LODI ELECTRIC UTILITY

WILDFIRE MITIGATION PLAN 2025

VERSION 6.0

June 10, 2025

TABLE OF CONTENTS

REVISION LOG, KEY CHANGES

Date	Location	Description
12/7/2020	Sec. III Sec. IV.B Sec. V Sec. VI Sec. V.G Sec. IX Sec. VIII	C: Updated with current staffing levels E: Updated infrastructure status Eliminated redundant map C: Updated with latest vegetation crew information and adding tree-inventory. D: Added details of in-progress tree inventory Replaced projected progress with dates of council presentations and other events which have since occurred Expanded list with additional de-energization consequences Replaced planned Audit with actual Audit dates and findings and other updates subsequent to prior year's plan Updated metrics
11/30/2021	Sec I.D Sec. VIII Sec. V.F	Created new sub. sec. "Risk Profile" & consolidated related info Updated all metrics, Clarified reporting dates for metrics Updated Reclosing section to include trial device
11/2/2022	Sec. VIII A	Updated metrics for last one year.
7/17/2023	Sec. VIII A	Updated metrics.
4/15/2024	Sec. G Sec. I D Sec. V C Sec. VIII A	Defined de-energization criteria and plan. Added note 3 in table in include new generation plant Updated copper re-conductor project information to show as complete. Updated metrics.
6/10/2025	Sec. IV B Sec. VIII A	Defined risks and drivers associated with design, construction, operation, and maintenance. Updated metrics for last one year.

I. OVERVIEW

A. POLICY STATEMENT

Lodi Electric Utility's (LEU's) overarching goal is to provide safe, reliable, and economic electric service to its local community. In order to meet this goal, LEU strives to construct, maintain, and operate its electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire posed by its electrical lines and equipment.

LEU is a department within the City of Lodi. As a public entity whose service territory is contained entirely within the City limits, LEU's interests are entirely aligned with the City's and the population we serve; we have no fiduciary obligation to any shareholders taking precedence over our customer-residents, nor any other priorities greater than Lodi's. LEU is singularly focused on serving Lodi, to the greatest extent possible. Lodi's wildfire prevention and mitigation efforts are thus benefited by Lodi's organizational structure and focus.

B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

This Wildfire Mitigation Plan describes the range of activities that LEU is taking to protect LEU infrastructure from wildfire impacts and to mitigate the threat of power-line ignited wildfires, including its various programs, policies, and procedures. This plan is subject to direct supervision by Lodi's City Council and is implemented by the Electric Utility Director. This plan complies with the requirements of Public Utilities Code section 8387 for publicly owned electric utilities to prepare a wildfire mitigation plan by January 1, 2020, and annually thereafter.

This Wildfire Mitigation Plan describes the safety-related measures that LEU follows to reduce its risk of causing wildfires.

C. BACKGROUND

LEU has provided Electric Service to the City of Lodi for over 110 years with no known history of causing any widespread fire, nor suffering a widespread and prolonged outage due to any fire. While no utility is fully immune to fire, LEU's history of outages and fire is consistent with operating a utility in an urban area.

D. OVERALL RISK PROFILE

Wildfire risk is greatly reduced by LEU's topography, setting, and urbanization. LEU is located in a region of the state with a very low wildfire risk. LEU is entirely situated within the California Public

Utilities Commission's (CPUC) lowest fire-threat risk-tier (Tier-1) with no part of LEU's service territory in or near the High Fire Threat District designed in the CPUC's Fire Threat Map[1]. Lodi Electric's service territory is predominantly categorized as either "non-fuel" or "moderate" in the California Department of Forestry and Fire Protection's (CALFIRE) Fire and Resource Assessment Program (FRAP) Fire Threat Map[2]. The area that is categorized as "moderate" is only approximately 2% of LEU's service territory primarily along the Mokelumne river. Cal Fire also provides the following statement with regard to the Local Responsibility Area for the County of San Joaquin, which LEU's Service Territory is entirely within, "Update, 6/2008: CAL FIRE has determined that this county has no Very High Fire Hazard Severity Zones in LRA. Therefore [San Joaquin] county will not have a map of recommended VHFHSZ in LRA"[3]. Based on a review of local conditions and historical fires, Lodi Electric has determined that its electrical lines and equipment do not pose a significant risk of catastrophic wildfire.

LEU's territory is flat, lacking any mountains, valleys, and similar hard to access locations. The City of Lodi's General Plan describes LEU's service territory as, "…not characterized by substantial areas of wildlands. The topography of the area is relatively homogenous and steep slopes that could contribute to wildland fires are not common. Data provided by the California Department of Conservation Fire and Resource Assessment Program in 2007 indicate that no portions of the [City's] Planning Area are classified as having a "High" or "Very High" risk."

LEU is bordered on the northern edge by the Mokelumne River. LEU is further benefited by advantageous land use in the surrounding area. In contrast with utilities traversing through large wilderness areas with decades of dry fuel accumulation, LEU is surrounded by miles of actively managed grape vineyards. Grape vineyards, with their open-space, moisture content, and active management, are frequently considered a very good firebreak, "The fire just came up to the edge of the vineyard and stopped."[4] Further, much of LEU's underground circuitry exists on the perimeter of LEU's service territory, and functions as a buffer between LEU's overhead infrastructure and the unimproved land abutting LEU's service territory.

LEU's Service Territory is limited to a dense urban footprint (approximately 13.7 square miles of land). With an estimated population of more than 68,000; this results in a density of ~5,000 persons per square mile of LEU service-territory; this density is advantages to the Utility as it provides tremendous visibility on LEU's infrastructure and any problems which arise. Problems within LEU's territory are therefore generally discovered very quickly. LEU's compact territory also allows LEU personnel to reach nearly every utility asset within a 10-minute drive from its headquarters. The high visibility and close proximity therefore generally result in quick discovery and quick addressing of problems. This is in stark contrast with utilities having thousands of miles of line traversing inaccessible areas of California's dry forests, far from urban areas, lacking any

[1] Cal Fire Map ID: FTHREAT_MAP, Oct. 20, 2005
[2] Cal Fire Map ID: FTHREAT_MAP, Oct. 20, 2005
[3] Cal Fire Map ID: FHSZL06_1_MAP, Oct. 02, 2007, http://www.fire.ca.gov/fire_prevention/fhsz_maps_sanjoaquin (05/22/2019)
[4] Mohan, Geoffrey. "Vineyards may have kept the wine country fire from getting worse." Los Angeles Times, web. https://www.latimes.com/business/la-fi-vineyards-firebreak-20171012-story.html

meaningful public visibility, and with potentially great travel distances required for the Utility and fire-fighting resources in responding to a problem.

As detailed extensively in the plan below, Lodi is also well-positioned with impressive water resources and fire-fighting capabilities, making for another stark contrast with utilities traversing sparse wilderness areas.

Despite LEU's low-risk profile, LEU takes appropriate actions to help its region prevent and respond to the increasing risk of wildfires. In its role as a public agency, LEU closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. LEU follows applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system.

WSAB Requested Risk Profile Information

Utility Name	**Lodi Electric Utility (LEU)**
Size (Sq Mi.)	~ 13.7 Sq. Mi.
Assets	✓ Distribution ✓ Sub-transmission (60 kV) Note-1: LEU owns shares in generation plants outside of LEU service territory, managed and operated by NCPA. Note-2: A 27 MW Peaker-Plant, owned and operated by NCPA, is found within LEU's service territory Note-3: A 48 MW gas generation plant, owned and operated by California DWR, is found within LEU's service territory.
Number of Customers Served	Approximately 28,000 active accounts, of which approximately are 22,600 residential accounts, and the balance is divided between commercial/industrial/misc. Estimated 2021 Population: 68,000+
Customer Classes	✓ Residential ✓ Government ✓ Small/Medium Business ✓ Commercial/Industrial
Location / Topography	Central Valley, approximately 100% urban / Flat
Percent Territory in CPUC High Fire Threat Districts	0%
CAL FIRE FRAP Map Fire Threat Zones	Non-Fuel

Existing Grid Hardening Measures	Approximately 55% underground. Overhead hardening measures include pole-changeouts, overclassing poles, reconductoring with steel-reinforced conductors, etc.
Utility Fire Threat Risk Level	Low
Impacted by Another Utility's PSPS?	No known historical instances
Mitigates Impact of Other Utility's PSPS?	Not as LEU interprets this question
Expects to Initiate its own PSPS?	No
Prevailing Wind Directions & Speeds by Season	Low

E. 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;
- Community outreach and education;
- Metrics for evaluating the performance of the plan and identifying areas for improvement; and
- Review and validation of the plan.

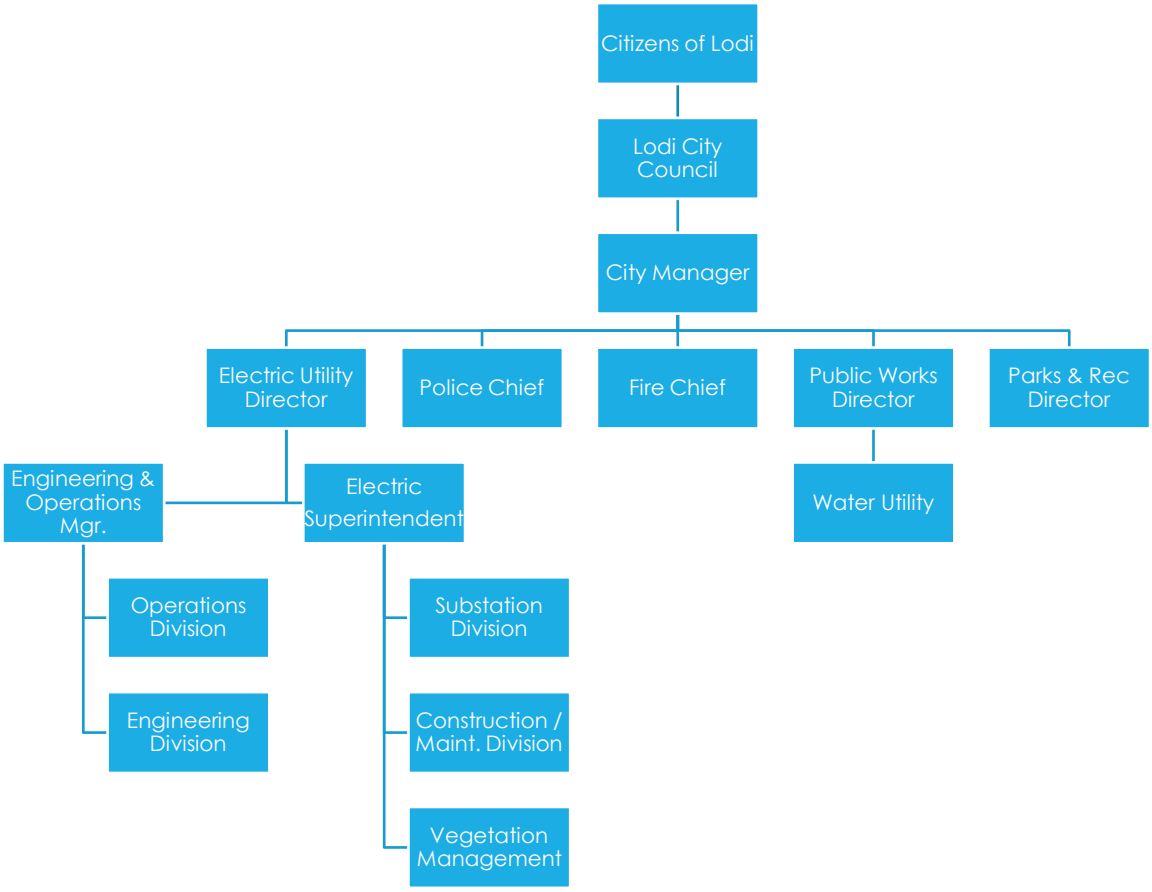
II. OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

The primary goal of this Wildfire Mitigation Plan is to describe LEU's programs, practices, and measures in-place, which effectively reduce the probability that LEU's electric supply system could be the origin or contributing source for the ignition of a wildfire; and in doing the aforementioned, comply with CA PUC Section 8387 and CA SB-901 2018 and its underlying goal to operate the electric-system safely when in high wildfire risk conditions. To support this goal, LEU 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.

The secondary goal of this Wildfire Mitigation Plan is to improve the resiliency of the electric grid. As part this plan, LEU continues to assess and implement new industry practices and technologies that reduce the likelihood of an interruption (frequency) in service, improve the restoration (duration) of service, and increase public safety during high wildfire risk conditions.

III. ROLES AND RESPONSIBILITIES

A. UTILITY GOVERNANCE STRUCTURE



City of Lodi Organization Chart (Excerpt, As Relevant to Wildfire Mitigation)

LEU's governance begins with the citizens of Lodi electing a City Council. The City Council appoints a city manager who in turn hires directors and chiefs to run the various departments and utilities within the City's auspices.

A key difference between LEU and Investor Owned Utilities (IOUs) is that LEU is publicly owned and overseen by the very community it serves; LEU has no shareholders and is not-for-profit.

Some of these positions' duties, specific to wildfire mitigation include:

City Manager:	• Oversight responsibility for the underlying departments
Electric Utility Director:	• Management of the Electric Utility • Overall implementation of this plan
Fire Chief:	• Fire response • Medical-emergency response • Maintaining a high-state of readiness (including staffing, training, perpetrations, equipment status) • Implementation of Incident Command System protocols • Certain public safety functions, partly overlapping with the Police Chief
Public Works Director:	• Management of the water system (including ensuring adequate supply, delivery, redundancy and back-up) • Maintenance of any City-Owned street trees (trimming, removal, etc.)
Police Chief:	• Law enforcement • Certain public safety functions, partly overlapping with the Fire Chief
Parks & Rec. Director:	• Overall condition of City's Parks (including vegetation management and fuel removal)
Engineering & Operations Manager:	• Management of Engineering Division • Design practices • Specifications • Standards • Management of Operations Division • Utility Mapping
Electric Superintendent:	• Management of Substation Division • Management of Construction Division • Vegetation Management program (inspections & trimming) • Conducting system patrols and inspections

B. WILDFIRE PREVENTION

Under the City's organizational arrangement, LEU's Director has overall responsibility for the implementation and execution of this plan; LEU's Engineering and Operations Manager oversees responsibility for electric facility design; and LEU's Electric Superintendent oversees responsibility for construction, maintenance, inspections, and vegetation management.

Other City departments contribute greatly to wildfire prevention efforts. Lodi's Fire Department conducts various forms of community outreach and has historically worked with Lodi's Parks & Recreation Department to conduct annual inspections of trees and vegetation in certain within certain properties controlled by the City, with the goal of identifying and removing fire-fuels such as dead trees or underbrush which may have accumulated.

C. WILDFIRE RESPONSE AND RECOVERY

LEU is available to its customers 24 hours per day, seven days per week, 365 days per year. During a wildfire or other public safety event, LEU's operations center has the ability to dispatch personnel to aide as needed around the clock. In the event that an incident requires more personnel than LEU has on hand, LEU has mutual-aid agreements in place and available to provide nearly unlimited line-worker resources.

LEU staff has the following obligations regarding fire prevention, response, and investigation:

- Operate the electrical system in a manner that will minimize potential wildfire risks.
- Take all reasonable and practicable actions to minimize the risk of a catastrophic wildfire caused by LEU's electric facilities.
- Coordinate with federal, state, and local fire management personnel as necessary or appropriate to implement LEU's Wildfire Mitigation Plan.
- Immediately report fires, pursuant to existing POU practices and the requirements of this Wildfire Mitigation Plan.
- Take corrective action when the staff witnesses or is notified that fire protection measures have not been properly installed or maintained.
- Comply with relevant federal, state, and industry standard requirements, including the industry standards established by the California Public Utilities Commission.
- Collect and maintain wildfire data necessary for the implementation of this Wildfire Mitigation Plan.
- Provide suitable training programs for all employees having obligations for implementation of this Wildfire Mitigation Plan.

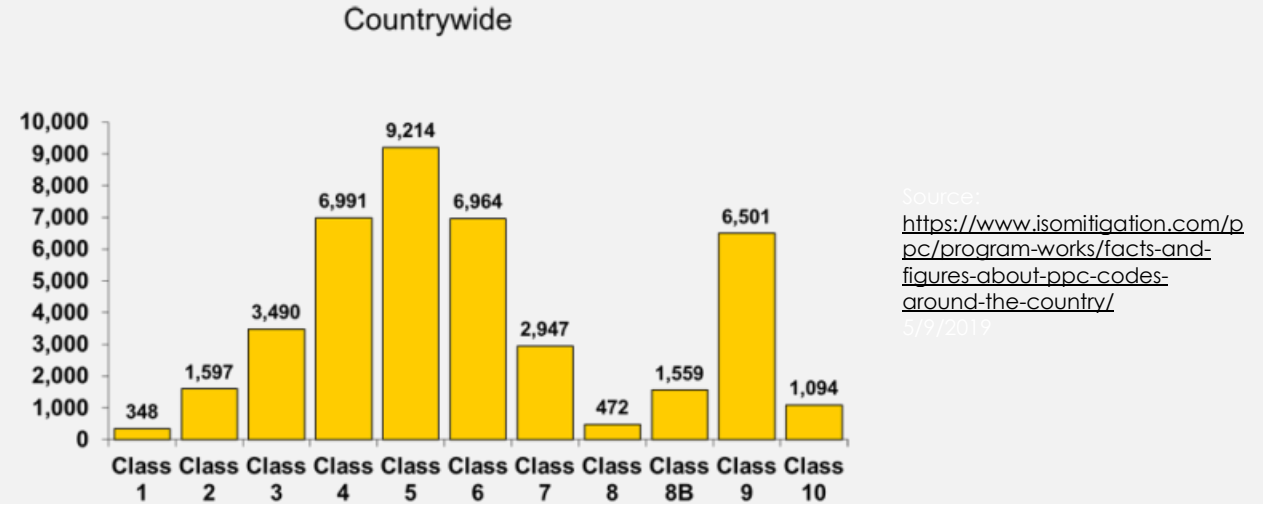
The City has established and positioned numerous public safety and water-utility resources, available to assist in combating wildfires and assisting with other public safety events and emergencies.

Fire Department staffing fluctuates from time-to-time, but has budgeted approximately 54 personnel, including 48 line staff.

The Insurance Services Office (ISO) measures the effectiveness of fire-mitigation services in fire protection areas throughout the country[5]. The ISO assigns each area a Public Protection Classification (PPC) rating between one and ten (where one is the best, and ten is the worst). As of May 2019, Lodi has the nearly highest ISO PPC rating of two. The Lodi Fire Department's high

[5] http://www.iso.com/isoPassportHelp/reading_loc_ppc_reports.htm

ranking places Lodi, in the top 95 percent of the ISO's fire-mitigation effectiveness rankings, nationwide. A Class 2 ISO rating "indicates that the Fire Department is strategically placed throughout the City, and has adequate personnel, equipment, and expertise to serve the current population."[6]



Source: https://www.isomitigation.com/ppc/program-works/facts-and-figures-about-ppc-codes-around-the-country/ 5/9/2019

Unlike many volunteer fire departments, Lodi's Fire Department is staffed with professional firefighters 24/7/365 and maintains a constant high-level of readiness." As of 8/7/2019, the department met the self-imposed National Fire Protection Association's response time criteria of 6 minutes for 90% of all calls.[7]

As of 2021, the City operated 28 groundwater wells providing a total pumping capacity of 37,910 gallons per minute[8,9] in addition to a Surface Water Treatment Plant, which currently has a capacity of 10-million gallons per day[10,11]. The 28 wells are computer controlled and "operate automatically on pressure demand, so that when water use increases, more wells are started"[12]. "Seven wells are fitted with emergency diesel powered generators. (….will help maintain water pressure during power outages….)"[13] The City has 5 million gallons of water storage, spread across different tanks[14]. During peak-season (roughly coinciding with high-heat and fire-season), the City's Water Utility's operating practice is to maintain its massive storage reserves at a nearly-full capacity.

[6] City of Lodi, General Plan, 4/2010 § 3.3
[7] Lodi Ca. Incident Compliance Percentage Report, June July 2019
[8] City of Lodi, Public Works, Annual Water Quality Report For 2021
[9] City of Lodi, Public Works, Water Master Plan, 2012, § 2.1
[10] City of Lodi, Urban Water Management Plan, Pg. 40
[11] City of Lodi, Public Works, Annual Water Quality Report For 2021
[12] City of Lodi, Public Works, Annual Water Quality Report For 2021
[13] City of Lodi, Public Works, Annual Water Quality Report For 2021
[14] City of Lodi, General Plan, 4/2010 § 3.3

"The City of Lodi owns and operates 28 emergency standby generator sets that range in size between six kilowatt (kW) to 2,000kW. The generators are located at critical facilities where operation during an extended power outage is necessary to maintain public health and/or safety. Examples of these facilities include fire stations, water wells, the Surface Water Treatment Plant, sanitary lift stations, White Slough Water Pollution Control Facility (WSWPCF), the police station, and Lodi Public Library."[15] The Library will also serve as a community resource center during a de-energization event.

The City has also undertaken replacement projects to upsize two and three inch water mains, to larger sizes, capable of providing more flows during fires.[16] Additionally, Lodi's Fire Department has the ability to pump water from the Mokelumne River -- a nearly unlimited fire-water resource on the northern edge of town. Lodi's Fire Department also has access to wide-area mutual-aid resources, able to provide yet more water tenders and substantial additional fire-fighting resources.

Police Department staffing fluctuates from time-to-time, but has budgeted approximately 109 full-time employees, comprised of 77 sworn officers, 32 support staff, and various additional volunteers."[17]

"The City has adopted the San Joaquin County Hazard Mitigation Plan. This plan identifies measures to reduce the impacts of natural and manmade hazards and to facilitate the recovery and repair of structures if damage should occur from hazardous events."[18]

"The City provides street standards for all street types, thus ensuring appropriate standards for emergency access and evacuation."[19]

D. COORDINATION WITH WATER UTILITY AND PUBLIC SAFETY

Lodi's Fire Department, Lodi's Public Works (including the Water Utility), and Lodi's Electric Utility, are all departments within the same organization. This unified structure results in frequent contact and communication between the departments on many fronts and topics, and a beneficial familiarity in working together. Lodi's Fire Department, (generally by way of its 24-hour Fire Dispatch), is well-versed in requesting assistance from LEU during emergencies. Fire Dispatch requests LEU's assistance for every structure fire; for all other fires (e.g. vehicle fires) LEU assistance is always available, with utilization determined on a case-by-case basis by the event's Incident Commander. Examples of LEU assistance include, to de-energize lines for fire and rescue operations, and to assess the hazards when overhead lines are on the ground (such as due to

[15] City of Lodi, City Council meeting, June-19 2019, Agenda Item C-11
[16] City of Lodi, General Plan, 4/2010 § 3.3
[17] PD provided info, 10/2020
[18] City of Lodi, General Plan, 4/2010 § 8.5
[19] City of Lodi, General Plan, 4/2010 § 8.5

car accidents). While Lodi's Police Department requests assistance from LEU less often, the same communication channels and access exist and are available.

The Water Utility's infrastructure is designed to automatically increase pressure and water-supply to the areas of the system where it's needed, 24 hours per day, without any human involvement required. In the rare event that an unusually large or prolonged event requires more water than is normally possible, Lodi's Water Utility staff are available 24 hours per day; Lodi's Fire Department is able to notify the Water Utility of any unusual need. Upon such notification, the Water Utility has some additional ability to manually increase supply and pressure, and allocate more water to certain parts of town.

E. COORDINATION WITH COMMUNICATION INFRASTRUCTURE PROVIDERS

In the event of a disaster, Lodi has various different communication channels available for notifying and messaging the public.

- Lodi has access to the County of San Joaquin's emergency alert system – able to interrupt radio and television programming to provide an emergency message.
- The County of San Joaquin also has a cell-phone triangulation system, able to message cell phones within a user-definable region. This system is available to Lodi for emergency use.
- Lodi has the ability to broadcast a message onto the AM spectrum.
- Lodi Unified School District has public-messaging capabilities available to the City.
- Lodi recently implemented a reverse-911 system, whereby emergency personnel can send an emergency notification message to area cell-phones, land-lines, and VOIP phones.
- LEU also provides notifications on our website www.lodielectric.com
- LEU has recently implemented an Outage Management System (OMS) and an Interactive Voice Response (IVR) system, for outage dispatch and notification purposes.

F. STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a local governmental agency,[20] the City of Lodi has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System ("SEMS") Regulations,[21] 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.[22] Pursuant to this structure, the City of Lodi annually

[20] As defined in Cal. Gov. Code § 8680.2.
[21] 19 CCR § 2407.
[22] 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.

coordinates and communicates with the relevant safety agencies as well as other relevant local and state agencies.

Under the SEMS structure, a significant amount of preparation is done through advanced planning at the county level, including the coordination of effort of public, private, and nonprofit organizations. San Joaquin County serves as the Operational Area; Lodi's representation includes the City of Lodi's Fire Chief. The Operational Area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process.

Pursuant to the SEMS structure, City of Lodi representatives participate in regular meetings (typically monthly) and various simulation exercises (typically yearly), wherein various disasters (e.g. flood, earthquake, fire, etc.) are simulated.

LEU is a member of the California Utility Emergency Association, which plays a key role in ensuring communications between utilities during emergencies. LEU also participate in the Western Energy Institute's Western Region Mutual Assistance Agreement, which is a mutual assistance agreement covering utilities across a number of western states.

IV. WILDFIRE RISKS AND DRIVERS

A. PARTICULAR RISKS AND RISK DRIVERS ASSOCIATED WITH TOPOGRAPHIC AND CLIMATOLOGICAL RISK FACTORS

Within LEU's service territory and the surrounding areas, the primary risk drivers for wildfire are the following:

- Extended drought

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(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.

- High winds
- Low humidity

Specific risks from these risk-drivers include increased vegetation mortality, contributing dry-fuels to the region, as well as deceased vegetation in its weakened-state potentially falling into energized lines during high-wind events. As mentioned in this plan, in contrast with the vegetation encountered by utilities traversing vast stretches of the California wilderness, the vegetation within LEU's territory is much healthier, limited, less-dense, and managed, consistent with that of an urban/suburban utility; further the land-use surrounding LEU is overwhelmingly actively-managed grape vineyards extending for miles in every direction.

LEU is unable to identify any direct risks of catastrophic wildfire in LEU's service territory in connection with "dynamic climate change" risks. Indirect risks to LEU's territory include the possible reduction of local Fire Department resources at times of mutual-aid deployments including combatting wildfires in State Responsibility Areas (a 12/12/2017 News Release by Cal Fire, US Forest Service and the Tree Mortality Task Force reports 129 Million dead-trees in California, predominantly in the Sierra Nevada region of the state).

B. PARTICULAR RISKS AND RISK DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCITON, OPERATION, AND MAINTENANCE

Within Lodi Electric Utility's (LEU) electric distribution system, the primary risk drivers for fire ignition are:

- **Tree limb contact** with energized conductors
- **Pole failure** resulting in downed energized lines

Although the City of Lodi is predominantly urban, street and backyard trees are present throughout the service territory and are located in close proximity to LEU's overhead distribution lines. While the area is not designated as a high wind zone, occasional winter storms can bring moderate to high winds. These events are typically accompanied by rainfall, which reduces the likelihood of fire ignition due to increased ground moisture and lower ambient fire risk.

LEU operates and maintains over 6,000 distribution poles. Pole failures can occur during storm events, particularly if the pole is structurally compromised due to decay or age. Additionally, poles that are overloaded with equipment (such as transformers, switches, or communications hardware) may be more prone to structural failure over time, potentially resulting in downed conductors. If such conductors remain energized and come into contact with dry combustible materials, there is a potential—albeit low under typical local weather conditions—for fire ignition.

C. ENTERPRISEWIDE SAFETY RISKS

Fire risks due to drought and windy conditions are low within LEU's service territory. Lodi is a well-developed urban area with over 50 percent underground high voltage circuitry. In consultation

with numerous experts and stakeholders, the CPUC created and adopted a statewide fire threat map to delineate the boundaries to identify, evaluate and potentially adopt stricter fire-safety regulations that apply to overhead power lines, electric equipment, and communications lines located within those boundaries. Drawing on the immense collective expertise responsible for the creation of the CPUC's map, LEU's methodology was to overlay LEU's service territory and overhead transmission lines coming into the City of Lodi onto the fire threat map and therein identify potential areas of concern. LEU's service territory and transmission all lines fall under the category of **Tier-1** (i.e. low risk). The description of tiered fire threat zones are shown in Table-1 and the overlay of LEU's service territory over the CPUC fire threat map is shown as Exhibit-1 below.

Lodi Electric Utility (LEU) has adopted a proactive and comprehensive approach to vegetation management. In light of the numerous wildfires that affected California between 2015 and 2024—many of which were attributed to contact between power lines and vegetation—LEU considers vegetation management to be one of the most effective strategies for reducing wildfire risk. For a detailed overview of LEU's vegetation management practices, please refer to Section V(D) of this document.

In addition to vegetation management, LEU has allocated $350,000 in its Fiscal Year 2025/26 budget to underground a section of distribution line adjacent to the Lodi Lake Nature Preserve, located in the northern area of the city. Upon completion of this initial phase—expected by the end of next year—LEU plans to allocate further funding to underground the remaining overhead lines in the Lodi Lake Nature Preserve area.

To prevent overloading of poles during replacement activities, LEU employs O-Calc, a structural analysis software, to model proposed pole installations and verify that the structural load requirements are met. Furthermore, LEU has recently acquired Resistograph machines and deployed them to field crews to perform intrusive pole inspections, enabling detection of internal decay and compromised structural integrity. LEU has established a goal to conduct intrusive inspections on 10% of poles annually within its service territory.

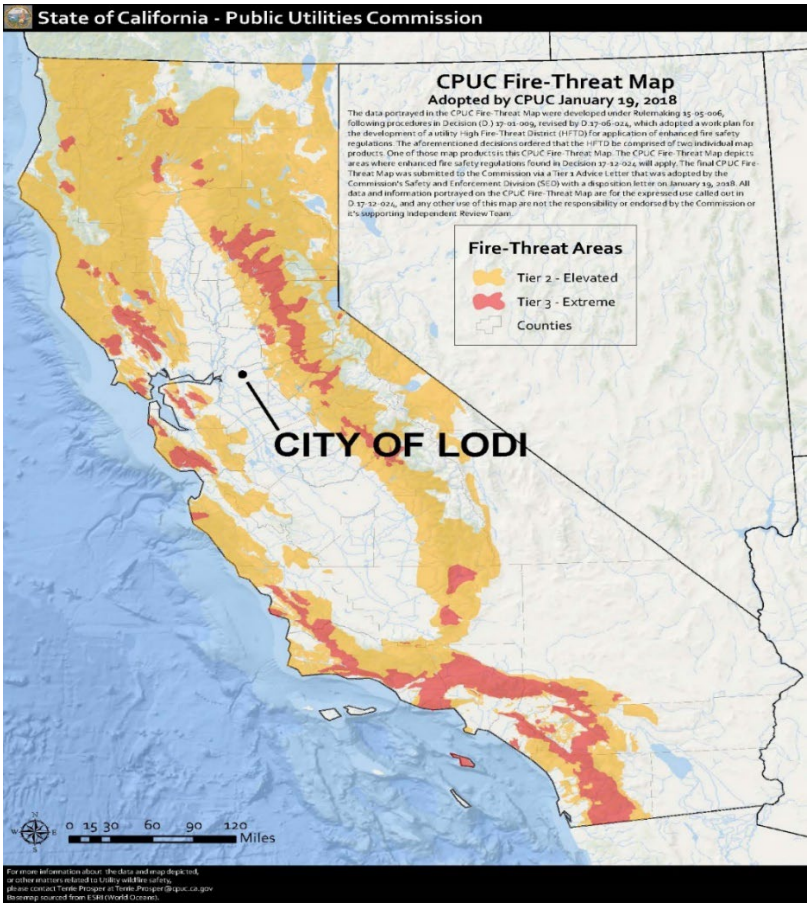
Table – 1

Description of tiered fire threat zones

Zone	Category	Description
Tier 3	Extreme	Wildland areas where exposure to overhead power lines, the availability of water resources, and emergency responder circulation routes affect response times to combat wildland fires.
Tier 2	Elevated	Elevated risk due to vegetation, high voltage regional transmission lines crossing the area, and adjacency to Tier 3 fire threat zones.
Tier 1	Low	Well-developed areas, typically with underground high voltage circuitry.

Exhibit – 1

Overlay of LEU's service territory over the CPUC fire threat map



D. CHANGES TO CPUC FIRE THREAT MAP

Currently LEU does not propose any changes to the borders of the High Fire Threat District boundaries as indicated in CPUC's fire threat map (adopted by the CPUC January 19, 2018).

V. WILDFIRE PREVENTATIVE STRATEGIES

A. HIGH FIRE THREAT DISTRICT

LEU, as a member of California Municipal Utilities Association (CMUA), participated in the development of the CPUC's fire-threat map which designates a high-fire threat district. In the map development process, LEU served as a territory lead, and worked with utility staff and local

fire and government officials to identify the areas of LEU's service territory that are at an elevated or extreme risk of power line ignited wildfire. It was determined that LEU's service territory and 60 kV transmission lines leading into the service territory are located outside of the high fire threat district as designated by the CPUC Fire-Threat Map.

LEU's efforts to improve this plan and achieve its goals are ongoing, including its efforts to identify existing and emerging fire threats and validate the characterization of LEU's service territory. LEU will continue to review any new information, and any future updates in the CPUC's Fire-Threat Maps, and revisit the above assessment as necessary.

B. WEATHER MONITORING

LEU monitors current and forecasted weather data from a variety of sources including:

- LEU's in-house weather station
- United States National Weather Service
- "PG&E Weather Awareness" website[23] (an aggregation of regional PSPS, wind, temperature, Red-Flag and other information)
- "PG&E PSPS Maps" website[24]
- National Fire Danger Rating System (NFDRS)

C. DESIGN AND CONSTRUCTION STANDARDS

LEU's electric facilities are designed and constructed per the City of Lodi's Electric Overhead Construction Standards to meet or exceed the relevant federal, state, or industry standards. LEU treats CPUC General Order (GO) 95 as a key industry standard for design and construction of overhead electrical facilities. LEU meets or exceeds all standards in GO 95. Additionally, LEU monitors and follows as appropriate the National Electric Safety Code.

Additional wildfire-mitigating design and construction standards LEU employs include:

- LEU stocks a wide range of covered-wires for use as jumpers and lead-wires

- LEU has specified all overhead transformers and capacitors to have bushing covers pre-installed. In targeting the locations where distance between energized medium-voltage phases are in their closest proximity to each other (or ground potential), the combination of bushing covers and covered leads greatly reduces the ability for wildlife, foliage, balloons or other foreign objects to make contact with energized parts and potentially ignite a fire

[23] https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/psps-weather-map.page?WT.mc_id=Vanity_weather
[24] https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/psps-event-maps.page

- All new distribution pad-mount transformers and switches have their medium-voltage interfaces specified as dead-front. In contrast with live-front equipment, dead-front equipment reduces the possibility of an unintended object making contact with energized components and igniting a fire. Examples include: wildlife (snakes, burrowing-rodents, etc.), a dropped-tool or a piece of foliage or debris which blows-in while the cabinet is energized and open for servicing.

- LEU recently introduced natural ester oil (Envirotemp/FR3) into its specifications for oil-filled distribution transformers and switches. "Envirotemp FR3 fluid has exceptionally high fire and flash points of 360°C and 330°C, respectively - the highest ignition resistance of any high fire point dielectric fluid currently available. It qualifies as a "high fire point", "less flammable", "IEC Class K", and "non-propagating" fluid. FR3 fluid is FM Global Approved and Underwriters Laboratories Classified as a Less-Flammable Dielectric Liquid. FR3 fluid possesses a 100% fire safety record, and is an ideal choice for transformers positioned indoors, underground, and in close proximity to buildings and other equipment"[25]

- New subdivisions and large commercial customers are connected by extending underground facilities, limiting the creation of additional overhead exposure[26]

- LEU aggressively pursued the removal of aged small-diameter overhead copper primary-voltage conductor (specifically, #6CU solid), and replaced it with larger diameter, stranded conductor with a steel core. This will provide greater safety, reliability and minimize lines-down events and in turn, fires associated with them. Following data-points are indicative of LEU's efforts:

	4/28/2021	2/15/2022	6/30/2023	4/15/2024
System Inventory **of Overhead #6CU** Conductor (Approx.)	302,400 feet	217,650 feet	71,874	0

D. VEGETATION MANAGEMENT

LEU strives to meet or exceed the minimum industry standard vegetation management practices. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. LEU will use specific knowledge of growing

[25] Cargill, *Envirotemp™ FR3™ Natural Ester Dielectric Fluid Overview*, Page-1
[26] Very rare exceptions may exist, such as for new minor-infill subdivisions found in overhead regions and where design constraints preclude underground infrastructure

conditions and tree species to determine the appropriate time-of-trim-clearance in various circumstances.

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**
Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volts	4 feet
Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts	6 feet
Radial clearances for any conductor of a line operating at 110,000 or more volts, but less than 300,000 volts	10 feet
Radial clearances for any conductor of a line operating at 300,000 or more volts	15 feet

LEU has taken an aggressive approach to vegetation management. As many of the fires which ravaged the state from 2015-2022 appear to have included contact between power lines and vegetation, LEU believes that vegetation management is one of the most effective methods to avoid wildfires.

- LEU has greatly increased its vegetation management efforts in recent years, resulting in more frequent visits to more locations and better clearances from lines. Between July 1, 2024 and June 10, 2025; a total of 1,517 trees were trimmed or removed.
- Despite the increased cost of doing so, LEU often pursues tree-removals instead of trimming; this is particularly beneficial for faster growing species which require more frequent return visits. LEU has setup a program to provide customers who undergo tree removal, with complimentary starter trees, which will better co-exist in the vicinity of power lines.
- LEU's typical practice for trimming exceeds GO-95 Table-1, as well as the recommendations in GO-95 Appendix-E Case-13. LEU's standard practice in trimming is to provide a minimum five-foot clear zone area around all secondary-voltage overhead infrastructure, a minimum ten-foot clear zone around all primary-voltage overhead infrastructure, and a minimum 15-foot clear zone around all sub-transmission and transmission overhead infrastructure. In instances including when our arborists believe that this high degree of trimming may kill a tree, they will occasionally reduce these large clearances while still complying with GO-95's proscribed values.

LEU, Typical Trimming Clearances:		
Secondary Voltage ≤ 600V	Primary Voltage 12 kV LL	Sub-Transmission / Transmission Voltage 60 kV LL
5'	10'	15'

While LEU's typical-practices already greatly exceed the state's GO-95 requirements, LEU will at times trim vegetation even further for various reasons including arboricultural best practices, matching prior trimming cuts, aesthetics, or customer request.

Additional features of LEU's tree trimming program:

- Prioritization given to dense-vegetation areas.
- Consideration for vegetation-species, when determining prioritization.
- When LEU encounters fast-growing or invasive species beneath overhead power lines, subject to permission from tree's owner, LEU will undertake complete removal in lieu of trimming.
- If LEU can anticipate an imminent seasonal growth spurt, LEU will generally trim deciduous trees beyond LEU's typical amounts.

- LEU averages two dedicated tree crews throughout the year; LEU's tree contractor has over 900 employees[27], and offers the ability to greatly scale-up the number of crews on a job-by-job basis should a particular job need additional crews and resources.
- LEU's contractor can provide cranes, as needed.
- Every tree in proximity of electric infrastructure will be visited every 18-24-months, some even more frequently.
- LEU has surveyed trees in its service territory and collected a detailed tree inventory of all trees in proximity to power lines, collecting: species, height, GPS coordinates, imagery, health, condition, and trimming priority.
- While customer-initiation is not required, customers with concerns can submit a request to have their vegetation situation reviewed. Customer-initiated requests are visited for assessment purposes within 48-hours, and frequently as fast as same-day.
- Minimization of fuel-accumulation by removal of trimmings and resulting wood byproducts (with rare exceptions for property owners requesting to maintain possession).

LEU's urban service territory is again distinguished from utilities having lines traversing vast, isolated, rural lands and dry wild forests. The fuel-loading underneath LEU's assets is consistent with the health, levels and species of vegetation found in other urban/suburban settings. Nearly all vegetation in the vicinity of LEU's lines and Rights-of-Way belongs to private parties or the City of Lodi. These parties bear the responsibility for the removal of any accumulation of fuels (e.g. fallen logs, dead shrubbery) on their respective properties. LEU believes that the vegetation-owning parties within its territory succeed at removing accumulated fuels at a level vastly exceeding what is seen in California's wildland areas.

E. SYSTEM MAINTENANCE AND INSPECTIONS

Periodic patrols and inspections provide the opportunity of identifying and remedying certain anomalous conditions prior to realization of any harm, possibly including wildfire.

LEU meets or exceeds the minimum inspection cycles provided in CPUC GO 165 and CPUC GO 95, Rule 18. Additionally, LEU staff uses their knowledge of the specific environmental and geographical conditions to determine when certain areas require more frequent inspections.

[27] https://westcoastarborists.com/

General Order 165

Table 1 -- Distribution Inspection Cycles (Maximum Intervals in Years)

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Switching/Protective Devices						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Regulators/Capacitors						
Overhead	1	2[1]	5	5	---	---
Underground	1	2	3	3	---	---
Padmounted	1	2	5	5	---	---
Overhead Conductor and Cables	1	2[1]	5	5	---	---
Streetlighting	1	2	x	x	---	---
Wood Poles under 15 years	1	2	x	x	---	---
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood poles which passed intrusive inspection	---	---	---	---	20	20

(1) Patrol inspections in rural areas shall be increased to once per year in Extreme and Very High Fire Threat Zones in the following counties: Imperial, Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura. Extreme and Very High Fire Threat Zones are designated on the Fire and Resource Assessment Program (FRAP) Map prepared by the California Department of Forestry and Fire Protection's Fire and Resource or the modified FRAP Map prepared by San Diego Gas & Electric Company (SDG&E) and adopted by Decision 12-01-032 in Phase 2 of Rulemaking 08-11-005. The fire threat map is to be used to establish approximate boundaries and Utilities should use their own expertise and judgment to determine if local conditions require them to adjust the boundaries of the map.

F. RECLOSING POLICY

In contrast with the majority of electric utilities in California, prior to 11/2021, LEU did not have any traditional reclosers deployed downstream of LEU's substations.

In 11/2021 LEU completed installation of a single, new type of non-spark emitting protection device with limited reclosing functionality. This single trial-device was located immediately behind sidewalk deep within our urban setting, positioned upstream of a circuit-branch, monitoring various short downstream line-lengths, with trivial vegetation exposure nearly all of which is within residential private property. This device replaces a traditional spark-emitting fuse that was formerly at this location, and under standard operation this trial device should never emit sparks to the ground below. This device is designed to minimize and contain outages on the lines it monitors downstream, and prevent impacts from spilling-over and affecting other customers on the circuit. The areas downstream are unlikely to get draped with windblown vegetation due to urban environment. Prior to the installation of this device, fusing limitations would have resulted in certain mis-coordinations in the protection scheme, and created circuit-level outages affecting substantially more customers. One of the critical customers downstream of this device is a large school. The Utility's belief is that the installation of this device will provide a net benefit to life-safety by increasing the uptime to this critical customer and in minimizing the downtime to others in the wider area.

Power outages create serious adverse impacts to life-safety (find examples in Section-V(G) De-Energization), these impacts increase as outages are extended. Nationwide, momentary-faults account for greater than 70-80% of all faults[28]. Policies which disable reclosing functionality, unnecessarily extend what would otherwise be momentary and self-clearing faults and outages, and consequently, increase the adverse life-safety impacts of an outage. Further, **undertaking such actions based largely upon weather predictions of unknown accuracy, carries the risk of doing so unnecessarily.**

The concept of disabling reclosing is predicated on the assumption that a small limited number of subsequent line-tests could possibly cause a problem not caused by the *initial* incident. In most situations (momentary self-clearing faults, urban lines not at risk of starting fires) there is no harm caused by successive tests, and no safety benefit gained by disabling reclosing, while there *is* potential harm caused by not re-powering lines to critical customers.

It is LEU's goal to reduce outages both in count and duration. In determining a policy for reclosing, LEU has considered its lone instance of a non-traditional field-recloser, its unique and low-risk urban setting and its beneficial service-territory specifics; LEU has additionally considered the large-scale adverse customer impacts arising from disabling reclosing at the substation-level. In consideration of the above, LEU finds that the public-interest is better served by not disabling reclosing functionality as a wildfire precautionary measure, and that doing-so would yield hard-to-identify benefits to wildfire reduction in LEU's territory.

[28] Cooper Power Systems, Electrical Distribution System Protection, P.7

G. DE-ENERGIZATION

When evaluating minimum fire potential conditions, the following thresholds will be considered:

1. Sustained Wind Speed: Above 19 miles per hour for 30 minutes continuously.

2. Relative Humidity (RH): Below 30 percent.

Evaluation Process:

If both of the above criteria are met, the Electric Distribution Operator is required to follow the steps outlined below:

1. Consultation: The Electric Distribution Operator will promptly consult with the Electric Utility Director and the Lodi Fire Department (LFD). This consultation is crucial for assessing the potential risk and determining appropriate actions.

2. Identification of Affected Section:

Upon consultation, the relevant stakeholders will collectively identify the specific section of the distribution line that poses a risk and requires de-energization for public safety.

3. Communication with Affected Customers:

Utilizing the Outage Management System (OMS), the Distribution Operator will send advanced text messages to customers in the affected area. These messages will aim to provide a 30-minute advance notice to prepare for the impending de-energization.

4. Field Crew Dispatch:

Following the communication with affected customers, the Distribution Operator will promptly dispatch field crew members to de-energize the identified section of the electric line.

5. Coordination for Citizen Welfare:

The Electric Utility (EU) Director, in collaboration with the City Manager, will coordinate efforts to identify a suitable shelter for citizens with medical needs who will be impacted by the de-energization. This ensures that vulnerable individuals receive necessary support and assistance during the outage.

By adhering to this procedure, the Electric Distribution Operator, Electric Utility Director, and relevant stakeholders can effectively mitigate risks associated with minimum fire potential conditions while prioritizing public safety and welfare.

VI. COMMUNITY OUTREACH AND PUBLIC AWARENESS

LEU presented the draft version of this plan to the Lodi City Council and the public during the October 15, 2019 Council meeting and the final version of the inaugural plan at the November 20, 2019 Council meeting. In addition to having provided continuous public access to this document on LEU's homepage, LEU provided an annual revision to the Lodi City Council in 12/2020 and will continue to do so annually. As detailed further in Section IX, LEU contracted with an independent third party to perform an audit of this Wildfire Mitigation Plan. The audit findings were presented to the Lodi City Council at a public meeting, giving the general public an opportunity to provide comments. LEU also posted the plan and auditor's findings on LEU's website www.lodielectric.com and made both available for public review and comment.

VII. RESTORATION OF SERVICE

LEU has an Electric Emergency Plan (EEP) which governs the order in which loads are restored to service. The EEP shows the order in which circuits are to be brought up following a city-wide blackout. Vital loads are restored first followed by non-vital loads. In the event of a partial outage, circuits will be brought back as conditions permit in the order of priority listed in the EEP.

In the case of wildfires involving lines and other utility assets and resulting in outages, once conditions have been made safe to do so, LEU will visually inspect every involved asset looking for visual damage and any hazards potentially remaining. Patrols will be conducted using a combination of human resources (both internal and depending on the scale, mutual aid resources) and may involve certain technology (possibly including drones, binoculars, etc.) prior to reenergizing circuits.

VIII. EVALUATION OF THE PLAN

A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

LEU will track four metrics to measure the performance of this Wildfire Mitigation Plan: (1) number of fire ignitions; (2) wires down within the service territory; (3) inspection-cycle completion; and (4) vegetation-management cycle completion.

Assumptions underlying the use of these metrics: As catastrophic wildfires are a subset of all fires, tracking and reporting *all* fire ignitions (as defined in metric-1) will necessarily capture wildfires. As wires-down events have the possibility of causing wildfires, tracking and reporting these events (as defined in metric-2) will over-time reveal LEU's success at minimizing their occurrence and in-turn fires caused by such events. As inspections provide the opportunity of remedying

certain conditions prior to realization of any harm, the successful progression of inspections is important to capturing this opportunity.

Due to the non-aligning year-to-year dates for the annual meeting where this plan is presented, in 2021 LEU added the clarification that metric-reporting for this plan covers the period of November-1 (prior year) to October-31 (current year).

METRIC 1: FIRE IGNITIONS

For purposes of this metric, a fire ignition is defined as follows:

- An LEU facility was associated with the origin of the fire[29];
- 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
- LEU has knowledge that the fire occurred.

In future Wildfire Mitigation Plans, LEU will provide the number of fires that occurred that were less than 10 acres in size. Any fires greater than 10 acres will be individually described.

Date Range	Count
11/1/2020 – 10/31/2021	LEU had one known incident of fire ignition meeting the above criteria[30]
11/1/2021 – 10/31/2022	LEU had two known incident of fire ignition meeting the above criteria[31]
11/1/2022 - 6/30/2023	LEU had zero known events meeting the above criteria[32] [33].
7/1/2023 - 6/30/2024	LEU had zero known events meeting the criteria
7/1/2024 - 6/10/2025	LEU had zero known events meeting the criteria

METRIC 2: WIRES DOWN

The second metric is the number of distribution and transmission wires downed within LEU's service territory. For purposes of this metric, a wires-down event includes any instance where an

[29] Origin of the Fire distinguishes from fires of external origin e.g. a discarded cigarette butt, arson etc., which then spreads to involve utility facilities. This distinction is in keeping with the goal of identifying and minimizing utility-sources of fire, and not diluting the metric's value with fires of unrelated origin.
[30] Data per LEU Operations, 6/10/2025. This fire is believed to be the result of an overhead transformer malfunction in an urban location, resulting in a secondary-bushing failure which emitted sparks onto dry vegetation located on customer-maintained private property.
[31] Data per LEU Operations. This fire is believed to be the result of an overhead transformer malfunction in an urban location, resulting in a secondary-bushing failure which emitted sparks onto dry vegetation located on customer-maintained private property.
[32] Data per LEU Operations, 6/10/2025.
[33] At least one known fire grew to involve LEU assets (outage 57-20), however, the fire was started by a homeless person and was not utility-caused. This incident and possibly others, were not counted in this year's metric, as their external origin did not meet the defined criteria, nor the intention of this metric.

electric transmission or primary distribution conductor falls to the ground or on to a foreign object.

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

Date Range	Count
11/1/2020 – 10/31/2021	LEU had two events meeting this criteria[34]
11/1/2021 – 10/31/2022	LEU had zero known events meeting this criteria
11/1/2022 - 6/30/2023	LEU had zero known events meeting this criteria
7/1/2023 - 6/30/2024	LEU had one event meeting this criteria
7/1/2024 - 6/10/2025	LEU had zero known events meeting this criteria

METRIC 3: INSPECTION-CYCLE COMPLETION

The Third metric relates to the completion percentage of each system-inspection cycle. As discussed in Section V-D System Maintenance and Inspections, LEU practices the inspection cycles specified in GO-165. For Urban utilities, GO-165 provides a maximum detailed-inspection cycle of 5-years for overhead, underground and pad-mounted infrastructure.

LEU will at times shift resources to accelerate or prioritize one category of inspection over another for strategic purposes (while achieving all required inspection timelines); this has the result of making the completion percentages of the various cycles uneven.

Date Range	Cycle Type	Percent of Cycle Completed
11/1/2020 – 10/31/2021	Detailed overhead (5-year inspection cycle) Detailed underground (5-year inspection cycle) Intrusive Overhead (10/20-year cycle)	Approx. 55%[35] 0% 100%[36]
11/1/2021 - 10/31/2022	Detailed overhead (5-year inspection cycle) Detailed underground (5-year inspection cycle) Intrusive Overhead (10/20-year cycle)	Approx. 45% 100% 0%

[34] Data per LEU Operations, 6/10/2025.
[35] Data per LEU Superintendent, 11/16/2021
[36] Data per 2021 Osmose inspections

11/1/2022 - 6/30/2023	Detailed overhead (5-year inspection cycle) Detailed underground (5-year inspection cycle) Intrusive Overhead (10/20-year cycle)	Approx. 0 % 0 % 0 %
7/1/2023 - 6/10/2024	Detailed overhead (5-year inspection cycle) Detailed underground (5-year inspection cycle) Intrusive Overhead (10/20-year cycle)	Approx. 0 % 0 % 0 %
7/1/2024 - 6/10/2025	Detailed overhead (5-year inspection cycle) Detailed underground (5-year inspection cycle) Intrusive Overhead (10/20-year cycle)	Approx. 10 % 0 % 0 %

METRIC 4: VEGETATION-MANAGEMENT CYCLE COMPLETION

The Fourth metric relates to the completion percentage of each vegetation-management cycle. As discussed in Section V-D Vegetation Management, all vegetation within proximity of LEU assets is visited at a minimum **every 18-24 months**. LEU tracks the progress of this by dividing its service territory into sixty-six similarly sized grids, and focusing and containing vegetation-management efforts to service one grid at a time until that grid's completion, before advancing to the next grid. While the amount of vegetation needing addressing in each grid is not exactly equal, the metric of percent complete, serves a reasonable approximation for progress towards the stated goal.

To satisfy the above stated targets, LEU would normally complete vegetation management in approximately 50 – 66% of the system grids each year. In the 2020, however, LEU increased and accelerated its efforts on vegetation management; resulting in an increase in the number of vegetation crews and a substantial increase in utility-spend.

Date Range	Percent of Grids Completed in Date Range
11/1/2020 – 10/31/2021	66%
11/1/2021 – 10/31/2022	66%
11/1/2022 - 6/30/2023	68%
7/1/2023 - 6/30/2024	100%
7/1/2024 - 6/10/2025	100%[37]

B. IMPACT OF METRICS ON PLAN

A discussion of how the application of previously identified metrics to previous plan performance has informed the plan, is required by SB-901. With LEU's Wildfire Mitigation Plan having been in-place for a short-duration, metric gathering provides insufficient data points for trending and comparisons. LEU anticipates that as the data collection history becomes more robust, LEU may be able to identify areas of its operations and service territory that are disproportionately impacted and may be better positioned to evaluate potential improvements to the plan.

C. MONITORING AND AUDITING THE PLAN

The inaugural version of this Wildfire Mitigation Plan was presented publicly to the Lodi City Council. LEU will present plan updates to the Lodi City Council on an annual basis. Additionally, a qualified independent evaluator has evaluated the plan and presented a report on their findings to the Lodi City Council.

The LEU Wildfire Mitigation Plan will be internally audited for completeness, effectiveness and implementation annually by the Electric Utility Director, in preparation for the presentation to the Lodi City Council.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

LEU's Utility Director shall identify any deficiencies in the plan's implementation and take appropriate action to remedy any issues found.

Additionally, the third-party auditor described in VIII.C will review the plan and provide feedback to LEU and the Lodi City Council. Findings from the above audits will be recorded and

[37] Data per LEU Superintendent, 6/10/2025

appropriate corrections to the Wildfire Mitigation Plan and supporting procedures and processes will be made.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

A key mitigation measure against wildfires in LEU's service territory is vegetation management, (described in greater detail in section V-D, Vegetation Management). All vegetation program matters are overseen by LEU's Electric Superintendent. LEU uses contract tree trimmers who audit the vegetation in need of management and maintain the proscribed clear-zones. LEU audits the contractors and conducts Quality Assurance as to their successful implementation of LEU's requirements, by at times working directly with them, and also by conducting audits (approximately weekly) of their work.

In addition, LEU Staff performs system patrols and inspections (described further in section V-E, System Maintenance and Inspections) to identify system issues and deficiencies. The results of these patrols and the associated corrective action are prioritized based on their degree of safety-concern.

The findings of the above audits, together with any trending provided by the metrics tracked in VIII-A of this plan will provide evidence of the effectiveness of the LEU Wildfire Mitigation plan.

IX. INDEPENDENT AUDITOR

Public Utilities Code section 8387(c) required LEU 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 which is posted to Lodi Electric Utility's website and presented to the Lodi City Council at a public meeting.

LEU is a member of the Northern California Power Agency (NCPA). In 2022, LEU leveraged the expertise of NCPA in selecting and engaging an independent evaluator (Guidehouse) as required in PUC Section 8387(c). Guidehouse performed an audit of LEU's Wildfire Mitigation Plan and was given the opportunity to audit the LEU processes as necessary to complete the audit. Following the completion of their audit, Guidehouse briefed relevant LEU staff and prepared a written report of its findings. In November of 2022, Guidehouse provided its Independent Evaluation report, which LEU made available to the public at the November 2022 Council meeting; the Wildfire Mitigation Plan and Guidehouse report were also made available to the public on LEU's website where they have remained continuously since their completion.

X. CROSS REFERENCES TO SB-901 REQUIREMENTS

CROSS REFERENCES TO SB 901 REQUIREMENTS		
Requirement	**Statutory Language**	**Location in POU Template**
Persons Responsible	**PUC § 8387(b)(2)(A):** An accounting of the **responsibilities of persons** responsible for executing the plan.	Section III
Objectives of the Plan	**PUC § 8387(b)(2)(B):** The **objectives** of the wildfire mitigation plan.	Section II
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 V
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 VIII.A
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 VIII.B
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 those protocols, including impacts on critical first responders and on health and communication infrastructure.	Section V.F Section V.G
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 III.D Section III.E Section III.F Section V.G
Vegetation Management	**PUC § 8387(b)(2)(H):** Plans for vegetation management.	Section V.D
Inspections	**PUC § 8387(b)(2)(I): Plans for inspections** of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	Section V.E

Prioritization of Wildfire Risks	**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: **(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. **(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.	Section IV.A Section IV.B
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 IV.C
Enterprisewide Risks	**PUC § 8387(b)(2)(L):** A methodology for identifying and presenting **enterprisewide** safety risk and wildfire-related risk.	Section IV.B
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 VII
Monitor and Audit	**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: (i) **Monitor and audit** the implementation of the wildfire mitigation plan. (ii) **Identify any deficiencies** in the wildfire mitigation plan or its implementation, and correct those deficiencies. (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.	Section VIII.C-E

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 IX

Information NOT REQUIRED BY SB 901	
Template Topic	Location in POU Template
Policy Statement	Section I.A
Purpose of the Plan	Section I.B
Background	Section I.C
Risk Profile	Section I.D
Organization of the Plan	Section I.E
Coordination with Water Utilities	Section III.D
Coordination with Communication Companies	Section III.E
Standardized Emergency Management Systems	Section III.F
High Fire Threat District	Section V.A
Weather Monitoring	Section V.B
Design and Construction	Section V.C
Community Outreach	Section VI

I. WSAB GUIADANCE ADVISORY OPINION RECOMMENDATIONS

The December 2020 California Wildfire Safety Advisory Board (WSAB) Publication, "Guidance Advisory Opinion for the 2021 Wildfire Mitigation Plans of Electric Publicly Owned Utilities and Cooperatives" identifies fourteen specific recommendations that POUs are requested to address in their future 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 POUs will be updating their WMPs based on the direction of their local governing boards within this 3-year cycle. Because the WSAB's recommendations have been provided after the initial WMP submission, the POUs will have varying capacities to fully address each recommendation in their subsequent WMP revision cycles.

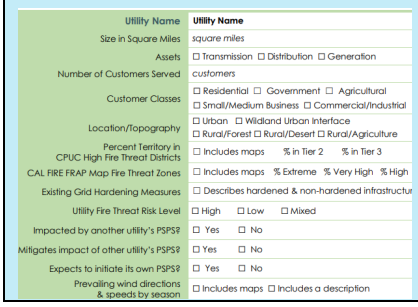
This section lists the WSAB's recommendations. For each of these, LEU seeks to do one or more of the following:

(1) Provide a narrative response to the recommendation
(2) Provide a cross-reference to the section in this WMP where the topic is addressed
(3) Describe why the recommendation is not applicable to LEU
(4) Inform the WSAB of the POU's intent to address the recommendation at the point of the POU's next comprehensive revision.

WSAB Recommendation - 1: The Board requests that the WMP and Independent Evaluator Reports be prominently displayed and easily located on the POU websites. To assist the Board in its review, the WMP could also include an index or table that shows where each section of the statute is addressed in the WMP.

In the WMP update, the Board hopes to receive context-setting information at the beginning of each POU plan to help situate the Board's general understanding about each POU and Cooperative's risk profile in accordance with the statutory requirements. Public Utilities Code Section 8387(b)(2) details what risks are to be addressed including all wildfire risks, and drivers for those risks, throughout the service territory such as the utility's grid configuration and condition, climate threat and geographic location. Without this information, the Board is unable to provide an individualized response to each filing. The goal would be to provide the unique utility context in the WMP document up front with the following information:

Size of the utility territory in square miles; □ Asset identification including transmission, distribution, and generation; □ Number of customers, which may differ from the number of city or county residents; □ Types of customer classes served; □ Location and topography including percentage urban, wildland, or wildland-urban interface; □ Typical prevailing wind directions and speeds within the territory differentiated by season; □ Territory maps with CPUC High Fire Threat Districts (HFTD) or California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP) Fire Threat Zones (FTZ) overlaid with distribution and transmission assets, again, considering the limitations of Federal Infrastructure Protection Protocols; □ Existing system hardening measures installed compared to non-hardened infrastructure such as 1) miles underground or overhead, 2) number of wooden, steel, or composite poles, 3) number of wooden, steel, fiberglass, or composite cross arms, and 4) miles of covered conductor; □ Impact on the POU of another utility's Public Safety Power Shutoff (PSPS) or similar wildfire related de-energization events, existing measures to mitigate the other utility's PSPS, and whether the POU expects to call its own PSPS, or engages in the de-energization of lines that are fire threatened. To simplify this requirement, the Board developed a template for its own review and asks that it be applied to the POU WMPs:



Utility Name	**Utility Name**
Size in Square Miles	*square miles*
Assets	☐ Transmission ☐ Distribution ☐ Generation
Number of Customers Served	*customers*
Customer Classes	☐ Residential ☐ Government ☐ Agricultural ☐ Small/Medium Business ☐ Commercial/Industrial
Location/Topography	☐ Urban ☐ Wildland Urban Interface ☐ Rural/Forest ☐ Rural/Desert ☐ Rural/Agriculture
Percent Territory in CPUC High Fire Threat Districts	☐ Includes maps % in Tier 2 % in Tier 3
CAL FIRE FRAP Map Fire Threat Zones	☐ Includes maps % Extreme % Very High % High
Existing Grid Hardening Measures	☐ Describes hardened & non-hardened infrastructur
Utility Fire Threat Risk Level	☐ High ☐ Low ☐ Mixed
Impacted by another utility's PSPS?	☐ Yes ☐ No
Mitigates impact of other utility's PSPS?	☐ Yes ☐ No
Expects to initiate its own PSPS?	☐ Yes ☐ No
Prevailing wind directions & speeds by season	☐ Includes maps ☐ Includes a description

LEU Response: LEU's **WMP and Independent Evaluator Reports** are **prominently displayed and easily located on** LEU's **website**; they can also be found by conducting a web-search for "Lodi Electric Utility Wildfire Plan." **To assist the Board in its review, the WMP also include**s **an index or table that shows where each section of the statute is addressed in the WMP.** LEU has provided some context-setting and risk discussion unique to LEU's territory, as well as the WSAB's requested template. Please refer to Sec. I.D "**Overall Risk Profile**."
WSAB Recommendation – 2: In the WMP update, the Board recommends utilities provide a paragraph describing the public review of the plan and how it is approved, if required. The Board requests additional data on monitoring and auditing and how that information is presented. A brief explanation on each POUs budget mechanism to be used to perform wildfire mitigation would also be helpful to the Board.
LEU Response:
WSAB Recommendation – 3: In the future, the Board recommends IEs perform a robust evaluation of the contents and substance of the POUs WMP. The Board especially appreciates evaluations of how each POU compares to the IE's assessment of industry standards.
LEU Response:
WSAB Recommendation - 4: The 2021 POU WMPs and/or updates should be based on the guidelines. It would be helpful to create a revised template that reflects the learnings from the 2020 initial effort. To develop that template in a timely manner, the Board invites the municipal utility associations CMUA, the Southern California Public Power Association, the Northern California Power Agency, and the Golden State Power Cooperative, to work collaboratively with the WSAB to identify the utility groupings and develop a revised template for 2021. The Board appreciated the discussion with the municipal utility and cooperative associations at the workshop on November 18, 2020 and looks forward to further discussion at the final Board meeting of 2020, scheduled for December 9, 2020 at 1pm. The Board will continue to work with these associations to develop future WMP guidelines within in the next 120 day or no later than March 1, 2021. Of course, feedback from the individual agencies is also welcomed.
LEU Response:
WSAB Recommendation - 5: In the next round of WMPs, utilities should provide the context-setting information discussed above. POUs should include a detailed protocol to address these concerns in order for the Board to understand the strategic direction and effectiveness of each POU and assist in furthering best practices.
LEU Response:
WSAB Recommendation - 6: For planning purposes, the Board understands that there is a distinction between being a resident of a community and being customer of a utility. The utility plan, while frequently a part of the municipal plan, should address the utility customer dimensions of emergency preparedness planning with respect to PSPS and wildfires and the unique concerns of more vulnerable customers such as: Access and Functional Needs, medical baseline, non-English speakers, and those at risk of losing water or telecommunications service. The Board recommends future WMPs continue to describe the specific methods, content, and timing used to communicate with customers. Beginning with the 2021 WMPs, the POUs should provide an evaluation of whether the current method of emergency communication appears sufficient and, if not, what can be done to improve it, especially protocols for notifying customers, essential service providers, and other critical facilities of IOU or self-triggered PSPS events.
LEU Response:

WSAB Recommendation - 7: The Board requests information from utilities on their existing and planned system upgrades. In future WMPs, the Board would like to understand the details of each utility's system hardening and grid design programs described in the WMP filing. Text of the WMPs should indicate the goals of the programs and the risk any particular program is designed to mitigate. The Board also wants to understand each POUs approach to PSPS mitigation and prevention. Finally, POUs should identify any supply shortages.
LEU Response:
WSAB Recommendation - 8: To prevent unanticipated ignitions due to our changing environmental circumstances, utilities should consider additional visual patrols on all potentially impacted circuits annually. The Board requests that future WMPs describe the unique risks a utility is inspecting for such as insect, wildfire incursion, wood split, woodpeckers, purposeful insulator destruction, termites, etc., be included in the WMP text. WMPs should also describe whether and how system inspections lead to system improvements.
LEU Response:
WSAB Recommendation - 9: The Board encourages POUs to consider different options for surfacing for further consideration and remediation, previously unidentified risks that could lead to catastrophic wildfires. POUs could work with the municipal and cooperative utility associations and neighboring utilities or create their own engineering or risk management teams.
LEU Response:
WSAB Recommendation - 10: The Board recommends the WMPs state the particular wildfire risks associated with system design and construction such as topography and location near a HFTD of another utility. The Board would also like information about G.O. 95 exempt assets and possible updates to G.O. 95 that could facilitate more resilient utility transmission and distribution assets.
LEU Response:
WSAB Recommendation - 11: To understand the engineering needs and wildfire risk, the Board requests POUs include context setting information in the WMPs including information about the prevailing wind directions and speeds, differentiated by season, along with average weather conditions by season. The Board requests information on how and why situational awareness technology is installed, and where on the system. The Board would also like insight into decisions that are made not to install situational awareness technology. Are there constraints such as budgets, availability of equipment, knowledge to effectively deploy, or qualified personnel to install and monitor effectively? The Board also requests information about whether this modeling data is received from or shared with other agencies, utilities, or fire professionals.
LEU Response:
WSAB Recommendation - 12: The Board recommends the 2021 WMP Updates 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. In order to understand current and future risk profiles for each POU, the WMPs should highlight: □ The reasoning behind each treatment plan and the ecological impact of the treatment options chosen; □ How vegetation management in the HFTD or Fire Threat Zones differs from other areas, including within private property and urban landscaping; □ The difference between any enhanced vegetation management and the vegetation management that meets the G.O. 95 standard; □ A list of native and non-native species and describe how treatment methods vary; and □ The new growth that occurs in areas that has previously been cleared or treated, and how the POUs tracks growth.
LEU Response:

WSAB Recommendation - 13: The Board recommends the POU WMPs list the qualifications of any experts relied upon, such as scientific experts in ecology, fire ecology, fire behavior, geology, and meteorology. The WMPs should specify the level of expertise of the POU staff that manages the contractors performing vegetation management. The Board also recommends the WMPs 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). Ensuring that on Qualified Electrical Workers treat vegetation within the MAD of an energized utility line as required by Cal/OSHA, is critical to fostering a strong safety culture.
LEU Response:
WSAB Recommendation - 14: The Board recommends WMPs describe whether the POU has considered innovative and alternative approaches to vegetation management such as, but not limited to requiring property owners to manage vegetation a certain distance from structures or utility lines, and pilot programs in home hardening.
LEU Response:

Please note that with the 2021 restructuring of the WSAB to be under the Office of Energy Infrastructure Safety, the link on the CPUC's website[38] to find "The Board's Guidance Advisory Opinion is available at….." is broken as of 11/2021, as is the following page, https://www.cpuc.ca.gov/wsab.

[38] CPUC site: https://www.cpuc.ca.gov/news-and-updates/all-news/wsab-approves-guidance-advisory-opinion-for-the-2021-wmps-of-electric-pous-and-cooperatives

VERSION (FINAL)

Independent Evaluator's Report

Lodi Electric Utility 2025 Wildfire Mitigation Plan

JUNE 2025

Prepared for:

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
NCPA	Northern California Power Agency
CAL FIRE	California Department of Forestry and Fire Prevention
CPUC	California Public Utilities Commission
FHSZ	Fire Hazard Severity Zone
FRAP	Fire Resource Assessment Program
HFTD	High Fire Threat District
IOU	Investor-Owned Utility
LEU	Lodi Electric Utility
PG&E	Pacific Gas and Electric
POU	Publicly Owned Utility
PRC	Public Resource Code
PSPS	Public Safety Power Shutoff
PUC	Public Utility Code
WMP	Wildfire Mitigation Plan
WRCC	Western Region Climate Center

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1 Introduction

The Lodi Electric Utility (LEU) contracted with Dudek to independently evaluate its 2025 Wildfire Mitigation Plan (WMP). This independent evaluation report (Report) describes the technical review and evaluation of the WMP prepared by the LEU. The WMP requirements are codified in the California Public Utilities Code (PUC) §8387(b)(2) for publicly owned electric utilities (POUs). PUC §8387(c) requires that an independent evaluator review and assess the comprehensiveness of a POU's WMP and issue a summary report.

Dudek reviewed LEU's 2023 WMP from April 30, 2025, to May 29, 2025. The evaluation's focus was to assess the comprehensiveness of LEU's WMP and ensure that it included all elements required under PUC §8387(b)(2) (listed in Attachment A).

This Independent Evaluator's report contains the following elements: 1.) An overview of the LEU's service territory and utility ignited wildfire risk, 2.) A review of the statutory requirements in PUC §8387(b)(2) for publicly owned electric utilities, and 3.) An evaluation of the comprehensiveness of the WMP.

2 An Overview of the Lodi Electric Utility

The Lodi Electric Utility Department's service territory covers approximately 13.7 square miles and is within the city limits of Lodi. The City of Lodi is located in the middle of the San Joaquin Valley, and the terrain is generally level. There is no steep or hilly terrain within LEU's service territory, and the only topographical feature of note is the Mokelumne River that runs west to east across the north border of LEU's service territory/Lodi city limits. As shown in Figure 1, the CPUC High Fire Threat District Map (HFTD) indicates that no portion of the LEU's service territory falls within the HFTD. The majority of LEU's service territory comprises developed urban and suburban areas that would be unable to sustain the spread of a wildfire due to non-combustible surfaces and limited flammable vegetation. There is a strip of land along the Mokelumne River that is within the LEU's service territory and contains unmanaged vegetation that could potentially sustain the spread of a utility-ignited fire when conditions permit. Fire season, the period of the year when conditions are conducive to the spread of rapid fire growth, occurs in the LEU's service territory and the central San Joaquin Valley from May to October. Extremely dangerous conditions for fire growth, as measured by the number of Red Flag Warnings issued by the National Weather Service (NWS), occur most frequently in June and from August through October.

Lodi Electric Utility's service territory encompasses approximately 318 circuit miles of power lines, with 55% (175 circuit miles) underground. 13.5 circuit miles belong to a 60kV transmission circuit, while the remaining 304.5 miles are distribution lines. Additional assets include four 60kV substations. (Lodi, 2024). There are two power-generating stations within LEU's service territory; however, neither station is owned or operated by LEU or produces power exclusively for LEU. One generating station is owned and operated by the Northern California Power Association (NCPA), and the other is owned and operated by the California Department of Water Resources (DWR). Power is transmitted to the LEU's service territory from a PG&E transmission line connected to their service territory. The Lodi Electric Utility is a member of the NCPA.

According to historical fire perimeter data from CAL FIRE, no recorded wildfires have occurred within the LEU's service territory. LEU's service territory is not within a CAL FIRE designated fire hazard severity zone (FHSZ), and the nearest FHSZ is more than four miles east of Lodi (CALFIRE 2025).

As indicated on the CAL FIRE FHSZ and CPUC HFTD maps, LEU's service territory has a low wildfire hazard. LEU's overhead equipment, which is the source for the majority of the electrical utility-ignited wildfires in the state (CPCU 2020), is generally located in developed areas where there is limited flammable vegetation to sustain fire spread after an ignition event. The utility's service territory does not contain terrain, vegetation, or a combination of these two features that could allow for unchecked fire spread or extreme fire behavior (e.g., crown fires).

3 Statutory Requirements for Wildfire Mitigation Plans

3.1 Statutory Requirement Overview

PUC §8387(b)(2) lists the statutory requirements for WMPs. These are the specific elements that the independent evaluator must review to make their determination for this report. The specific elements that must be addressed in LEU's WMP are included in Table A (see Attachment A) and are summarized here for reference.

- Staff Responsibilities
- General Objectives
- Wildfire risk reduction program descriptions.
- The metrics used to evaluate the wildfire mitigation plan's performance.
- How has applying previously identified metrics informed the wildfire mitigation plan?
- Protocols for reclosers, de-energization, and Public Safety Power Shut-off (PSPS)
- Procedures for community notification and outreach.
- Vegetation Management Plans
- Electrical Equipment and Infrastructure Inspection Plans.
- A description of wildfire risks and drivers for those risks throughout the service territory, including design, construction, operation, and maintenance of equipment and facilities, as well as topographic and climatological risk factors.
- Identify any geographic area in the service territory with a higher wildfire threat than identified in a commission fire threat map.
- Identification of enterprise-wide safety risk and wildfire-related risks.
- How the service will be restored after a wildfire.
- The processes and procedures used to monitor and audit the implementation of the wildfire mitigation plan, identify any deficiencies, and assess the effectiveness of electrical line and equipment inspections.

3.2 Detailed Review of Statutory Requirements

A. Minimizing Wildfire Risks

PUC §8387(a) requires the following: "Each local publicly owned electric utility and electrical cooperative shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment."

The LEU's WMP comprehensively describes the safety-related measures that the LEU follows to reduce the risk of its energized equipment causing a wildfire. The WMP describes a utility located in an area with a low risk of wildfire and implements appropriate wildfire prevention strategies to address the fire risk factors present within its service territory. Dudek has determined that LEU complies with 8387(a) through the design of its system, its operational procedures, and the implementation of wildfire risk reduction and response strategies.

B. Evaluation of WMP Elements

Dudek found that LEU's WMP meets the statutory requirements of comprehensiveness, as per PUC §8387. Each required element is comprehensively described in one or more sections of the WMP. Notably, LEU's WMP contains several sections where the utility provided a comprehensive description of a required WMP element that demonstrates an attention to wildfire preparedness. This includes:

- a PSPS protocol, which includes thresholds for considering the use of a PSPS.
- Use of both performance and outcome-based metrics to evaluate the WMP. This section in the WMP incorporates current metric data.

Table 1 summarizes our initial review of the LEU's WMP and is organized by required elements in PUC 8387.

Table 1: Summary of LEU WMP Compliance with PUC 8387 Requirements

WMP Required Element	Sub-element	Location in WMP	Meets PUC 8387 Requirements?
(A) An accounting of the responsibilities of the persons responsible for executing the plan.		Chapter III, Roles and Responsibilities	**Yes**
(B) The objectives of the wildfire mitigation plan.		Chapter II, Objectives of the Wildfire Mitigation Plan. Chapter III C	**Yes**
(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.		Chapter V Wildfire Preventative Strategies	**Yes**
(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		Chapter VIII: A Metrics and Assumptions for Measuring Plan Performance	**Yes**

WMP Required Element	Sub-element	Location in WMP	Meets PUC 8387 Requirements?
that underlie the use of those metrics.			
(E) A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.		Chapter VIII: Impacts of Metrics on Plan	**Yes**
(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 those protocols, including impacts on critical first responders and health and communication infrastructure.		Chapter V F Reclosing Policy, Chapter V G De-energization	**Yes**
(G) Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential de-energization for a given event.		Chapter V G De-energization	**Yes**
(H) Plans for vegetation management.		Chapter V D Vegetation Management	**Yes**

WMP Required Element	Sub-element	Location in WMP	Meets PUC 8387 Requirements?
(I) Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.		Chapter V E System Maintenance and Inspections	**Yes**
(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:			
	(i) Risks and risk drivers associated with the design, construction, operation, and maintenance of the local publicly owned electric utility's or electrical cooperative's equipment and facilities.	Chapter IV B Particular Risks and Risk Drivers Associated with Design, Construction, Operation, and Maintenance	**Yes.**
	(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.	Chapter IV A Particular Risks and Risk Drivers Associated with Topographic and Climatological Risk Factors	**Yes**
(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.		Chapter V: A High Fire Threat District	**Yes**

WMP Required Element	Sub-element	Location in WMP	Meets PUC 8387 Requirements?
(L) A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.		Chapter IV B Enterprise-wide Safety Risks	**Yes**
(M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.		Chapter VII Restoration of Service	**Yes**
(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:			
	(i) Monitor and audit the implementation of the wildfire mitigation plan.	Chapter VIII: C Monitoring and Auditing the Plan	**Yes**
	(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.	Chapter VIII D: Identifying and Correcting Deficiencies in the Plan	**Yes**
	(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.	Chapter VIII: E Monitoring the Effectiveness of Inspections	**Yes**

4 Wildfire Mitigation Plan Comprehensiveness: Wildfire Risks and Wildfire Prevention Strategies, and Metrics

4.1 Wildfire Risks and Wildfire Prevention Strategies

Dudek's review of the Lodi Electric Utility Department's WMP determined that the utility has identified the significant wildfire risk factors in its service territory and has a wildfire prevention strategy to reduce the likelihood of each factor. As noted in the WMP, the LEU utilizes the specific requirements in the GO rules (GO 95, GO 128, and GO 165) (CPUC 2024) and the National Electric Safety Code as the minimum requirements for their wildfire prevention strategies. Table 2 below describes the wildfire risk factors presented in the WMP and the wildfire prevention strategies the utility implements to mitigate that risk.

The risk factors in Table 2 are based on the categories listed in the 'Suspected Initiating Event' column in the CPUC's fire ignition data tables (CPUC 2024).

Table 2: Lodi Utility Department Wildfire Risk Factors and the Wildfire Prevention Strategies

CPUC Suspected Initiating Event'	LEU Wildfire Risk Factor	Utility Wildfire Prevention Strategy
Equipment/Facility Failure	Overhead Medium Voltage Transformers and Capacitors in close proximity	Pre-installed bushing covers on all overhead transformers and capacitors.
	Live-front distribution pad mount equipment	New pad mount distribution equipment specified as dead-front
	Aged small-diameter overhead copper conductors	Replacement with a larger diameter standard steel core conductor
	Oil-filled distribution equipment	Replacement of flammable oil with high ignition-resistant FR3 fluid.
	Overhead equipment is more likely to cause an initiating event.	Undergrounding for new subdivisions and large commercial customers
Contact from Object	Vegetation contact with equipment	Minimum 5-foot clearance around secondary overhead distribution infrastructure, 10-foot clearance

CPUC Suspected Initiating Event'	LEU Wildfire Risk Factor	Utility Wildfire Prevention Strategy
		around primary overhead equipment, and 15-foot clearance around sub-transmission and transmission equipment.
	Wildlife contact with equipment	Covered wires for use as jumpers and lead wires, pre-installed bushing covers on overhead capacitors and transformers, and dead front equipment. Annual system inspection cycle.
	Foreign Object contact with equipment	Covered wires, pre-installed bushing covers on overhead equipment. Annual system inspection cycle.
	Vehicle contact with equipment	System inspection and maintenance cycle, Undergrounding for new subdivisions and large commercial customers
Vandalism/Theft		System inspection and maintenance cycle, Undergrounding for new subdivisions and large commercial customers
Other/Unknown		System inspection and maintenance cycle, Undergrounding for new subdivisions and large commercial customers
Wire to Wire Contact		System inspection and maintenance cycle
Contact Between Third-Party Facility on Pole and Supply Lines		System inspection and maintenance cycle

4.2 Metrics

The metrics utilized in LEUs' WMP are a combination of performance and outcome-based metrics. LEU's performance-based metrics include: Inspection-Cycle Completion and Vegetation Management Cycle Completion. LEU's outcome-based metrics include: Fire Ignitions and Wires Down. These four metrics are appropriate for the LEU's equipment and service territory. The performance-based metrics are useful for demonstrating LEU's

compliance with the wildfire mitigation strategies described in the WMP. The outcome-based metrics are functional for demonstrating the overall fire and ignition environment in the LEU's territory. There is insufficient information to determine the effectiveness of these metrics due to the limited number of recorded outcome metric events, the lack of cause information for the outcome metrics, and LEU's low overall fire risk.

5 Conclusion

The Lodi Electric Utility has prepared a comprehensive Wildfire Mitigation Plan for 2025 that describes a utility that intends to meet the requirements of PUC 8387 (a) and "construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment". The LEU WMP accurately describes the low fire risk environment in its territory and the wildfire mitigation strategies that it has implemented. The LEUs' selected wildfire mitigation strategies are appropriate to the risks and risk drivers in their service territory with a focus on managing ignition risks through equipment upgrades, tree trimming, and system inspection. LEU complies with PUC 8387 (a) through this combination of situational awareness and effective wildfire mitigation strategies.

The WMP meets the statutory requirements described in PUC 8387 (b)(2) for a publicly owned utility and contains a section devoted to each of the required elements that is sufficiently comprehensive to demonstrate the LEU's understanding of its wildfire risks and an appropriate response to address these risks.

The goal of a POU's WMP is to document the wildfire risks present in a utility's service territory and the strategies the utility has adopted to mitigate these wildfire risks. The LEU's WMP describes an electrical utility that understands the fire risk in its service territory and has developed effective mitigation strategies to address the fire risk. LEU's WMP fully complies with the PUC requirements and is ready for adoption by the Lodi City Council.

6 References

Lodi Electrical Utility. 2024. LEU 2024 Wildfire Mitigation Plan. City of Lodi

California Public Utilities Commission. 2021. CPUC Fire Threat Map. Accessed on May 6, 2025 at https://capuc.maps.arcgis.com/apps/webappviewer/index.html?id=5bdb921d747a46929d9f00dbdb6d0fa2

California Public Utilities Commission. 2024. Fire Ignition Data. Accessed on May 6, 2025, at https://www.cpuc.ca.gov/industries-and-topics/wildfires

California Department of Forestry and Fire Protection (CAL FIRE). 2025. Fire Hazard Severity Zone Map. Accessed on May 6, 2025, at https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0

VERSION (FINAL)

Report

Lodi Electric Utility Public Safety Power Shutdown Protocol

JUNE 2025

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
IOU	Investor-Owned Utility
CPUC	California Public Utility Commission
PUC	Public Utility Code
POU	Publicly Owned Utility
LEU	Lodi Electric Utility
NFDRS	National Fire Danger Rating System
RFW	Red Flag Warning
NWS	National Weather Service
PSPS	Public Safety Power Shutdown
PG&E	Pacific Gas and Electric Company

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1 Introduction

All electrical utilities in California recognize the risk of wildfire throughout the state and that, when conditions are right, their energized equipment is a potential ignition source for a wildfire. To reduce the risk of electrical equipment igniting a fire, all electrical utilities, publicly and privately owned, are required to meet certain standards regarding design and construction, system inspection and maintenance, and inspection. The wildfire risk reduction measures that utilities use to meet these standards provide overlapping layers of protection by addressing potential ignition sources associated with a utility's equipment and contact with a utility's equipment from a foreign object. The most drastic wildfire risk reduction measure available to electrical utilities is a proactive de-energization, a Public Safety Power Shutdown (PSPS) of portions of a utility's system. While the PSPS reduces the risk of an ignition event from a utility's electrical equipment, it carries the potential for significant consequences, including loss of power to customers who depend on electricity for medical devices and loss of power to critical facilities such as hospitals, and is considered by the CPUC as a 'measure of last resort' (CPUC 2024).

Investor-owned utilities (IOUs) and publicly owned utilities (POUs) recognize the significant impacts associated with proactive de-energization. Each utility has developed its own set of protocols that describe when de-energization should be considered, how the utility will notify customers of a de-energization event, how the utility will determine which sections of its system to de-energize, and how the utility will restore power after the de-energization event. Since granting IOUs the authority to proactively de-energize in 2012, the CPUC has developed standards and guidelines for de-energization events for IOUs. Since 2018, the CPUC has reviewed IOUs' Public Safety Power Shutoff (PSPS) protocols and PSPS event reports. The CPUC does not govern POUs' Public Safety Power Shutoff (PSPS) protocols or events. Local utilities develop their own rules and guidelines for de-energization events. Lodi Electric Utility (LEU) developed PSPS protocols in conjunction with the development of its first Wildfire Mitigation Plan (WMP) and has reassessed these protocols with each subsequent revision of its WMP. For the LEU's 2025 WMP review, Dudek is assisting the LEU with the review of their PSPS protocols. This PSPS Protocol report summarizes the results of our review and our recommendations for LEU's PSPS protocols.

2 PSPS Overview

2.1 Regulatory Environment

The use of Public Safety Power Shutdowns by Publicly Owned Utilities (POUs) is governed by local and state regulations. Locally, the LEU's rules and regulations give the utility the authority to pre-emptively de-energize portions of the electrical system. The State, through the CPUC, does not regulate PSPS use or protocols by POUs, and the only regulation related to PSPS from the State comes from the requirements for describing PSPS processes in the utility's WMP. Appendix A, PSPS Regulations, contains the full text of the two PSPS regulations relevant to LEU's use of PSPS.

2.1.1 Local

Lodi Electric Utility Rules and Regulations No. 14

Rules and Regulations No. 14 Section B Interruption of Delivery provides LEU with the authority to pre-emptively suspend the delivery of electrical energy when necessary. Rules and Regulations No. 14 Section B also states that the LEU will provide reasonable notice to customers of the disruption as circumstances permit. Finally, Rules and Regulations No. 14 absolves LEU of any liability for the interruption of the supply of electrical energy.

Rules and Regulations No. 14 does not specifically address PSPS events or protocols. LEU has interpreted these rules and regulations as providing the utility with the authority to initiate a PSPS event.

2.1.2 State

The State does not regulate PSPS protocol or event reporting for publicly owned utilities (POUs). State regulations related to POU PSPS are limited to the section of the Public Utility Code (PUC) that contains the requirements for POU WMPs.

California Public Utility Code 8387

PUC 8387 describes the requirements for a POU's Wildfire Mitigation Plan. Section (b)(2)(F) contains the requirement to discuss the utility's protocols for "…deenergizing portions of the electrical distribution system…" as well as mitigating the impacts of PSPS events to first responders and health and communication infrastructure. Section (b)(2)(G) outlines the requirements for the VMP to describe the appropriate and feasible procedures for notifying customers, including first responders and critical infrastructure, that may be impacted by a de-energization event. Finally, Section (b)(2)(M) contains the requirement for the WMP to include a description of how the utility will restore service after a wildfire. Together, these three sections of the PUC 8387 provide the State's requirements for a POU's PSPS protocol.

2.2 LEU PSPS Protocol

As required in PUC 8387, LEU's WMP describes the three components of the utility's PSPS protocol; the process that the utility uses to decide where and when to pro-actively de-energize portions of its electrical system, the process for notifying impacted customers, and the process the utility uses for restoring service after the PSPS event is ended. The section below contains a summary of three components of LEU's PSPS protocol, and the full text is available in Appendix B.

LEU Thresholds for Initiating a PSPS Event

- Sustained Wind Speeds above 19 MPH
- Relative Humidity below 30%

LEU PSPS Process

1. Consultation with the Electric Utility Director and the Lodi Fire Department (LFD)

2. Identification of Affected Section:
3. Communication with Affected Customers:
4. Field Crew Dispatch:
5. Coordination for Citizen Welfare:

LEU Restoration of Service Process

Restoration of electrical service after a PSPS is governed by LEU's Electric Emergency Plan (EEP), which describes the order in which circuits are re-energized. LEU will visually inspect every involved portion of their system prior to re-energization.

3 LEU's PSPS Protocol Review and Recommendations

According to the CPUC, PSPS is a wildfire mitigation strategy that reduces the risk of electrical equipment igniting a wildfire in "at certain times and in particular locations when weather and fuel conditions increase the risk that equipment failure will lead to a catastrophic fire." (CPUC 2025). Dudek used the CPUC's statement that PSPS is an effective wildfire risk reduction strategy in certain locations and for a limited period in our review of LEU's PSPS protocol. Furthermore, Dudek recognizes that CPUC and California's electrical utilities regard PSPS as a 'measure of last resort' (CPUC 2025, Pacific Gas and Electric Company (PG&E) 2025, LEU 2024). Therefore, an effective PSPS protocol enables LEU to utilize PSPS as a measure of last resort in the portion of its electrical system where there is a high risk of catastrophic wildfire and when conditions are conducive to rapid fire growth.

Based on this understanding, we conclude that LEU's current PSPS protocol is appropriate for the utility. The current PSPS protocol is robust enough to allow the utility to use it should it become necessary, but not so complex that it burdens the utility with additional operational requirements or triggers an unnecessary PSPS activation review when conditions exceed their PSPS thresholds. This conclusion is based on the following findings, which are presented in more detail in the section below.

- First, LEU's service territory has a very limited area where there is a wildfire hazard, and PSPS as a wildfire mitigation strategy is not useful for the majority of its territory.
- Second, LEU's current PSPS protocol is similar to the PSPS protocols used by their industry peers.
- Third, a complex PSPS protocol, like the one utilized by PG&E, would not provide the utility with a more effective method for using PSPS in its service territory.

3.1 Wildfire Hazard in LEU's Service Territory

PSPS, as a wildfire risk reduction strategy, is of limited use for LEU. LEU's service territory is primarily urban (+90%) (San Joaquin County 2025), where the majority of their electrical equipment is located on developed properties or

along roadways (LEU, 2024) that is considered non-burnable or has a low probability of burning because it consists of irrigated and maintained vegetation (IFTDSS 2025). LEU's service territory does not contain any Fire Hazard Severity Zones as identified by CAL FIRE where there is the potential for catastrophic fire (CAL FIRE, 2025) nor does it contain any High Fire Threat Districts as identified by the CPUC, where there is the potential for catastrophic wildfire ignited by electrical utility equipment (CPUC 2021).

As noted above, the CPUC considers PSPS an effective strategy in a specific location where there is a risk of catastrophic fire due to a combination of weather and fuel conditions. LEU's service territory does not contain locations where there is a risk of catastrophic fire because there are no areas where fuel conditions can support the spread of a catastrophic wildfire. The LEU's existing PSPS protocol is effective for the limited wildfire hazard present in their service territory, where use of PSPS will not substantially impact wildfire risk. The current PSPS protocol permits the utility to use PSPS, in particular in coordination with the Lodi Fire Department, City officials, and other experts who may have justifications for the use of PSPS beyond the risk of utility ignition.

3.2 PSPS Protocols Used by Other POUs

LEU's current PSPS protocols are appropriate for the wildfire hazards in its service territory. POUs with similar wildfire hazards as LEUs (City of Industry, City of Vernon, City of Lompoc, and City of Pittsburg) have adopted similar PSPS policies. In the WMPs published by these POUs, each utility has identified that the majority of their electrical system are not in a location where their electrical equipment could potentially ignite a wildfire. Therefore, PSPS would not provide a significant decrease in wildfire risk, and the utility, like LEU, has elected to use PSPS only after coordinating with city officials and emergency responders (City of Lompoc, 2024; City of Vernon, 2024; Island Energy, 2022; Industry Public Utilities, 2024).

There are no industry standards for the electrical utility industry that provide guidance on how and when Public Safety Power Shutoffs (PSPS) should be used. While the CPUC publishes PSPS guidance documents, these are primarily intended for IOUs and largely focus on communications with customers and emergency responders (CPUC, 2019, 2020, 2021). The CPUC does not publish guidance documents for POUs for Public Safety Power Shutoff (PSPS) protocols. Based on Dudek's review of WMPs prepared by other POUs with similar service territories including City of Industry, City of Vernon, City of Lompoc, and City of Pittsburg, PSPS protocols for POUs are developed on a case by case basis and based on both fire hazards present and what the utility deems to be an acceptable protocol. All of the WMPs reviewed shared the following similarities with LEU's service territory:

- Minimal areas of flammable vegetation.
- Limited exposure of the utility's equipment to flammable vegetation.
- No portion of their electrical system is located in a CAL FIRE FHSZ or CPUC HFTD.
- No history of PSPS use.

POUs with similar wildfire hazards, as found in LEU's service territory, have similar PSPS protocols to LEU. These PSPS protocols include coordinating with emergency responders to determine when pre-emptive de-energization is a viable option for reducing fire risk or improving public safety. Like LEU, these utilities have concluded that their service territories do not contain significant wildfire hazards; therefore, PSPS as a wildfire mitigation strategy is of

limited effectiveness and only usable in special circumstances. Appendix C contains a summary of the PSPS protocols for the ten POUs evaluated for this report.

3.3 PSPS Protocols Used by IOUs

The majority of Publicly Owned Utilities (POUs) in California have relatively simple Public Safety Power Shutoff (PSPS) protocols, where the decision to pre-emptively de-energize their electrical system is made on a case-by-case basis in consultation with emergency responders. In contrast, IOUs in California have complex PSPS protocols that include constant fire risk evaluation and multiple levels of decision-making to initiate a PSPS event. A more complex PSPS is necessary for the IOUs whose service territories are large, difficult to monitor, and contain large sections of High Fire Threat Areas. While IOU protocols consider a larger amount of information for making their PSPS decisions, these more complex protocols are inappropriate for LEU's service territory because they include conditions that will never be met near LEU's equipment (e.g., low fuel moistures) or apply only to High Fire Threat Areas, which are not present.

In contrast to LEU's service territory, the IOUs' service territories cover a much larger area, and within these larger service territories are a variety of vegetation fuels and terrain. IOUs with a high exposure to high wildfire hazard areas (service territory includes HFTD Tier 3 areas) have complex PSPS protocols where the decision to initiate the PSPS event is based on a combination of observed conditions, fire risk scoring algorithms, and simulations of fire behavior. PG&E's PSPS protocol is a good example of the more complex process this IOU uses to determine when to consider using a PSPS. As shown in Appendix D, PG&E uses the following thresholds for its PSPS protocols:

- Sustained wind speeds above 19 MPH
- Ten-hour dead fuel moisture[1] below 9%
- One hundred hour dead fuel moisture below 12%
- Relative Humidity below 30%
- Normalized Differential Vegetation Index less than 0.36[2]
- Fire Potential Index[3] above 0.22

PG&E uses the above thresholds as **a minimum trigger to consider a PSPS in PG&E High Fire Threat Areas**. Assessing the above thresholds requires PG&E to monitor weather and fuel conditions in real time across its service territory rather than rely solely on National Weather Service, Federal Aviation Authority, or fire agency observation stations. Once these thresholds are met within the HFTD in their service territory, PG&E will initiate a PSPS event if one of PG&E's PSPS event criteria are met:

[1] 10 & 100 hour Dead fuel moisture is measure of the amount of moisture that is present in the woody debris. 10 hour fuels are equivalent to small sticks and branches in diameter (1/4 inch), 100 hr fuel is equivalent to small logs (1 to 3 in.).

[2] Normalized Differential Vegetation Index is a metric for measuring the health and density of vegetation using sensor data, the score ranges from -1 to 1. A value closer to 1 indicate healthy, dense vegetation, values closer to 0 indicate sparse, less healthy vegetation.

[3] A score that indicates the likelihood of ignition event causing a large or catastrophic fire. PG&E uses a range between 0 and 1 with 1 indicating extremely high likelihood of a fire.

- Catastrophic Fire Probability score above 7,
- Catastrophic Fire Behavior models predicting flame lengths above 10 feet, and rates of spread over 30 chains[4] per hour
- Event criteria above are met over a predetermined area.

PG&E utilizes, through partnerships with external experts, machine learning models that use historical datasets and advanced forecast models to provide the scores used in the above criteria (PG&E 2024).

While PG&E leverages an impressive amount of resources for determining when to initiate a PSPS, such a protocol is unlikely to provide a substantial benefit to existing PSPS protocols. Based on the thresholds in PG&E's PSPS protocol, LEU's service territory does not contain fuel conditions that would exceed PG&E's thresholds for PSPS use because it is a largely urban area and is not within a High Fire Threat District. Without exceeding PG&E's fuel condition thresholds, it is unlikely that any portion of LEU's service territory will score high enough on its fire potential index or catastrophic fire probability to trigger a PSPS.

3.5 PSPS Protocol Recommendations

Based on our review of PSPS protocols of POUs with similar service territories and wildfire hazards, as well as the PSPS protocol from a much larger utility with a much higher wildfire hazard, LEU's PSPS protocol, as outlined in their 2024 WMP, is appropriate for its electrical system and the wildfire hazards in its service territory (LEU, 2024). Dudek does not recommend adopting a different Public Safety Power Shutoff (PSPS) protocol.

In the preparation of this report, Dudek came across several instances of lawsuits involving electrical utilities in California and Oregon related to wildfire and wildfire prevention practices, and specifically the use of PSPS as a measure to minimize fire risk. After the Labor Day 2020 fires, Pacific Corp was sued for being negligent in not pre-emptively de-energizing some of its wires (Pacific Corp, 2025). In 2021, the CPUC issued an administrative law judge decision that penalized PG&E for a flawed implementation of PSPS during the fall of 2019 (CPUC 2021). In both of these cases, the lawsuit identifies the utility's PSPS protocol as a contributing factor to the lawsuit outcome. For Pacific Corp, the utility was being sued for not de-energizing portions of its systems during several wildfires on Labor Day 2020. For PG&E, the utility was being sued for not following its PSPS protocols and guidelines during a fall 2021 fire weather event. Dudek's interpretation of these lawsuits is that it is in LEU's best interest to have a well-developed PSPS protocol even if PSPS is a wildfire mitigation measure of limited application to the utility. Specifically, it would be beneficial to the utility to add a new PSPS threshold to its protocol that considers the condition of vegetation in the area as an indicator of potential fire risk (regardless of ignition source).

Our recommendation is to improve LEU's thresholds for when the utility considers the use of a PSPS by adding a threshold condition using the National Fire Danger Rating System (NFDRS). The NFRDRS is used nationwide by wildfire agencies to understand fire danger and mobilize firefighting resources. Two measurements of potential fire behavior represent NFRDRS: burning index (BI) and energy release component (ERC). These measurements are updated regularly by national and state fire agencies and are made available to the public through the region's Geographic Area Coordination Center. The NFDRS maps are online, updated at least daily during fire season, and are easy to read (the BI and ERC measurements are color-coded on the maps). The BI and ERC measurements are

[4] 1 Chain=66 feet

indicators of how intense a fire can burn and how difficult a potential wildfire may be to control (NIFC, 2025). These two measurements incorporate similar data as PG&E's Fire Potential Index, allowing LEU PSPS protocol to consider similar conditions (weather, fuels, and a fire danger rating) as PG&E's by using an easy-to-use and reliable publicly available source of information.

Dudek does not have additional recommendations for the other elements of LEU's PSPS protocol. The protocol, as described in the LEU WMP, outlines the necessary steps to meet the PUC 8387 requirements and addresses some of the flaws identified by the CPUC administrative law decision from 2021, including the requirement for advanced notification of affected customers.

4 Conclusions

Public Safety Power Shutoffs are a drastic measure taken to reduce wildfire risks, as customers may experience significant impacts during the period they are without electrical power. Based on the historical use of PSPS by PG&E and the PSPS protocols adopted by PG&E, PSPS is a viable strategy only when the utility has determined there is a high risk of its equipment igniting a destructive wildfire (PG&E). PSPS is a much less viable strategy for utilities with a low wildfire risk, such as LEU, where the likelihood of their equipment igniting a fire is very low, even when weather conditions would otherwise permit it, because their service territory does not contain areas where a destructive fire could spread. LEU's PSPS protocol, as described in their 2024 WMP, demonstrates their understanding of the limited utility of PSPS in their service territory. Still, it provides the LEU with a comprehensive protocol to use PSPS in the event that the utility, in consultation with the Lodi Fire Department, determines that it is necessary to protect its customers and equipment from wildfire.

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Appendix A
Public Safety Power Shut-off Regulations

State of California

PUBLIC UTILITIES CODE

Section 8387

8387. (a) Each local publicly owned electric utility and electrical cooperative shall construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment.

(b) (1) The local publicly owned electric utility or electrical cooperative shall, before January 1, 2020, prepare a wildfire mitigation plan. After January 1, 2020, a local publicly owned electric utility or electrical cooperative shall prepare a wildfire mitigation plan annually and shall submit the plan to the California Wildfire Safety Advisory Board on or before July 1 of that calendar year. Each local publicly owned electric utility and electrical cooperative shall update its plan annually and submit the update to the California Wildfire Safety Advisory Board by July 1 of each year. At least once every three years, the submission shall be a comprehensive revision of the plan.

(2) The wildfire mitigation plan shall consider as necessary, at minimum, all of the following:

(A) An accounting of the responsibilities of persons responsible for executing the plan.

(B) The objectives of the wildfire mitigation plan.

(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.

(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.

(E) A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.

(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 those protocols, including impacts on critical first responders and on health and communication infrastructure.

(G) Appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines. The procedures shall direct notification to all public safety offices, critical first responders, health care facilities, and operators of telecommunications infrastructure with premises within the footprint of potential deenergization for a given event.

(H) Plans for vegetation management.

(I) Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.

(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:

(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.

(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.

(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.

(L) A methodology for identifying and presenting enterprisewide safety risk and wildfire-related risk.

(M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.

(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:

(i) Monitor and audit the implementation of the wildfire mitigation plan.

(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation, and correct those deficiencies.

(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.

(3) The local publicly owned electric utility or electrical cooperative shall, on or before January 1, 2020, and not less than annually thereafter, present its wildfire mitigation plan in an appropriately noticed public meeting. The local publicly owned electric utility or electrical cooperative shall accept comments on its wildfire mitigation plan from the public, other local and state agencies, and interested parties, and shall verify that the wildfire mitigation plan complies with all applicable rules, regulations, and standards, as appropriate.

(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 website 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.

(Amended (as amended by Stats. 2019, Ch. 79) by Stats. 2019, Ch. 410, Sec. 3. (SB 560) Effective January 1, 2020.)

Lodi Electric Utility

Rules and Regulations No.14
CONTINUITY OF SERVICE

Revision: 02

Summary of changes:

Revision	Date	Council Resolution	Summary of Changes	Comments
1	3/22/1989	89-29	-Initial Release	
2	9/4/2019	2019-182	-Revisions page added -Formatting changes -Now referencing the Electric Emergency Plan (EEP) when a shortage of supply occurs -Added “Conflict with Equipment and Facilities” Section -Added “Tree Trimming” Section	

Lodi Electric Utility

Rules and Regulations No.14
CONTINUITY OF SERVICE

A. Shortage of Supply

1. The City will exercise reasonable diligence and care to furnish and deliver a continuous and sufficient supply of electric energy to the Customer, but does not guarantee continuity or sufficiency of supply.

2. The City shall not be liable for any shortage or insufficiency of supply of electric energy, or any loss or damage of any kind or character occasioned thereby, caused by strikes or labor disputes, fire or other casualty, governmental restrictions, regulations, orders or controls, terrorism or sabotage, civil commotion or riots, war or hostile governmental action, wind, rain, lightning, earthquake, or other act of God, or any other cause beyond the City's reasonable control.

3. If a shortage of supply occurs, the City will make an apportionment of the available supply of energy among Customers as ordered or directed by the Electric Emergency Plan (EEP).

B. Interruption of Delivery

1. The City will have the right to suspend temporarily the delivery of electric energy whenever necessary to make repairs or improvements to its system. Reasonable notice, as circumstances permit, will be given to the Customers. However, during emergency work notification of further interruptions may not be given. Repairs or improvements will be completed as rapidly as possible. Non-emergency work will be scheduled and performed to cause the least inconvenience to the affected Customers. Such scheduled outages will normally occur during normal working hours.

2. In the event a request by the City for a scheduled interruption during normal working hours cannot be agreed upon by one or more Customers and the only acceptable time for the interruption is outside of normal working hours, then such Customer(s) shall pay all overtime premiums associated with the work.

3. The City shall not be liable for interruption of supply of electric energy, or any loss or damage of any kind or character occasioned thereby, the causes include but are not limited to strikes or labor disputes; fire or other casualty; governmental restrictions, regulations, orders or controls; terrorism or sabotage; civil commotion or riots; war or hostile governmental action; wind, rain, lightning, earthquake, falling trees, birds, animals or any other act of God; or any other cause beyond the City's reasonable control.

C. Conflict with Equipment and Facilities:

Equipment and facilities, including metering equipment, installed by the City within easements and rights-of-way that subsequently become obstructed, covered, inaccessible, exposed to traffic, incorrectly applied, etc., as a result of actions such as landscaping, screening, fencing, driveway widening, etc., solely caused by and to the benefit of the property owner and/or occupant of the property where such equipment and facilities were originally installed, shall have corrective measures implemented, per City's approval, at the property owner's and/or occupant's expense.

D. Tree Trimming (Line Clearing):

LEU will from time to time trim, clear away and, if necessary, cut down trees and brush in the vicinity of its overhead lines. The City will determine whether or not the trees and brush are in the vicinity of its overhead lines. The clearances determined by the City around Services (Service Drops), although desirable, may require extreme impact on landscaping.

Tree trimming (line clearing) is done to improve the overall system reliability, to eliminate hazards from trees and branches falling on the lines and per General Order No. 95 of the State of California, Rule 35 which states, "Where overhead wires pass through trees, safety and reliability of service demand that a reasonable amount of tree trimming be done in order that the wires may clear branches and foliage."

The City will perform the necessary trimming to clear the lines, will remove all brush and trimmings from the Premises and, if requested by the property owner, will leave any and all valuable timber and wood at the site.

Lodi Electric Utility

The City will not perform any shaping or overall trimming of trees.

The property owner agrees as a condition of Service to provide access to do line clearing consistent with this rule.

(End)

Appendix B
Lodi Electric Utility PSPS Protocols

G. DE-ENERGIZATION

When evaluating minimum fire potential conditions, the following thresholds will be considered:

1. Sustained Wind Speed: Above 19 miles per hour for 30 minutes continuously.

2. Relative Humidity (RH): Below 30 percent.

Evaluation Process:

If both of the above criteria are met, the Electric Distribution Operator is required to follow the steps outlined below:

1. Consultation: The Electric Distribution Operator will promptly consult with the Electric Utility Director and the Lodi Fire Department (LFD). This consultation is crucial for assessing the potential risk and determining appropriate actions.

2. Identification of Affected Section:

Upon consultation, the relevant stakeholders will collectively identify the specific section of the distribution line that poses a risk and requires de-energization for public safety.

3. Communication with Affected Customers:

Utilizing the Outage Management System (OMS), the Distribution Operator will send advanced text messages to customers in the affected area. These messages will aim to provide a 30-minute advance notice to prepare for the impending de-energization.

4. Field Crew Dispatch:

Following the communication with affected customers, the Distribution Operator will promptly dispatch field crew members to de-energize the identified section of the electric line.

5. Coordination for Citizen Welfare:

The Electric Utility (EU) Director, in collaboration with the City Manager, will coordinate efforts to identify a suitable shelter for citizens with medical needs who will be impacted by the de-energization. This ensures that vulnerable individuals receive necessary support and assistance during the outage.

By adhering to this procedure, the Electric Distribution Operator, Electric Utility Director, and relevant stakeholders can effectively mitigate risks associated with minimum fire potential conditions while prioritizing public safety and welfare.

Appendix C
Summary of PSPS Protocols from Selected Publicly Owned Utilities in California

Lathrop Irrigation District

Lathrop Irrigation District's service territory covers eight square miles and is located entirely in a largely developed urban area near Stockton, California. The Lathrop Irrigation District's service territory does not contain any High Fire Threat Districts. The Lathrop Irrigation District's WMP includes a PSPS protocol that establishes thresholds for when the utility will consider a PSPS.

PWRPA and PG&E in Colusa Area

While customers in the PWRPA-Colusa service area have not lost service due to an IOU PSPS event, customers have been previously notified about potential loss of service due to forecasted IOUs PSPS events. Similar to LID, PWRPA-Colusa has not had to shut off electricity in response to elevated wildfire risk preemptively. PWRPA-Colusa has not developed protocols to preemptively shut off electricity in response to wildfire-related risks.

Biggs Municipal Utilities

Similar to PWRPA-Colusa, Biggs has not previously lost service due to an IOU PSPS event, but customers have been previously notified about potential loss of service due to forecasted IOUs PSPS events. Biggs 2023 WMP does not specify is electricity has been previously preemptively shut off in response to elevated wildfire risk. Specific protocols to preemptively shut off electricity in response to elevated wildfire risks are not listed in the Biggs WMP.

Gridley Electric Utility

The Gridley WMP does not specifically mention if customers in the Gridley service area have previously lost service due to an IOU PSPS event, but customers have been previously notified about potential loss of service due to forecasted IOUs PSPS events. Electricity has been previously preemptively shut off in response to elevated wildfire risk. Specific protocols to preemptively shut off electricity in response to elevated wildfire risks are not listed in the Gridley WMP.

Port of Stockton

The Port of Stockton has previously notified customers of potential loss of service due to forecasted IOU PSPS events, but has not lost service due to an IOU PSPS event nor has electricity been previously pre-emptively shut off in response to elevated wildfire risk. The Port of Stockton has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks

Sacramento Municipal Utility District (SMUD)

SMUD's service territory contains both highly urban areas with low wildfire risk in the Sacramento area as well as higher wildfire risk areas in the areas surrounding Sacramento. SMUD's service territory covers approximately 900 miles, while some it is located in areas the utility determines are Wildland Urban Interface, none of its service territory is in a CPUC High Fire Threat area. SMUD has developed PSPS protocols that include thresholds for considering PSPS use. SMUD has pre-emptively de-energized portions of its system to reduce wildfire risk from its equipment.

City of Industry

The City of Industry Public Utility's (IPU) service territory covers two square miles and is located entirely within the highly urban Los Angeles metropolitan area. The IPU's service territory does not contain any High Fire Threat Districts. The IPU WMP states that the utility has the authority to pre-emptively shut off power but this option is unlikely to be utilized because of the utility's minimal fire risk. The IPU has not adopted specific PSPS protocols.

City of Vernon

The City of Vernon's Public Utility (VIPU) service territory covers approximately five square miles and is located entirely within the highly urban Los Angeles metropolitan area. The VPU's service territory does not contain any High Fire Threat Districts. The VPU WMP states that the utility has the authority to pre-emptively shut off power but this option is unlikely to be utilized because of the utility's minimal fire risk. The VPU has not adopted specific PSPS protocols.

Lompoc Electric

While Lompoc Electric has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks, Lompoc Electric has not adopted specific protocols for de-energizing any potions of its electric distribution system because of the infrastructure has minimal risk of causing a power-line ignited wildfire. Although approximately 28.8% of Lompoc Electric's service area is located in CPUC HFTD, its small service area has a dense urban footprint, flat terrain, and only 1.21% of overhead distribution lines are in Tier 2 HFTD. Less than 1% of Lompoc Electric's 15,263 customers are located in the HFTD. If Lompoc were to turn off power to customers in the HFTD, less than 1% of customers would be affected. Additionally, if wildfire were a concern, sections of the HFTD can be isolated to limit power outage to specific areas. If power needed to be turned off, Lompoc Electric would coordinate with the City of Lompoc Fire Department, the City Administration Department, and, if activated, the City EOC to notify impacted customers prior to a power shut off event. Lompoc Electric management will oversee restoration of service and response activities in cooperation with local agencies.

Pittsburg Power Company

The Pittsburg Power Company does not have any High FHSZ nor CPUC Tier 2 and Tier 3 areas within their service territory. 11 miles of their distribution lines are underground, and overhead distribution lines total approximately 10,480 feet. Although their risk of wildfire is very low, Pittsburg Power Company has developed protocols to pre-emptively shut off electricity in response to elevated wildfire risks. Pittsburg Power Company has the authority to shut off power due to ignition-thread conditions, but this authority will be exercised in extraordinary circumstances. Specific PSPS protocols are not outlined in the WMP, but considerations for shutting off power and for restoring service are listed within the WMP. Customers would be notified in advance of a power shut off event, whether by Pittsburg Power Company or PG&E. Restoration of service would be per PPC utility operation procedures, which are listed in their WMP.

Appendix D
Summary of PG&E's PSPS Protocols

Appendix C

PSPS Protocol Summary for PG&E and Public Utilities

PSPS Protocols

Investor-owned Utilities

PG&E

PG&E considers implementing a PSPS event when the combination of strong, gusty winds and critically low humidity and fuel moisture levels lies over areas with dry vegetative fuel loads, creating a high risk that vegetation blown into a power line or a spark from a power line could cause an ignition that could lead to a catastrophic wildfire (PG&E 2021). Exhibit 1, PG&E's High-level PSPS Process Steps, displays an outline of the general events that would occur during the possible implementation of a PSPS event.

The process to prepare for and to conduct a PSPS event begins several days before the weather conditions that could create fire risk occur. PG&E identifies these weather conditions through internal and external forecasting services, sources, and data, including those from federal agencies. External forecast information from the NWS (e.g., Red
Flag Warnings (RFW) and other forecast agencies are examined carefully. Furthermore, PG&E coordinates with these agencies during high-risk periods to ultimately decide to de-energize portions of the grid for public safety.

Reviewing weather conditions is crucial for assessing minimum fire potential conditions and determining the scope of a PSPS to be executed (Exhibit 2, PSPS Protocols for Distribution). If **all** minimum fire conditions are met, then PG&E evaluates Catastrophic Fire Probability, Catastrophic Fire Behavior, Vegetation, and Electric Asset Criteria Considerations for both Distribution and Transmission. Tree Considerations and Fireline Intensity are additional factors that are considered in PSPS protocols for Distribution (PG&E 2025), while Catastrophic Fire Probability is analyzed in PSPS protocols for Transmission through two components: Assets and Vegetation (Exhibit 3, PSPS Protocols for Transmission).

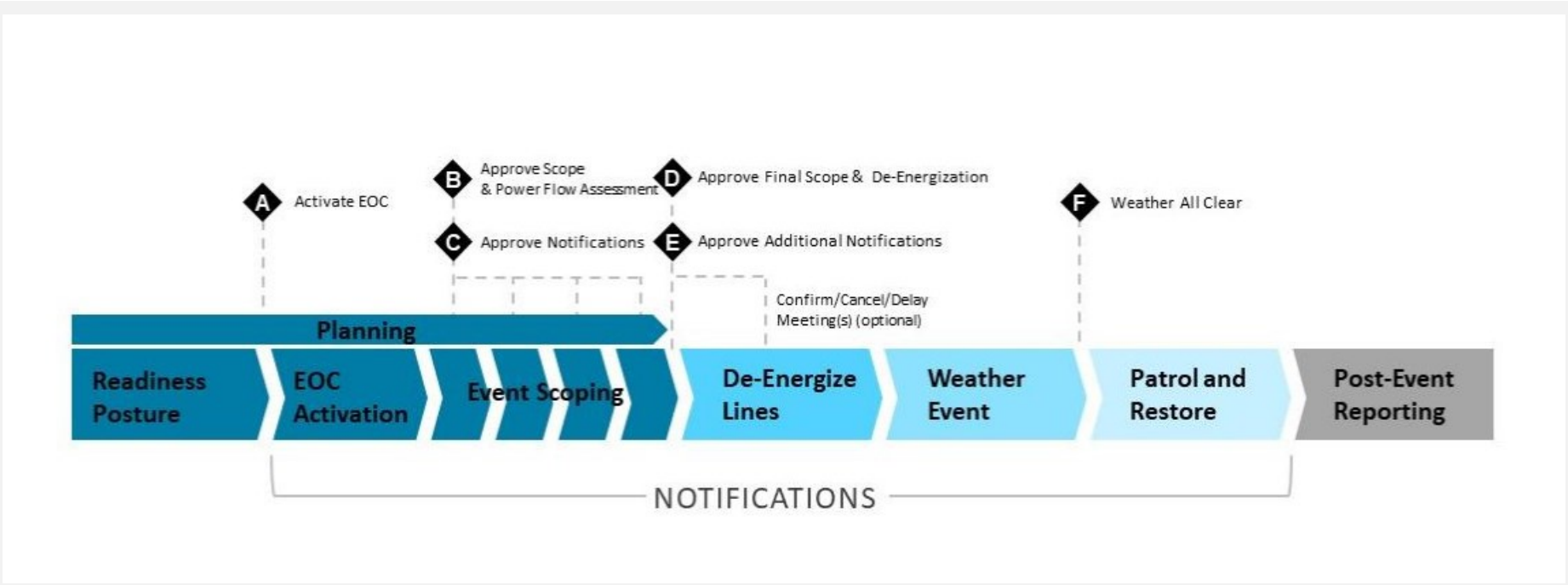

Exhibit 1. PG&E's High-Level PSPS Process Steps (PG&E 2025)

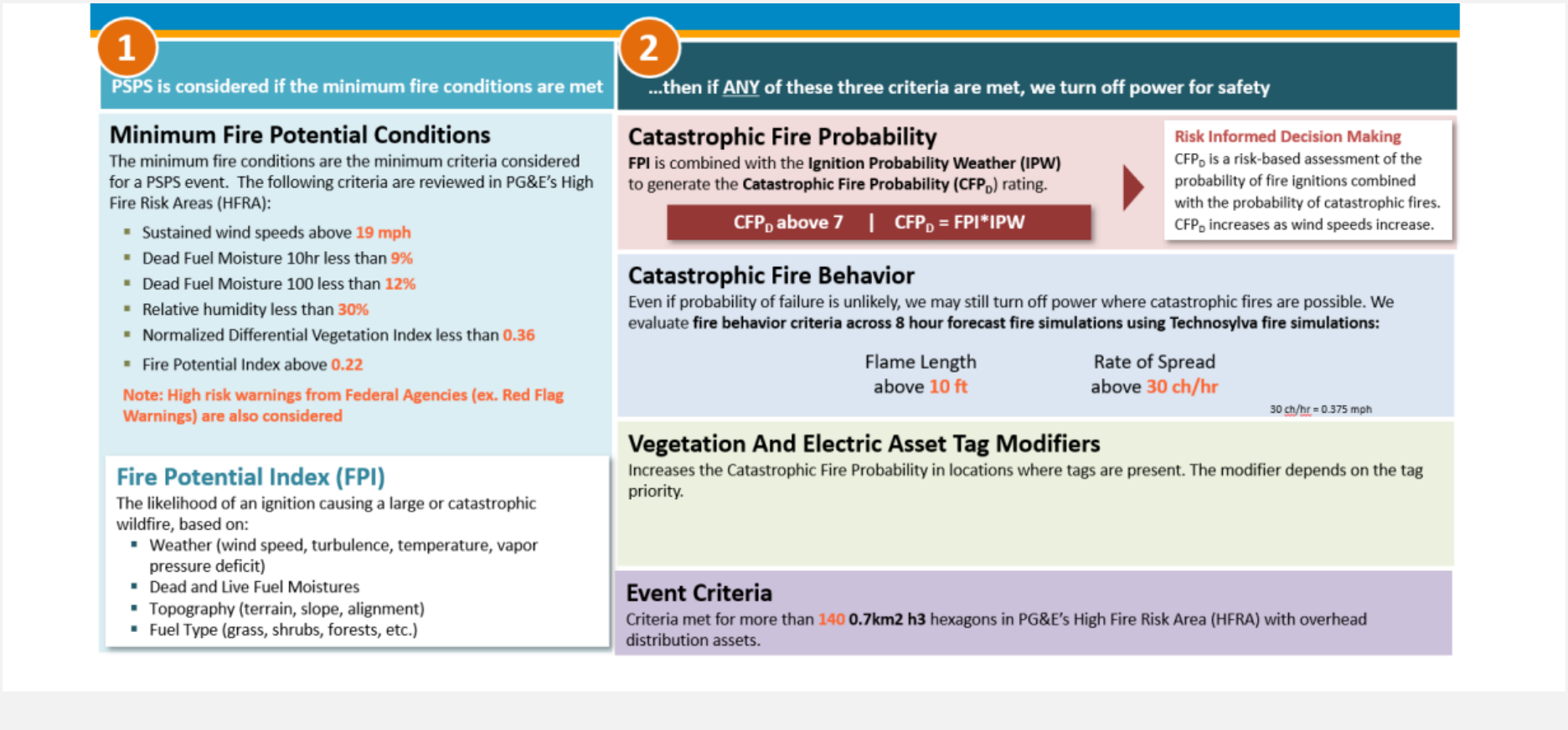

Exhibit 2. PG&E PSPS Protocols for Distribution (PG&E 2025)

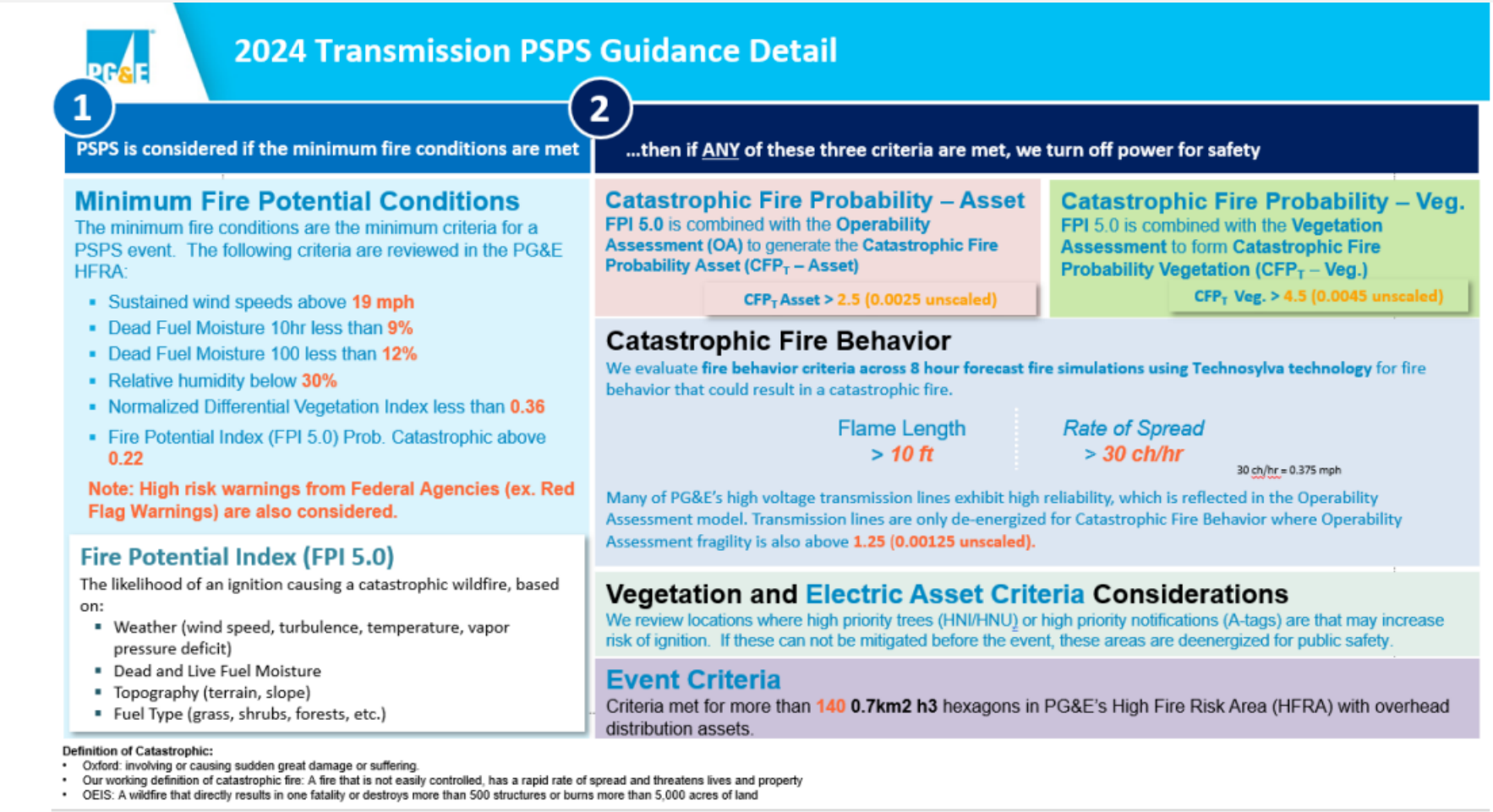

Exhibit 3. PG&E PSPS Protocols for Transmission (PG&E 2025)

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Pacific Gas and Electricity Company (PG&E). 2021. Response of Pacific Gas and Electric Company to Energy Safety Remedy PG&E-21-29 And Change Order Report. Dated September 30, 2021.

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