NAVIGANT
A Guidehouse Company

Wildfire Mitigation Plan Independent Evaluation

Prepared for:

Anaheim Public Utilities

ANAHEIM PUBLIC UTILITIES

Submitted by:
Guidehouse Inc.
35 Iron Point Circle
Suite #225
Folsom, CA 95630

guidehouse.com

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DISCLAIMER

This report was prepared by Guidehouse, Inc., f/k/a Navigant Consulting, Inc. ("Guidehouse"),[1] for the City of Anaheim Public Utilities Department ("APU"). The work presented in this report represents Guidehouse's professional judgment based on the information available at the time this report was prepared. Guidehouse is not responsible for the reader's use of, or reliance upon, the report, nor any decisions based on the report. GUIDEHOUSE MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED. Readers of the report are advised that they assume all liabilities incurred by them, or third parties, as a result of their reliance on the report, or the data, information, findings and opinions contained in the report.

[1] On October 11, 2019, Guidehouse LLP completed its previously announced acquisition of Navigant Consulting Inc. In the months ahead, we will be working to integrate the Guidehouse and Navigant businesses. In furtherance of that effort, we recently renamed Navigant Consulting Inc. as Guidehouse Inc.

EXECUTIVE SUMMARY

The City of Anaheim ("Anaheim") Public Utilities Department (APU) contracted with Guidehouse, Inc. f/k/a Navigant Consulting, Inc. ("Guidehouse") to engage in an independent evaluation of its Wildfire Mitigation Plan ("Plan" or "WMP"). This independent evaluation report ("Report") describes the technical review and evaluation provided by Guidehouse. Guidehouse performed this evaluation between March and April of 2020 and completed the Report on April 10, 2020. Guidehouse's project team reviewed detailed information related to the Plan and assessed APU's procedures related to the Plan.

Anaheim initially prepared a wildfire mitigation plan in 2018 and submitted the to the Anaheim Public Utilities Board and Anaheim City Council for approval. This proactive measure by APU predated the regulatory requirement of Senate Bill ("SB") 901. This plan was also posted to APU's public website.

The Plan was prepared as a response to SB 901, which was signed into law on September 21, 2018. SB 901 resulted in a number of provisions and directives, among which includes the requirement for electric utilities to prepare and adopt plans and revise and update the plan annually thereafter. These requirements are codified in the California Public Utilities Code ("PUC") Section 8387 for publicly owned utilities ("POUs").

Guidehouse evaluated APU's 2020 updates to the 2018 wildfire mitigation plan based on the statutory requirements of PUC Section 8387 as it relates to POUs. This PUC Section was amended on July 12, 2019 as a result of the signing of California's Assembly Bill (AB) 1054 into law. AB 1054 amended Section 8387(b)(1) to include a provision that requires POU's to "submit the plan to the California Wildfire Safety Advisory Board on or before July 1 of each year" (beginning in 2020) and conduct mandatory cyclical revisions. The required elements for a plan have not been modified by this new legislation. This Report meets the requirement imposed on APU under PUC Section 8387(c), which mandates an independent evaluation of APU's Plan. The Report was developed to satisfy the statutory requirement for public review. This Report underlies the required evaluation by the governing body of Anaheim at a public meeting, scheduled for May 12 2020. The Report includes the following:

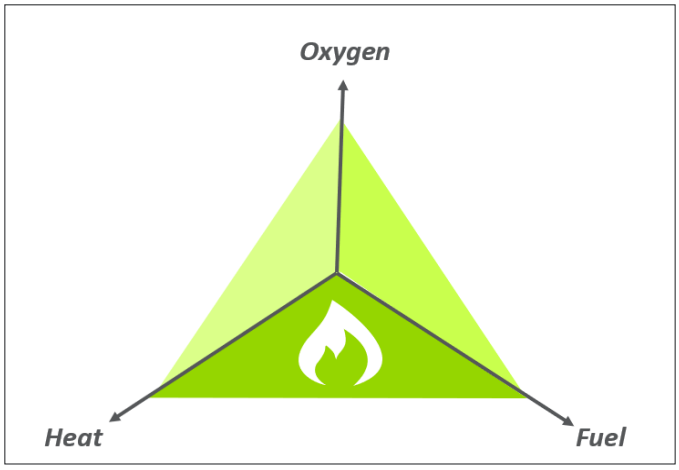
- Background of the legislative history requiring wildfire mitigation plans and their independent evaluations
- Approach and methodology evaluating a plan's comprehensiveness
- APU's Plan elements and their compliance with SB 901 and PUC Section 8387 wildfire mitigation plans elements and directives
- An evaluation of the Plan's presented metrics to assess the effectiveness of the overall Plan
- Determinations and results

Based on relevant experience in grid hardening and resiliency, natural disaster response, prior experience in wildfire mitigation plan development, and active tracking of wildfire legislative and regulatory proceedings Guidehouse has concluded that APU's WMP is comprehensive and meets the statutory requirements in accordance with PUC section 8387.

1. BACKGROUND

In recent years, California has seen an increase in utility equipment-involved, catastrophic wildfires. The unique geographic profile of California and the impacts of climate change, including continued dry conditions, high winds, and elevated heat index risk from global rising temperatures, have led to elongated fire seasons. The state is also experiencing increased levels of vegetation fuel due to the wet winters, hotter summers following a seven-year drought, and past fire suppression efforts. This increasingly abundant dry vegetation is the leading driver of wildfires. The levels of dry vegetation fuel have been aggravated by a destructive bark beetle infestation that continues to impact the health of the state's forested areas, further increasing fire risk. These fuel-rich environments, coupled with intensified climatological conditions with high wind gusts and natural electrical infrastructure risks, produce the conditions conducive to potential wildfire ignition. The three attributes that provide optimal conditions for a fire ignition are illustrated through the graphic in Figure 1: Fire Triangle.

Figure 1: Fire Triangle



Disastrous wildfire threat is a well-known and shared priority among electric utilities in California. The recent spike in utility-involved wildfire incidents since the 2015 wildfire season and the significant financial and livelihood impacts associated with them have led to more formalized efforts to ensure safe operations of electric utility equipment and greater investment in wildfire mitigation efforts.[2] Specifically, the state has approved legislation that strengthens governmental and regulatory oversight of wildfire prevention implementation activities, utility wildfire mitigation plans, and proper dispersal of state funds to wildfire victims. In an effort to minimize future devastating occurrences through risk-driven wildfire prevention, electric utilities, including cooperatives, were mandated, by SB 901 (Senator Bill Dodd, 2018), to prepare and annually adopt a wildfire mitigation plan before January 1, 2020. This effort is foundational to the state's prioritized goal of minimizing the potential of devastating fires in future years.

1.1 SB 901 – Wildfire Mitigation Plans

On September 21, 2018, Governor Jerry Brown signed SB 901 into law. The bill directs electrical utilities to annually prepare wildfire mitigation plans that include several mitigation and response elements in each utility's strategies, protocols, and programs. Each electric utility is to prepare and adopt a comprehensive wildfire mitigation plan before January 1, 2020. The requirements for publicly owned

[2] California Public Utilities Commission, 2019. "Fire Incident Data Reports for Investor-Owned Utilities," https://www.cpuc.ca.gov/fireincidentsdata/.

utilities (POUs) are presented in Public Utilities Code (PUC) Section 8387. Details relating to POU requirements are discussed in Section 2 of this Report.

1.2 Anaheim Public Utilities Plan Preparation

APU began providing electric utility services to the City of Anaheim in 1895. Anaheim's population has grown to approximately 360,000 and there are approximately 20,000 businesses located in Anaheim. Anaheim is the 10th largest city in California, with the only municipally-owned electric and water utility in Orange County. APU is governed by the Anaheim City Council who appoints a Public Utilities Board that serves as an advisory body consisting of local residents to provide recommendations and reviews APU's operations, finances, and conducts public hearings.

Anaheim is about 50 square miles and divided into six Council Districts. For the purpose of APU's WMP, the areas considered to be in the Fire Threat Zone (FTZ) are generally in District 6, or the eastern portion of Anaheim which is comprised of steeper terrain and is part of the wildland urban interface.

Wildfire safety is a critical issue in Anaheim. As recently as 2017, a wind-driven wildfire (Canyon Fire 2) destroyed homes and caused the evacuation of thousands of residents in Anaheim. The cause of Canyon Fire 2 was not due to any actions or inactions of APU. Additionally, APU sub-transmission or distribution lines were not impacted as approximately 98% of APU-owned power lines in the FTZ are currently underground, which significantly reduces the overall risk to the community. As a customer-owned utility, APU emphasizes safety, reliability and affordability in its daily operations and long-term investments.

APU participates in the California Independent System Operator (CAISO) and is interconnected to the regional grid at 220 kilovolts (kV) and distributes power from its fourteen 69 kV to 12 kV substations located throughout Anaheim through approximately 1,200 circuit miles of sub-transmission and distribution lines. APU's historic peak demand is 596 Megawatts (MW).

1.2.1 Independent Evaluation Services

PUC Section 8387(c) directs POUs to procure services for an independent evaluation (IE) of the comprehensiveness of their wildfire mitigation plans. In 2020, upon commencement of the California Wildfire Safety Advisory Board, guidelines and further details related to the scope and timelines of future IEs will be discussed and reviewed. In its present form, the provisions of PUC Section 8387 state that the independent evaluator shall be experienced in "assessing the safe operation of electrical infrastructure" and will perform an assessment to determine the comprehensiveness of wildfire mitigation plans.[3]

APU sought IE services to assess the comprehensiveness of its WMP pursuant to PUC Section 8387(c) prior to presenting the final updated WMP to its City Council and contracted Guidehouse Consulting, Inc., n/k/a Guidehouse Inc. (Guidehouse) in March of 2020 to undertake an assessment of its Plan based on Guidehouse's prior experience with assessing the safe operation of electrical infrastructure, including grid-hardening and wildfire mitigation plans, with an emphasis on electrical equipment, public, and personnel safety.

Emergent practices will materialize as evolving legislative action and technology advances continue to shape wildfire mitigation and safety efforts. Understanding this, Guidehouse performed a comparison of the wildfire mitigation investments undertaken by other utilities throughout California as well as relied on the team's experience in working directly with utilities to develop their wildfire mitigation plans and data collection practices along with prior experience related to gird hardening and electric safety assessments. This Report presents the results of Guidehouse's IE of the WMP. The following section describes the methodology in executing this evaluation.

[3] It is recognized that this requirement does not yet include a clear definition of comprehensiveness.

Guidehouse Identification of Qualifications

Guidehouse provides IE services throughout the United States. Guidehouse's grid-related IE projects include storm hardening, wildfire mitigation, resiliency assessments, advanced technology suitability, among others. Our approach includes an evaluation of data considered, suitability of tracking metrics – both frequency and trends analysis - and an evaluation of key performance indicators. Guidehouse assesses the efficacy of tools for creating sufficient awareness and for effectiveness of understanding overall wildfire mitigation plan's intended and actual impacts. Guidehouse also leverages experience developing "Metrics and Benefits Reporting Plans" to gauge cost-effectiveness of activities and alignment of plans to intentions.

Guidehouse continues to track proceedings, pending legislation, and other developments surrounding utility wildfire risk. Our team remains active with wildfire mitigation plan engagements across jurisdictions and risk profiles. As part of maintaining high acumen of prudent mitigation strategies, Guidehouse participates in forums focused on innovative wildfire mitigation strategies—further expanding our industry knowledge. Guidehouse provides thought leadership and advisory wildfire mitigation plan services related to wildfire mitigation plans and other resiliency innovative technologies to the California Energy Commission and has supported their system hardening and fire prevention efforts since 2008. Additionally, Guidehouse's reach into grid resiliency and disaster-related hardening extends across the United States including island grids, such as Puerto Rico, recovering from recent, weather-related catastrophes.

2. EVALUATION SCOPE AND APPROACH

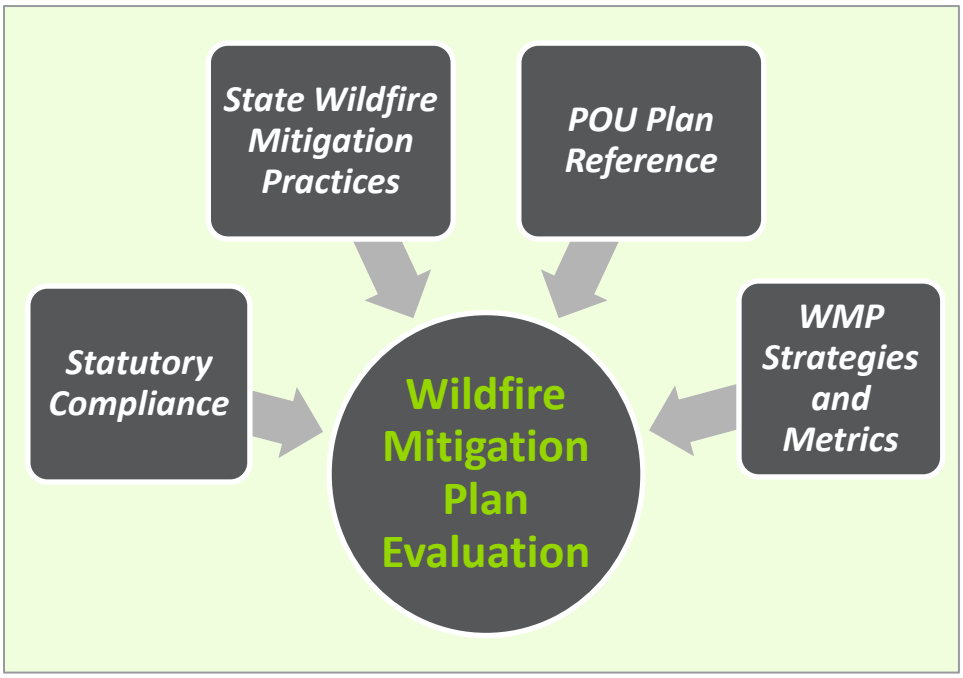
Guidehouse completed this evaluation based on industry standard practices, our experience developing and reviewing wildfire mitigation plans and other grid hardening activities, our active tracking of wildfire legislative and regulatory proceedings and, most importantly, a comparison of the specific criteria in PUC Section 8387(b)(2) to the specific wildfire-related plans outlined in APU's WMP.

The state's priority towards abating future catastrophic wildfire events is demonstrated through aggressive measures, directing utilities to enhance their protocols for fire prevention, public communications, and response. That collection of information is presented in a comprehensive wildfire mitigation plan. Guidehouse has tracked docketed proceedings and maintains a presence in state activities and workshops surrounding wildfire prevention. Understanding that APU is not subject to CPUC regulations, the insight gained from this related experience is leveraged in assessing APU's Plan relative to its risk profile and industry position.

2.1 Evaluation Parameters

Figure 2 represents the attributes comprising the methodology and approach of the evaluation.

Figure 2: Contributing Factors to Evaluate the Plan



As mentioned above, the requirement for electric utilities and corporations to develop wildfire mitigation plans emerged from the directives of SB 901 and associated statutory modifications. See Table 1 for the complete statutory compliance list for POUs.

Table 1: POU Requirements for the WMP

PUC Section 8387 *(as amended on July 12, 2019)*
(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 consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure.
(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 enterprise wide 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.

2.2 Evaluation Approach

To perform an assessment of the comprehensiveness of the Plan, Guidehouse used the following approach.

2.2.1 Statutory Compliance

Guidehouse sought to determine compliance with the provisional requirements laid out in SB 901 as codified in PUC Section 8387. The Plan's alignment with the statutory requirement is presented in Appendix A. Mitigation measures are not required to exceed the statutory requirements.

2.2.2 Industry Wildfire Mitigation Practices Comparison

Accepted practices for wildfire mitigation have been discussed and presented at numerous events. Additionally, wildfire mitigation plans approved by the CPUC have garnered significant insight from the industry at large. Guidehouse's understanding of an effective wildfire mitigation plan draws on comparisons from existing wildfire mitigation plans and industry practices and is summarized according to business practice categories described in Figure 3: Mitigation Strategy Overview.

Figure 3: Mitigation Strategy Overview

Design & Construction: System, equipment, and structure design and technical upgrades designed to improve system hardening to prevent contact between infrastructure and fuel sources, such as vegetation.

Inspection & Maintenance: Assessment and diagnostic activities as well as associated corrective actions aimed to ensure all infrastructure is in working condition and vegetation adheres to defined minimum distance specifications.

Operational Practices: Proactive, day-to-day actions taken to mitigate wildfire risks aimed to ensure the POU is prepared in high-risk situations, such as dry, windy environmental conditions.

Situational & Conditional Awareness: Methods to improve system visualization and awareness of environmental conditions aimed to provide tools to improve the other components of the plan.

Response & Recovery: Procedures to react to de-energization, wildfire, or other related emergency conditions, aimed to formalize protocols for these situations, so the POU can provide an adequate response and recovery.

Expertise in these critical elements facilitated Guidehouse's review of the comprehensiveness of APU's WMP. While not all of these strategies need to be present in or applicable to in any POU's wildfire mitigation plan, due to that POU's size, location, and system or operational characteristics, Guidehouse's understanding of collected utility strategies demonstrated throughout the state are summarized below:

- ***Inspection and maintenance of distribution transmission and substation assets*** including conducting system patrols and ground inspections, using technological inspection tools, managing predictive and electrical preventative maintenance, and conducting vegetation inspections and management, vulnerability detection such as Light Detection and Ranging (LiDAR) inspection; and geospatial and topography identification, geographic information system (GIS) mapping data. A key component is identifying collected data elements through each program and understand how that data is used and shared to improve utility practices.
- ***Vegetation management*** that includes routine preventative vegetation maintenance; corrective vegetation management and off-cycle tree work; emergency vegetation clearance, prioritized for portions of the service territory that lie in high hazard zones, quality control processes; and resource protection plan, including animal and avian mitigation programs.
- ***System hardening*** that includes pole replacement, non-expulsion equipment, advanced fuses, tree attachment removal, less flammable transformer oil, covered wire and wire wrap, and undergrounding where cost beneficial.
- ***Operational practices*** including communications and mustering plans under varying degrees of wildfire risk. Plans to deactivate automatic reclosers, de-energization of "at risk" area powerlines based on type of facility (overhead bare conductions, high voltage, etc.), tree and vegetation density, available dry fuel, and other factors that make certain locations vulnerable to wildfire risk.
- ***Situational awareness*** including obtaining information from devices and sensors on actual system, weather and other wildfire conductivity conditions, two-way communication with agencies and key personnel. Programs such as online feeds and websites such as the National Fire Danger Rating System. Situational awareness should help achieve a shared understanding of actual conditions and serve to improve collaborative planning and decision making.
- ***De-Energization actions*** triggered and prioritized by forecasted extreme fire weather conditions; imminent extreme fire weather conditions; validated extreme fire weather conditions; and plans for re-energization when weather subsides to safe levels. Manual or automatic capabilities exist for implementation.

- ***Advanced Technologies*** including Distribution Fault Anticipation technology, tree growth regulators, pulse control fault interrupters, oblique and hyper-spectral imagery; advanced transformer fluids; advanced LiDAR, and advanced SCADA, to reduce electrical ignition while also helping to mitigate power outages and equipment damage.
- ***Emergency Preparedness, Outreach and Response communications*** before, during, and after emergencies including but not limited to engaging with key stakeholders that include critical facilities and served customers; local governments, critical agencies such as California Department of Forestry and Fire Protection (CAL FIRE), local law enforcement agencies and other first responders, hospitals, local emergency planning committees, other utility providers, California Independent System Operator, and the utility's respective Board. Coordination agreements such as Mutual Assistance should be leveraged. Community outreach plan should inform and engage first responders, local leaders, land managers, business owners and others.
- ***Customer support programs*** including financial assistance and support for low-income customers; billing adjustments; deposit waivers; extended payment plans; suspension of disconnection and non-payment fees; repair processing and timing; access to utility representatives; and access to outage reporting and emergency communications. Consideration of languages in addition to English. Identification of priority customers, such as first responders and local agencies, health care providers, water and telecommunication facilities, groups that assist children, elderly, mobility impaired, and other vulnerable populations.

2.2.3 Value Determination of Plan Metrics

Metrics for tracking the wildfire mitigation plan's progress intend to allow the utility to refresh information as trends become clearer. Based upon the discussion included in the CPUC's Phase 2 of the SB 901 proceeding docket, interests in metric development and underlying data collection are beginning to take shape. While these determinations do not directly influence the public power sector, insight has been leveraged to employ and evaluate effective metrics.[4]

[4] CPUC Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to SB 901 (2018) (Rulemaking 18-10-007) https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R1810007.

3. APU WMP PLAN ELEMENTS

Guidehouse reviewed the Plan elements to determine whether the activities supported the intention to deploy an effective wildfire mitigation plan. This determination incorporated individual elements as well as underlying data sources that further described data collection methodologies and implementation procedures to ensure measures are carried out and also tracked. This understanding also informs internal reviews and subsequent updates for future Plan iterations.

Guidehouse found that APU's WMP meets the statutory requirements of comprehensiveness per PUC Section 8387. In this section, we review the WMP's elements and their purpose relative to the development and successful execution of the WMP. A table comparing each subsection of PUC Section 8387 to the significant sections of the WMP can be found in Appendix A.

3.1 Review of Statutory Elements

3.1.1 Objectives and Overview of Preventative Strategies and Programs

PUC Section 8387
(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.

3.1.1.1 Objectives

APU states the WMP objectives in Section 1.B. of the WMP.

According to the Plan, the "WMP serves to establish methods and procedures used to construct, maintain, and operate APU's electrical lines and equipment to minimize the risk of wildfire posed by its infrastructure." Additionally, the Plan is intended to meet the provisions mandated by several recent California laws that requires all public and investor owned utilities to develop and implement a WMP.

3.1.1.2 Preventive Strategies

APU sets forth numerous preventive strategies and programs in their Plan. Table 6 in Section 7 of the WMP including strategies that address the following topics:

1. Situational/Conditional Awareness
2. Design and Construction
3. Inspection and Maintenance
4. Operational Practices
5. Response and Recovery

These strategies are discussed at length in Sections 8 (Situational Awareness), 9 (Preventative Strategies for Building Infrastructure Resiliency), and 10 (Operational Strategies to Reduce Risk of Wildfire Ignition) of the Plan. These initiatives are further supported by pictures, operating plans, technological tools, etc. in place at APU and reviewed by Guidehouse.

3.1.2 Risks, Risk Drivers, and Risk Assessment

PUC Section 8387
(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.
(L) A methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk.

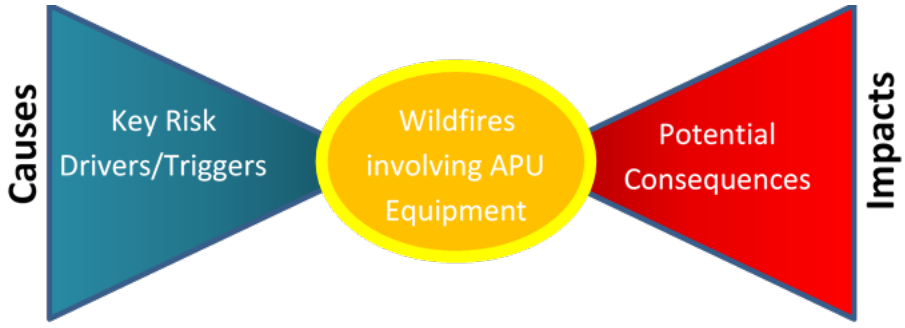
3.1.2.1 Identification of Risks and Risk Drivers

APU identifies, describes, and prioritizes wildfire risks and risk drivers throughout the Plan, with the following sections as the focus of such efforts of APU's Plan:

- Sections 2 ("Enterprise-wide Safety Risk Assessment" - methodology),
- Section 3 ("Dynamic Climate Change" – anticipated impacts of a changing climate),
- Section 4 ("Overview of Risks and Risk Drivers Related to Wildfires" – risk/risk driver identification),
- Section 5 ("Assessment Inventory in High Fire Threat Zones" – identifying those assets most at risk from wildfire, and most likely to contribute to the ignition of a wildfire)

Of the above, Section 4 is the core effort to address PUC Section 8387(b)(2)(J). Section 4 identifies the risk and risk drivers specifically related to wildfires, describes those risks, and explains the process in which APU evaluated risks from utility operations or equipment sparking a wildfire and prioritized them based on the threat to the community, core business impact, consequences, and risk mitigation path. As can be seen below, APU included risks and risk drivers associated with the design, construction, operation, and maintenance of their system, as well as the topologic and climatologic risk factors present in their service territory.

APU evaluated these risks through the "bow-tie method" which they illustrated with the following:



Through this methodical analysis APU identified the following risks are detailed in "Table 2" on pages 11-12 of the Plan which is incorporated below.

Table 2

Risk- APU Equipment including Third Party Attachment Igniting a Wildfire		
Potential Drivers	Description of Impact	Mitigation Measures and Programs
Topology	Wildland areas with exposure to overhead power lines.	• Vegetation Management • Construction Standards • Water infrastructure reliability improvements to help protect homes near wildland areas • Ensure availability of water in Walnut Canyon Reservoir for water aircraft support • Patrols of utility equipment and structures
Elevated wildfire conditions	Weather conditions plus topology more conducive to the spread of a wildfire.	• Construction Standards • Reclosers Blocking • Wildfire Cameras • Pole Loading • Threat Level Communications and Public Outreach
Climate Change	Expanding fire threat areas and more extreme weather conditions.	• Inventory Assessment in the FTZ • Vegetation Management
Contact by a foreign object	Vegetation, metallic balloons, avian, vehicle accidents, for example, coming into contact with APU overhead electric facilities.	• Construction Standards • Avian Deterrents • Conductor Spacing • Undergrounding
Failure of Equipment	Electrical equipment containing flammable material or potential for arcing when operated in a FTZ.	• System Inspection • System Patrols
Downed Conductors including Third Party attachments	Energized electrical wires falling and coming into contact with vegetation below.	• System Inspection • System Patrols • Reclosers Blocking • Vegetation Management • De-Energize Equipment • Undergrounding
Energized lines coming into contact	Multiple energized lines in contact with each other creating arcing and sparking in dry conditions.	• Construction Standards • Conductor Spacing • De-energize Equipment
Operational Procedures	Automatic operations to re-energize a line after an interruption or programmable settings that de-energize during specific conditions.	• Reclosers Blocking • Public Safety Power Shut-off • Notification to AF&R emergency operations to determine necessity of activation of local

Risk- APU Equipment including Third Party Attachment Igniting a Wildfire		
Potential Drivers	Description of Impact	Mitigation Measures and Programs
		Emergency Operations Center (EOC) and establishment of incident command • Evacuation Assessment • Initiate citywide communications and public outreach • Staffing of 311 Call Center to assist with customer inquiries
Lack of Coordinated Response	When ignition is identified, a well-coordinated response to suppression and de-energizing lines to limit progression of the fire.	• Customer Support and Emergency Response coordination with local and regional first responders • Coordination with SCE • Staffing of EOC and inter-departmental collaboration on traffic, emergency management, and communications

The risk drivers were also detailed in "a separate Table 3" of the Plan which is partially copied below:

Table 3

Risk Driver	Categorization
Topology	Situational Awareness
Elevated Wildfire Condition	Situational Awareness
Climate Change	Situational Awareness
Contact by Foreign Object	Design & Construction/Response & Recovery
Failure of Equipment	Design & Construction/ Inspection & Maintenance
Downed Conductors including Third Party attachments	Design & Construction/ Inspection & Maintenance
Energized lines contact together	Design & Construction
Operational Procedures	Operational Practices
Lack of Coordinated Response	Response & Recovery

3.1.2.2 Methodology for identifying and presenting enterprise-wide safety risk and wildfire-related risk

Section 2 describes the Enterprise-Wide Safety Risk Assessment performed by APU. APU has instituted a comprehensive risk assessment that looks at all risks facing APU, including wildfire, which represents an industry best practice. In this process, APU follows the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management - Integrated Framework. APU states that the purpose of this assessment, captured in the "Utilities Enterprise Risk Management Matrix," is to identify, prioritize, and manage potential enterprise and safety risks, including "failure to properly identify and address wildfire related risks" and associated risks such as regulatory compliance, loss of power, and

reputational damage, among other topics that could "threaten the community, interrupt core business functions, and threaten business continuity or impact recovery."

APU's enterprise risk management framework includes an iterative process that begins with an assessment where managers identify threats and identify risk owners, and then monitors risk evolution and emerging risks as well as the effectiveness of risk control efforts.

3.1.3 Asset Overview & Service Territory

PUC Section 8387
(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 5 addresses APU's assessment of high fire threat districts in its service territory.

APU, AF&R, along with SCE and Orange County Fire Authority developed the Anaheim FTZ boundaries based on the CalFire "Very High Fire Hazard Severity Zones" identified areas within its territory (primarily areas in the WUI) that are at elevated risk for wildfire. This was submitted to the Peer Development Panel and Independent Review Team appointed by CalFire and the CPUC and adopted in September of 2017.

Anaheim does not identify any areas where there is a higher wildfire threat than identified in a commission fire threat map, nor is there a request to expand any high fire-threat district based on any new information or changes to the environment.

3.1.4 Wildfire Prevention Strategies

PUC Section 8387
(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.
(H) Plans for vegetation management.
(I) Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.

3.1.4.1 Disabling Reclosers

APU has established a protocol for disabling reclosers on four distribution circuits during elevated threat conditions, which is described in Section 10.C of the Plan. APU will disable its automatic reclosing capability of the protective relays for lines located within the FTZ as a precautionary measure, during windy periods that invoke either Red Flag Warnings (RFW) or Santa Ana Wildfire Threat Index (SAWTI) conditions. APU also, notes that APU operations is responsible for disabling reclosers, and will receive training on this subject. Additionally, if these identified circuits experience a fault and relay, they will not be re-energized until a visual inspection has been performed.

3.1.4.2 De-Energization Protocols

Section 10.D addresses the possibility of enacting a de-energization protocol, commonly known as Public Safety Power Shutoff (PSPS). APU notes that "the potential for de-energizing power to APU customers is extremely remote" but does not rule out their use for a very limited portion of their service territory affecting eight residential customers.

Section 10.D also describes the operational and communication protocols that will be followed for both de-energizing that portion of the system and notifying impacted customers. APU states they will contact the affected customers via in person communication, phone, text, and email. APU will also coordinate such actions with other Anaheim entities such as Anaheim Fire & Rescue (AF&R), Police, Safety, Public Works, and City Public Information Officer, and will work through the media to keep the public informed.

Additional details are described *part 3.1.5.1* below.

3.1.4.3 Vegetation Management

Section 9.A details APU's vegetation management practices. As a general practice, Anaheim through Anaheim Public Works,[5] upholds CPUC General Order 95 – Rules for Overhead Electric Line Construction Rules for Overhead Electric Line Construction, Section III - Minimum Allowable Clearances - Extreme and Very High Fire Threat Zones in Southern California practices for vegetation management and determining appropriate vegetation clearances from energized elements within its high FTZs.

Additionally, APU has an as needed, year-round program to remove hazard trees that includes removal of dead/rotten trees and brush,[6] clearing vegetation around the base of power poles, as well as tracking species of particular concern. All of this information is collected in Anaheim's geographical information system (GIS) that tracks the location, species, condition and trimming schedule for trees near APU overhead lines, which represents an industry best practice. This also forms the basis for one of the metrics to be tracked as part of APU's WMP.

3.1.4.4 Infrastructure Inspections

APU describes its inspection program in detail in Section 9.B of the Plan. As with the vegetation management program, APU follows the guidelines set forth in the CPUC GOs even though they are not subject to CPUC jurisdiction, specifically GO 165 and 174. APU runs a comprehensive and systematic inspection program that includes visual inspections, intrusive pole testing, oil sampling, and infrared inspections based on annual, three-year, and five-year cycles that is supplemented by hazard tracking and as-needed inspections and maintenance/replacements for issues that post public safety or reliability risks. The inspection cycles are organized in APU's inspection schedule map, and detailed guidance is contained in APU's supporting documentation. Additionally, APU is also tracking inspections, equipment details, and maintenance conditions on its GIS, again representing an industry best practice.

[5] Public Works program is largely detailed in the "Tree Standards and Specification Manual."

[6] AF&R runs a brush abatement program that uses goats and tools to remove brush and establish fire breaks.

3.1.5 Response & Restoration

PUC Section 8387
(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.
(M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.

3.1.5.1 Event Communication

APU's WMP discusses Customer Notification Procedures in Section 11 of the Plan in addition to the brief discussion in the de-energization section 10.D (described in part 3.1.4.2 above).

Section 11.A states that with respect to PSPS, APU and AF&R held an outreach event in October 2018 for the residents that would be potentially impacted by a PSPS, informing them of the measures APU will take to avoid a power shut-off, but also informing them they would receive alert notifications, in the event one is imminent or occurring.

Additionally, Anaheim has held community events to inform residents and customers of fire dangers, potential impacts, and fire safety efforts of APU and other City of Anaheim organizations such as a Wildland Fire Preparedness Fair in April 2019 and Public Safety Town-Hall meeting for District 6, an area primarily located in the FTZ, in July 2019. Anaheim also details special provisions in place to ensure the safety of its residents with disabilities.

In the Plan, APU describes the close interactions and coordination between APU and other City first responders and agencies and how these entities will interact in an emergency. The details of these interactions are further elaborated in the City of Anaheim Emergency Operations Plan ("EOP"). APU provides a link to the EOP in Section 11.B of the WMP.

Additionally, the WMP notes the City of Anaheim Emergency Response Plan - Public Notification and Alerts, uses the following methods to warn the public of emergency conditions. Emergency information, warnings, and actions for an event will be broadcasted to the public by any one of the following methods:

- Emergency Alert System ("EAS")
- Wireless Emergency Alert ("WEA")
- Integrated Public Alert and Warning System ("IPAWS")
- Route alerting - Detour and evacuation routes posted by AF&R
- AlertOC – Mass notification via phone or text message initiated by Orange County
- Anaheim Alert – Mass notification via phone or text message initiated by the City of Anaheim
- Social Media
- Medial-releases – through the City PIO
- Telephone emergency hotline – established during Canyon Fire 2

APU also describes the establishment of a Mobile Neighborhood Utility Center near areas impacted by major water or electric incidents to provide timely and meaningful system information updates to customers to improve communications with impacted residents.

Finally, APU included that it utilizes information obtained from the California Utilities Emergency Association and the American Public Power Association, as well as standards contained in the CPUC's

GO166-Standards for Operation, Reliability, and Safety During Emergencies and Disasters, which APU has utilized as a guideline for emergency planning.

3.1.5.2 Restoration

Restoration is addressed in Section 11 of the WMP. In that section APU describes its plans to restore service after a wildfire. The WMP is further supported by restoration efforts described in System Order 2529 and the Public Safety Power Shutoff/Restore Process diagram which includes a site patrol of affected areas prior to re-energization. If necessary, APU could also call on mutual aid assistance as APU is a member of the California Utility Emergency Association. Additionally, APU's WMP notes it will undertake customer support and protection measures to ease strains, especially financial burdens, on customers.

3.1.6 Plan Execution, Monitoring, & Metrics

PUC Section 8387
(A) An accounting of the responsibilities of persons responsible for executing the plan.
(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.
(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.

3.1.6.1 Responsibilities of Persons Responsible for Executing the Plan

APU describes the responsible parties, as well as the organization and assignment responsibilities for the execution of the Plan in Section 13 of the WMP which includes both an organizational chart (figure 9 of the WMP) and a table (table 8) that lists the areas of responsibility for each department. These assignments of responsibilities satisfy PUC 8387 Section (b)(2)(A).

3.1.6.2 Metrics

APU identified three primary metrics that will be used to evaluate the Plan's performance in Section 14. These include two categories of metrics:

1. Specific metrics of fire incidents, and
2. WMP performance metrics.

For fire incident metrics, APU will track RFW and SAWTI alerts for Orange County, reclosers disabled due to fire threat conditions, PSPS events, and "reportable ignitions in an FTZ associated with electric overhead conductors." With respect to the second category, WMP performance metrics, APU will continually track and assess its performance with respect to CPUC GO 95 and 165. These performance metrics will be used to establish benchmarking that will compare targeted completion of tasks against actual completion. APU expects these metrics will be refined further and may include additional elements over time.

Table 2: APU Proposed Metrics

Specific metric	Indicator	Measure of effectiveness	Criteria
RFW and SAWTI Alerts	Alerts Issued in Orange County	N/A	Track number of RFW/SAWTI issued
Reclosers disabled	Disabling of APU Reclosers	N/A	Track number of fire threat events requiring disabling APU reclosers
Reportable Fire Ignitions	Fire Starts	Decreased number over time	Track number of fire ignitions cause by APU equipment/facilities.
PSPS Events	PSPS Events	Decreased number over time	Track number of PSPS events
GO 95 and 165 Performance	Performance Trend	Tasks Completed	Comparison of target completion versus actual completion,

These metrics are largely an extension of issues already tracked since at least 2018 by APU but these are expanding and will likely continue to do so. Additional areas tracked by APU include but are not limited to:

- Downed power lines
- New weather monitoring stations
- Wood pole replacement
- Concealed lightning arresters installed
- New fire cameras
- Percentage of powerlines undergrounded
- Fire trainings delivered

Guidehouse believes the metrics identified and tracked satisfy the requirement of PUC 8387(b)(2)(d).

APU began tracking performance metrics in 2018, but only limited data has been available from such metric tracking thus far. Additionally, new metrics will be tracked beginning this year. Future versions of the WMP will likely include a broader discussion of previous metrics and how those metrics are used to shape and improve measures to reduce the risk of wildfires. The previously identified metrics were not evaluated in depth as this is the first statutory year of this program, however, these metrics also appear to satisfy the requirement for 8387(b)(2)(e).

3.1.6.3 Monitoring and Auditing the Plan

Section 15 describes how APU intends to monitor and audit the WMP. Specifically, Anaheim notes the Plan will be reviewed annually with an assessment of the relevant programs conducted under or in alignment with the WMP. APU will also track the metrics described above and monitor the performance in order to evaluate the effectiveness of its fire mitigation efforts. APU will use these inputs to align planning and budgeting for future years and to develop and implement any necessary changes to design, construction, or maintenance standards to be incorporated into future iterations of the WMP. As part of this effort, APU will identify any deficiencies in the plan or implementation and correct them accordingly.

APU plans continuously monitor the implementation of the WMP to identify any deficiencies in the wildfire mitigation plan or its implementation. Identified deficiencies, will be assessed and corrected as soon as is practicable. Additionally, APU will monitor and audit the effectiveness of its electrical line and equipment inspections, including inspections performed by contractors described in Section 9.A through its implementation of GIS, its tracking of metrics described in Section 14, and by other means (such as spot checks or reviews of work orders) on an ongoing basis.

4. INDUSTRY PRACTICES COMPARISON

In consideration of industry-accepted and demonstrated mitigation measures, Guidehouse provided a comparison against approved California utility wildfire mitigation plans that are comparable to APU service territory, risk profile, and equipment within the Fire Threat Zone (FTZ). The complete comparison matrix with supporting information is provided in Table 2. Highlighted strategies for effective wildfire mitigation are represented in Table 2 below; four items have been recommended for detailed discussion of the applicability and efficacy of the proposed strategy.

Fuels Management

Many types of plant materials can act as wildfire fuel, including grasses, shrubs, trees, dead leaves, and fallen pine needles. Accumulation of these burnable materials increase the chances of catastrophic wildland fire. In the right conditions, excess fuel allows fires to burn hotter, larger, longer, and faster, making them more difficult and dangerous to manage. The intensity and severity of wildfires is often reduced through fuels management activities. Fuels management is an action designed to reduce fire hazards by removing or rearranging fuels. When applied to strips of land, they are designated as a fuel break or fire break. Fuel breaks are strips of land in which vegetation, both dead and alive has been modified, but some trees and shrubs are retained.

Anaheim tracks the location, species, condition, and trimming schedule for trees near power lines in the Tier 3 FTZ to maintain a defensible space. The attributes of the tree and GPS coordinates are archived in Geographic Information System (GIS) mapping, and annual inspections and trimming appropriate for the growth pattern of that species is recorded. To manage surface fuel in the FTZ, AF&R manages the Brush Abatement Program.

APU's approach to fuels management is well coordinated with AF&R and can be considered a leading practice.

Disabling Reclosing Operations

Disabling reclosing refers to the ability to turn off the functionality of substation reclosing circuit breakers and line reclosers to attempt to isolate fault conditions and re-energize (turn back on) areas of the electric grid. Traditionally, electrical circuits were designed to automatically open and close to detect and isolate faults. In many cases, the relays would make two or three attempts to isolate a fault condition. Each potential attempt could cause an electrical spark, which could be a source of ignition. Disabling reclosing significantly reduces the number of potential ignition sources.

APU's WMP indicates the use of the "reclose and test" method to allow for a shorter outage duration and less impact to service when the fault is momentary. During Red flag warnings, and/or SAWTI indicates wind speeds are excessive, APU operators will disable the automatic reclosing capability of the protective relays for lines located within the FTZ as a precautionary measure. Four distribution circuits are identified as subject to disabling the reclosing function during these elevated fire and weather conditions. Additionally, if a fault is experienced on these circuits, a visual inspection will be performed prior to energization.

APU's approach to disabling reclosing, and patrols after line faults is consistent with best practices at other Utilities.

Non-Expulsive Fuse Devices

Fuses (Fusing) refer to protective devices that defend the distribution system from faulted or damaged lines and equipment. Historically, APU, other utilities in California, and utilities across the country have

used conventional fuses to protect powerlines. These conventional fuses, when operated, expel hot particles and gases, which can start fires. In order to mitigate the potential for fire ignitions, non-expulsive fuses can be installed to replace expulsion type fuses. Fuse manufacturers now provide current-limiting fuses with self-contained design that eliminate expulsive showers associated with expulsion fuse operation. These non-expulsive fuses are more suitable for FTZs. Many of these fuses have been granted permanent exemption by the California Department of Forestry and Fire Protection (CAL FIRE) from pole clearance requirements if installed in the field according to manufacturer's specifications.

APU currently has 31 locations within the FTZ (Tiers 1-3) that have expulsive fuse units. APU has initiated a pilot test of 6 non-expulsive units within the FTZ, using a fuseless lateral line mounted recloser that uses vacuum interrupters that can be placed in non-reclose mode. The devices do not produce hot debris and minimize sparks, having met CAL FIRE exemption status.

APU's actions are consistent with the non-expulsive fuse best practices being performed by the other utilities in the state.

Operational Activities Limitations

A best practice that is being implemented by some California utilities establishes procedures and routine operational practices that limit or curtain operational activities during periods of increased risk within fire threat districts. These procedures and practices provide employee and contractors specific information and instructions to improve the reliable and safe operations of electric facilities and mitigate the threat of utility caused inadvertent ignitions. For example, depending upon the level of designated fire risk, activities such as tree trimming, use of reciprocating equipment, blasting and conductor replacement are limited or curtailed. Crew safety monitors may also be assigned when crews are working within an FTZ during period of elevated risk.

APU limits the operational practices of employee and contractors during periods of elevated wildfire risk. It is noted that 98% of the APU power lines in the FTZ are underground, which significantly reduces the risk of inadvertent ignition during performing operational activities.

APU's actions to evaluate and limit operational activities within the FTZ during conditions conducive to wildfires is consistent with the best practices being performed by the other utilities in the state.

4.1 Mitigation Strategies Assessment

The following describes the scoring determinations of the benchmarking practice. Guidehouse weighed strategies that have been demonstrated globally as well as from those proposed by state utilities. As expressed in Figure 4, this benchmarking practice supports efforts to determine a wildfire mitigation plan's comprehensiveness when investigating the mitigation measures proposed in APU's WMP. This assessment is designed to confirm prudent measures as proposed by APU and did not result in any material findings that would result in non-compliance or lack of comprehensive WMP elements.

Figure 4: Determinations for Benchmarking

Meets the state and federal requirements and aligns with the identified benchmarking practices

The Plan does not effectively describe the mitigation measure to warrant a sound determination or the strategy does not align with the presented best practice strategy. For the purpose of this evaluation, exploratory considerations of proposed best practice measures would fall under this category.

The strategy does not apply to the Utility or their risk exposure to wildfire events

The selected strategies represented in Table 2 include both statutory requirements that exist as industry standards for POUs as well as accepted industry practices within the state.

TABLE 2 INDUSTRY PRACTICE STRATEGY COMPARISON MATRIX

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Situational Awareness / Weather Conditions					
Real-time situational awareness of conditions that lead to high risk of wildfires requires a multi-faceted approach including but not limited to coordination with local public agencies, weather monitoring, strategically placed high visibility cameras and other early warning systems.	Having access to internal and external mechanisms to track fire conditions (high wind, dry conditions, high heat), will aid in responding to and preventing potential fires by enacting related protocols during fire watch conditions	Especially in the FTZ, weather stations and cameras would allow APU personnel to have access to real-time monitoring of these areas	APU collaborates with multiple parties to enable situational awareness through camera networks, web-based real time monitoring data from local weather stations and fire condition warning systems for tracking for fire threats and conditions. Anaheim Fire and Rescue (AF&R) provides daily assessments of fire conditions for the East Anaheim FHZ. Of specific note are the high- resolution cameras with the ability to zoom into areas to identify ignition point and monitor wildfire spread.		APU has established leading approaches for real-time wildfire situational awareness and response. These actions can serve to identify wildfire ignitions and accelerate response to limit wildfire expansion and property damage.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Cameras with night vision mode capability atop of electrical structures	Visual inspections can be enhanced through the use of cameras with high definition and night vision capabilities. This measure improves response times in addressing risk incidents and de-energization	The FTZ zone within the APU service territory is expansive with difficult to access areas.	AF&R and APU joined with University of California San Diego-Scripps (UCSD) to become part of this regional network of fire cameras and to include locations in Anaheim. Anaheim strategically placed one of its Pan-Tilt-Zoom (PTZ) cameras to capture real-time situational awareness in Gypsum Canyon /2017 Canyon Fire 2 area and a second camera was installed at a substation to provide a different vantage point. Two additional locations have been identified and verified that they can accommodate the network requirements for the cameras and are being coordinated with UCSD Scripps for installation.		The wildfire camera network provides AF&R and APU operators the ability control and monitor cameras for real time verification of wildfire ignitions
System Hardening / Design & Construction / Operational Practices					
Replacing bare wires with covered conductors	Covered wire is a well-demonstrated prevention method to sparks / ignitions during severe weather conditions. Several utilities are employing pilot programs of covered wire replacement of distribution lines, prioritizing FTZs for implementation.	APU has limited overhead distribution lines (3.04 circuit miles in Tiers 1-3) FTZs that would benefit from additional hardening such as covered wire replacement for existing legacy bare wire.	APU has hardened an overhead 12Kv circuit tie traversing from Tier 1 to Tier 3 with 27 ductile iron poles and increased conductor spacing. Another overhead 12Kv traversing from Tier 1 To Tier 3 is under consideration for undergrounding. Additionally, APU has implemented increased wire spacing and protections against animal contacts.		APU has taken alternate resiliency measures for the limited overhead distribution lines in Tier 3. Applicability to replace bare wires with covered conductors is very limited.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
New or planned electrical lines (distribution and transmission) that are designed to withstand working loads under the stress above design standards to address high wind speeds	As new capital infrastructure plans are developed, it would be prudent to consider resilient design standards that can withstand sustained winds and gusts that occur during Red Flag Warning periods.	Construction of distribution facilities meet or exceed GO 95 standards. Specifically, APU increases pole strength requirements to meet the GO 95 safety factors. APU does not own or construct transmission lines.	APU construction standards for overhead infrastructure including poles, conductors, switches, connectors, and grounding in the Tier 3 FTZ have been modified to incorporate design and construction to account for the highest measured 3-second wind gust. As stated above, Anaheim has also been aggressive in undergrounding in the Tier 2/Tier 3 FTZs.		APU meets the best practice criteria through construction of new distribution lines through standards meeting or exceeding GO 95
Steel or composite poles swapped out for wood poles, at minimum, within FTZs or fireproofing wooden poles (fire resistant material coating)	When considering pole replacement strategies, when applicable, composite or steel poles can reduce the risk that wood poles present. At minimum, fire retardant material can be coated to temporarily enhance the ability to prevent fire spread or impact the stability of the structure under fire threat.	While pole remediation activities exist, such as additional clearing, coring to test structural integrity, and coating mechanisms, when new poles are considered for high fire severity zones, more resilient designs should be a consideration.	APU has hardened an overhead 12Kv circuit tie traversing from Tier 1 to Tier 3 with 27 ductile iron poles and increased conductor spacing. Another overhead 12Kv traversing from Tier 1 To Tier 3 is under consideration for undergrounding.		Where applicable, APU has swapped out wood poles with ductile iron poles. Additional measures are recommended for a .5- mile overhead distribution line traversing from Tier 1 to Tier 3.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Pole loading assessment, pole intrusive inspection and testing	Carry out programs that address pole loading issues and inspections that would result in remediation to infrastructure.	GO 166, Section E – specifies that Utilities shall have a Fire Prevention Plan that describes implementable measures to mitigate threats of power line ignitions in situations that meet specified criteria GO 165 is considered a “best practice by many public owned utilities. GO 165 Section III A (5) defines "Intrusive" inspection as one involving movement of soil, taking samples for analysis, and/or using more sophisticated diagnostic tools beyond visual inspections or instrument reading.	APU allows for a total maximum weight attached onto the pole using standard guidelines established in GO 95, Section IV. Wind parameters for calculating pole loading were increased from 8 lbs. to 12 lbs., exceeding the GO 95 standard, and has been assessed for all poles within or adjacent to the FTZ. Spacing between wires attached to cross arms mounted on the poles are also increased for energized overhead lines located in or adjacent to the Tier 3 FTZ. The increased clearance reduces the potential for wires to contact each other during Santa Ana wind conditions. APU inspection practices are aligned with GO 165 – Inspection Requirements for Electric Distribution and Transmission Facilities. Inspection of the overhead system, which included intrusive pole testing of over 17,000 poles, & associated overhead conductors and equipment was completed in 2018. Results from the latest inspection cycle included 72 of the 86 wood poles in the FTZ that met the GO 165 criteria were intrusively tested, and the remaining 14 were visually inspected with no findings of deterioration.		APU follows best practices in pole loading assessment and pole inspections

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Expulsion fuse device change out to current-limiting (non-expulsive) fuses	Traditional fuses pose a fire risk due to the ignited material that can be expelled. Best practices for mitigating this risk is to change out these fuses with non-expulsive fuses A protective device coordination study achieves an optimum balance between equipment protection and selective isolation that is consistent with the operating requirements of power systems.	FTZs would benefit from the replacement of traditional fuses with ones that minimize sparks and arcs Electrical systems use fuses and circuit breakers to protect electrical equipment. Equipment failures and other anomalies may cause a short circuit. Risks are reduced within FTZs when a short circuit impacts only that portion of the system where the failure occurs.	APU has changed out lighting arrestors to a concealed version which protects against animal intrusion and expulsion. APU has initiated a pilot program for non-expulsion fuses. They plan to pilot test 6 non-explosive fuse units in one of our overhead FTZ areas. If the pilot proves successful, APU will expand into additional FTZ installations. The device to be piloted is a line mounted reclosers with vacuum interrupters that do not expel debris and sparks, which helps mitigate the risk of wildfires. The reclosers also have a Non-Reclose mode, a feature recommended so operators can disable reclosing during periods of heightened risk.		APU should continue the non-expulsive fuse pilot program
Tree attachment removals	This practice involves the removal of electrical infrastructure fastened to trees for infrastructural support but can be a source of ignition. The removal of these legacy devices may reduce electrical spark risk.	APU has no tree attachments within Tier 1-3 that require evaluation	APU has no existing tree attachments and does not allow tree attachment for new service installations.		Tree attachments do not apply to APU

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Disabling reclosers through blocking reclosing operations (distribution level) in FTZs during the fire season and/or during Red Flag Warnings issued by the National Weather Service (or as fire risk potential designates)	Disabling reclosing reduces the number of potential ignition events during a fault condition	Reclosing operations should be defined within the Plan as per statute. Operational best practices align with having settings that align with fire potential weather conditions to prevent potential ignition	APU operators will disable the automatic reclosing capability of the protective relays for lines located within the FTZ as a precautionary measure. Four distribution circuits are identified as subject to disabling the reclosing function during these elevated fire and weather conditions. Additionally, if a fault is experienced on these circuits, a visual inspection will be performed prior to energization. APU has also disabled the reclosing function on the recloser used as a switch on the normally open line with the FTZ.		APU meets the basic requirements of this practice strategy
Ground patrol as well as aerial inspection practices	Routine ground patrols are implicit practices in equipment and vegetation inspection protocols. Increasing the frequency, especially in FTZ, represents an effective preventative measure and ensures the integrity of electrical equipment. Aerial inspections, by way of helicopters, will lead to greater coverage of the service territory and areas adjacent to required clearances	Ground patrols are a required strategy in ensuring safe and reliable delivery of electricity. When access concerns arise, aerial inspections provide better coverage in surveying and inspecting electrical equipment throughout the utility service territory	During forecasted elevated ambient temperatures or RFW and high wind conditions, APU staff patrols the overhead infrastructure in the Tier 3 FTZ or utilize AF&R Community Emergency Response Teams (CERTS) already out on patrols for multiple purposes to provide visibility on electric infrastructure.		APU meets best practices criteria for equipment and vegetation management ground patrols

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Wildfire Infrastructure Protection Teams	An internal team to help coordinate efforts to ensure the Plan is being followed as well as coordinating efforts to enhance the Plan's strategies and quality check that activities are being performed and tracked aligning with the Plan	An internal team to prepare and protect physical aspects of the electric system as well as ensure effective mitigation measures are carried out would be a prudent activity to pursue	APU has an emergency response team, but they are not specifically trained for fire hazards since they work closely with AF&R.		An internal wildfire protection team can support continuous improvement and quality assurance of the Wildfire Mitigation Plan and related activities.
Infrared corona scanning and high definition imagery technology for inspection practices along with visual inspections	Infrared and ultraviolet (Corona) light cameras are typically mounted to helicopters with special attention to splices, conductor connection/attachment points, and insulators for a detailed visual of electrical equipment	Infrared is an accepted practice that enables better awareness of the utility's equipment	APU has no transmission facilities in the FTZ and limited distribution assets in the FTZ		Practice does not apply to APU

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Operational activities limitations during the fire season and/or during Red Flag Warnings issued by the National Weather Service (or as fire risk potential designates)	Establishment of procedures and routine operational practices that limit or curtain operational activities during periods of increased risk within fire threat districts. These procedures and practices provide employee and contractors specific information and instructions to improve the reliable and safe operations of electric facilities and mitigate the threat of utility caused inadvertent ignitions.	Limiting operational practices may reduce the probability of inadvertent ignitions by utility workers and utility contractors	During periods of higher risk of wildfires, APU limits operational activities within the FTZ. Additionally, APU contractors are assigned work through a Utility Inspector. During periods of higher wildfire risk, the Utility Inspector will limit the contractor activities. APU does not have written procedures for limiting operational activities.		Written safety and operational procedures for limiting operational activities is a best practice
Vegetation Management					
Routine vegetation management & inspections in accordance with: Public Resources Code (PRC) 4292 & 4393, General Order (GO) 95 Rule 35 and Appendix E, and ANSI A300	State and federal compliance for vegetation management and inspection, as well as California Public Utilities Commission GO 95, which is accepted as industry standard amongst all utilities. (Community and investor owned).	PRC sections 4292 and 4293; and GO 95 are required by the CPUC for investor owned utilities.	APU performs vegetation management activities consistent with the guidelines outlined in GO 95 Appendix E. The arborist contactor maintains a perpetual 10 foot plus clearance. During the fall of very year, the FTZ with line clearance per 4293. All dead and decayed trees are either removed or pruned per 4293.		APU meets or exceeds best practices criteria for routine vegetation management & inspections.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
LiDAR Technology for vegetation management inspections	Where foot patrols or normal helicopter patrols are insufficient to evaluate the right-of-way (ROW) clearance, utilities use LiDAR technology to identify trees along the ROW border that can potentially contact with lines during high wind events.	LiDAR is demonstrated as an effective tool for transmission level inspection of dense vegetation within the corridor and adjacent to the easement area.	APU does not own or operate transmission lines		This practice does not apply since APU has no transmission facilities
Hazardous tree/vegetation identification and removal protocols and programs	Recording and tagging trees that pose risks to adjacent electrical equipment or are dead/dying are considered prudent efforts for vegetation management practices	Within the FTZ , danger trees could pose a greater potential to catch on fire or contribute to fire spread. Addressing, though identification and surveying, as well as implementing remediation activities will result in further wildfire risk reduction	During forecasted elevated ambient temperatures or RFW and high wind conditions, utility staff will be dispatched to patrol the overhead infrastructure in the Tier 3 FTZ. Additionally, AF&R Community Emergency Response Teams (CERTS) already out on patrols for multiple purposes provide visibility on electric infrastructure. The utility troubleshooter/crews report any required equipment repairs or hazardous trees and vegetation.		Additional equipment and vegetation inspections are a best practice during period of elevated wildfire risk.
Fuels management	Fuels management is an action designed to reduce fire hazards by removing or rearranging fuels. When applied to strips of land, they are designated as a fuel break or fire break. Fuel breaks are strips of land in which vegetation, both dead and alive has been modified, but some trees and shrubs are retained.	Fuels management is an effective practice to reduce fire intensity and can provide safe passage zones for the public, APU workers and AF&R	Anaheim tracks the location, species, condition, and trimming schedule for trees near power lines in the Tier 3 FTZ to maintain a defensible space. The attributes of the tree and GPS coordinates are archived in Geographic Information System (GIS) mapping, and annual inspections and trimming appropriate for the growth pattern of that species is recorded. To manage surface fuel in the FTZ, AF&R manages the Brush Abatement Program.		APU has a highly effective fuels management program

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Off-Cycle / Call-in vegetation removal or corrective work, especially during the fire season	Off-cycle practices of vegetation inspection and management	Within APU's FTZ, impact trees could pose a greater potential to catch on fire or contribute to fire spread. Addressing, though identification and surveying, as well as implementing remediation activities will result in further wildfire risk reduction	APUs' vegetation management practices and contractor tree specifications assure continual monitoring for vegetation removal.		APU meets or exceeds best practices criteria for removal of dead and decayed trees.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Emergency Response & Recovery					
Notify critical facilities and public safety partners, which may include first responders, incident origin law enforcement, acute health care facilities, essential service providers, related governing local and state agencies, adjacent jurisdictions, vulnerable populations, and the Independent System Operator (ISO) (for transmission level de-energization).	Following a sequence of events in contacting public safety partners and impacted community facilities will enable quicker response in reacting to an emergency event (such as a wildfire or de-energization). Utilities should describe their processes to notify critical facilities as it applies to their service territory and impacted communities as well as grid operators.	Notification practices targeting key stakeholders are crucial during emergency events such as storms and wildfires.	A de-energizing power event would impact 0.5 circuit miles of overhead line serving eight residential customers. Under an RFW event in combination with an extreme level SAWTI, APU will de-energize this pole line that poses a potential threat within the Tier 3 FTZ. Customers affected by de-energized lines will be contacted in person and by phone, text, and electronic mail by APU staff. In situations where AF&R or other public safety/first responders initiate an evacuation of an area, APU will coordinate with the City Public Information Office to keep the media and general public informed, if power has been de-energized as a precautionary measure.		Development of proactive practices for notification and specific contact lists for public safety partners, critical community facilities and life and health support customer assures effective and timely emergency event communications.

Identified Practice Strategy	Mitigation Rationale	APU Applicability	Plan Elements	Determination	
Incident Command Team / Emergency Operations frameworks in the event a de-energization event or wildfire incident occurs	Using the State Emergency Management System (SEMS) framework, which is determined on the Federal Emergency Management Agency (FEMA) structure for incident command protocols will ensure prepared and adequately trained staff to respond in effective communication manners as well as respond to risk events in a sequence of effective procedures	Establishment of Emergency Action Plans between the Electric Department, The City Emergency Operations Center and other City departments assures effective identification, assignment and training for emergency management roles	APU maintains a Public Utilities Department - Emergency Response Plan (ERP) specific to utility operations. services. This ERP incorporates knowledge gained from the experience of others and includes industry best practices developed as a result of major regional storms and outages affecting other organizations over the last several years. APU Electric System Order (ESO) 2529 establishes the response plan for wildfire mitigation in fire threat zones. The plan contains specific operational procedures during wildfire threat conditions, delineates roles and responsibilities, and provides directives for notifications and communications and training.		Development of an emergency action plan for wildfire incidents or de-energization events with the associated incident command roles, responsibilities and training assures effective emergency response.
Coordination with stakeholder agencies/entities with routine meetings to discuss emergency preparedness needs and areas of improvement, etc.	Communicating with vested stakeholders during wildfire mitigation activities, PSPS events, and general strategy development will help drive efforts to better align with the risk profile of the utility's service and asset territory. These efforts should occur throughout the year and wildfire mitigation plan planning process	Although APU has limited facilities and customers within the FTZ, Anaheim and APU have conducted extensive stakeholder coordination and emergency preparedness.	Community outreach related to wildfire planning is a priority for the City of Anaheim and APU. Anaheim has held several community outreach events to inform citizens on how AF&R and APU are preparing for wildfires and taking preventative measures. Also, a specific meeting was held for the residents adjacent to Tier 3 FTZ to discuss emergency response and communications and wildfire preventative measures.		APU meets the basic requirements of this practice strategy.

5. RESULTS & DISCUSSION

Guidehouse concluded this assessment on April 10, 2020. Over the course of reviewing APU's WMP and supporting documentation, Guidehouse captured takeaways and findings that align the Plan with state laws and effective wildfire measure demonstration. APU's Plan appropriately responds to each of the required elements of PUC Section 8387, which is detailed in Appendix A. The following describes the assessment and resulting findings of the Plan's proposed and established mitigation measures as it applies to safe, reliable operation of all electric infrastructure and wildfire prevention and response.

Report Conclusions

After internal review of the latest version of the WMP and associated data collection products, Guidehouse concludes this Report with the following:

1. APU's WMP aligns appropriately with PUC Section 8387 and includes all required elements.[7]

2. APU's Plan is determined to be comprehensive as described throughout this Report.

[7] Following acceptance of this Report, APU will post the Report online for public view. The Report is scheduled for presentation to the City Council at a public meeting on May 12, 2020.

APPENDIX A. STATUTORY COMPLIANCE MATRIX

Required Statutory Element	Plan Section Reference(s)	APU Plan Elements *(Summarized)*	Meets Section Elements *(Determination)*
(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.	**Section 13**	APU describes the responsible parties, as well as the organization and assignment responsibilities for the execution of the Plan in Section 13 of the WMP which includes both an organizational chart (figure 9 of the WMP) and a table (table 8) that lists the areas of responsibility for each department. These assignments of responsibilities satisfy PUC 8387 Section (b)(2)(A). Responsibilities are also clearly identified in other sections of the Plan as well as APU support documents.	**Yes**

(B) The objectives of the wildfire mitigation plan.	**Section 1**	APU states the "WMP serves to establish methods and procedures used to construct, maintain, and operate APU's electrical lines and equipment to minimize the risk of wildfire posed by its infrastructure." Additionally, the Plan is intended to meet the provisions mandated by California law to develop and implement a WMP.	**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.	**Sections 3, 7-10**	APU sets forth numerous preventive strategies and programs in their Plan. Table 6 in Section 7 of the WMP including strategies that address the following topics: 1. Situational/Conditional Awareness 2. Design and Construction 3. Inspection and Maintenance 4. Operational Practices 5. Response and Recovery APU also includes detailed descriptions of each action and programs to reduce fire starts, improve response, and notify the community.	**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 that underlie the use of those metrics.	**Section 14**	The WMP includes language describing several metrics that will track metrics of fire-related incidents and APU performance implementing the Plan.	**Yes**
(E) A discussion of how the application of previously identified metrics to previous wildfire mitigation plan performances has informed the wildfire mitigation plan.	**Section 14**	While APU began tracking performance metrics in 2018, only limited data have been available from such metric tracking thus far. Additionally, new metrics will be tracked beginning this year. was not been previously required to have a WMP. Future versions of the WMP will likely include a broader discussion of previous metrics and how those metrics are used to shape and improve measures to reduce the risk of wildfires. The previously identified metrics were not evaluated in depth as this is the first statutory year of this program, however, these metrics appear to satisfy the requirement for 8387(b)(2)(e).	**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 on health and communication infrastructure.	**Section 10**	APU has established a protocol for disabling reclosers on four distribution circuits during elevated threat conditions, which is described in Section 10.C of the Plan. Anaheim will disable its automatic reclosing capability of the protective relays for lines located within the FTZ as a precautionary measure, during windy periods that invoke either Red Flag Warnings (RFW) or Santa Ana Wildfire Threat Index (SAWTI) conditions.	**Yes**
(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.	**Sections 10-11**	Section 10.D of the WMP addresses the enaction of a de-energization protocol, commonly known as Public Safety Power Shutoff (PSPS). Anaheim notes that "the potential for de-energizing power to APU customers is extremely remote" but does not rule out their use for a very limited portion of their service territory affecting eight residential customers. Section 10.D also describes the operational and communication protocols that will be followed for both de-energizing that portion of the system and notifying impacted customers. APU states they will contact the affected customers via in person communication, phone, text, and email. APU will also coordinate such actions with other Anaheim entities such as Anaheim Fire & Rescue (AF&R), Police, Safety, Public Works, and City Public Information Officer, and will work through the media to keep the public informed. These actions are further supported by operational documents provided to Guidehouse.	**Yes**
(H) Plans for vegetation management.	**Section 9**	APU, through Anaheim Public Works, upholds CPUC General Order 95 – Rules for Overhead Electric Line Construction Rules for Overhead Electric Line Construction, Section III - Minimum Allowable Clearances -Extreme and Very High Fire Threat Zones in Southern California practices for vegetation management and determining appropriate vegetation clearances from energized elements within its high FTZs. Additionally, Anaheim has an as needed, year-round program to remove hazard trees that includes removal of dead/rotten trees and brush, clearing	**Yes**

		vegetation around the base of power poles, as well as tracking species of particular concern. All of this information is collected in Anaheim's geographical information system (GIS) that tracks the location, species, condition and trimming schedule for trees near APU overhead lines, which represents an industry best practice. This also forms the basis for one of the metrics to be tracked as part of APU's WMP.	
(I) Plans for inspections of the local publicly owned electric utility's or electrical cooperative's electrical infrastructure.	**Section 9**	APU follows CPUC GOs even though they are not subject to CPUC jurisdiction, specifically GO 165 and 174. APU runs a comprehensive and systematic inspection program that includes visual inspections, intrusive pole testing, oil sampling, and infrared inspections based on annual, three-year, and five-year cycles that is supplemented by hazard tracking and as-needed inspections and maintenance/replacements for issues that post public safety or reliability risks. The inspection cycles are organized in APU's inspection schedule map, and detailed guidance is contained in APU's supporting documentation. Additionally, Anaheim is also tracking inspections, equipment details, and maintenance conditions on its GIS, again representing an industry best practice. APU also conduct patrols before Red Flag and Santa Ana warnings issued by the National Weather Service and identify issues that can be quickly addressed.	**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:	**Sections 2-5, esp. 4**	As described below, APU identified numerous risks and risk drivers addressing parts (i) and (ii) of this requirement.	**Yes**

(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.	Section 4	Section 4 of the WMP identifies the risk and risk drivers specifically related to wildfires, describes those risks, and explains the process in which APU evaluated risks from utility operations or equipment sparking a wildfire and prioritized them based on the threat to the community, core business impact, consequences, and risk mitigation path. As can be seen below, Anaheim included risks and risk drivers associated with the design, construction, operation, and maintenance of their system, as well as the topologic and climatologic risk factors present in their service territory.	**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.	Section 4	APU identified several topographical/climatological risks in the Plan listed in Tables 2 and 3 of the Plan and incorporated into this Report.	**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.	Section 5	APU, AF&R, along with SCE and Orange County Fire Authority developed the Anaheim FTZ boundaries identified areas within its territory (primarily areas in the WUI) that are at elevated risk for wildfire. This was submitted to the Peer Development Panel and Independent Review Team appointed by Cal-Fire and the CPUC and adopted in September of 2017. APU has not identified any portion of its system which should be included in a higher risk zone than is currently establish APU and is not making any recommendations to the expand the area of a high fire threat district.	**Yes**
(L) A methodology for identifying and presenting enterprise wide safety risk and wildfire-related risk.	Section 2	Section 2 describes the Enterprise-Wide Safety Risk Assessment performed by APU. APU has instituted a comprehensive risk assessment that looks at all risks facing APU, including wildfire, which represents an industry best practice. In this process, APU follows the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management - Integrated Framework. APU states that the purpose of this assessment, captured in the	**Yes**

		"Utilities Enterprise Risk Management Matrix," is to identify, prioritize, and manage potential enterprise and safety risks, including "failure to properly identify and address wildfire related risks" and associated risks such as regulatory compliance, loss of power, and reputational damage, among other topics that could "threaten the community, interrupt core business functions, and threaten business continuity or impact recovery." APU's enterprise risk management framework includes an iterative process that begins with an assessment where managers identify threats and identify risk owners, and then monitors risk evolution and emerging risks as well as the effectiveness of risk control efforts.	
(M) A statement of how the local publicly owned electric utility or electrical cooperative will restore service after a wildfire.	**Sections 10-11**	APU describes its plans to restore service after a wildfire in Section 11 of the WMP. The WMP is further supported by restoration efforts described in System Order 2529 and the Public Safety Power Shutoff/Restore Process diagram which includes a site patrol of affected areas prior to re-energization. If necessary, APU could also call on mutual aid assistance as APU is a member of the California Utility Emergency Association.	**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.	**Section 14-15**	Section 15 describes how APU intends to monitor and audit the WMP. Specifically, Anaheim notes the Plan will be reviewed annually with an assessment of the relevant programs conducted under or in alignment with the WMP. APU will also track the metrics described above and monitor the performance in order to evaluate the effectiveness of its fire mitigation efforts. Anaheim will use these inputs to align planning and budgeting for future years and to develop and implement any necessary changes to design, construction, or maintenance standards to be incorporated into future iterations of the WMP. As part of this effort, APU will identify any	**Yes**

		deficiencies in the plan or implementation and correct them accordingly.	
(ii) Identify any deficiencies in the wildfire mitigation plan or its implementation and correct those deficiencies.	**Section 14-15**	APU continuously monitors the WMP's implementation. Any deficiencies in the WMP are identified in the tracked metrics and corrective measures will be deployed.	**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.	**Section 9, 14, 15**	APU monitors and audits the effectiveness of its electrical line and equipment inspections, including inspections performed by contractors described in Section 9.A through its implementation of GIS, its tracking of metrics described in Section 14, and by other means (such as spot checks or reviews of work orders) on an ongoing basis.	**Yes**
(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.		APU first presented its current WMP at publicly noticed public meetings of the Anaheim Public Utilities Board and City Council at a public meeting in 2018. APU has since revised its WMP and posted it to the APU website. APU will present the updated Plan to Anaheim Public Utilities Board and City Council will occur on April 22, 2020 and May 12, 2020 respectively. At that time, an updated WMP will be approved.	**Yes**

(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.		APU contracted with Guidehouse Inc. to perform an independent evaluation of its WMP. Qualifications are described in Section 1.	**Yes**