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 LS Power Grid California'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 LS Power Grid California'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

LS POWER GRID CALIFORNIA

January 2024

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

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 LS Power Grid California (LS Power) 2023-2025 Wildfire Mitigation Plan, submitted on May 9, 2023.

LS Power is an independent transmission owner. Independent transmission owners are transmission-only electrical corporations with no end-use customers. These electrical corporations have limited assets and footprints compared to the large investor-owned utilities and small and multi-jurisdictional investor-owned utilities in California. LS Power has not yet begun operations in California, but anticipates it will have two substations in operation by mid-2024. These substations are located in eastern Shasta County and western Fresno County, within Pacific Gas and Electric Company's service territory.

LS Power's Wildfire Mitigation Plan is comparable to the plans of the other independent transmission operators. For example, within its Wildfire Mitigation Plan, LS Power is strong in the overall planning of wildfire mitigation initiatives for its planned operations.

LS Power's Wildfire Mitigation Plan can be further developed and improved. For example, LS Power currently does not have complete emergency preparedness tables within its Wildfire Mitigation Plan. Energy Safety expects LS Power to include completed tables in its 2025 Wildfire Mitigation Plan Update.

2. Introduction and Background

LS Power Grid California (LS Power) 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 LS Power's 2023-2025 WMP.

Energy Safety approves LS Power's 2023-2025 WMP. In 2024, LS Power must submit a 2025 Update consistent with the 2025 WMP Guidelines. Energy Safety will approve or deny LS Power'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 LS Power'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] Process Guidelines (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] LS Power provided its WMP pre-submission to Energy Safety on March 6, 2023.

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

LS Power 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. LS Power's results specific to each initiative are discussed in Sections 6 through 9 of this Decision, and overall results for LS Power 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 LS Power 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 LS Power's 2023-2025 WMP. LS Power'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, LS Power provided basic information regarding persons responsible for executing the plan and adherence to statutory requirements.[15]

LS Power 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. LS Power completed this checklist.
- Section 4: Overview of WMP (Primary Goal; WMP Objectives; Proposed Expenditures; Risk-Informed Framework).

4.1 LS Power'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]

LS Power provided all required information regarding expenditures. A summary of this information is presented below. Figure 4.1-1 presents planned expenditures by LS Power.

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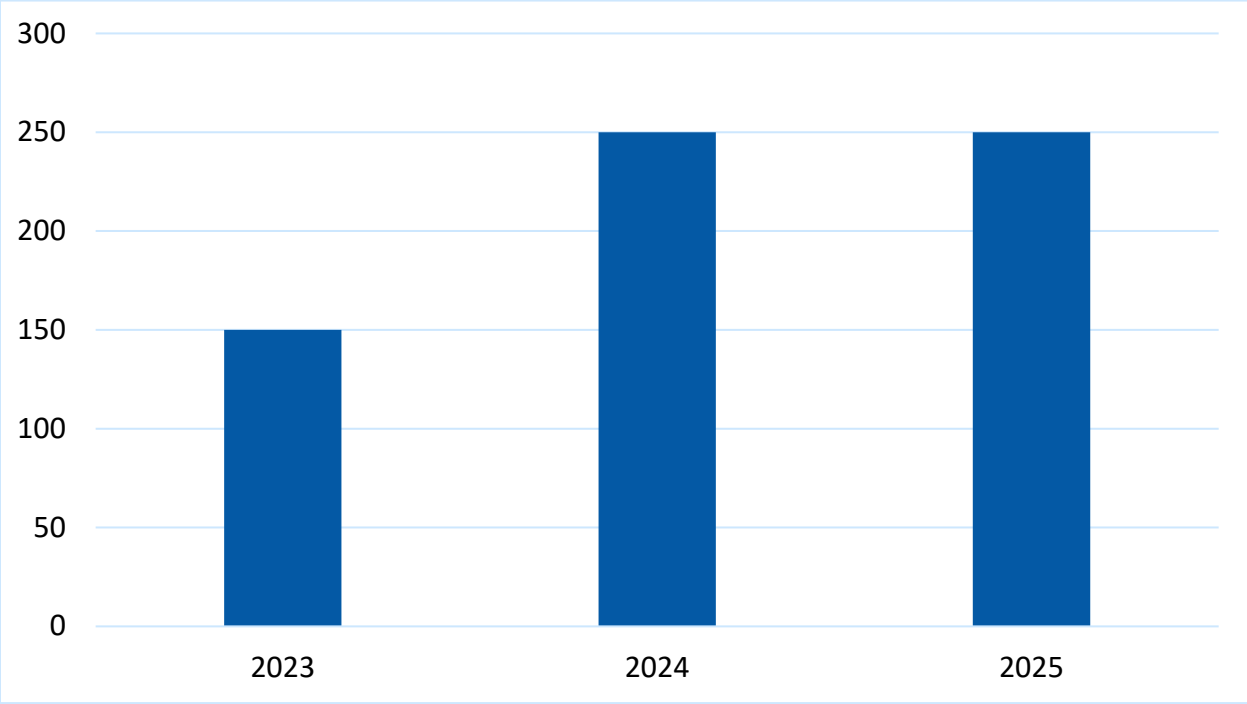
[15] Technical Guidelines, Sections 1 through 4, pages 6-14 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[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. LS Power WMP Expenditures (Planned Spend in Thousands)[18]



[18] Numbers from LS Power's 2023-2025 WMP, Figure 4.1 "Summary of WMP Expenditures," page 15.

5. Overview of the Operational Area

In response to Section 5 of the Technical Guidelines, LS Power provided a high-level overview of its operational area that includes key characteristics of its electrical infrastructure, environmental settings, and community values at risk.[19]

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

5.1 Service Territory

Per the Independent Transmission Operator 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.[20]

5.2 Electrical Infrastructure

Section 5.2 of the Technical Guidelines requires LS Power 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.[21]

LS Power provided a description of its planned electrical infrastructure and a table with an overview of its key electrical equipment, including two substations, one in a Tier 2 HFTD and one outside the HFTD.[22]

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[19] 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).

[20] 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).

[21] 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).

[22] LS Power's 2023-2025 WMP, Table 5-2 "Overview of Key Electrical Equipment," page 23.

5.3 Environmental Settings

Section 5.3 of the Technical Guidelines requires LS Power to provide a high-level overview of the environmental settings within its service territory.[23]

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 their service territory.[24]

LS Power provided a narrative describing the vegetative coverage across its future operational area.[25]

5.3.2 Catastrophic Wildfire History

Section 5.3.2 of the Technical Guidelines requires LS Power 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.[26]

LS Power 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.

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.[27]

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

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[23] 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).

[24] 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).

[25] LS Power's 2023-2025 WMP, page 39.

[26] 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).

[27] 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).

functional needs and social vulnerability, and communities vulnerable because of single access/egress conditions adjacent to their assets, rather than within their service territory.

LS power provided this information for the communities around each of their planned substations. The Fern Road Substation will be in an isolated location about 1.3 miles from the closest populated area – the unincorporated community of Whitmore (population of 416) in Shasta County. Additionally, the Orchard Substation will be 3.7 miles from the incorporated community of Huron (population 7,084) in Fresno County. Both areas are considered vulnerable according to the Social Vulnerability Index calculation.[28]

5.4.1 Environmental Compliance and Permitting

Section 5.4.5 of the Technical Guidelines requires LS Power 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.[29]

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.

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.

LS Power summarized how it plans to ensure compliance with applicable environmental laws, regulations, and permitting requirements in planning wildfire mitigation projects.[30]

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[28] LS Power's 2023-2025 WMP, pages 69-70.

[29] 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).

[30] LS Power's 2023-2025 WMP, pages 70-71.

5.5 Areas for Continued Improvement

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

6. Risk Methodology and Assessment

In response to Section 6 of the Technical Guidelines, LS Power 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.[31]

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

6.1 Methodology

Section 6.1 of the Technical Guidelines requires LS Power 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.[32]

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

LS Power does not currently have any active facilities, but plans to complete construction of two 500 kilovolt (kV) substation facilities (Fern Road and Orchard) during 2023[33] and energize both in 2024. LS Power does not plan to have any transmission facilities.

LS Power's risk methodology analyzes risk at the substation level using a spatial landscape categorization: specific geographic areas are assigned Likert scale risk assessments (low, high, extreme) using a weighted quantitative risk assessment approach. The weighted risk assessment includes wildfire probability, wildfire behavior metrics, fire history, and values at risk (critical infrastructure) as inputs.[34]

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[31] 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).

[32] 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).

[33] LS Power's 2023-2025 WMP, page 36.

[34] LS Power's 2023-2025 WMP, pages 72-86.

6.2 Risk Analysis Framework

Section 6.2 of the Technical Guidelines requires LS Power to provide a high-level overview of its risk analysis framework, including a summary of key modeling assumptions, input data, and modeling tools used.[35]

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

LS Power applies a scenario-based approach to risk analysis[36] that uses the following four scenarios:

1. In situ wildfire risk, in which the substation is threatened by wildfire caused by other sources.
2. Wildfire risk in which substation equipment failure is the cause of a wildfire.
3. Wildfire risk caused by vegetation contact with substation equipment.
4. Enhanced consequences of ignition due to an extreme weather event.

LS Power discusses the potential for construction-related wildfire risk during the maintenance work on its substations;[37] however, LS Power does not explicitly list this as a scenario considered in its risk analysis.

6.3 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for risk assessment and mitigation strategy. LS Power 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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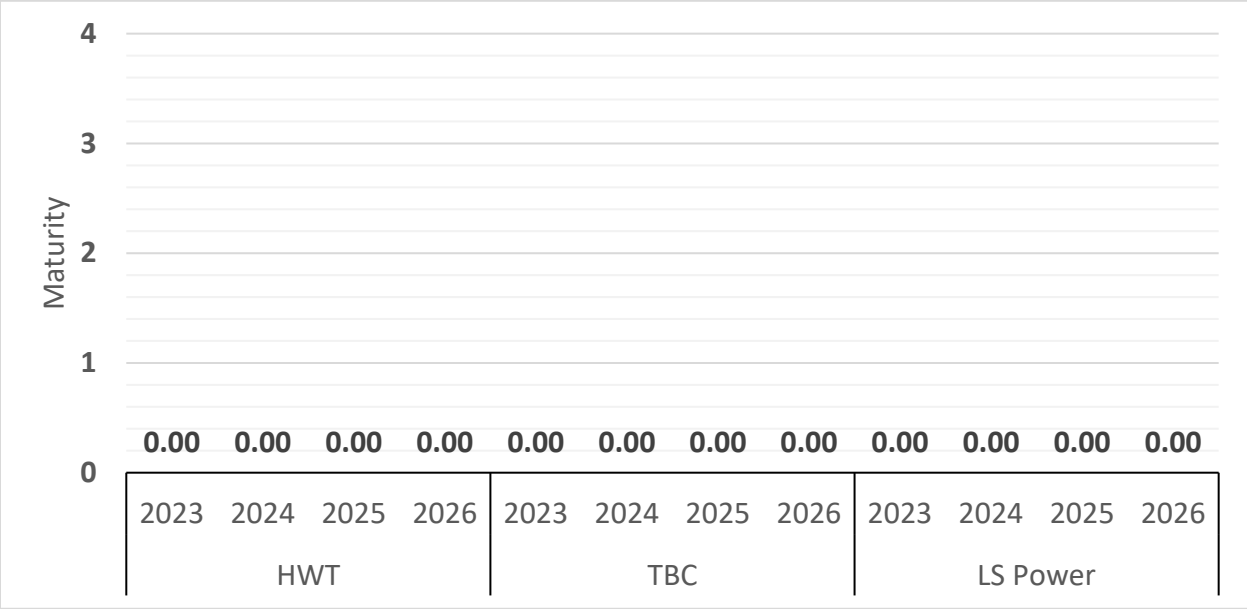
[35] Technical Guidelines, Section 6.2, "Risk Analysis Framework," pages 36-44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed May 5, 2023).

[36] LS Power's 2023-2025 WMP, pages 78-79.

[37] LS Power's 2023-2025 WMP, pages 94-95, 97

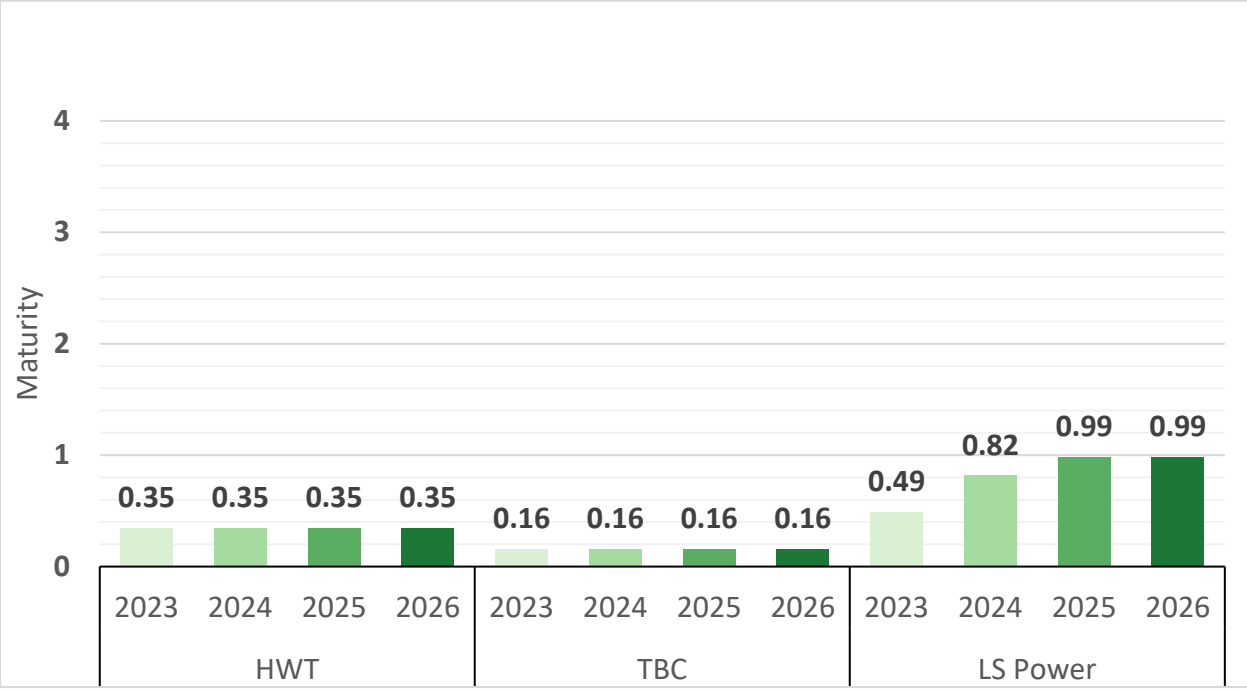
Figure 6.3-1. Cross-Utility Maturity for Risk Assessment and Mitigation Strategy (Minimum Values)



The utility's maturity level for the risk assessment and mitigation strategy described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at LS Power'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), LS Power has a maturity level for risk assessment and mitigation strategy of 0.49 for 2023, 0.82 in 2024, and 0.99 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.

LS Power's current maturity level in this category is around the same as its peers, with HWT and TBC reporting at levels 0.00 and 0.00, respectively (see Figure 6.3-1)

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

- Comprehensiveness.[38,39]
- Modularization.[40,41]

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

[38] LS Power's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 1 "Statistical weather, climate, and wildfire modeling."

[39] 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.

[40] LS Power's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 1 "Statistical weather, climate, and wildfire modeling."

[41] The degree to which utility risk model software architecture is sufficiently modular to track and control changes and enhancements over time.

- Automation.[42]
- Stability of assumptions.[43,44]

6.4 LS Power's WMP Strengths

LS Power projects improvement in risk methodology and assessment over the WMP cycle in the following area: risk analysis results and presentation.

LS Power applies a risk analysis framework with elements that are more common with large electric corporations, one example being the multiple modeling platforms that LS Power uses to make risk-informed decisions.[45] LS Power has a modeling platform and/or data sources for the following risk analysis factors:

- Fire behavior.
- Weather compilation.
- Vegetation management.
- Vulnerability.

The separate modeling platforms and data sources integrate into a comprehensive modular platform, the resulting advantages include:

- Greater clarity of assumptions and limitations.
- Platform scalability to address changing needs.
- Sub-components can be evaluated for updates separately to support operational continuity.

6.4.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

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[42] LS Power's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 2 "Calculation of wildfire and PSPS risk exposure for societal values."

[43] LS Power's responses to questions on the 2023 Maturity Survey under Category A "Risk Assessment and Mitigation Strategy," Capability 2 "Calculation of wildfire and PSPS risk exposure for societal values."

[44] 'Stability of assumptions' is a sub-capability used in the 2023 Maturity Survey, section 1.1.7, covering inquiries on utility model assumptions and limitations documentation, process for changing assumptions and limitations, how changes are development, and any current plans to change assumptions and limitations.

[45] LS Power's 2023-2025 WMP, page 85.

6.5 Areas for Continued Improvement

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

7. Wildfire Mitigation Strategy Development

In response to Section 7 of the Technical Guidelines, LS Power 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.[46]

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

7.1 Risk Evaluation

Section 7.1 of the Technical Guidelines requires LS Power to describe its approach to risk evaluation based on risk analysis outcomes.[47] The approach should inform the development of a wildfire mitigation strategy that meets WMP goals and objectives.

LS Power's wildfire mitigation strategy is determined by its initial mitigation prioritization. Because LS Power is not operating yet as an ITO in California, it cannot establish baseline mitigation effectiveness. Consequently, LS Power assumes all mitigations have roughly equal risk reduction impact.[48]

LS Power's mitigation strategy includes both near-term and long-term initiatives. Mitigating risks present during construction and its transition to operations is a priority.[49] Its current mitigation strategy scope is limited to the two facilities (the Orchard Substation and the Fern Road Substation) that it plans to energize in the current WMP cycle. LS Power determined that the Orchard Substation is not located within the HFTD, but that the Fern Road Substation is in HFTD Tier 2 lands. LS Power's wildfire modeling with respect to the vegetation and terrain around the Fern Road Substation confirmed the elevated risk. LS Power reports that it considers these and similar factors to determine what mitigations are needed now and how needs may change as it transitions from construction to operation.

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[46] 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).

[47] 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).

[48] LS Power's 2023-2025 WMP, page 91.

[49] LS Power's 2023-2025 WMP, page 22.

7.1.1 LS Power's WMP Strengths

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

While LS Power's assets are not currently operational, LS Power is preparing and planning to implement mitigation initiatives. One example is its adherence to a standardized set of principles and guidelines for the implementation and maintenance of a risk management framework; the International Organization for Standardization (ISO) 31000 standards; best practices, and its own research to develop its wildfire mitigation strategy.[50]

LS Power plans to approach WMP implementation monitoring using four time horizons: at initial operation, annually, within 3 years, and within 10 years,[51] when LS Power expects to consider broader process improvements. Considering the substation footprints, LS Power's current plans is sufficient to address foreseeable risks over the next 10 years. LS Power is also planning to integrate statistical analysis into its mitigation scheduling and effectiveness calculations once sufficient data have been generated from operations.

7.1.1.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

7.1.2 Areas for Continued Improvement

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

7.2 Risk-Informed Framework

Section 4.4 of the Technical Guidelines requires LS Power to adopt and describe its framework for making risk-informed decisions.[52]

7.2.1 LS Power's WMP Strengths

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

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[50] LS Power's 2023-2025 WMP, page 90-91.

[51] LS Power's 2023-2025 WMP, page 93.

[52] 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).

LS Power's wildfire mitigation strategy strengths are a subset of those already noted in Sections 6.4 and 7.1.1. In brief, LS Power commits to following industry-recognized best practices for risk identification, mitigation selection, and implementation. Considering the small scale of its operations, its plan is adequate.

7.2.1.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, since it did not exist in California yet. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

7.2.2 Areas for Continued Improvement

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

7.3 Wildfire Mitigation Strategy

Section 7.2 of the Technical Guidelines requires LS Power to describe its proposed wildfire mitigation strategies based on the evaluation process identified in Section 7.1 of its WMP.[53]

7.3.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for risk prioritization. For 2024, LS Power projects the same. For 2025, LS Power projects that it will slightly increase in maturity to a level of 0.29.

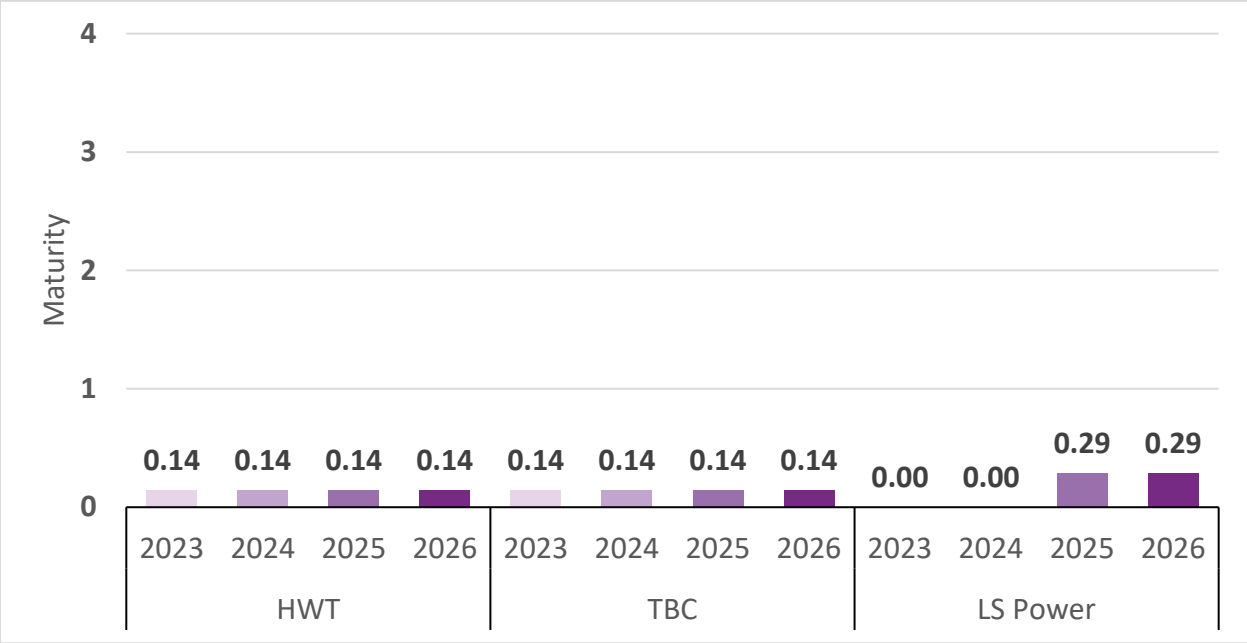
Note that cross-category themes are calculated by averaging the relevant sub-capability maturity levels.

LS Power's current maturity level in this cross-category theme is lower than its peers, with HWT and TBC reporting at levels 0.14 and 0.14, respectively. See Figure 7.3-1. LS power's projected maturity is projected to exceed that of the other ITOs in 2025 and 2026.

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

[53] 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.[54]

7.3.2 LS Power's WMP Strengths

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

LS Power's anticipated risk reduction strengths are a subset of those already noted in Sections 6.4 and 7.1.1. In brief, LS Power describes industry-recognized best practices for risk identification, mitigation selection, and implementation. Considering the small scale of its operations, its plan is adequate.

7.3.2.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

[54] 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).

7.3.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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 LS Power undertakes to reduce the risk of catastrophic wildfire. For each mitigation initiative this section provides an analysis of LS Power's maturity level, the ways LS Power is progressing and specific areas where LS Power must 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.

LS Power's approach to PSPS is discussed in Section 9. LS Power'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,[55] LS Power 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 LS Power's objectives and targets, maturity levels, and strengths in these areas.

8.1.1 Objectives and Targets

As part of its Base WMP, LS Power provided 3-year and 10-year objectives for its grid design, operations, and maintenance programs.[56]

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

[56] LS Power's 2023-2025 WMP, pages 99-101.

LS Power also defined quantitative targets for initiative activities for grid design, operations, and maintenance programs. LS Power's Base WMP includes end-of-year targets for 2024 and 2025. Selected targets are included in Table 8.1-1.

Table 8.1-1. LS Power Grid Design, Operations, and Maintenance – Selected Targets[57]

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Implement Inspection Program	Inspections	N/A	9	24

8.1.2 Grid Design and System Hardening

Section 8.1.2 of the Technical Guidelines requires LS Power 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.[58]

8.1.2.1 Maturity Survey Results

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

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

[57] LS Power's 2023-2025 WMP, Table 8-4. Asset Inspections Targets by Year, page 101.

[58] 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 LS Power's performance in grid design and resiliency. The capability average is determined from the average of all components sub-capabilities and is an additional tool to evaluate the utilities' maturity. [59]

When the capability maturity is calculated using the average (rather than the minimum), LS Power has a maturity level for grid design and resiliency of 0.17 for 2023 and projects no change for 2024 and 2025 *(Figure 8.1-2).*

[59] 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[60] (Average Values)

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

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

8.1.2.2 LS Power's WMP Strengths

LS Power projects improvement in grid design and system hardening over the WMP cycle in the following area: hardened design plans.

Given that LS Power is still in the process of constructing its Fern Road and Orchard substations, LS Power does not have any existing infrastructure to retrofit and harden. If LS Power's substations are built as designed, they will be significantly hardened upon construction, including enclosing switchgears and other structures, as well as having fire detection capability.

[60] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 16 "Grid design and resiliency."

2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.1.2.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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 LS Power to provide an overview of its procedures for inspecting its assets.[61]

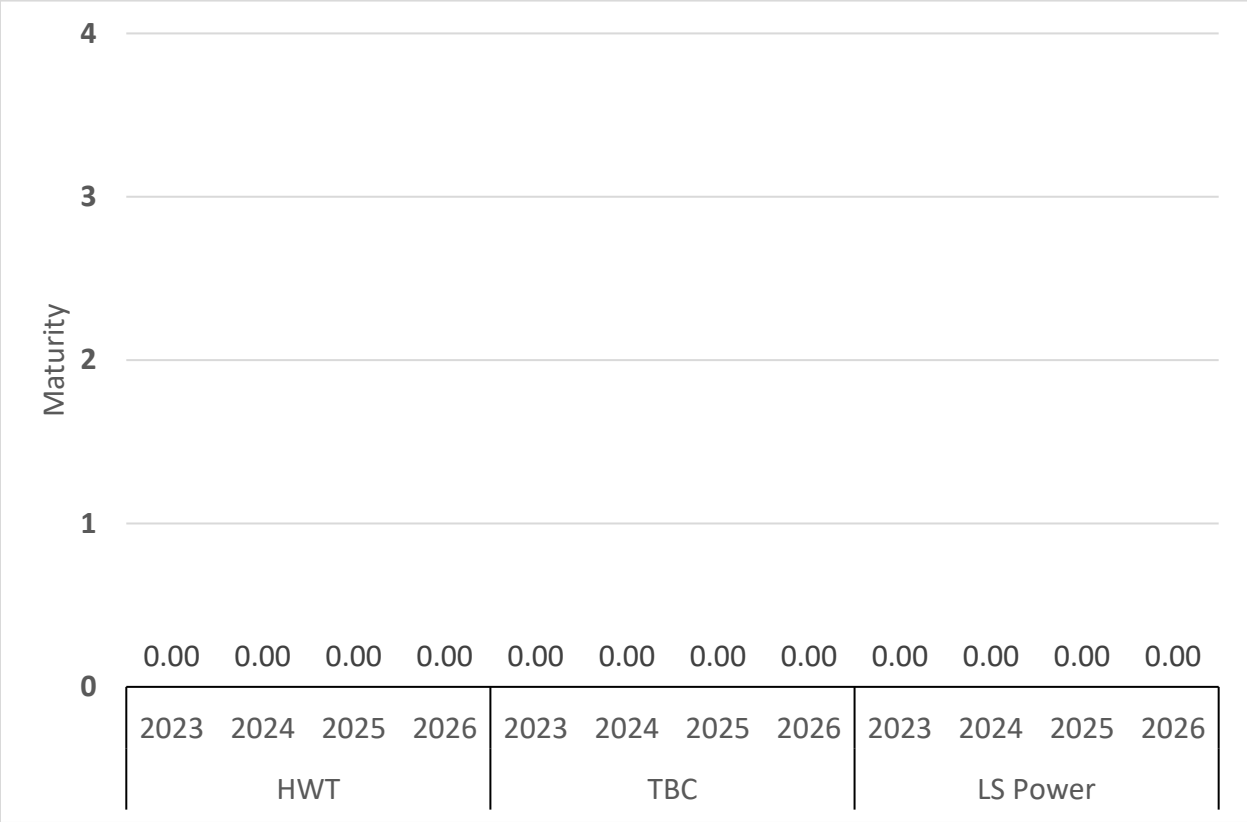
8.1.3.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for asset inspections. LS Power 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.

[61] 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)

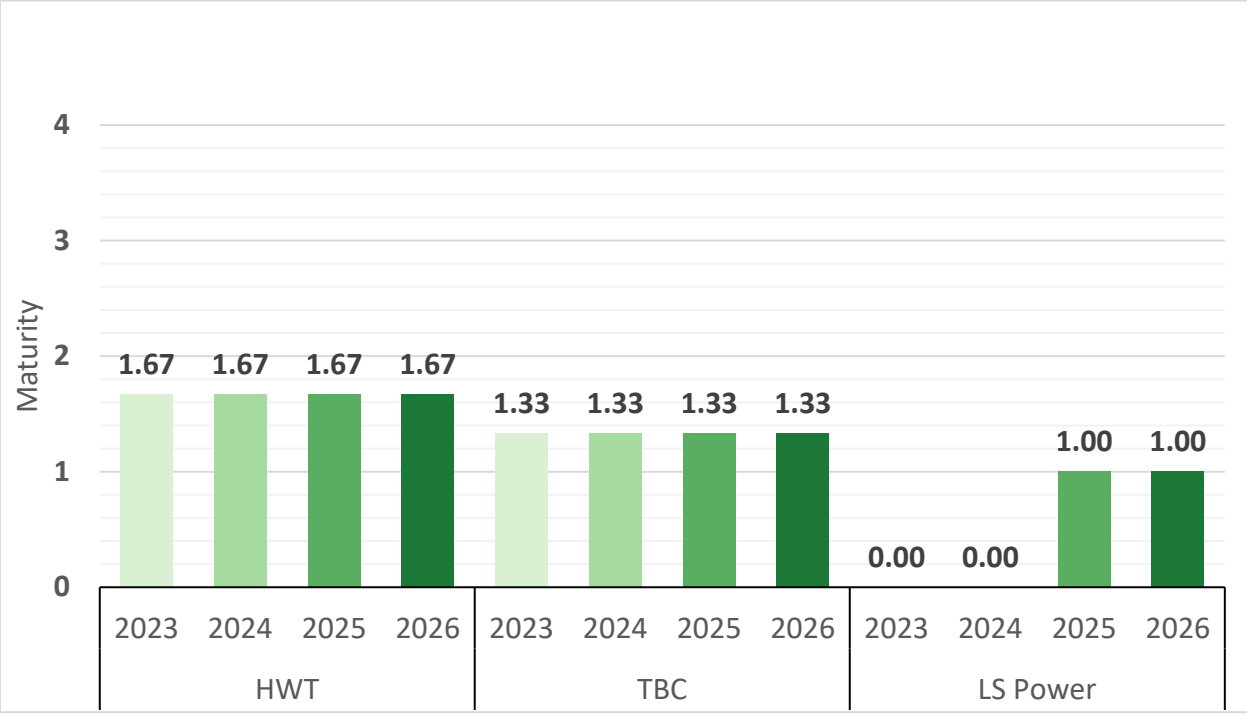


The utility's maturity level for the asset inspection capability described above is calculated using the minimum value of component sub-capabilities. The capability average is another way to look at LS Power's performance in asset inspections. The capability average is determined from the average of all components sub-capabilities and is an additional tool to evaluate the utilities' maturity. [62]

When the capability maturity is calculated using the average (rather than the minimum), LS Power has a maturity level for asset inspections of 0.00 for 2023, and projects no change for 2024, and projects an increase to 1.00 in 2025 (Figure 8.1-4).

[62] 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[63] (Average Values)



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

LS Power's current maturity level in this capability is lower than its peers, with HWT and TBC reporting at levels 1.67 and 1.33, respectively. See Figure 8.1-4.

8.1.3.2 LS Power's WMP Strengths

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

Given that LS Power is still in the process of constructing its Fern Road and Orchard substations, LS Power does not have any existing infrastructure to inspect. LS Power states it will perform monthly inspections and additional inspections before extreme weather events.[64] While monthly substation inspections are standard, the 2023-2025 WMP demonstrates strength by committing to additional inspections prior to extreme weather events.

[63] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 14 "Asset inspections."

[64] LS Power's 2023-2025 WMP, page 104.

2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.1.3.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power under the asset inspections section of its Base WMP.

8.1.4 Equipment Maintenance and Repair

Section 8.1.4 of the Technical Guidelines requires LS Power to provide a narrative of its maintenance programs, including its strategy for replacing/upgrading and for specific equipment types.[65]

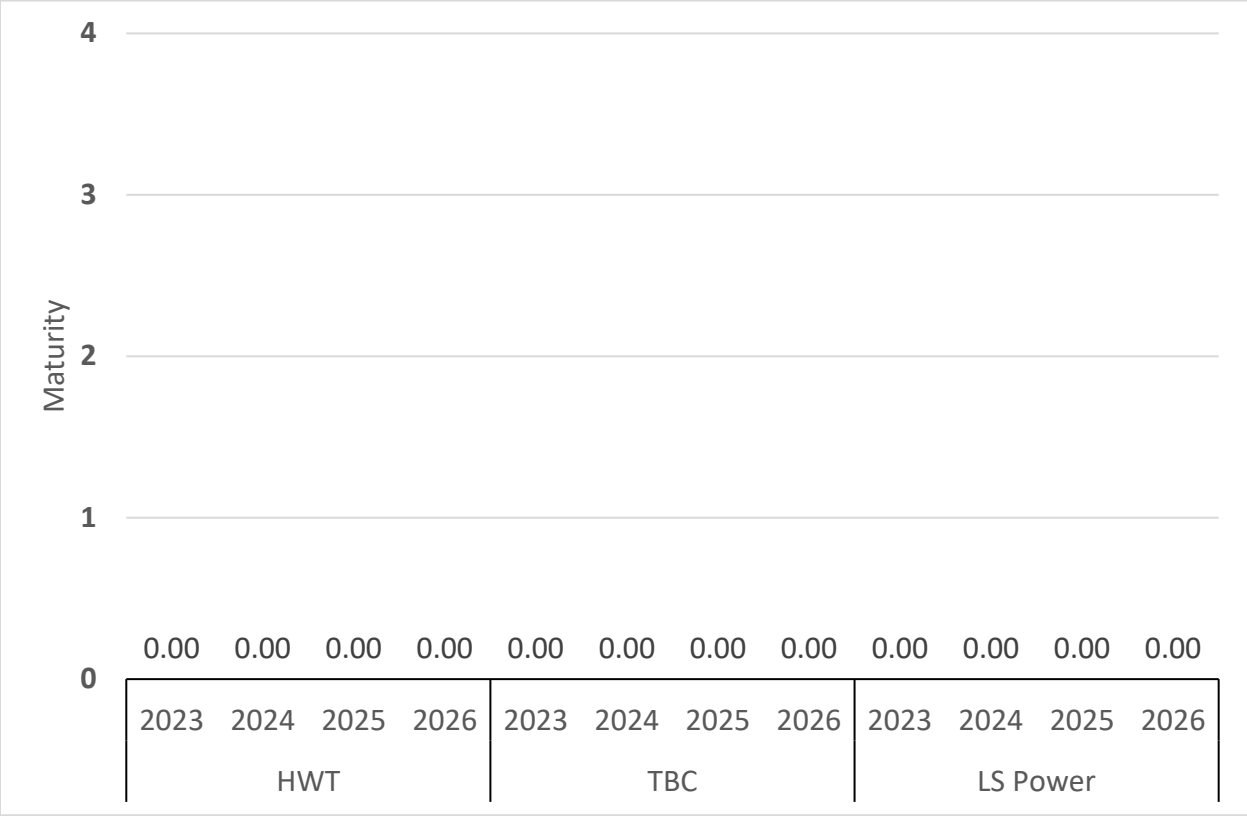
8.1.4.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for asset maintenance and repair. LS Power 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.

[65] 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[66] (Minimum Values)



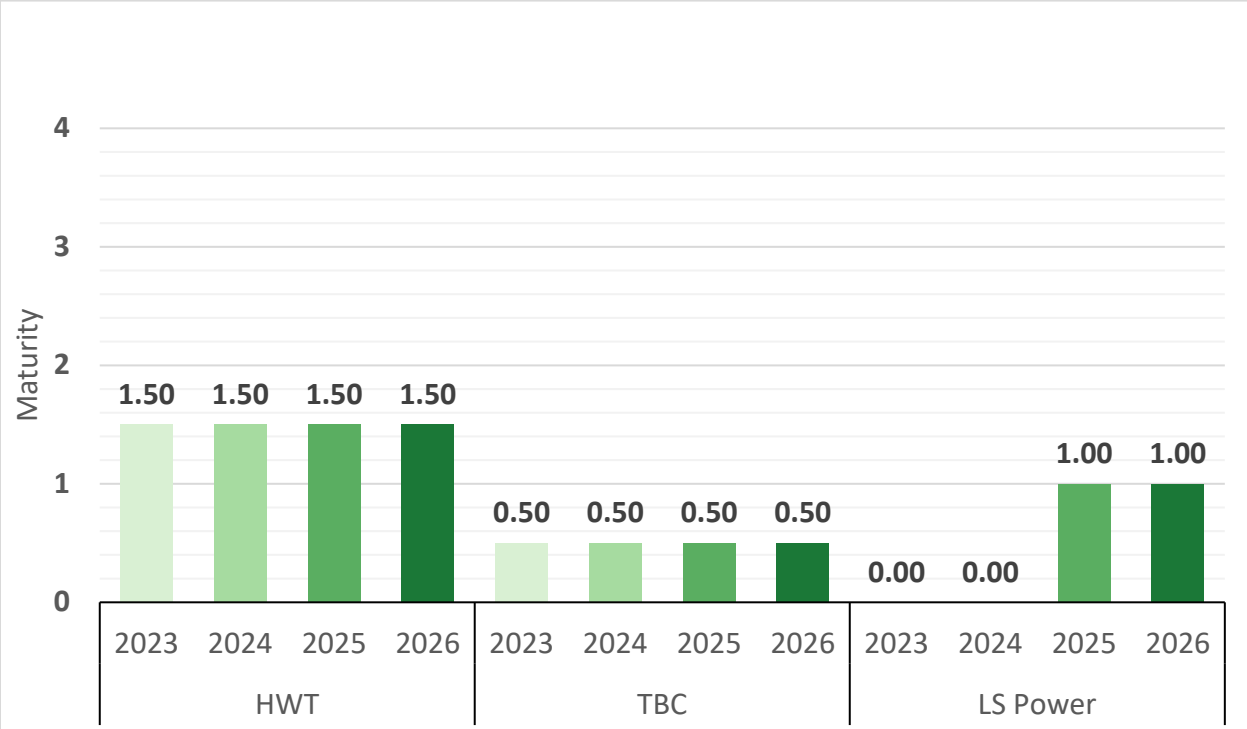
The utility's maturity level for the asset maintenance and repair capability described above is calculated using the minimum value of component sub-capabilities. The capability average is another way to look at LS Power's performance in asset maintenance and repair. The capability average is determined from the average of all components sub-capabilities and is an additional tool to evaluate the utilities' maturity. [67]

When the capability maturity is calculated using the average (rather than the minimum), LS Power has a maturity level for asset maintenance and repair of 0.00 for 2023, projects no change for 2024, and projects an increase to 1.00 in 2025 (Figure 8.1-6).

[66] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 15 "Asset maintenance and repair."

[67] 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[68] (Average Values)



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

LS Power's current maturity level in this capability is lower than its peers, with HWT and TBC reporting at levels 1.50 and 0.50, respectively. See Figure 8.1-6.

8.1.4.2 LS Power's WMP Strengths

LS Power projects improvement in equipment maintenance and repair over the WMP cycle in the following area: static synchronous compensator maintenance (STATCOM).

Given that LS Power is still in the process of constructing its Fern Road and Orchard substations, LS Power does not have any existing infrastructure to maintain and repair. LS Power demonstrates strong planning in this area, stating that it has secured a long-term maintenance contract with the manufacturer of its STATCOM devices to supplement LS Power personnel.[69]

[68] 2023 Maturity Survey Category C "Grid Design, Inspections, and Maintenance," Capability 15 "Asset maintenance and repair."

[69] LS Power's 2023-2025 WMP, page 107.

2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.1.4.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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 LS Power 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.[70]

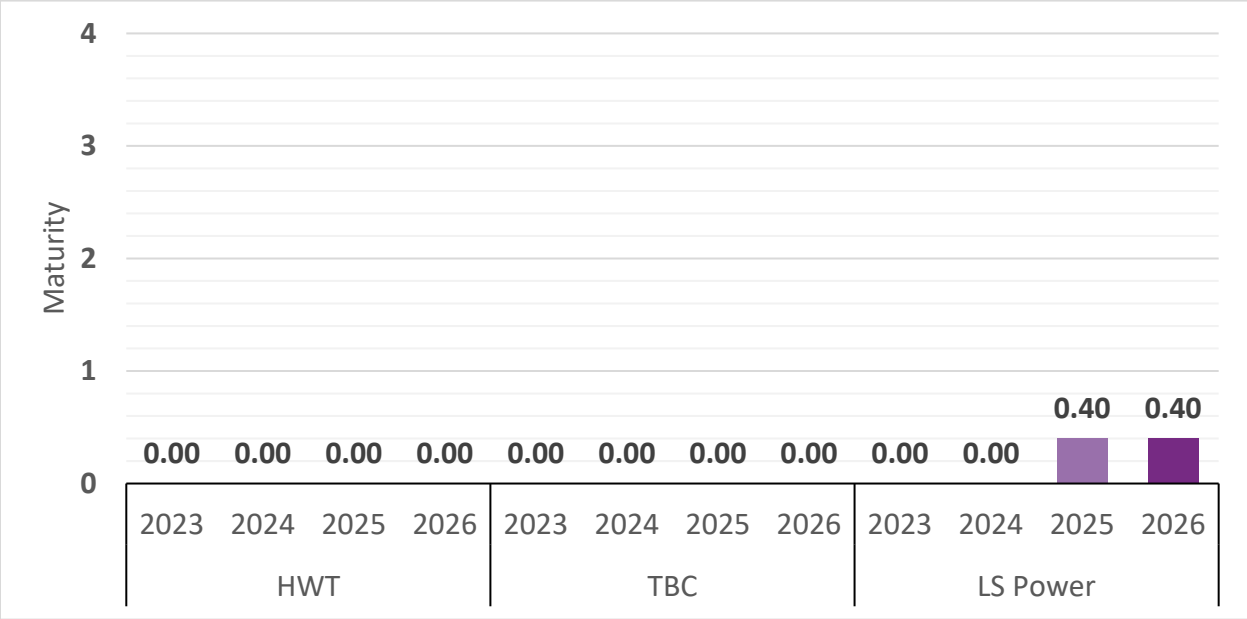
8.1.5.1 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for grid operations and protocols. For 2024, LS Power projects the same. For 2025, LS Power projects that it will slightly increase in maturity to a level of 0.40 (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.

[70] 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)

Figure 8.1-7. Cross-Utility Maturity for Grid Operations and Protocols[71] (Minimum Values)



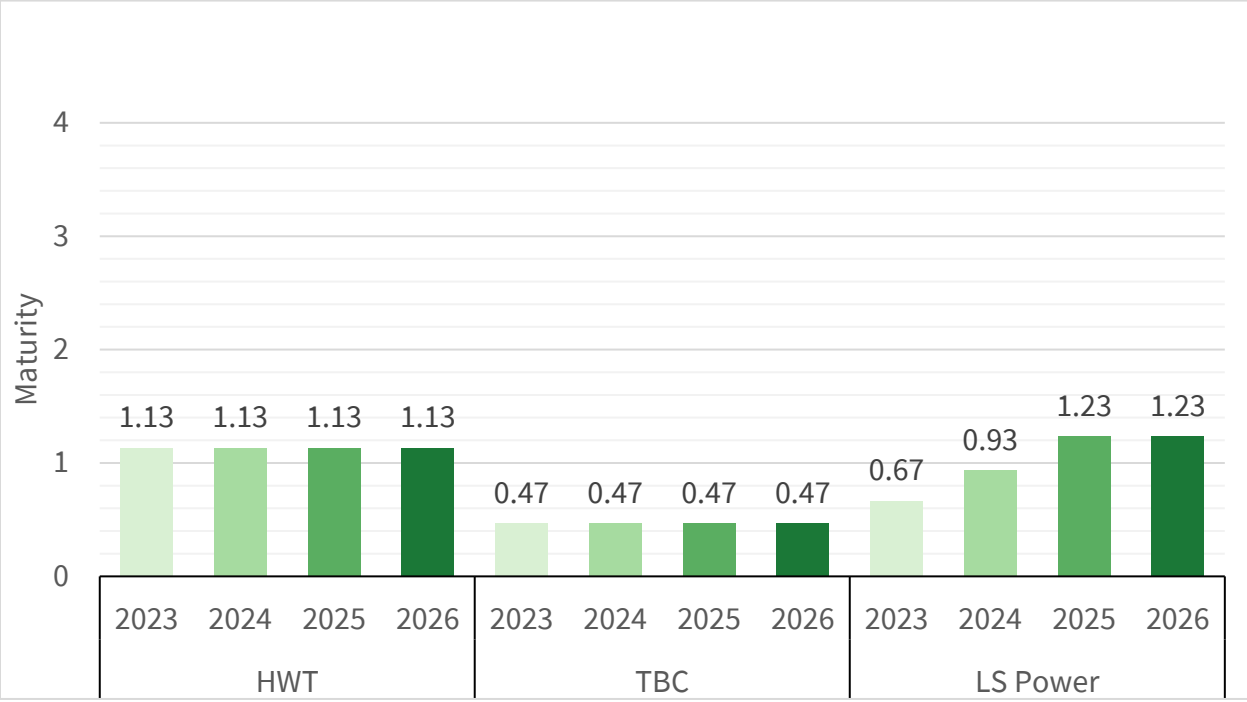
The utility's maturity level for the grid operations and protocols category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at LS Power's performance in grid operations and protocols. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [72]

When the category maturity is calculated using the capability average (rather than the minimum), LS Power has a maturity level for grid operations and protocols of 0.67 for 2023, and projects an increase to 0.93 in 2024, and another increase to 1.23 in 2025 (Figure 8.1-8).

[71] 2023 Maturity Survey Category E "Grid Operations and Protocols."

[72] 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 8.1-8. Cross-Utility Maturity for Grid Operations and Protocols[73] (Average Values)



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

LS Power's current maturity level in this category is around the same as its peers, with HWT and TBC reporting at levels 0.00 and 0.00, respectively. See Figure 8.1-8.

8.1.5.2 LS Power's WMP Strengths

LS Power projects improvement in grid operations and procedures over the WMP cycle in the following area: installation of protective equipment.

LS Power is planning on installing system protection equipment, including circuit breakers, breaker failure relaying with direct transfer trip, high-speed communication transmission line protection, internal protection, and control systems, as well as dual transformer differential protective relaying and temperature monitoring. This system will be monitored around the clock and will operate automatically.

2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

[73] 2023 Maturity Survey Category E "Grid Operations and Protocols."

8.1.5.3 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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, LS Power 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.[74]

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

8.2.1 Objectives and Targets

As part of its Base WMP, LS Power provided 3-year and 10-year objectives for its vegetation management programs.[75]

LS Power also defined a quantitative target for initiative activities for its vegetation management programs. LS Power's Base WMP includes end-of-year targets for 2023, 2024, and 2025. Selected targets are included in Table 8.2-1.

Table 8.2-1. LS Power Vegetation Management – Selected Targets

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Vegetation Inspections	Inspection and Removal Activities	N/A	• Monthly and ahead of extreme weather events (RFW) • Removal of all vegetation greater than 3" in buffer zone • Ensuring no vegetation/	• Monthly and ahead of extreme weather events (RFW) • Removal of all vegetation greater than 3" in buffer zone • Ensuring no vegetation/

[74] 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).

[75] LS Power's 2023-2025 WMP, pages 117-118.

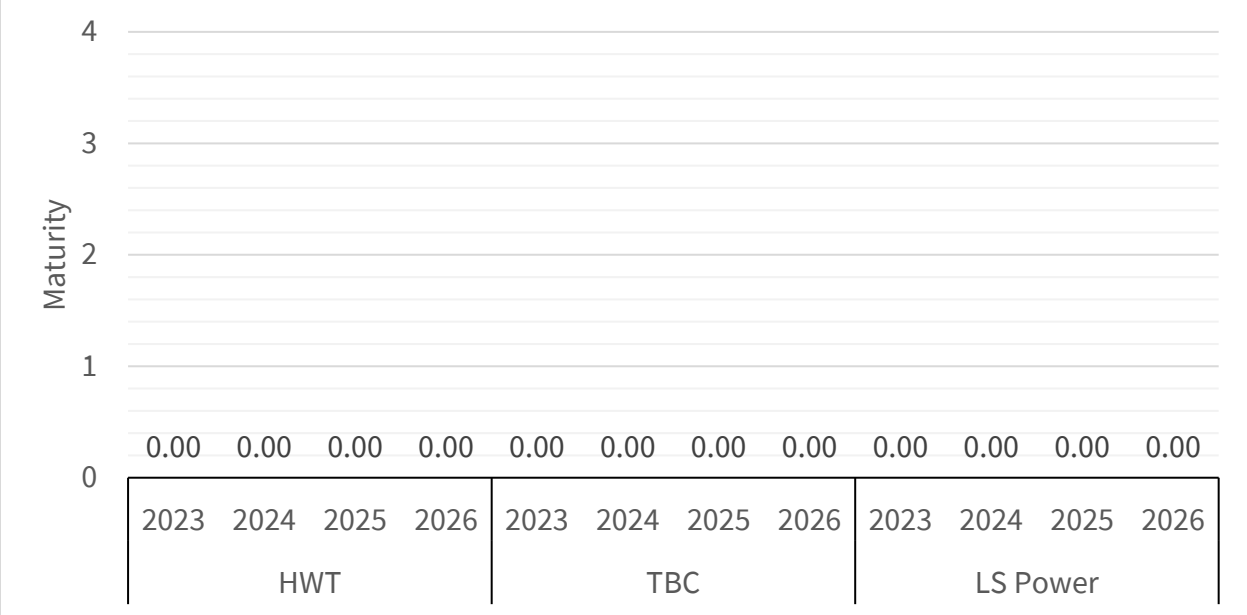
Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
			substation contact	substation contact

8.2.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for vegetation management and inspections. LS Power 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)

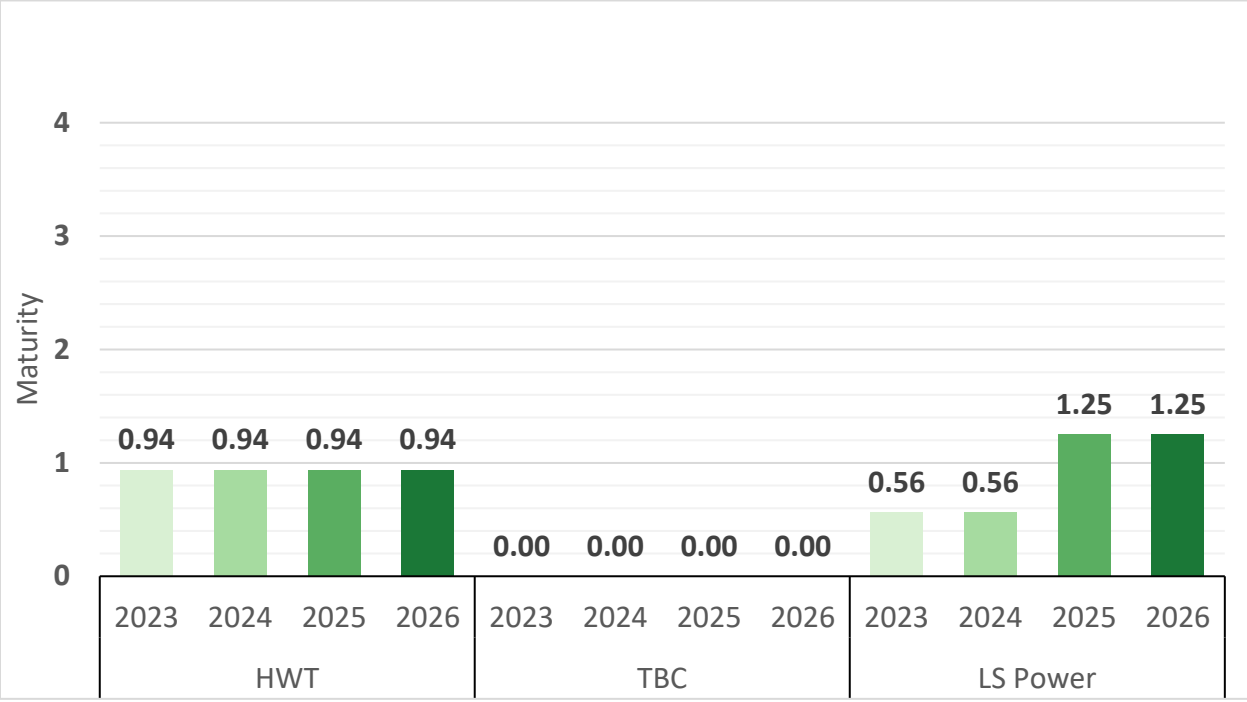


The utility's maturity level for the vegetation management and inspections category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at LS Power's performance in vegetation management and inspections. The capability average is determined from the average of all components sub-capabilities and is an additional tool to evaluate the utilities' maturity. [76]

[76] 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.

When the category maturity is calculated using the capability average (rather than the minimum), LS Power has a maturity level for vegetation management and inspections of 0.56 for 2023, projects no change for 2024, and projects an increase to 1.25 in 2025 (Figure 8.2-2).

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.

LS Power's current maturity level in this category is between its peers, with HWT and TBC reporting at levels 0.94 and 0.00, respectively. See Figure 8.2-2.

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

- Vegetation inventory and condition database[77]

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

- Vegetation personnel training and quality[78]

[77] LS Power's responses to questions on the 2023 Maturity Survey under Category D "Vegetation Management and Inspections," Capability 18 "Vegetation inventory and condition database."

[78] HWT's responses to questions on the 2023 Maturity Survey under Category D "Vegetation Management and Inspections," Capability 21 "Vegetation personnel training and quality."

8.2.3 LS Power's WMP Strengths

LS Power projects improvement in vegetation management over the WMP cycle in the following area: vegetation inspections.

As LS Power's Fern Road and Orchard substation projects are currently under construction, LS Power is planning how it will mitigate risk from vegetation contact once the projects are energized. LS Power has committed to performing monthly vegetation inspections and supplemental inspections ahead of Red Flag Warnings. These inspections will adhere to applicable regulations including Public Resources Code section 4291, which defines defensible space requirements for structures in the State Responsibility Area.[79] Additionally, LS Power expects to engage an International Society of Arboriculture (ISA) Certified Arborist Utility Specialist to conduct a survey around the facilities identify any trees that may require ongoing monitoring.[80]

8.2.3.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.2.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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, LS Power 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.[81]

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

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[79] LS Power's 2023-2025 WMP, page 120.

[80] Data Request P-WMP_2023-LSP-001, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55607&shareable=true, accessed September 18, 2023).

[81] 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).

8.3.1 Objectives and Targets

As part of its Base WMP, LS Power provided 3-year and 10-year objectives for its situational awareness and forecasting programs.[82]

LS Power also defined quantitative targets for initiative activities for its situational awareness and forecasting programs. LS Power's Base WMP includes end-of-year targets for 2023, 2024, and 2025. Selected targets are included in Table 8.3-1.

Table 8.3-1. LS Power Situational Awareness and Forecasting – Selected Targets

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Cameras at substations	Number installed	0	64	0
Weather forecasting tool	Integration	n/a	full integration	n/a

8.3.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for situational awareness and forecasting. For 2024, LS Power projects the same in maturity to a level of 0.00. For 2025, LS Power projects that it will slightly increase in maturity to a level of 0.17 (Figure 8.3-1).

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

[82] LS Power's 2023-2025 WMP, page 129-130.

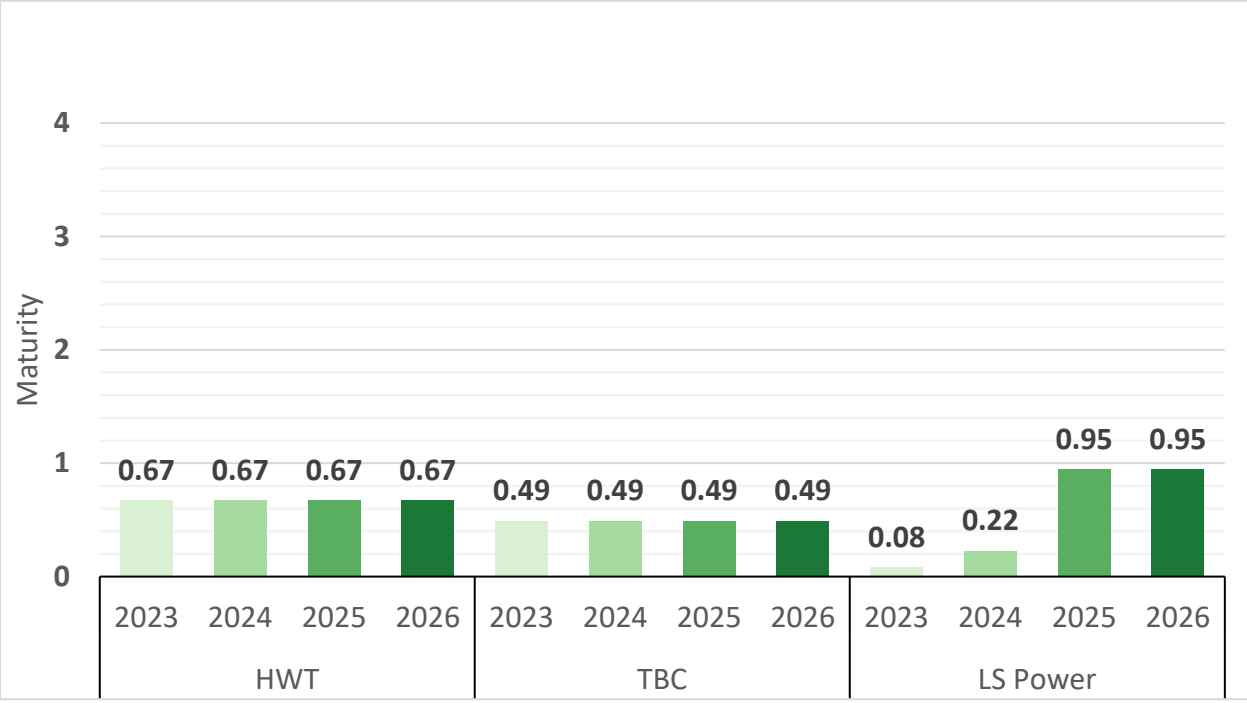
Figure 8.3-1. Cross-Utility Maturity for Situational Awareness and Forecasting (Minimum Values)

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 LS Power's performance in situational awareness and forecasting. The capability average is determined from the average of all components 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), LS Power has a maturity level for situational awareness and forecasting of 0.08 for 2023, and projects increases to 0.22 in 2024 and 0.95 in 2025 (Figure 8.3-2).

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



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

LS Power's current maturity level in this category is lower than its peers, with HWT and TBC reporting at levels 0.67 and 0.49, respectively. See Figure 8.3-2.

Based on its responses to the 2023 Maturity Survey, LS Power reported its highest levels of projected maturity in the following capabilities for 2023 and 2024: Wildfire detection and alarm systems.[84]

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

- Ignition likelihood estimation.[85]
- Centralized monitoring of real-time conditions.[86]

[84] LS Power's responses to questions on the 2023 Maturity Survey under Category B "Situational Awareness and Forecasting," Capability 11 "Wildfire detection and alarm systems."

[85] LS Power's responses to questions on the 2023 Maturity Survey under Category B "Situational Awareness and Forecasting," Capability 7 "Ignition likelihood estimation."

[86] LS Power's responses to questions on the 2023 Maturity Survey under Category B "Situational Awareness and Forecasting," Capability 12 "Centralized monitoring of real-time conditions."

Given LS Power is in the construction phase of its substations, its current maturity level is not unreasonable.

8.3.3 LS Power's WMP Strengths

LS Power plans to have contracted personnel present during the construction phase of its substation facilities in 2023. Personnel would be present onsite for any potential ignitions or emergencies during non-work hours.[87]

In 2024, LS Power expects its substations to be operational and has committed to installing 64 video surveillance cameras between both substation sites to monitor its assets. The camera system will enable remote monitoring of indoor and outdoor areas, ensuring round-the-clock surveillance of its assets.[88]

LS Power intends to integrate its weather forecasting and intelligence support tool to assess fire danger and inform operational decision making.[89]

8.3.3.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.3.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power 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, LS Power 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.[90]

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[87] LS Power's 2023-2025 WMP, Page 131

[88] LS Power's 2023-2025 WMP, Page 131

[89] LS Power's 2023-2025 WMP, page 137

[90] 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).

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

8.4.1 Objectives and Targets

As part of its Base WMP, LS Power provided 3-year and 10-year objectives for its emergency preparedness programs.[91]

LS Power also defined quantitative targets for initiative activities for its emergency preparedness programs. LS Power's Base WMP includes end-of-year targets for 2023, 2024, and 2025. Selected targets are included in Table 8.4-1 to demonstrate the utility's projected progress.

Table 8.4-1. LS Power Emergency Preparedness – Selected Targets[92]

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Conduct meetings with local agencies	Emergency Preparedness Plan meetings	2 meetings/year	2 meetings/year	2 meetings/year

8.4.2 Maturity Survey Results

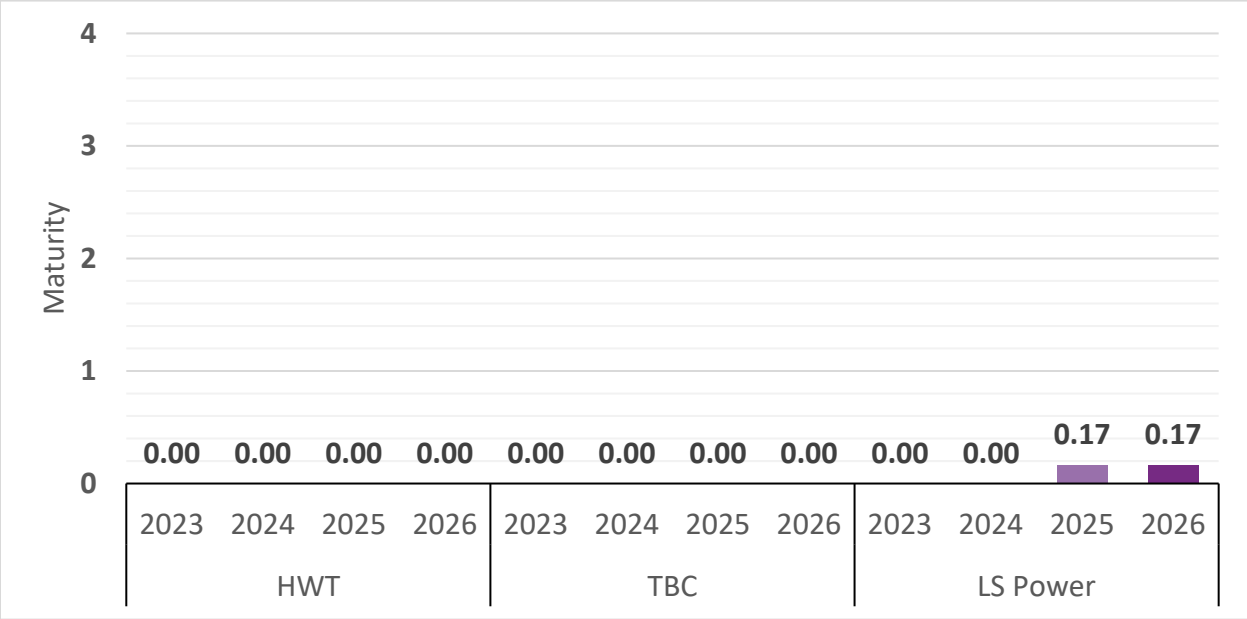
According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for emergency preparedness. For 2024, LS Power projects the same maturity. For 2025, LS Power projects that it will slightly increase in maturity to a level of 0.17 (Figure 8.4-1).

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

[91] LS Power's 2023-2025 WMP, Page 140

[92] LS Power's 2023-2025 WMP, Page 141

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

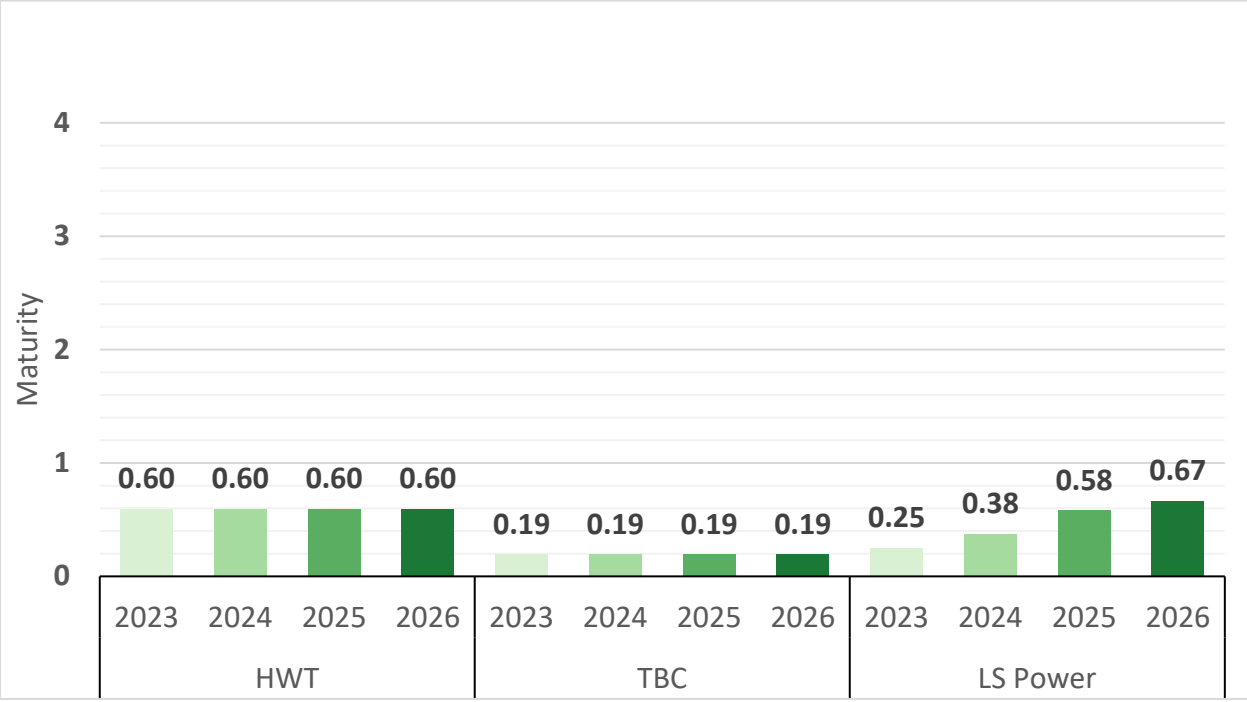


The utility's maturity level for the emergency preparedness category described above is calculated using the minimum value sub-capability of each capability. Using the capability average is another way to look at LS Power's performance in emergency preparedness. The capability average is determined from the average of all component sub-capabilities and is an additional tool to evaluate the utilities' maturity. [93]

When the category maturity is calculated using the capability average (rather than the minimum), LS Power has a maturity level for emergency preparedness of 0.25 for 2023, and projects a slight increase to 0.38 in 2024 and again to 0.58 in 2025 (Figure 8.4-2).

[93] 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.

LS Power's current maturity level in this category is around the same as its peers, with HWT and TBC reporting at levels 0.60 and 0.19, respectively. See Figure 8.4-2.

8.4.3 LS Power's WMP Strengths

LS Power describes its successful and safe operation history in other states and its collaboration with industry peers, which should inform its practices in California when it becomes operational here in mid-2024.

8.4.3.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.4.4 Areas for Continued Improvement

The Technical Guidelines require utilities to fill out 20 tables in the emergency preparedness section of the WMPs.[94] Of these, LS Power marked 9 tables as "TBD" or "N/A." Some of these

[94] 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).

tables require information on LS Power's staffing and qualifications, training programs, and communication protocols with stakeholders (see Section 11 for a full list of tables). LS Power explained this information is not included due to its substations not being operational yet. However, LS Power must fully populate all 20 tables in its 2025 Update.

The information provided in these tables in its next WMP Update must match the information that LS Power provides in its Quarterly Data Reports (QDR).

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

8.5 Community Outreach and Engagement

In response to Section 8.5 of the Technical Guidelines, LS Power 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.[95]

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

8.5.1 Objectives and Targets

As part of its Base WMP, LS Power provided 3-year and 10-year objectives for its community outreach and engagement programs.[96]

LS Power also defined a quantitative target for initiative activities for its community outreach and engagement programs. LS Power's Base WMP includes an end-of-year target for 2023, 2024, and 2025. A selected target is included in Table 8.5-1 to demonstrate the utility's projected progress.

Table 8.5-1. LS Power Community Outreach and Engagement – Selected Target

Initiative Activity	Target Unit	2023 Target	2024 Target	2025 Target
Meetings with local agencies	Number of meetings	2	2	2

[95] 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).

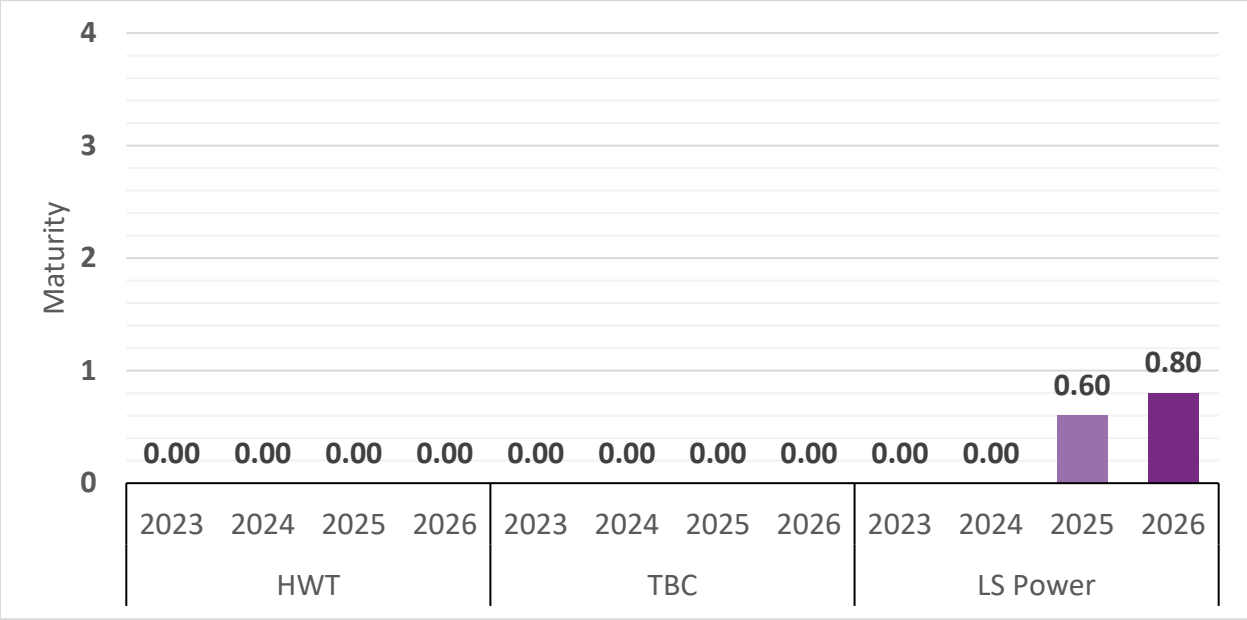
[96] LS Power's 2023-2025 WMP, page 173.

8.5.2 Maturity Survey Results

According to its responses to the 2023 Maturity Survey, LS Power has a 2023 maturity level of 0.00 for community outreach and engagement. For 2024, LS Power projects the same. For 2025, LS Power projects that it will slightly increase in maturity to a level of 0.60 (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.

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 LS Power'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. [97]

When the category maturity is calculated using the capability average (rather than the minimum), LS Power has a maturity level for community outreach and engagement of 0.00 for 2023, projects the same in 2024, and projects an increase to 1.3 in 2025 (Figure 8.5-2).

[97] 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.

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

8.5.3 LS Power's WMP Strengths

LS Power projects improvement in community outreach and engagement over the WMP cycle in the following areas: public outreach and education awareness program; collaboration on local wildfire mitigation Planning; and best practice sharing with other electrical corporations.

LS Power's outreach and engagement efforts will focus on local government agencies and first responders as well as interconnecting utilities, rather than focusing on community outreach or direct customer support.

As LS Power continues to develop its programs, it plans to update its website[98] to assist with public awareness and provide wildfire safety information. LS Power also plans to meet with local agencies to establish and maintain relationships.[99]

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[98] LS Power's public website (https://www.lspgridcalifornia.com, accessed September 27, 2023).

[99] LS Power's 2023-2025 WMP, pages 175-176.

LS Power has also identified local fire and governmental agencies it plans to coordinate with during construction and after to discuss project-specific risks, activities, and response procedures, and enhance overall operation safety.[100]

Additionally, LS Power plans to collaborate with peer electrical corporations through best practice sharing, primarily through its participation in the North American Transmission Forum.[101]

These efforts demonstrate strength in LS Power's community outreach program.

8.5.3.1 2022 Areas for Continued Improvement

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

8.5.4 Areas for Continued Improvement

Energy Safety has no areas for continued improvement for LS Power under the community outreach and engagement section of its Base WMP.

[100] LS Power's 2023-2025 WMP, page 177.

[101] LS Power's 2023-2025 WMP, pages 179-180.

9. Public Safety Power Shutoffs

LS Power is a transmission-only electrical corporation and does not own, operate, or maintain electric distribution facilities. LS Power anticipates developing PSPS Protocols in a future WMP cycle and ahead of commercial operation of the company's first transmission line assets, which is currently scheduled for December 2027.[102]

[102] LS Power's 2023-2025 WMP R1, page 183.

10. LS Power's Process for Continuous Improvement

In response to Sections 10, 11, and 12 of the Technical Guidelines,[103] LS Power 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 LS Power's implementation of lessons learned.

LS Power is a new California electrical corporation and has no operational history in the state. However, LS Power identifies its successful and safe operation history in other jurisdictions and collaboration with industry peers as something that it will continue to do while operating in California to inform lessons learned in future WMPs.

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 LS Power'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.

LS Power is in the process of developing a CAP and reports that it plans to include a description of this program in its 2025 Update.

10.3 Areas for Continued Improvement

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

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[103] 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).

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 LS Power's areas for continued improvement follows below.

11.1 Emergency Preparedness

- **LS Power-23-01. Emergency Preparedness Tables**
  - Description: Many of LS Power's emergency preparedness tables were incomplete. LS Power explained that the tables were incomplete because its substations will not be operational until mid-2024.
  - Required Progress: In its 2025 Update, LS Power must complete all 20 tables in the emergency preparedness section. The information provided in these tables must match the information that LS Power provides in its QDRs. These tables include the following:
    - Table 8-33 – 3-Year Objectives.
    - Table 8-34 – 10-Year Objectives.
    - Table 8-35 – Targets.
    - Table 8-36 – Performance Metrics.
    - Table 8-37 – Key Gaps and Limitations.
    - Table 8-38 – Staffing and Qualifications.
    - Table 8-39 – Training Program.
    - Table 8-40 – Contractor Training Program.
    - Table 8-41 – Internal Drills, Simulation, and Tabletop.
    - Table 8-42 – External Drills, Simulation and Tabletop.
    - Table 8-43 – Updates to EP Plan.
    - Table 8-44 – State & Local Collaboration.
    - Table 8-45 – Key Gaps with Collaboration Agencies.
    - Table 8-46 – High Level Communications.
    - Table 8-47 – Key Gaps with Communications.

- Table 8-48 – Mutual Aid Agreement.
- Table 8-49 – Protocols for Communication with Stakeholders.
- Table 8-50 – Key Gaps on Communications Strategy.
- Table 8-51 – Internal Drills, Simulation, and Tabletop for Service Restoration.
- Table 8-52 – External Drills, Simulation, and Tabletop for Service Restoration.

- Discussed in Section 8.4, "Emergency Preparedness."

12. Conclusion

LS Power's 2023-2025 Wildfire Mitigation Plan is approved.

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electrical corporations, including LS Power, must continue to make progress toward reducing utility-related ignition risk. Energy Safety expects LS Power 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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Office of Energy Infrastructure Safety

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APPENDICES

APPENDICES

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

Energy Safety did not require LS Power to submit a 2022 WMP Update, because it did not exist in California at the time the 2022 WMP Update submission was required. Therefore, Energy Safety had no Areas for Continued Improvement for LS Power.

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:

- City of Moorpark.
- California Department of Fish and Wildlife (CDFW).
- 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 LS Power'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.

Tables A-1 compare the ITOs' maturity levels across mitigation categories showing average values. Table A-2 shows LS Power's projected maturity growth throughout the WMP cycle. Figure A-1 provides a one-page look at all LS Power's maturity levels for the WMP cycle, including 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. LS Power Projected Growth in Maturity throughout Current WMP Cycle by Category

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

Category	2023	2024	2025	2026
A. Risk Assessment and Mitigation Strategy	0.49	0.82	0.99	0.99
B. Situational Awareness and Forecasting	0.08	0.22	0.95	0.95
C. Grid Design, Inspections, and Maintenance	0.28	0.43	1.33	1.33
D. Vegetation Management and Inspections	0.56	0.56	1.25	1.25
E. Grid Operations and Protocols	0.67	0.93	1.23	1.23
F. Emergency Preparedness	0.25	0.38	0.58	0.67
G. Community Outreach and Engagement	0.00	0.00	1.30	1.57

Figure A-1. LS Power Comprehensive Maturity Survey Results

Capability Scores by Year and Category for LS Power

		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.	0.2	1.0	1.0	1.0	0.6	1.1	1.1	1.1	0.5	0.5	0.5	0.5	0.0	0.7	0.7	0.7	1.0	1.0	2.0	2.0	0.6	0.6	0.6	0.6
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	1.0	1.0	0.0	0.0	0.0	0.0
	Average of Sub-Cap.	0.4	0.4	0.4	0.4	0.1	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	2.2	2.2	0.0	0.4	2.0	2.0
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	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0				
	Average of Sub-Cap.	1.0	1.0	2.5	2.5	0.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.2	0.2	0.2	0.2	0.3	1.0	2.0	2.0				
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.	2.0	2.0	2.0	2.0	0.0	0.0	1.3	1.3	0.3	0.3	1.0	1.0	0.0	0.0	0.8	0.8								
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	2.0	2.0				
	Average of Sub-Cap.	1.2	1.2	1.3	1.3	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.5	1.5	2.2	2.2	0.0	1.3	2.0	2.0				
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	1.0	1.0	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	0.8	1.0	1.5	0.0	0.0	0.5	0.5	0.7	0.7	0.7	0.7	0.8	0.8	1.3	1.3	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	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0				
	Average of Sub-Cap.	0.0	0.0	2.5	2.5	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	1.3				