



Wildfire Mitigation Plan



CITY OF VERNON PUBLIC UTILITIES
4305 S SANTA FE AVE.
VERNON, CALIFORNIA 90058

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Reference Guide

Vernon Public Utilities (VPU) is dedicated to providing safe, reliable electric services to the residents and businesses in City of Vernon at competitive prices.

While VPU’s service territory and operations do not include or interface with any wildland or elevated fire-threat areas, VPU remains committed to evaluating hazards that may affect the reliability and safety of the City of Vernon. This WMP describes the activities that VPU is taking to mitigate the threat of power-line ignited wildfires, including its various programs, policies and procedures. This plan will be reviewed and evaluated by its City Council on an annual basis.

Wildfire Safety Advisory Board Recommendations

The California Wildfire Safety Advisory Board (WSAB) issued the Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives (“2021 WSAB Guidance Advisory Opinion”) on December 15, 2020. VPU provides this document to the WSAB in order to respond to each of the recommendations included in the 2021 WSAB Guidance Advisory Opinion. POUs will provide a narrative response and/or a cross reference to the location in VPU’s Wildfire Mitigation Plan (WMP) where the topic is addressed. Where the recommendation is not applicable to VPU, the response will provide a brief description supporting this conclusion.

Table 1: Context-Setting Information

Utility Name	Vernon Public Utilities (VPU)	
Service Territory Size	5.2 square miles	
Owned Assets	<input type="checkbox"/> Transmission <input checked="" type="checkbox"/> Distribution <input checked="" type="checkbox"/> Generation	
Number of Customers Served	2,000 customer accounts	
Population Within Service Territory	150 people	
Customer Class Makeup	<i>Number of Accounts</i>	<i>Share of Total Load (MWh)</i>
	4% Residential; 5% Government; 0% Agricultural; 64% Small/Medium Business, Commercial; 26% Industrial	3% Residential; 5% Government; 0% Agricultural; 64% Small/Medium Business, Commercial; 28% Industrial
Service Territory	0% Agriculture 0% Barren/Other	

Location/Topography¹	0% Conifer Forest 0% Conifer Woodland 0% Desert 0% Hardwood Forest 0% Hardwood Woodland 0% Herbaceous 0% Shrub 100% Urban 0% Water
Service Territory Wildland Urban Interface² (based on total area)	0% Wildland Urban Interface; 0% Wildland Urban Intermix;
Percent of Service Territory in CPUC High Fire Threat Districts (based on total area)	Tier 2: 0% Tier 3: 0%
Prevailing Wind Directions & Speeds by Season	The windier part of the year lasts for 6 months, from November to May, with average wind speeds of more than 6.9 miles per hour. The windiest day of the year is December 31, with an average hourly wind speed of 8.6 miles per hour. The calmer time of year lasts for 6 months, from May to November. The calmest day of the year is August 10, with an average hourly wind speed of 5.3 miles per hour. The wind is most often from the west for 5 months, from February to July, with a peak percentage of 47% on May 23. The wind is most often from the north for 4 months, from October to February, with a peak percentage of 36% on January 1.
Miles of Owned Lines Underground and/or Overhead	Overhead Dist.: 95 miles Overhead Trans.: 0 miles Underground Dist.: 24 miles Underground Trans.: 0 miles Explanatory Note 1 - Methodology for Measuring "Miles": measured in line miles
Percent of Owned Lines in CPUC High Fire Threat Districts	<i>Overhead Distribution Lines as % of Total Distribution System (Inside and Outside Service Territory)</i>
	Tier 2: 0% Tier 3: 0%
	<i>Overhead Transmission Lines as % of Total Transmission System (Inside and Outside Service Territory)</i>
	Tier 2: 0% Tier 3: 0%

¹ This data shall be based on the California Department of Forestry and Fire Protection, California Multi-Source Vegetation Layer Map, depicting WHR13 Types (Wildlife Habitat Relationship classes grouped into 13 major land cover types) available at: <https://www.arcgis.com/home/item.html?id=b7ec5d68d8114b1fb2bfbf4665989eb3>.

² This data shall be based on the definitions and maps maintained by the United States Department of Agriculture, as most recently assembled in *The 2010 Wildland-Urban Interface of the Conterminous United States*, available at https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf.

Customers have ever lost service due to an IOU PSPS event?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Customers have ever been notified of a potential loss of service to due to a forecasted IOU PSPS event?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has previously pre-emptively shut off electricity in response to elevated wildfire risk?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

I. Cross Reference to Statutory requirements

WSAB requested that POU's provide a clear roadmap as to where each statutory requirement is addressed within the POU WMP.

Table 2: Cross References to Statutory Requirements

Requirement	Statutory Language	Location in WMP
Persons Responsible	PUC § 8387(b)(2)(A): An accounting of the responsibilities of persons responsible for executing the plan.	Section 4
Objectives of the Plan	PUC § 8387(b)(2)(B): The objectives of the wildfire mitigation plan.	Section 3
Preventive Strategies	PUC § 8387(b)(2)(C): A description of the preventive strategies and programs to be adopted by the local publicly owned electric utility or electrical cooperative to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.	Section 7
Evaluation Metrics	PUC § 8387(b)(2)(D): A description of the metrics the local publicly owned electric utility or electrical cooperative plans to use to evaluate the wildfire mitigation plan's performance and the assumptions that underlie the use of those metrics.	Section 13
Impact of Metrics	PUC § 8387(b)(2)(E): A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	Section 14
Deenergization Protocols	PUC § 8387(b)(2)(F): Protocols for disabling reclosers and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of	Section 10

	those protocols, including impacts on critical first responders and on health and communication infrastructure.	
Customer Notification Procedures	PUC § 8387(b)(2)(G): Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.	Section 11
Vegetation Management	PUC § 8387(b)(2)(H): Plans for vegetation management.	Section 8
Inspections	PUC § 8387(b)(2)(I): Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section 9
Prioritization of Wildfire Risks	<p>PUC § 8387(b)(2)(J): A list that identifies, describes, and prioritizes all wildfire risks, and drivers for those risks, throughout the local publicly owned electric utility's or electrical cooperative's service territory. The list shall include, but not be limited to, both of the following:</p> <p>(i) Risks and risk drivers associated with design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities.</p> <p>(ii) Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the local publicly owned electric utility's or electrical cooperative's service territory.</p>	Section 5
CPUC Fire Threat Map Adjustments	PUC § 8387(b)(2)(K): Identification of any geographic area in the local publicly owned electric utility's or electrical cooperative's service territory that is a higher wildfire threat than is identified in a commission fire threat map, and identification of where the commission should expand a high fire threat district based on new information or changes to the environment.	Section 2.3 Section 2.6
Enterprisewide Risks	PUC § 8387(b)(2)(L): A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.	Section 6
Restoration of Service	PUC § 8387(b)(2)(M): A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	Section 12
Monitor and Audit	<p>PUC § 8387(b)(2)(N): A description of the processes and procedures the local publicly owned electric utility or electrical cooperative shall use to do all of the following</p> <p>(i) Monitor and audit the implementation of the wildfire mitigation plan.</p> <p>(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.</p>	Section 15

	(iii) Monitor and audit the effectiveness of electrical line and equipment inspections, including inspections performed by contractors, that are carried out under the plan, other applicable statutes, or commission rules.	
Qualified Independent Evaluator	PUC § 8387(c): The local publicly owned electric utility or electrical cooperative shall contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of its wildfire mitigation plan. The independent evaluator shall issue a report that shall be made available on the Internet Web site of the local publicly owned electric utility or electrical cooperative, and shall present the report at a public meeting of the local publicly owned electric utility’s or electrical cooperative’s governing board.	Section 16

II. WSAB Guidance Advisory Opinion Recommendations

The 2021 WSAB Guidance Advisory Opinion identifies 14 specific recommendations that POU’s are requested to address in their 2021 WMPs. As specified in Public Utilities Code § 8387(b)(1), each POU is required to perform a comprehensive revision to the POU’s WMP at least once every three years. Pursuant to this guidance, the POU’s will be updating their WMPs based on the direction of their local governing boards within this 3-year cycle.

A. Plan Structure

WSAB Recommendation #1: Provide context-setting information about the POU and provide a simple guide to where the statutory requirements are addressed within the WMP.

POU Response:

See Tables 1 and 2 above.

WSAB Recommendation #2: Provide a short description of the POU’s public review and approval (if required) for the WMP. This description may also include a brief explanation of the funding mechanisms for wildfire mitigation efforts.

POU Response:

The 2020 Vernon Public Utilities Wildfire Mitigation Plan was presented to Vernon City Council on January 21, 2020. City Council adopted Resolution 2020-02 adopting Vernon Public Utilities 2020 Wildfire Mitigation Plan. The 2021 Vernon Public Utilities Wildfire Mitigation Plan was presented to the Vernon City Council on May 18, 2021, and was adopted in Resolution No. 2021-12. Subsequent annual updates and triennial comprehensive revisions shall be publicly presented and approved by minute order of the City Council. At this time, due to Vernon’s low wildfire threat profile, the costs of meeting

the state requirements are limited to the staff time required to prepare and annually review the Wildfire Mitigation Plan.

WSAB Recommendation #3: Identify where the POU has posted the most recent Independent Evaluator (IE) Report and if your POU plans to enhance future IE reports, please summarize in what ways.

POU Response:

The independent evaluator's report is posted to the City of Vernon's website and has been presented to Vernon's City Council at a noticed public meeting.

WSAB Recommendation #4: Develop, in collaboration with POU industry associations, WMP guidelines for future WMPs, understanding that it may take multiple cycles for POUs to integrate these recommendations into the WMPs.

POU Response:

This document is intended to include, as appropriate, responses to the recommendations in the WSAB's Guidance Advisory Opinion for the POUs' 2021 WMP. This document also represents the combined effort of the POU industry associations to further the development of a template to respond to the WSAB's Guidance Advisory Opinion in a future reporting WMP cycle.

B. Customer Impacts

WSAB Recommendation #5: Describe the potential impact investor-owned utilities (IOU) public safety power shutoff (PSPS) events could have on POU customers and how the POU manages these impacts. For POUs that are also balancing authorities, describe the criteria for wildfire related de-energizations. Responses shall only provide aggregated information that does not provide customer-specific information or other potentially sensitive data.

POU Response:

VPU's electric system includes generation and distribution facilities that are completely located within VPU's electric service territory in the LA Basin. VPU does not own or operate any transmission facilities. VPU has two generation facilities that are located within VPU service territory. No overhead distribution lines span over naturally vegetated open space areas. Therefore, there is no potential for electrical equipment igniting a wildfire. The generation and distribution facilities are located entirely within the CAISO balancing area and are connected to the CAISO through five 66kV Southern California Edison (SCE) source lines. Under a double contingency (N-2) situation, where two 66 kV transmission lines are out of service, the VPU electric system reliability will most likely not be compromised with the support of Vernon's local generation. Thus, it is unlikely that VPU's customers will be directly impacted by an IOU PSPS.

WSAB Recommendation #6: Describe the utility customer communication plans with respect to wildfires and PSPS, and in particular describe the methods, content and timing used to communicate with the most vulnerable customers, such as Access and Functional Needs (AFN) customers, medical baseline customers, non-English speakers, and those at risk of losing water or telecommunications service.

POU Response:

While VPU has a low risk of igniting a wildfire, VPU and its customer may be subject to a wildfire threat to transmission line(s) that impacts the statewide grid or parts of it, creating a resource shortage.

In such a situation, VPU proactively communicates to customers and key stakeholders through multiple channels about preparing for potential curtailments, and the power restoration process. VPU recognizes that many entities and individuals are particularly vulnerable during extended power outages and makes every effort to provide up-to-date information to these populations prior to, during, and after an event.

VPU's Customer Service Center, Key Accounts staff, social media and CityofVernon.org will provide ongoing and available resources for communication and education for the overall customer base.

Key stakeholders, federal, state, and local elected officials, City and County executive staff and first responders are also contacted via a variety of channels and personnel.

VPU has specific personnel assigned to elected officials and agencies, and to critical customers including water and telecommunications utilities, potentially affected by an outage to a major shared transmission line.

C. The Grid

WSAB Recommendation #7: Provide details on each POU's system hardening and grid design programs, including: (1) the goals of the programs and the risk any particular program is designed to mitigate; (2) approach to PSPS mitigation and prevention; and (3) identify any resource shortages.

POU Response:

Due to the unique characteristics of VPU's service territory and operations including lack of wildfire fuel sources and distance from any designated elevated fire-threat areas, VPU has determined that it is not necessary to describe system hardening and grid design programs in relation to Wildfire Prevention.

WSAB Recommendation #8: Describe annual visual patrols on potentially impacted circuits and the risks the POU is inspecting for. Describe whether and how system inspections lead to system improvements. Describe line patrols before, during, and/or after a critical fire weather event, such as a Red Flag Warning with strong winds, or following a fire that burned in areas where electric facilities are or could have been impacted.

POU Response:

VPU meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Pursuant to these rules, utilities inspect electric facilities in the High Fire-Threat District more frequently than the other areas of its service territory. VPU currently does not have any overhead powerlines located within, or near the High Fire-Threat District within the CPUC's Fire-Threat Map but still maintains compliance with

the inspection requirements as a best business practice. VPU performs intrusive pole inspections and has a pole replacement priority and schedule program to remove potential pole failure hazards, even though there is no significant native vegetation below VPU's overhead distribution lines.

VPU staff uses their knowledge of the specific environmental and geographical conditions of VPU's service territory to determine if any particular areas require more frequent inspections.

If VPU staff discovers a facility in need of repair that is owned by an entity other than VPU, VPU will issue a notice of repair to the facility owner and work to ensure that necessary repairs are completed promptly.

WSAB Recommendation #9: Describe options considered by POU (including through the joint efforts of the POU associations) to identify previously unidentified risks that could lead to catastrophic wildfires.

POU Response:

The California Municipal Utilities Association (CMUA) will be holding a special meeting of its Wildfire Preparedness, Response, and Recovery Working Group this fall, which will be focused on risk drivers for power-line caused catastrophic wildfires and innovative mitigation options. CMUA plans to invite a broad range of utility staff, state agency staff (including the WSAB), industry experts, and academics to participate in this discussion. As part of this meeting, the working group will discuss unidentified wildfire risk drivers and mitigation measures that could address these risks. Based on the input provided during this meeting, CMUA will produce a publicly-available, post-meeting report that summarizes the group's conclusions and recommendations. VPU's staff will participate in CMUA's meeting and will discuss any changes that VPU has made to its operations in response to the conclusions and recommendations of the working group in a future WMP.

D. Risk Assessment

WSAB Recommendation #10: Describe the particular wildfire risks associated with system design and construction such as topography and location near the HFTD areas of another utility's service territory. Describe any G.O. 95 exempt assets and possible updates to G.O. 95 that could facilitate more resilient utility transmission and distribution assets.

POU Response:

VPU's service area is not within or near any wildland-urban interface zones and more than ten miles from the nearest wildland-urban interface area. Thus, VPU has determined that it is not necessary to describe wildfire risks associated with system design and construction such as topography and location near the HFTD areas of another utility's service territory.

E. SITUATIONAL AWARENESS TECHNOLOGY

WSAB Recommendation #11: Provide context-setting information about the prevailing wind directions and speeds, differentiated by season, along with average weather conditions by

season. Describe how and why situational awareness technology is installed, and where on the system. Describe the decision-making process regarding the installation of situational awareness technology, including constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively. Identify any other agencies, utilities, or fire professionals that the data from these devices is shared with.

POU Response:

See Table 1 above for wind information.

VPU does not have any overhead powerlines located within, or near the High Fire-Threat District within HFTD or Fire Threat Zones. Furthermore, VPU's service area is not within or near any wildland-urban interface zones and more than ten miles from the nearest wild-land urban interface area. Due to these unique characteristics of VPU's service territory, VPU has not installed meteorological situational awareness technology.

F. VEGETATION MANAGEMENT

WSAB Recommendation #12: Describe treatment plans for all types of vegetation associated with utility infrastructure, from the ground to the sky, which includes vegetation above and below electrical lines.

POU Response:

VPU's vegetation management program is discussed in Section 8 of VPU's WMP. Due to the industrial natural of the City of Vernon, there is minimal risk of vegetation igniting a wildfire.

The following provides responses to specific questions included in the WSAB's 2021 WSAB Guidance Advisory Opinion:

- Describe the reasoning behind each treatment plan and the ecological impact of the treatment options chosen.

POU Response: *City of Vernon Urban Forest is composed of approximately 1200 trees, which are maintained and pruned annually by a contracted Urban Forest Management Service Company*

- Describe how vegetation management in the HFTD or Fire Threat Zones differs from other areas, including within private property and urban landscaping.

POU Response: *VPU's service territory neither contains nor is adjacent to identified fire threat areas.*

- Describe how the POU tracks new vegetation growth that occurs in areas that has previously been cleared or treated.

POU Response: *Substations require bare ground for the safe operator of high voltage equipment. Electric Operators monitor substations, switchyard, and other electric facilities on a daily basis and remove invasive weeds and other vegetation as necessary.*

WSAB Recommendation #13: List the qualifications of any experts relied upon, such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology. Specify the level of expertise of the POU staff that manages the contractors performing vegetation management. Describe measures each POU takes to ensure that POU staff and contractors comply with or verify compliance with Cal/OSHA standards on Minimum Approach Distances (MAD).

POU Response:

In 2018, then Vernon Fire Department Fire Chief performed an evaluation of VPU's electric system in accordance with Senate Bill 1028 section 8387 b. The Fire Chief included California Office of the State Fire Marshal's "Community at Risk" as well as the Wildfire Hazard Potential developed by the U.S. Forest Service's Fire Modeling Institute in his considerations. Finally, based on the Fire Chief's expertise, historical fire data, geographic location and local conditions, the Vernon Fire Department Fire Chief concluded that VPU's operations do not pose a risk of igniting a fire that could cause any significant or catastrophic wildfire condition.

VPU meets or exceeds the minimum inspection requirements provided in CPUC GO 165 CPUC GO 95, Rule 18, and National Electric Safety Codes. Contractors performing electric infrastructure maintenance are required to adhere to safety rules, regulations, and operating procedures per their services agreement. Pursuant to these rules, utilities and contractors inspect electric facilities in the High Fire-Threat District more frequently than the other areas of its service territory. VPU currently does not have any overhead powerlines located within, or near the High Fire-Threat District within the CPUC's Fire-Threat Map but still maintains compliance with the inspection requirements as a best business practice. VPU and its contractors perform intrusive pole inspections and maintain a pole replacement priority and schedule program to remove potential pole failure hazards, even though there is no significant native vegetation below VPU's overhead distribution lines.

VPU staff uses their knowledge of the specific environmental and geographical conditions of VPU's service territory to determine if any particular areas require more frequent patrols and inspections.

If VPU staff discovers a facility in need of repair that is owned by an entity other than VPU, VPU will issue a notice of repair to the facility owner and work to ensure that necessary repairs are completed promptly.

Finally, VPU contracted with Dudek & Associates, a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure. Dudek conducted an evaluation of the VPU Wildfire Mitigation Plan (WMP), as required under California Public Utilities Code (CPUC) Section 8387(b).

Dudek conducted an initial review of VPU's Draft WMP on December 19, 2019 and provided a summary letter for suggested Draft WMP modifications. The focus of the evaluation was to determine whether the Draft WMP addressed all required elements under CPUC Section 8387(b) (2) (included in Attachment A) that were applicable to VPU.

Subsequently, VPU elected to modify its Draft WMP and incorporated Dudek's recommended modifications to the Plan. The revised WMP was provided to Dudek on December 30, 2019. Dudek reviewed the revised WMP and determined that VPU's WMP is deemed comprehensive and appropriate for the very low risk fire environment within their service territory. Additionally, VPU's WMP approach appropriately addresses all applicable elements required under CPUC Section 8387(b) (2).

WSAB Recommendation #14: Describe whether the POU has considered innovative and alternative approaches to vegetation management.

POU Response: *Due to the unique characteristics of VPU's service territory and operations including lack of wildfire fuel sources and distance from any designated elevated fire-threat areas, VPU has not adopted any innovative or alternative approaches to vegetation management.*

1. Executive Summary

- 1.1. The Vernon Public Utilities Wildfire Mitigation Plan meets applicable California Senate Bill 901, Assembly Bill 1054, and Assembly Bill 111 requirements.
- 1.2. The City of Vernon is an industrial city of 5.2 square miles, adjacent to Downtown Los Angeles. Wildfire ignition risks are low due to the sparsity of vegetation and fuel sources in Vernon's industrial environment.
- 1.3. Vernon is located more than 10 miles from the nearest California Public Utilities Commission (CPUC) High Fire-Threat District Elevated risk area.
- 1.4. Vernon Public Utilities (VPU) does not own or operate transmission, distribution, or generation facilities in CPUC High Fire-Threat District.
- 1.5. VPU does not own or operate transmission, distribution, or generation facilities in California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) Fire Threat Map's designated High or Extreme Wildfire Hazard areas.
- 1.6. VPU's Wildfire Mitigation Plan includes required program components such as performance metrics, continuous improvement, and responsible parties.
- 1.7. VPU will make annual Wildfire Mitigation Plan progress updates to the Vernon City Council and the California Wildfire Safety Advisory Board.

2. Introduction

Over the last few years, California has seen some of its most devastating and destructive wildfires. Climate Change is recognized as a contributing factor (long hot spells, low moisture, etc.). In response, Senate Bill (SB) 901 authored by Senator Dodd, was enacted in 2018. SB 901 requires every electric utility to prepare a wildfire mitigation plan (WMP) and annually present the plan to its governing body. SB 901 amended Public Utilities Code (PUC) section 8387. Section 8387 generally requires every publicly owned utility to construct, maintain, and operate its electrical facilities to minimize the risk of wildfire posed by those facilities. As further required by Assembly Bill (AB) 1054 enacted in 2019, the WMP shall be submitted to the California Wildfire Safety Advisory Board for review and advisory opinion by July 1, 2020. At least once every three years, the submittal must be a comprehensive revision of the WMP.

This document outlines Vernon Public Utilities' activities in accordance with these requirements.

2.1. Policy Statement

Vernon Public Utilities' overarching goal is to provide safe, reliable, and economic electric service to its local community. In order to meet this goal, VPU constructs, maintains, and operates its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment.

2.2. Organization of the Wildfire Mitigation Plan

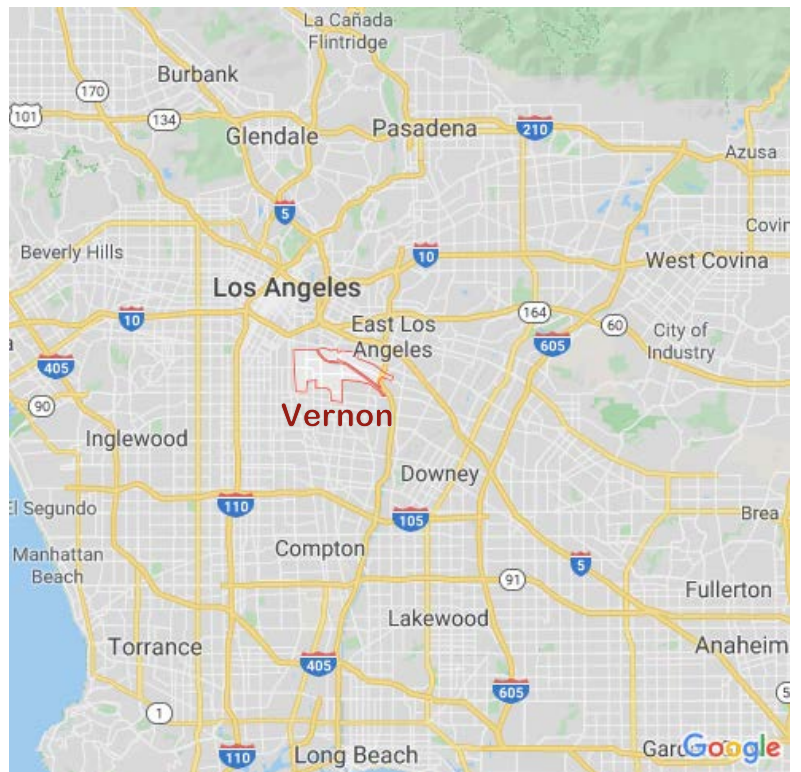
This Wildfire Mitigation Plan includes the following elements:

- Objectives of the plan;
- Roles and responsibilities for carrying out the plan;
- Identification of key wildfire risks and risk drivers;
- Description of wildfire prevention, mitigation, and response strategies and programs;
- Metrics for evaluating the performance of the plan and identifying areas for improvement; and
- Review and validation of the plan.

2.3. City of Vernon

The City of Vernon is an industrial city of 5.2 square miles located several miles to the southeast of Downtown Los Angeles in Southern California. The City's business-friendly environment, low-cost utilities, and proximity to ports, trucking and rail transport make Vernon an ideal location for industrial uses.

The City of Vernon is located in a region of Los Angeles County with low wildfire risk. No part of VPU's service territory is located in or near the High Fire-Threat District, designed in the California Public Utilities Commission's (CPUC) Fire Threat Map. Further, all of VPU's service territory is excluded from the High, Very High, and Extreme Threat areas of the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) Fire Threat Map. Based on a review of local



conditions and historical fires, the Vernon Fire Department has determined that VPU's electrical lines and equipment do not pose a significant risk of wildfire.

Despite this low risk, VPU takes appropriate actions to help its region prevent and respond to the increasing risk of wildfires. In its role as a public agency, VPU closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. In its role as a utility, VPU follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system. This Wildfire Mitigation Plan describes the safety-related measures that Vernon Public Utilities follows to reduce its risk of causing wildfires.

2.4. Vernon Public Utilities Profile

Formerly known as Vernon Light and Power and Vernon Gas & Electric, the City of Vernon has consolidated all utility services within the VPU. VPU provides electric, water, natural gas, and fiber optic services.

VPU serves about 2,000 mainly commercial and industrial electric customers with electric sales of approximately 1,128 GWh annually, and peak loads of approximately 184 MW in the summer and 174 MW in the winter.

2.5. Generation and Distribution Facilities

VPU's electric system includes generation and distribution facilities that are completely located within VPU's electric service territory in the LA Basin. VPU does not own or operate any transmission facilities. VPU has two generation facilities that are located within VPU service territory. Malburg Generating Station (MGS), a 134 MW combined-cycle natural gas-fired plant and two H. Gonzales units, a combined 10 MW natural gas plant. VPU has 119 miles of distribution lines and 27 miles of 66 kV subtransmission lines. No overhead distribution lines span over naturally vegetated open space areas. Therefore, there is no potential for electrical equipment igniting a wildfire. The generation and distribution facilities are located entirely within the CAISO balancing area and are connected to the CAISO through the Southern California Edison (SCE) 220-66 kV Laguna Bell Substation. The Vernon load is supplied and supported by five 66 kV source lines that exit the SCE Laguna Bell 220/66 kV Substation. Under a double contingency (N-2) situation, where two 66 kV transmission lines are out of service, the VPU electric system reliability will most likely not be compromised with the support of Vernon's local generation.

2.6. Wildfire Risk Assessment

In 2018, Vernon Fire Department conducted a risk assessment of wildfires caused by VPU's overhead electrical lines and equipment, in compliance with Senate Bill 1028 (Hill, 2016). VPU provides electric service to the City of Vernon within the greater Los Angeles

basin. Specifically, VPU's service area is not within or near any wildland-urban interface zones and more than ten miles from the nearest wildland-urban interface area. The assessment includes information from the US Forest Service's Fire Modeling Institute, and the CAL FIRE Office of the State Fire Marshal. Also considered were Vernon's historical fire data, geographical location, and local conditions. Based on this information, the determination was made that VPU's electric equipment and operations do not pose a risk of igniting a fire that could cause any significant wildfire condition.

3. Objectives

The primary objectives of this Wildfire Mitigation Plan are to:

1. Describe VPU's existing programs, practices, and measures that effectively reduce the probability that VPU's electric supply system could be the origin or contributing source for the ignition of a wildfire.

To support this goal, VPU regularly evaluates the prudent and cost-effective improvements to its physical assets, operations, and training that can help reduce the risk of equipment-related fires.

2. The secondary objective of this Wildfire Mitigation Plan is to improve the resiliency of the electric grid. As part of the development of this plan, VPU assesses new industry practices and technologies that will reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service.
3. Create a WMP that is consistent with state law and objectives.

4. Roles and Responsibilities

4.1. Wildfire Prevention

VPU staff that have responsibility for wildfire prevention are:

General Manager: Assumes overall responsibility for VPU's planning and mitigation activities, including maintaining compliance with state and federal safety and operating requirements.

Assistant General Manager: Responsible for emergency preparedness, emergency response, and coordinating recovery after a fire.

Utilities Operations Manager: Responsible for the reliable operation of VPU's electric distribution system and safety protocols, including the evaluation and installation of new protective equipment to reduce fire risk. Maintain compliance with federal, state and

local fire management personnel to ensure that appropriate preventive measures are in place.

Electric Operations Supervisor: Is primarily responsible for ensuring inspections of electric lines, poles, and equipment, in addition to the performance of operations and maintenance (O&M).

While other individuals, such as linemen, have the responsibility to inspect and report any faulty operations of equipment, the primary responsibility for preventing electrical-ignited fires and coordinating recovery is the Utilities Operations Manager and Assistant General Manager.

4.2. Wildfire Response and Recovery

VPU is a member of the California Utility Emergency Association, which plays a key role in ensuring communications between utilities and with California Office of Emergency Services (CAL-OES) during emergencies. VPU also participates in the American Public Power Association (APPA) Mutual Assistance Agreement, which is a mutual assistance agreement covering municipal utilities across the United States.

4.3. Standardized Emergency Management System

As a local governmental agency,³ VPU has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System (SEMS) Regulations,⁴ adopted in accordance with Government Code section 8607. The SEMS Regulations specify roles, responsibilities, and structures of communications at five different levels: field response, local government, operational area, regional, and state.⁵ Pursuant to this structure, VPU annually coordinates and communicates with the relevant safety agencies as well as other relevant

³ As defined in Cal. Gov. Code § 8680.2.

⁴ 19 CCR § 2407.

⁵ Cal. Gov. Code § 2403(b):

(1) "Field response level" commands emergency response personnel and resources to carry out tactical decisions and activities in direct response to an incident or threat.

(2) "Local government level" manages and coordinates the overall emergency response and recovery activities within their jurisdiction.

(3) "Operational area level" manages and/or coordinates information, resources, and priorities among local governments within the operational area and serves as the coordination and communication link between the local government level and the regional level.

(4) "Regional level" manages and coordinates information and resources among operational areas within the mutual aid region designated pursuant to Government Code §8600 and between the operational areas and the state level. This level along with the state level coordinates overall state agency support for emergency response activities.

(5) "State level" manages state resources in response to the emergency needs of the other levels, manages and coordinates mutual aid among the mutual aid regions and between the regional level and state level, and serves as the coordination and communication link with the federal disaster response system.

local and state agencies. Pursuant to the SEMS structure, VPU participates in annual training exercises with the Vernon Disaster Council. The Council meets quarterly to discuss emergency management protocols, FEMA and SEMS procedures, and lessons learned from disasters around the world. On an annual basis, the City's Emergency Operating Center is exercised by the Disaster Council as part of an Emergency Drill.

5. Wildfire Risks and Drivers

Pursuant to Public Utilities Code section 8387(b)(2), VPU has determined that it is not necessary to describe Wildfire Risks and Drivers in this Wildfire Mitigation Plan because of the unique characteristics of the service territory and operations of VPU, including lack of wildfire fuel sources, and distance from any designated elevated fire-threat areas.

5.1. Design, Construction, Operation, and Maintenance

Due to the minimal risk of VPU's electrical supply facilities igniting a wildfire, VPU is not adopting wildfire specific protocols for Wildfire Risks and Drivers Associated with Design, Construction, Operation, and Maintenance. However, VPU meets or exceeds the minimum design and construction requirements provided in CPUC GO 95, which specifies that electric supply systems shall be designed, constructed, and maintained for their intended use with regard given to the conditions under which they are to be operated to enable the furnishing of safe, proper, and adequate service.

5.2. Topographic and Climatological Risk Factors

Due to the minimal risk of VPU's electrical supply facilities igniting a wildfire, VPU is not adopting wildfire specific protocols for Wildfire Risks and Drivers Associated with Topographic and Climatological Risk Factors.

6. Enterprise-wide Safety Risks

Pursuant to Public Utilities Code section 8387(b)(2), VPU has determined that it is not necessary to describe Enterprise-wide Safety Risks in this Wildfire Mitigation Plan because of the unique characteristics of the service territory and operations of VPU, including lack of wildfire fuel sources, and distance from any designated elevated fire-threat areas.

7. Wildfire Preventative Strategies

Pursuant to Public Utilities Code section 8387(b)(2), VPU has determined that it is not necessary to describe Wildfire Preventative Strategies in this Wildfire Mitigation Plan because of the unique characteristics of the service territory and operations of VPU, including lack of wildfire fuel sources, and distance from any designated elevated fire-threat areas.

High Fire-Threat District

In coordination with the California Municipal Utilities Association, VPU participated in the development of the CPUC's Fire-Threat Map,⁶ which defines a statewide High Fire-Threat District (HFTD).

In the map development process, VPU reviewed the proposed boundaries of the High Fire-Threat District and confirmed that, based on local conditions and historical fire data, all of VPU's service territory was properly excluded.

Design and Construction Standards

VPU's electric facilities are designed and constructed to meet or exceed the relevant federal, state, or industry standard. VPU treats CPUC General Orders (GO) 95 and 128 as a key industry standard for design and construction standards for overhead and underground electrical facilities. VPU meets or exceeds all standards in GO 95 and GO 128. Additionally, VPU monitors and follows, as appropriate, the National Electric Safety Code.

8. Vegetation Management

Due to the industrial nature of the City of Vernon, there is very little risk of vegetation igniting a wildfire, or impeding Vernon Public Utilities' services. VPU's service territory neither contains nor is adjacent to any wildlands or elevated fire-threat areas and thus, there is no risk of igniting wildfires.

⁶ Adopted by CPUC Decision 17-12-024.

- 8.1. City of Vernon Urban Forest is comprised of approximately 1361 trees, which are maintained and are pruned annually by a contracted Urban Forest Management Service company.
- 8.2. Substations require bare ground for the safe operation of high voltage equipment. Electric Operators monitor substations, switchyards, and other electric facilities on a daily basis and remove invasive weeds and other vegetation as necessary. This may be accomplished by pulling the vegetation, pruning, or spraying with an herbicide such as glyphosate.
- 8.3. VPU meets or exceeds the minimum industry standard vegetation management practices. For distribution level facilities, VPU meets: (1) Public Resources Code section 4292; (2) Public Resources Code section 4293; (3) GO 95 Rule 35; and (4) the GO 95 Appendix E Guidelines to Rule 35. These standards require significantly increased clearances in the High Fire-Threat District. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead, provide useful guidance to utilities.

GO 95, Rule 35, Table 1					
Case	Type of Clearance	Trolley Contact, Feeder and Span Wires, 0-5kv	Supply Conductors and Supply Cables, 750 - 22,500 Volts	Supply Conductors and Supply Cables, 22.5 - 300 kV	Supply Conductors and Supply Cables, 300 - 550 kV (mm)
13	Radial clearance of bare line conductors from tree branches or foliage	18 inches	18 inches	¼ Pin Spacing	½ Pin Spacing
14	Radial clearance of bare line conductors from vegetation in the Fire-Threat District	18 inches	48 inches	48 inches	120 inches

**Appendix E
Guidelines to Rule 35**

The radial clearances shown below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293.

Voltage of Lines	Case 13	Case 14
Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volts	4 feet	12 feet
Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts	6 feet	20 feet
Radial clearances for any conductor of a line operating at 110,000 or more volts, but less than 300,000 volts	10 feet	30 feet
Radial clearances for any conductor of a line operating at 300,000 or more volts	15 feet	30 feet

9. Inspections

VPU meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Pursuant to these rules, utilities inspect electric facilities in the High Fire-Threat District more frequently than the other areas of its service territory. As described above, VPU currently does not have any overhead powerlines located within, or near the High Fire-Threat District within the CPUC’s Fire-Threat Map but still maintains compliance with the inspection requirements as a best business practice. VPU performs intrusive pole inspections and has a pole replacement priority and schedule program to remove potential pole failure hazards, even though there is no significant native vegetation below VPU’s overhead distribution lines.

VPU staff uses their knowledge of the specific environmental and geographical conditions of VPU’s service territory to determine if any particular areas require more frequent inspections.

If VPU staff discovers a facility in need of repair that is owned by an entity other than VPU, VPU will issue a notice of repair to the facility owner and work to ensure that necessary repairs are completed promptly.

10. De-energization Protocols

10.1. Reclosing Policy

Due to the low wildfire threat in VPU's service territory, VPU does not disable re-closers due to anticipated wildfires. VPU does not have a formal procedure identified for disabling re-closers. VPU will continue to assess the wildfire threat and will develop a procedure as needed.

10.2. De-energization

Electrical outages can adversely affect electrical system equipment, customer production and equipment, devices vital to public health and safety such as lighting, traffic signals, wells and chlorinators and can cause disruption to critical communication networks.

Due to Vernon's low wildfire risk profile, VPU is not adopting wildfire specific protocols for de-energizing any portions of its electric distribution system. VPU will re-evaluate the need to pre-emptively shut off power due to fire-threat conditions in future updates to this Wildfire Mitigation Plan.

11. Customer Notification Procedure

While VPU has a low risk of igniting a wildfire, VPU and its customers may be subject to a wildfire threat to a major shared transmission line(s) that impacts the statewide grid or parts of it- creating a resource shortage for the utilities that rely on the resources the line(s) provides.

VPU proactively communicates to customers and key stakeholders through multiple channels about preparing for potential curtailments, and the power restoration process. VPU recognizes that many entities and individuals are particularly vulnerable during extended power outages and makes every effort to provide up-to-date information to these populations prior to, during, and after an event.

VPU's Customer Service Center, Key Accounts staff, social media and CityofVernon.org will provide ongoing and available resources for communication and education for the overall customer base.

Key stakeholders, federal, state, and local elected officials, City and County executive staff and first responders are also contacted via a variety of channels and personnel.

VPU has specific personnel assigned to elected officials and agencies, and to critical customers including water and telecommunications utilities, potentially affected by an outage to a major shared transmission line.

Any communications by VPU during an active emergency, such as wildfire, will be in accordance with California's Standardized Emergency Management System (SEMS) and will be at the direction of the entity responsible for disseminating information about the emergency.

12. Restoration of Service

Due to Vernon's low wildfire risk profile, VPU is not adopting wildfire specific protocols for restoration of service after de-energizing its electric distribution system.

General Steps to Restoration of Service are:

Patrol. VPU crews patrol the line to look for vegetation in lines and any obvious damage that may prevent safe energization.

Repair. During patrol, crews look for potential damage to the lines and poles. Where equipment damage is found, additional crews are dispatched with new materials to repair or replace damaged equipment.

Test. Once the lines and poles are safe to operate, crews test the infrastructure by closing the fuse or breaker to re-energize the line segment.

Restore. Power is restored, and the outage communication system provides notification of power restoration to customers.

13. Evaluation Metrics

This section provides the metrics used to measure the performance of the Plan and outlined programs.

13.1. Metrics and Assumptions for Measuring Plan Performance

VPU will track two metrics to measure the performance of this Wildfire Mitigation Plan: (1) number of fire ignitions; and (2) wires down within the service territory.

Metric 1: Fire Ignitions

For purposes of this metric, a Fire Ignition is defined as follows:

- VPU facility was associated with the fire;
- The fire was self-propagating and of a material other than electrical and/or communication facilities;
- The resulting fire traveled greater than one linear meter from the ignition point; and
- VPU has knowledge that the fire occurred.

In future Wildfire Mitigation Plans, VPU will provide the number of Fire Ignitions that occurred that were less than 5 acres in size. Any fires greater than 5 acres will be individually described.

YEAR	Number of Fire Ignitions
2019	0
2020	0
2021	0

Metric 2: Wires Down

The second metric is the number of distribution wires downed within VPU's service territory. (VPU does not own or operate any transmission lines.) For purposes of this metric, a Wires Down event includes any instance where an electric primary distribution conductor falls to the ground, or on to a foreign object. As VPU does not own or operate any transmission lines or own/operate distribution lines in the High Fire-Threat District, reporting of Wires Down is limited to local distribution outside of the High Fire-Threat District.

VPU will not normalize this metric by excluding unusual events, such as severe storms. Instead, VPU will supplement this metric with a qualitative description of any such unusual events.

YEAR	Number of Wires Down
2019	0
2020	0
2021	0

14. Impact of Metrics on Plan

Due to VPU's extremely-low risk wildfire circumstances, VPU anticipates that there will be relatively limited data gathered through these metrics. However, as the data collection history increases, VPU will be able to identify if any areas of its operations and service territory are disproportionately impacted. VPU will then evaluate potential improvements in future updates to this Plan including the use of additional metrics.

15. Monitoring and Auditing the Plan

This Wildfire Mitigation Plan will be reviewed annually and will include an assessment of the Plan programs and performance. Annual updates and triennial comprehensive revisions shall be publicly presented and approved by minute order of the City Council and adopted by resolution.

15.1. Identifying and Correcting Deficiencies in the Plan

At any point in time, when deficiencies are identified, the Utilities Operations Manager or his/her delegates are responsible for correcting the deficiencies.

15.2. Monitoring the Effectiveness of Inspections

VPU's Utilities Operations Manager will be responsible for monitoring and auditing the targets specified in the Plan to confirm that the objectives of the Plan are met.

16. Independent Evaluator

Public Utilities Code section 8387(c) requires VPU to contract with a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure to review and assess the comprehensiveness of this Wildfire Mitigation Plan. The independent evaluator must issue a report that is posted to the City of Vernon's website. This report must also be presented to the Vernon City Council at a public meeting.

VPU participated in a public request for proposals, to identify the best qualified independent evaluator to assess the comprehensiveness of VPU's Wildfire Mitigation Plan. VPU contracted with Dudek & Associates, a qualified independent evaluator with experience in assessing the safe operation of electrical infrastructure. Dudek's Independent Evaluation is attached in Appendix A of this Plan.

The independent evaluator's report is posted to the City of Vernon's website and has been presented to Vernon's City Council at a noticed public meeting.

17. Acronym Glossary

AB (Assembly Bill)

CAISO (California Independent System Operation)

CAL FIRE (California Department of Forestry and Fire Protection)

CPUC (California Public Utilities Commission)

CUEA (California Utilities Emergency Association)

ERM (Enterprise Risk Management)

FRAP (Fire Resource and Assessment Program)

GHG (Greenhouse gas)

GIS (Geographic Information System)

GO (General Order)

KV (Kilovolt)

KWH (Kilowatt Hours)

MW (Mega Watts)

O&M (Operations & Maintenance)

EOC (Emergency Operations Centers)

OES (Office of Emergency Services)

PUC (Public Utilities Code)

SB (Senate Bill)

SEMS (Standardized Emergency Management System)

SME (Subject Matter Expert)

T&D (Transmission and Distribution)

WMP (Wildfire Mitigation Plan)