



July 1, 2024



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DISCLAIMER

This report has been compiled through the process of observation and review of documents provided by the electric service provider named herein. The office of Energy Safety instituted the requirement for an independent evaluation of electric utility providers Wildfire Mitigation Plans (“WMP”). Bureau Veritas is not the designer, implementer, or owner of the WMP and is not responsible for its content, implementation and/or any liabilities, obligations or responsibilities arising therein.

The report reflects only those conditions and practices which could be ascertained through observation at the time of evaluation. This report is limited to those items specifically identified herein. The report is not intended to validate those dangers, hazards and/or exposures that are or are not present. Bureau Veritas shall only be responsible for the performance of the services identified or defined in its specific scope of services.

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1. EXECUTIVE SUMMARY

Background

Derived from the devastating wildfires of 2016 and 2017, the California Public Utilities Commission (CPUC) opened Rulemaking 18-10-007 to provide guidance on the Investor-Owned Utilities' (IOU) Wildfire Mitigation Plans (WMPs). Moving forward, the California Legislature passed several bills increasing the oversight for investor-owned utilities (IOUs) as it related to mitigating wildfires associated with electrical corporations' infrastructure role in utility-related wildfires. This term has changed from IOU to Electrical Corporation (EC). The resulting legislative measures, Senate Bill 901 (2018), Assembly Bill 1054 (2019), and Assembly Bill 111 (2019), have led to the continued requirement for ECs to submit a WMP for review and approval by CPUC designated regulatory division. Since the passing and ratification of this legislation, the Wildfire Safety Division (WSD) of the California Public Utilities Commission (CPUC) has transitioned to the Office of Energy Infrastructure Safety or Energy Safety (ES). The wildfire mitigation process requires utilities to submit their annual Wildfire Mitigation Plan (WMP) in a 3-year cycle; with the 2023 – 2025 cycle being the first cycle for LS Power Grid California, LLC (LSPG).

Pursuant to P.U. Code Section 8386.3(c)(2)(A), Bureau Veritas North America, Inc. (BVNA) has been selected as an independent evaluator (IE) to review and assess LSPG 2023 Wildfire Mitigation Plan (WMP) and to provide a final Annual Report of Compliance (ARC) on July 1st of this year. BVNA has evaluated LSPG compliance with its 2023 WMP pursuant to Public Utilities Code Section 8386, validated LSPG's WMP framework, which include goals and plan objectives, scope of application, hazard identification, risk scenarios and analysis and risk mitigation and management activities, including quality assurance and quality control (QA/QC) programs outlined for support of WMP initiatives and associated WMP funding.

Scope

Pursuant to the requirements of the Public Utilities Code (PUC); BVNA has reviewed LSPG's 2023-2025 WMP issued in May 2023. Activities specific to the construction of LSPG's Fern Substation and Orchard Substation along with WMP objectives and activities are:

- Grid Design, Operations, and Maintenance
- Vegetation Management and Inspections
- Situational Awareness and Forecasting
- Emergency Preparedness
- Community Outreach and Engagement

Assessment of the above activities and the components of the WMP are assessed as outlined in PUC 8386.3(c)(2)(B)(i), (ii), (iii), (iv) for initiative compliance verification for the execution of the WMP goals and targets. For supplemental documents (see Appendix B) that were also

reviewed for verification of compliance, validation of quality assurance QA/QC programs, and assessment of the utility funding activities related to WMP.

LS Power Grid California, LLC

Fern Road and Orchard substations are Static Synchronous Compensator (STATCOM). Orchard substation was the only facility that was permitted for construction at the time the 2023 WMP was filed on January 10, 2023. The project's full approval included connection to the Pacific Gas and Electric Company (PG&E) Gates Substation.

LSPG Fern Road Substation was expected to receive its construction permit during 2023 but was delayed such that there is no standing infrastructure. Currently, Fern Road Substation construction includes groundwork such as dirt work and removal of tree stands. The California Public Utility Commission (CPUC) has since approved the construction of the Fern Road Substation on January 25, 2024. Therefore, this ARC will only address the WMP initiatives for the Orchard Substation. The initiatives for Fern Road have not been in effect due to the late permitting of the substation construction.

As described within LSPG's Annual Report on Compliance (ARC) dated March 2024, LSPG is a wholly owned subsidiary of LS Power and a California Electrical Corporation classified as an Independent Transmission Operator. LSPG has no end use customers, and its infrastructure is limited to the two (2) 500 kilovolt (kV) substation facilities referred to as Fern Road and Orchard Substations, which are in two different geographic locations. Fern Road Substation is in Shasta County and Orchard Substation is in Fresno County.

The intent of construction of LSPG Orchard Substation is to connect to PG&E's Gates Substation by two single-circuit 500 kV interconnection transmission lines. The Gates Substation will connect through its 500 kV bus to the Orchard Substation 500 kV take-off Towers. LSPG expects to have in service the two substations within the WMP 3-year cycle but will not have any transmission lines. LSPG does not serve wholesale, distribution, or retail customers nor does it have any residential, commercial, or industrial interconnections.

The location known as the Orchard Substation is not located within a CPUC High Fire Threat District (HFTD). As depicted in the CPUC's High Fire Threat District mapping, Fresno County is shown as non-tiered classification.

Therefore, during Orchard Substation's construction period, LSPG has outlined WMP initiatives for Grid Design, Operations, and Maintenance; Vegetation Management and Inspections; Situational Awareness and Forecasting; Emergency Preparedness; and Community Outreach and Engagement.

2. Key Findings

BVNA has determined that many aspects of the 2023 WMP are limited to construction site safety since the construction of the substation is not complete and the substation is not energized. Activities assessed are those specific to site construction safety which include

the presence of equipment necessary to address fire protection and prevention during construction.

LSPG's WMP objective for this current cycle of WMP (2023-2025) has demonstrated through review of the documents requested in data request and site visit to the Orchard Substation, the IE has determined that LSPG has substantially met construction site safety provisions as it pertains to the current site status of controlling fire risk associated with construction.



Figure 1 - Orchard Current Site Condition

Outlined initiatives of the 2023 WMP as it pertains to the initiatives discussed are as follows:

Grid Design, Operations, and Maintenance – Due to current construction, LSPG is to enhance work safety procedures. This was observed on site by the presence of water trolleys, flammable liquid storage lockers, secondary containment for fuel tank, active safety officer presence during construction, implementation of Hot Work Program, and security gates. Many of the items observed on site for site fire safety were above that outlined in the WMP activities or illustrated in the requested initiative list.

Vegetation Management and Inspections – As demonstrated above in Figure 2, the current site status is “Under Construction” and all combustible vegetation has been removed from the site.

Situational Awareness and Forecasting – LSPG 3-year objective is the establishment of environmental monitoring and weather forecasting where data is used to reduce the risk of wildfire from environmental or weather-related conditions. The Orchard site is significantly

different that LSPG's Fern Road site, with the major difference is that this site is not classified as a HFTD or HFRA.

Emergency Preparedness – LSPS emergency preparedness items that are specific to the Orchard Substation is the implementation of fire-safe construction practices, establish contact with local public safety agencies that support the location and ensure proper identification of the site is provided for emergency responders. Orchard substation is provided with site signage from the roadway, but no addressing was provided. This was communicated with LSPG representatives during the site walk.

Community Outreach and Engagement – LSPG's objective includes outreach and engagement to establish and maintain relationships with their interconnecting utilities by ensuring clear communication practices. Since the Orchard site is not located in a HFTD or HFRA; the surrounding area is made up of farmland and other utility providers; and does not have any end use customers or distribution lines; the risk of wildfire does not exist.

Summary of Findings

- LSPG has substantially completed the activities outlined in its 2023 WMP as it can currently be applied due to site conditions. As stated previously, the Orchard Substation is currently under construction and is not energized.
- Due to Orchard construction schedule, initiative funding is shown as NA (Not Applicable). Funding associated with building relationships with local fire agencies and conducting annual visits had no funding targeted. However, actual information obtained from Data Request 002 indicates that \$16,000 dollars was spent on labor hours for travel to and from the site locations and meeting with local fire safety officials.

Other unplanned funding was shown that was associated with Wildfire Mitigation Strategy Development. Data Request 002 indicates that \$47,000 was spent to engage Dudek Consulting to assess the Wildfire Risk and develop practices on construction fire prevention. However, these dollars were tied to the Fern Road substation and were not utilized for Orchard Substation.

- Overall, LSPG funding was underspent due to the current construction schedule and the late approval of the Fern Road Substation. The IE has determined that this underspend is supported by the construction status of the two substations.
- The IE review of the Monthly Inspection Reports provided through Data Request 004 and assessed the Quality Assurance and Quality Control (QA/QC) process developed and implemented by LSPG. Based on this review, LSPG was found to be in conformance with its 2023 WMP.

3. INDEPENDENT EVALUATOR REVIEW OF COMPLIANCE

To verify compliance, the IE employed a comprehensive approach that included reviewing and assessing multiple WMP activities through data requests, examining publicly available documents, and conducting an on-site facility assessment to document and validate the items outlined in LSPG’s 2023-2025 WMP.

At the outset of the evaluation, the IE initiated the assessment by thoroughly reviewing LSPG's 2023-2025 WMP, all publicly available documents listed in Appendix B and the initiatives list provided through Data Request (DR) 001 (see Appendix C) to identify LSPG's stated 2023 WMP activities. 2023 WMP activities described in the initiative list obtained from DR was not specifically outlined in the 2023-2025 WMP and not observed within the publicly available records. To confirm current site conditions, the IE conducted a site visit to LSPG's Orchard Substation and met with LSPG representative Ross Hohlt (Director of Engineering LSPG) to collect images and evaluate compliance with the 2023 WMP activities or initiatives identified during the initial review (see Appendix E – Field Visit Report).

The IE's analysis and key findings for each respective section are detailed within this section, "Independent Evaluator Review of Compliance". This section provides an in-depth examination of LSPG's compliance with the 2023 WMP, based on the information gathered through the document review, data requests, and on-site facility assessment.

3.1 WMP Activity Completion

WMP activities outlined in LSPG's 2023 WMP with specific quantifiable or qualitative performance goals/targets included the following items:

Table 1: 2023 WMP Initiatives

Large Volume (≥ 100 units), Quantifiable Goal/Target – Field Verifiable	
2023 WMP Initiative	
N/A	
Large Volume (≥ 100 units), Quantifiable Goal/Target – Not Field Verifiable	
2023 WMP Initiative	
N/A	
Small (less than 100 items) Volume Quantifiable Goal/Target	
2023 WMP Initiative	
Qualitative Goal/Target WMP Activities	
2023 WMP Initiative	
7.2.1	Buffer zone establishment: Establish risk-based buffer zones and implement monthly substation inspection program once operational
8.1.7	CMMS integration into maintenance program: Enhance use of Computer

	Maintenance Management Systems (CMMS)/automation into LSPG-CA maintenance work orders
8.1.8.3	Implementation: Implement Hot Work Programs during construction and maintenance activities
8.2	Inspections: Implement Substation Inspection Program
8.3.2	Integration into decision making process: Integrate StormGeo into decision-making and safety practices
8.3.2	Number of cameras installed: Implement 24/7 video security surveillance at substation locations.
8.3.2	Live Video improvements: Evaluate and enhance use of live video
8.4.2	Emergency plan updates: Establish continuous improvement of emergency plan and procedures
8.4.3	integration into dispatch systems: Establish and ensure integration into Local Public Safety Computer dispatch systems.
8.5.4	Number of meetings: Work to build relationships with local fire agencies and conduct annual visits
8.5.5	Instances of Collaboration: Formalize mechanisms to share lessons learned among ITO peers.

The following sections of this report assess the performance of the above targets and activities. Section 4, Conclusion, summarizes the completion of initiatives and adherence to applicable protocols and procedures.

Sampling Methodology and Discussion

Sampling percentages do not apply for this facility as we observed the facility in its entirety. Onsite information was captured during the onsite field visit, which included an SME interview with facility personnel and detailed within Appendix E along with photos captured IE's field visit findings.

Large Volume Quantifiable Goal/Target – Field Verifiable

Review of Initiatives

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Trends and Themes

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Large Volume Quantifiable Goal/Target – Not Field Verifiable

Review of Initiatives

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Trends and Themes

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Small (less than 100 times) Volume Quantifiable Goal/Target

Review of Initiatives

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Trends and Themes

These activities are not present in the 2023 WMP activities. Therefore, this subject is not applicable to or covered in this report.

Qualitative Goal/Target

Review of Initiatives

The IE identified WMP activities listed in LSPG 2023 Wildfire Mitigation Plan classified as Qualitative Goal/Target that were conducted in 2023. These 2023 WMP activities identified with the Qualitative Goal/Target list were assessed in this section and presented below in tables grouped by the associated initiative category. The IE findings are defined as follows:

- Activity Validated – Qualitative work on the initiative began and ended in 2023.
- Activity In Progress – Qualitative work on the initiative began in 2023 and continues into 2024.
- Activity Ongoing – Qualitative work on the initiative is incorporated in operations to be repeated annually.

Trends and Themes

As demonstrated through LSPG site visit, LSPG consistently conducts asset and vegetation inspections and assesses and evaluates facility wildfire risk, looking for areas to further fire harden and proactively reduce wildfire risk.

3.2 Verification of Funding

**Table 3: Summary of WMP Expenditures by Category
(Spend in thousand \$)**

WMP Category	2023 Planned ²	2023 Actual ²	2023 Variance
8.5.4 Work to build relationships with local fire agencies and conduct annual visits	\$0	\$16,000	Calculated based off internal hours spent traveling to and from site locations and meeting with local fire safety officials
8.5.5 Collaborate with other utilities on best practices to improve wildfire mitigation	\$20,000	\$ N/A	QDR Submission
8.4.3 Improve communications plan to improve emergency response efficiency	\$10,000	N/A	QDR Submission
8.2 Asset inspections	\$15,000	N/A	QDR Submission
8.2 Equipment inspections, maintenance, and repair	\$15,000	N/A	QDR Submission
8.1.7 Asset management and inspection enterprise system(s)	\$10,000	N/A	QDR Submission
8.3.2 Weather forecasting	\$10,000	N/A	QDR Submission
7.2.1 Vegetation Inspections	\$10,000	N/A	QDR Submission
4.3 Proposed Expenditures, Wildfire Mitigation Strategy Development	0	\$47,000	Actual numbers calculated from engaging Dudek consulting firm to assess our Wildfire Risk and construction fire prevention plans at Fern Road. Our only

			current facility in a HFTD
Total	\$100,000	\$63,000	\$37,000

¹ 2023 Total Planned data as shown from Table 3. Summary of WMP Expenditures (Spend in thousands \$)

² 2023 Planned and Actual data as shown in LSPG Data Request DR002.

3.3 Verification of QA/QC Programs

Quality Assurance and Quality Control, due to the limited scale and scope of LSPG current operation, is accomplished through field operations personnel review results, Onsite safety managers, and Inspections from various agencies. Any identified issues which need further mitigation are discussed and addressed with the appropriate subject matter expert (SME) or supervisor.”

To verify the QA/QC programs, the IE reviewed the documentation provided as well as the site visit. LSPG’s written responses that describe the processes, documentation, and monitoring of identified issues noted by employees and supervisors are looked at and forwarded to inspectors and SMEs to ensure inspections and corrective actions are completed.

4.0 CONCLUSION

LSPG’s WMP objective for this current cycle of WMP (2023-2025) has demonstrated through review of the documents requested in data request and site visit to the Orchard Substation that LSPG has substantially met construction site safety provisions as it pertains to the current site status.

The IE has determined that many aspects of the 2023 WMP are limited to construction site safety since the construction of the substation is not complete and the substation is not energized. Activities assessed are those specific to the site construction safety including the presence of equipment necessary to address fire protection and prevention during construction. Site status is “Under Construction.”

APPENDICES



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Appendix A – List of 2023 WMP Activities

SOW Category	2023 WMP Activities	WMP Category	2023 Initiative No.	Utility Initiative Name	Initiative Activity
NA	NA	NA	7.2.1	Buffer Zone Establishment	Buffer Zone Establishment
NA	NA	NA	8.1.7	% CMMS integration into maintenance program	% CMMS integration into maintenance program
NA	NA	NA	8.1.8.3	Implementation	Implementation
NA	NA	NA	8.2	Inspections	Inspections
NA	NA	NA	8.3.2	Integration into decision making process: Integrate StormGeo into decision-making and safety practices	Integration into decision making process: Integrate StormGeo into decision-making and safety practices
NA	NA	NA	8.3.2	Number of cameras installed: Implement 24/7 video security surveillance at substation locations.	Number of cameras installed: Implement 24/7 video security surveillance at substation locations.
NA	NA	NA	8.3.2	Live Video improvements: Evaluate and enhance use of live video	Live Video improvements: Evaluate and enhance use of live video
NA	NA	NA	8.4.2	Emergency Plan Updates	Emergency Plan Updates

NA	NA	NA	8.4.3	Integration into dispatch systems	Integration into dispatch systems
NA	NA	NA	8.5.4	Number of Meetings	Number of Meetings
NA	NA	NA	8.5.5	Instances of Collaboration	Instances of Collaboration

Appendix B – List of Documents Reviewed

Item No.	Documents Reviewed - Public	Document Date
1	TN 12227_20230508T140110_LSPGC_2023_WMP_R0	05/2023
2	Orchard_Sub_2023Q4_Quarterly_Compliance_Report	10/2023
3	Orchard_Sub_2024Q1_Quarterly_Compliance_Report	01/2024
4	Orchard_Substation_NFP_011022_BS	01/10/2023

Appendix C – Data Log and Data Requests

LS Data Req. # Tracking Number	Date Sent	Subject	Date Response Received	File Name
DR001	6/6/2024	Initiative List	6/11/2024	LS Power Grid - DR001 - Initiative List.xlsx
DR002	6/6/2024	Funding Distributions	6/11/2024	LS Power Grid - DR002 - Funding Distributions.xlsx
DR003	6/6/2024	Construction Drawings	6/11/2024	LS Power Grid - DR003 - Construction Drawings.xlsx Confidentiality Statement.doc Fern (Zip file) Orchard (Zip file)
DR004	6/6/2024	QAQC Programs	6/11/2024	LS Power Grid - DR004 - QAQC Program.xlsx 84HP-005_LS Power_Fern Rd_Quality Plan.pdf 84HP-005_LS Power_Orchard_Quality Plan.pdf TTRS Orchard Submittal 7 Quality Assurance - Quality Control Plan_R0.pdf



Data Request Number:
LS_DR001

Data Request Date: 06/6/24
Due Date: 6/11/24

Name: Barbara Tomajic

Email:
 barbara.tomajic@bureauveritas.com

WMP Category: Initiative List and Goals

Phone #: (916)514-4511

Company: BVNA

Preferred Point of Contact: Email

Program Target	Units	Sections	Target	Actual	Method	Data Request
NA	NA	2023 Wildfire Mitigation Plan	NA	NA	Document Review	Please provide the Complete Initiative List with Categorization





Data Request Number: LS_DR002 **Data Request Date:** 06/6/2024
Due Date: 06/11/24

Name: Barbara Tomajic Email: barbara.tomajic@bureauveritas.com
WMP Category: Funding Phone #: (916)514-4511
Company: BVNA Preferred Point of Contact: Email

Program Target	Units	Sections	Target	Actual	Method	Data Request
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NA	NA	2023 Wildfire Mitigation Plan	NA	NA	Document Review	Please provide the distribution funding for 2023 commitments
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Data Request Number:
LS_DR003

Data Request Date: 06/6/2024
Due Date: 06/11/24

Name: Barbara Tomajic

Email:
barbara.tomajic@bureauveritas.com

WMP Category: NA

Phone #: (916)514-4511

Company: BVNA

Preferred Point of Contact: Email

Program Target	Units	Sections	Target	Actual	Method	Data Request
NA	NA	NA	NA	NA	Document Review	Please provide the Construction Drawings for the Fern site and the Orchard site





Data Request Number:
LS_DR004

Data Request Date: 06/6/2024
Due Date: 06/11/24

Name: Barbara Tomajic

Email:
 barbara.tomajic@bureauveritas.com

WMP Category: NA

Phone #: (916)514-4511

Company: BVNA

Preferred Point of Contact: Email

Program Target	Units	Sections	Target	Actual	Method	Data Request
NA	NA	NA	NA	NA	Document Review	Please provide confirmation that LS Power Grid has not implemented a QA/QC program due to the status of construction and provide information on QA/QC functions during the construction process for the two substation development.



Appendix D – 2023 WMP Funding Verification Summary

Program Target	Units	Sections	Target	Actual	Method
Work to build relationships with local fire agencies and conduct annual visits	Opex (Thousands)	8.5.4	0	16	Calculated based off internal hours spent traveling to and from site locations and meeting with local fire safety officials
Collaborate with other utilities on best practices to improve wildfire mitigation	Opex (Thousands)	8.5.5	20	NA	QDR Submission
Improve communications plan to improve emergency response efficiency	Opex (Thousands)	8.4.3	10	NA	QDR Submission
Asset inspections	Opex (Thousands)	8.2	15	NA	QDR Submission
Equipment inspections, maintenance, and repair	Opex (Thousands)	8.2	15	NA	QDR Submission
Asset management and inspection enterprise system(s)	Opex (Thousands)	8.1.7	10	NA	QDR Submission
Weather forecasting	Opex (Thousands)	8.3.2	10	NA	QDR Submission
Vegetation Inspections	Opex (Thousands)	7.2.1	20	NA	QDR Submission

Wildfire Mitigation Strategy Development	Opex (Thousands)	4.3 Proposed Expenditures	0	47	Actual numbers calculated from engaging Dudek consulting firm to assess our Wildfire Risk and construction fire prevention plans at Fern Road. Our only current facility in a HFTD
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