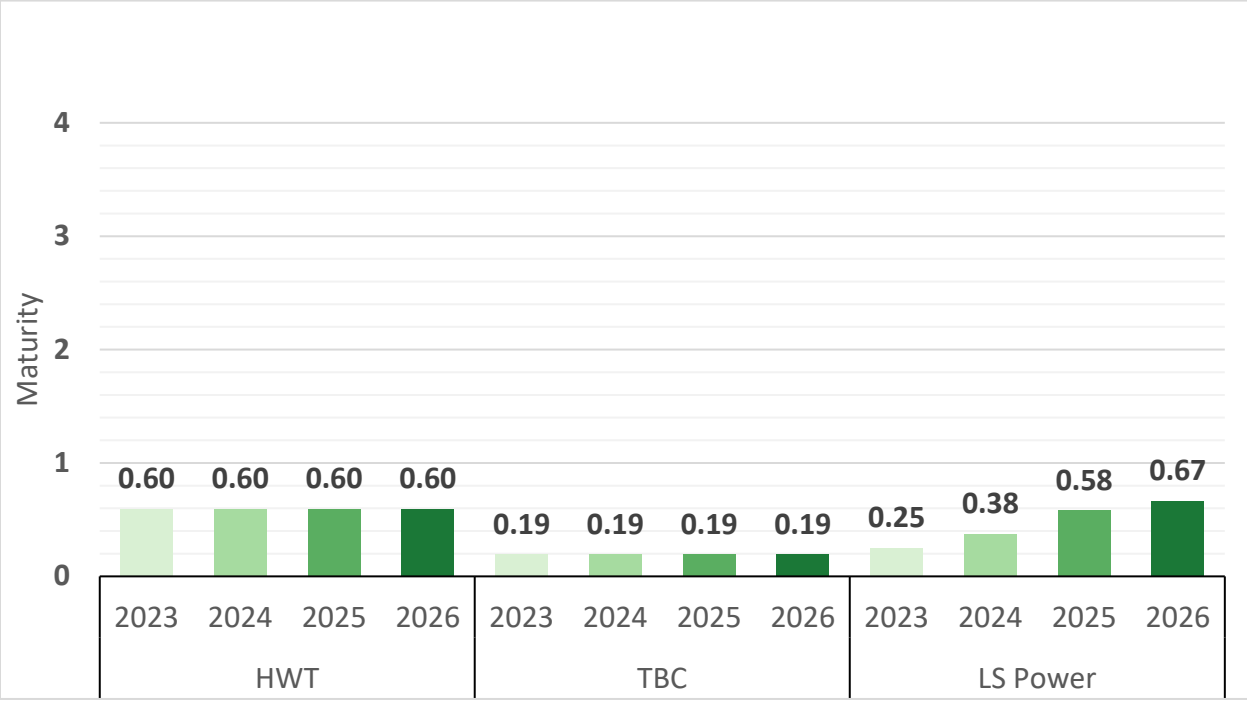


The utility's maturity level for the emergency preparedness category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at TBC's performance in emergency preparedness. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [88]

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for emergency preparedness of 0.19 for 2023, and projects no change for 2024 or 2025 (Figure 8.4-2).

[88] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.4-2. Cross-Utility Maturity for Emergency Preparedness (Average Values)



The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this category is lower than its peers, with HWT and LS Power reporting at levels 0.60 and 0.25, respectively. See Figure 8.4-2.

Considering the limited scale and scope of TBC's infrastructure and services, its existing maturity level is in line with its peer ITOs and is adequate.

8.4.3 TBC's WMP Strengths

Although TBC has limited infrastructure, it does have a protocol for engaging with critical stakeholders regarding any potential emergency event, which includes wildfire or PG&E-initiated PSPS events, and this is detailed in TBC's Emergency Operations Plan and Emergency Action Plan, which show strong coordination with the CAISO, PG&E, and the Contra Costa County fire agencies and emergency response teams.

8.4.3.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

8.4.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC under the emergency preparedness section of its Base WMP.

8.5 Community Outreach and Engagement

In response to Section 8.5 of the Technical Guidelines, TBC provided information on its community outreach and engagement, including its public outreach and educational awareness for wildfires, PSPS, outages, and vegetation management; public engagement in the WMP decision-making process; engagement with AFN populations, local governments, and tribal communities; collaboration on local wildfire mitigation and planning; and best practice planning as applicable.[89]

Below is Energy Safety's evaluation regarding TBC's objectives and targets, maturity levels, and strengths in these areas. In addition, Energy Safety has identified an area where TBC must improve, described at the end of this section.

8.5.1 Objectives and Targets

As part of its Base WMP, TBC did not provide 3-year and 10-year objectives for its community outreach and engagement programs, nor did it provide quantitative targets for its community outreach and engagement initiative activities.

Given the limited scale and scope of TBC's facilities as a transmission-only ITO without distribution or end-use customers, TBC has provided sufficient justification with its existing community outreach and engagement initiatives for marking objectives and targets as "Not Applicable."

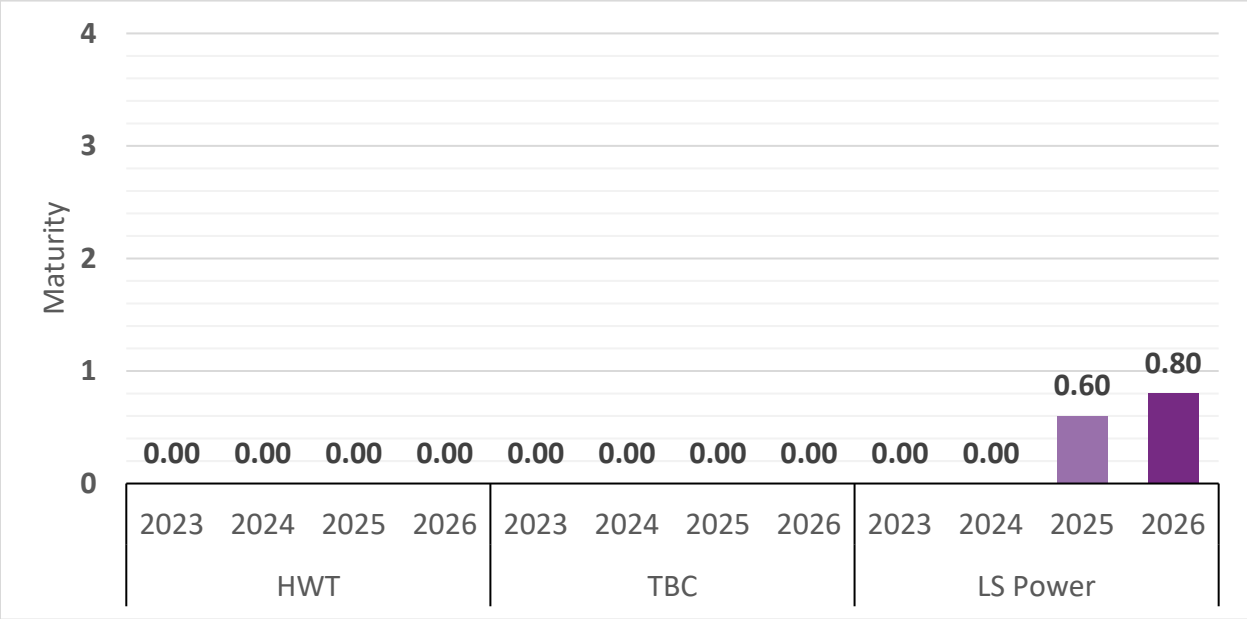
8.5.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, TBC has a 2023 maturity level of 0.00 for community outreach and engagement. TBC projects no maturity level change for 2024 or 2025 (Figure 8.5-1).

Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

[89] Technical Guidelines, Section 8.5, "Community Outreach and Engagement," pages 179-194 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

Figure 8.5-1. Cross-Utility Maturity for Community Outreach and Engagement (Minimum Values)



The utility's maturity level for the community outreach and engagement category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at TBC's performance in community outreach and engagement. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity.[90]

When the category maturity is calculated using the capability average (rather than the minimum), TBC has a maturity level for community outreach and engagement of 0.13 for 2023, and projects no change for 2024 or 2025 (Figure 8.5-2).

[90] For further information on maturity level determinations, see Section 4 of the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (second revision), published February 21, 2023.

Figure 8.5-2. Cross-Utility Maturity for Community Outreach and Engagement (Average Values)

The rest of this section reports on maturity levels considering the average values.

TBC's current maturity level in this category is around the same as its peers, with Horizon West and LS Power reporting at levels 0.13 and 0.00, respectively. See Figure 8.5-2.

8.5.3 TBC's WMP Strengths

TBC does not have a service territory or distribution system and does not serve end-use customers. As such, TBC does not provide direct customer support or engage with communities during an emergency. However, TBC engages and maintains communication with relevant entities such as the CAISO and its Interconnecting Transmission Owner, PG&E. Furthermore, in the event of a fire, TBC states that it would contact the local Contra Costa Fire Department for support.[91]

8.5.3.1 2022 Areas for Continued Improvement

There were no areas for continued improvement for TBC resulting from Energy Safety's evaluation of TBC's 2022 WMP Update.

[91] TBC's 2023-2025 WMP, page 213.

8.5.4 Areas for Continued Improvement

TBC must continue to improve in the following area.

TBC states that many of the efforts undertaken by larger utilities with service territories and distribution systems are not specifically applicable to TBC. As such, TBC does not have a formal process for sharing best practices with its affiliates, but rather, shares information on an ad hoc basis (e.g., information on capital improvements that may have applicable fire risk reduction benefits).[92] Given the ad hoc nature of TBC's best practice sharing, TBC does not provide examples of best practice sharing to date and marks its WMP Table 8-63 "Best Practice Sharing with Other Electrical Corporations" as "Not Applicable."[93]

While sharing best practices on an ad hoc basis is acceptable given the limited scale and scope of TBC's operations and programs, TBC should be documenting such instances of best practice sharing as they occur. TBC must provide this information within its 2026-2028 Base WMP and applicable tables.

Energy Safety sets forth specific areas for improvement and associated required progress in Section 11.

[92] TBC's 2023-2025 WMP, page 216.

[93] TBC's 2023-2025 WMP, pages 216.

9. Public Safety Power Shutoffs

TBC is a transmission-only electrical corporation and does not own, operate, or maintain electric distribution facilities or have end-use customers. With no end-customers, PSPS matters are coordinated by PG&E. Due to this, as well as TBC's assets being located underwater, underground, and in highly urbanized/non-HTF areas, TBC does not have PSPS protocols or PSPS evaluation measures.[94] This is reasonable given the scale and scope of its operations.[95]

[94] TBC 2023-2025, pages 225-226.

[95] Energy Safety's Independent Transmission Operator Supplement to the 2023-2025 Wildfire Mitigation Plan Technical Guidelines (Dec. 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53290&shareable=true, accessed May 5, 2023).

10. TBC's Process for Continuous Improvement

In response to Sections 10, 11, and 12 of the Technical Guidelines,[96] TBC provided information on its lessons learned, a description of its corrective action program, and information on any Notices of Violation or Notices of Defects it has received.

Below is Energy Safety's evaluation regarding these steps to drive continuous improvement.

10.1 Lessons Learned

Section 10 of the Technical Guidelines requires a utility to use lessons learned to drive continuous improvement in its WMP. Lessons learned can be divided into the three main categories: (1) internal monitoring and evaluation, (2) external collaboration with other electrical corporations, and (3) feedback from Energy Safety or other authoritative bodies. This section includes an assessment of TBC's implementation of lessons learned.

TBC representatives attended the Energy Safety-led risk modeling working group meetings. It decided to commission research to further inform key assumptions for long-term capital improvements and wildfire risk mitigation initiatives, particularly in the areas of unexpected, extreme events and potential environmental shifts due to climate change.

10.2 Corrective Action Program

Section 11 of the Technical Guidelines requires a utility to describe its corrective action program (CAP) and a summary of the relevant portions of its existing procedures. This section includes an assessment of TBC's implementation of its CAP relative to wildfire safety, including how it prevents recurrence of risk events; addresses findings from wildfire investigations; addresses findings from Energy Safety Compliance Assurance Division; and addresses areas for continued improvement identified by Energy Safety as applicable.

TBC has a CAP in place; however, no corrective actions have been required and no deficiencies have been identified in any in TBC's wildfire-related compliance by Energy Safety.

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[96] Technical Guidelines, Section 10, pages 207-209; Section 11, pages 210-211; Section 12, pages 212-213 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

10.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for TBC in these areas of its Base WMP.

11. Required Areas for Continued Improvement

Energy Safety's evaluation of the 2023-2025 WMPs focused on each utility's strategies for reducing the risk of utility-related ignitions. The evaluation included assessing the utility's progress implementing wildfire mitigation initiatives, evaluating the feasibility of its strategies, and measuring year-to-year trends. As a result of this evaluation, Energy Safety identified areas where the utility should continue to improve its wildfire mitigation capabilities in future plans. The complete list of all TBC's areas for continued improvement follows below.

11.1 Grid Design, Operations, Maintenance

- **TBC-23-01. QA/QC Process Documentation**
  - Description: TBC states that it has procedures and checklists that provide additional detail about its QA/QC process and is evaluating changes to its QA/QC program as its operational experience grows. TBC does not provide the documents related to QA/QC or details on the QA/QC evaluation process.
  - Required Progress:
    - In its 2025 Update, TBC must provide all documentation related to its QA/QC processes, including TBC-MP-001 section 4.1.4.
    - An analysis demonstrating the current QA/QC process effectively mitigates wildfire risk.
  - Discussed in Section 8.1, "Grid Design, Operations, and Maintenance." (8.1.3 "Asset Inspections").

11.2 Community Outreach and Engagement

- **TBC-23-02. Documentation of Sharing Best Practices**
  - Description: TBC does not document instances of sharing best practices.
  - Required Progress: In its 2026-2028 Base WMP, TBC must provide documented examples of its sharing of best practices to date (as of the 2026-2028 submission).
  - Discussed in Section 8.5, "Community outreach and engagement."

12. Conclusion

TBC's 2023-2025 Wildfire Mitigation Plan is approved.

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electrical corporations, including TBC, must continue to make progress toward reducing utility-related ignition risk. Energy Safety expects TBC to effectively implement its wildfire mitigation activities to reduce the risk of utility-related ignitions and the potential catastrophic consequences if an ignition occurs, as well as to reduce the scale, scope, and frequency of PSPS events, if applicable.

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APPENDICES

APPENDICES

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Appendix A. Glossary of Terms

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

Term	Definition
EPUC	Energy Producers and Users Coalition
EVM	Enhanced vegetation management
FERC	Federal Energy Regulatory Commission
FPI	Fire potential index
FWI	Fire weather index
GFN	Ground-fault neutralizers
GIS	Geographic information systems
GO	General order
GPI	The Green Power Institute
GRC	General rate case
HD	High definition
HFRA	High Fire Risk Area
HFTD	High fire threat district
HWT or Horizon West	Horizon West Transmission
I.	CPUC Investigation
ICS	Incident command system or structure
IOU	Investor-owned utility
IR	Infrared
ISA	International Society of Arboriculture
ITO	Independent transmission operator
kV	Kilovolt
Liberty	Liberty Utilities

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

Term	Definition
QA	Quality assurance
QC	Quality control
QDR	Quarterly Data Report
R.	CPUC rulemaking
RAMP	Risk Assessment and Management Phase
RCRC	Rural County Representatives of California
REFCL	Rapid earth fault current limiter
RFW	Red Flag Warning
RSE	Risk-spend efficiency
SAWTI	Santa Ana Wildfire Threat Index
SCADA	Supervisory control and data acquisition
SCE	Southern California Edison Company
SDG&E	San Diego Gas & Electric Company
S-MAP	Safety Model Assessment Proceeding, now the Risk-Based Decision-Making Framework Proceeding
SMJU	Small and multijurisdictional utility
TAT	Tree Assessment Tool
TBC	Trans Bay Cable
TURN	The Utility Reform Network
USFS	United States Forest Service
VM	Vegetation management
VRI	Vegetation risk index
WMP	Wildfire Mitigation Plan

Term	Definition
WRRM	Wildfire Risk Reduction Model
WSAB	Wildfire Safety Advisory Board
WSD	Wildfire Safety Division
WUI	Wildland-urban interface

Appendix B. Status of 2022 Areas for Continued Improvement

There were no areas for continued improvement for Transbay Cable resulting from Energy Safety's evaluation of Transbay Cable's 2022 WMP Update.

Appendix C. Stakeholder Comments on the 2023-2025 Wildfire Mitigation Plans

Energy Safety invited stakeholders, including members of the public, to provide comments on the utilities' 2023-2025 WMPs. Opening comments on the SMJU and ITO WMPs were due on June 29, 2023, and reply comments were due on July 10, 2023.

No stakeholders provided comments that were specifically related to the ITOs.

The following individuals and organizations submitted comments related to SMJUs:

- California Department of Fish and Wildlife (CDFW).
- City of Moorpark.
- Mussey Grade Road Alliance (MGRA).
- Rural County Representatives of California (RCRC).
- The Green Power Institute (GPI).
- The Public Advocates Office at the California Public Utilities Commission (Cal Advocates).
- Julia and David Allenby.
- Cynthia Barbera.
- Curren Meechem Family.
- Maureen Isola.
- Brenda So.
- Southard.

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

Appendix D. Stakeholder Comments on the Draft Decision

Energy Safety invited stakeholders, including members of the public, to provide comments on Energy Safety's Draft Decision on TBC's 2023-2025 WMP. Opening comments were due on January 2, 2024, and reply comments were due on January 12, 2024.

No stakeholders provided comments during these comment periods.

Appendix E. Maturity Survey Results

Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model[1] (Maturity Model) and 2023 Electrical Corporation Wildfire Mitigation Maturity Survey[2] (Maturity Survey) together provided a quantitative method to assess the maturity of each utility's wildfire risk mitigation program.

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

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

Maturity levels range from 0 (below minimum requirements) to 4 (beyond best practice). Electrical corporations' responses to the Maturity Survey, listed by mitigation category, are depicted in the figures and tables below. Due to the smaller scope and scale of the ITOs, a minimum maturity level at or around 0.00 is acceptable in certain categories.

Table A-1 compare the ITOs' maturity levels across mitigation categories showing minimum values and average values. Table A-2 shows Trans Bay Cable's projected maturity growth throughout the WMP cycle. Figure A-1 provides a one-page look at all Trans Bay Cable's maturity levels for the WMP cycle, including at the capability and sub-capability levels, showing both minimum and average calculations.

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[1] 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Second Revised Final, Feb. 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53394&shareable=true, accessed May 5, 2023).

[2] 2023 Electrical Corporation Wildfire Mitigation Maturity Survey (Revised Final, April 2023) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53708&shareable=true, accessed May 5, 2023). This is the version used by Energy Safety when scoring the survey.

Table A-1. Cross-Utility Maturity Level by Category (Average Values)

Category	HWT	TBC	LS Power
A. Risk Assessment and Mitigation Strategy	0.35	0.16	0.49
B. Situational Awareness and Forecasting	0.67	0.49	0.08
C. Grid Design, Inspections, and Maintenance	1.07	0.72	0.28
D. Vegetation Management and Inspections	0.94	0.00	0.56
E. Grid Operations and Protocols	1.13	0.47	0.67
F. Emergency Preparedness	0.60	0.19	0.25
G. Community Outreach and Engagement	0.13	0.13	0.00

Table A-2. TBC Projected Growth in Maturity throughout Current WMP Cycle by Category

TBC Projected Growth in Maturity throughout Current WMP Cycle by Category (Avg. to Avg.)

Category	2023	2024	2025	2026
A. Risk Assessment and Mitigation Strategy	0.16	0.16	0.16	0.16
B. Situational Awareness and Forecasting	0.49	0.49	0.49	0.49
C. Grid Design, Inspections, and Maintenance	0.72	0.72	0.72	0.72
D. Vegetation Management and Inspections	0.00	0.00	0.00	0.00
E. Grid Operations and Protocols	0.47	0.47	0.47	0.47
F. Emergency Preparedness	0.19	0.19	0.19	0.19
G. Community Outreach and Engagement	0.13	0.13	0.13	0.13

Figure A-1. TBC Comprehensive Maturity Survey Results

Capability Scores by Year and Category for TBC

		1. Capability				2. Capability				3. Capability				4. Capability				5. Capability				6. Capability			
		2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026
A. Risk Assessment and Mitigation Strategy		1. Statistical weather, climate, and wildfire modeling				2. Calculation of wildfire and PSPS risk exposure for societal values				3. Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS)				4. Calculation of risk and risk components				5. Risk event tracking and integration of lessons learned				6. Risk-informed wildfire mitigation strategy			
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Average of Sub-Cap.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0
B. Situational Awareness and Forecasting		7. Ignition likelihood estimation				8. Weather forecasting ability				9. Wildfire spread forecasting				10. Data collection for near-real-time conditions				11. Wildfire detection and alarm systems				12. Centralized monitoring of real-time conditions			
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Average of Sub-Cap.	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.2
C. Grid Design, Inspections, and Maintenance		13. Asset inventory and condition database				14. Asset inspections				15. Asset maintenance and repair				16. Grid design and resiliency				17. Asset and grid personnel training and quality							
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	Average of Sub-Cap.	1.8	1.8	1.8	1.8	1.3	1.3	1.3	1.3	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
D. Vegetation Management and Inspections		18. Vegetation inventory and condition database				19. Vegetation inspections				20. Vegetation treatment				21. Vegetation personnel training and quality											
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
	Average of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
E. Grid Operations and Protocols		22. Protective equipment and device settings				23. Incorporation of ignition risk factors in grid control				24. PSPS operating model				25. Protocols for PSPS re-energization				26. Ignition prevention and suppression							
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	Average of Sub-Cap.	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0				
F. Emergency Preparedness		27. Wildfire and PSPS emergency and disaster preparedness plan				28. Collaboration and coordination with public safety partners				29. Public emergency communication strategy				30. Preparedness and planning for service restoration				31. Customer support in wildfire and PSPS emergencies				32. Learning after wildfires and PSPS incidents			
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Average of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G. Community Outreach and Engagement		33. Public outreach and education awareness				34. Public engagement in electrical corporation wildfire mitigation planning				35. Engagement with AFN and socially vulnerable populations				36. Collaboration on local wildfire mitigation planning				37. Cooperation and best practice sharing with other electrical corporations							
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
	Average of Sub-Cap.	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3				