City of Biggs

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Wildfire Mitigation plan

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I. OVERVIEW

A. POLICY STATEMENT

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

B. PURPOSE OF THE WILDFIRE MITIGATION PLAN

This Wildfire Mitigation Plan describes the range of activities that Biggs is taking to mitigate the threat of power-line ignited wildfires, including its various programs, policies, and procedures. This plan is subject to direct supervision by the City of Biggs City Administrator and is implemented by the Electrical Superintendent. This plan complies with the requirements of Public Utilities Code section 8387 for publicly owned electric utilities to prepare a wildfire mitigation plan by January 1, 2020, and annually thereafter.

Biggs Electric is a department within the City of Biggs. [Describe how POU's fire prevention efforts fit into the general plan and other safety planning documents. Describe how POU coordinates with local fire agencies and other safety departments.]

Organization of the Wildfire Mitigation Plan

This Wildfire Mitigation Plan included the following elements:

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

II. OBJECTIVES OF THE WILDFIRE MITIGATION PLAN

A. MINIMIZING SOURCES OF IGNITION

The primary goal of this Wildfire Mitigation Plan is to minimize the probability that Biggs transmission and distribution system may be the origin or contributing source for the ignition of a fire. Biggs has evaluated the prudent and cost-effective improvements to its physical assets, operations, and training that can help to meet this objective. Biggs has implemented those changes consistent with this evaluation.

B. RESILIENCY OF THE ELECTRIC GRID

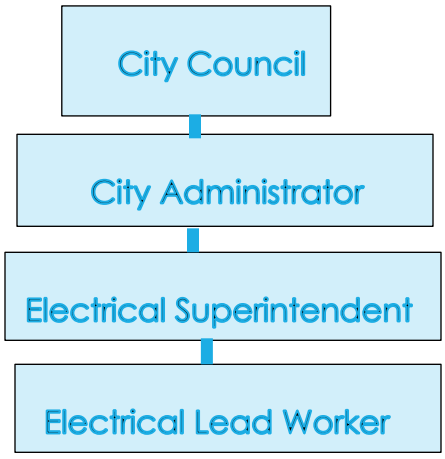
The secondary goal of this Wildfire Mitigation Plan is to improve the resiliency of the electric grid. As part of the development of this plan, Biggs assesses new industry practices and technologies that will reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service.

C. MINIMIZING UNNECESSARY OR INEFFECTIVE ACTIONS

The final goal for this Wildfire Mitigation Plan is to measure the effectiveness of specific wildfire mitigation strategies. Where a particular action, program component, or protocol is determined to be unnecessary or ineffective, Biggs will assess whether a modification or replacement is merited. This plan will also help determine if more cost-effective measures would produce the same or improved results.

III. ROLES AND RESPONSIBILITIES

A. BIGGS UTILITY GOVERNANCE STRUCTURE



City Council to debate, Consider and adopt any policies, regulations or ordinances recommended by the City Administrator and Electrical Department Superintendent as to the safe operations of the City of Biggs Electrical System in accordance with the Wildfire Mitigation plan

City Administrator to work with the Electrical Department Superintendent in the implementation of the Wildfire Mitigation Plan and to be a liaison to the Biggs Electrical Department during wildfire events. To be the liaison between The City of Biggs and any outside Governmental agencies in procurement of any needed resources to aid in a Wildfire Event. To be the public relation contact for the City of Biggs during a Wildfire Event.

Electrical Department Superintendent to oversee the operation of the Electrical Department. to implement The City of Biggs Wildfire Mitigation Plan as adopted by the City of Biggs Council. To be the liaison between the Electrical Department and The City of Biggs during wildfire events. To be the liaison between City of Biggs Administrator in providing aid during Wildfire Events. To provide training to the City of Biggs staff in the prevention of potential Wildfire events due to the Electrical Distribution System.

Electrical Lead Worker to oversee the day to day operations of the City of Biggs Electrical Distribution System. To implement The City of Biggs Wildfire Mitigation Plan as adopted by The City of Biggs' Council. To be the liaison between the Electrical Crew and the Biggs City Administrator during Wildfire Events. To report and correct any adverse conditions on the Electrical Distribution that may cause a Wildfire event.

B. WILDFIRE PREVENTION

The following are POU staff roles and responsibilities for (1) electric facility design, maintenance, and inspection; and (2) vegetation management:

- Operate system in a manner that will minimize potential wildfire risks.
- Take all reasonable and practicable actions to minimize the risk of a catastrophic wildfire caused by Biggs electric facilities.
- Coordinate with federal, state, and local fire management personnel as necessary or appropriate to implement Biggs Wildfire Mitigation Plan.
- Immediately report fires, pursuant to existing Biggs Electric practices and the requirements of this Wildfire Mitigation Plan.
- Take corrective action when the staff witnesses or is notified that fire protection measures have not been properly installed or maintained.
- Comply with relevant federal, state, and industry standard requirements, including the industry standards established by the California Public Utilities Commission.
- Collect and maintain wildfire data necessary for the implementation of this Wildfire Mitigation Plan.
- Provide regular training programs for all employees having obligations for implementation of this Wildfire Mitigation Plan.
- Perform annual inspections of distribution system for tree clearances
- Perform annual tree trimming to maintain a 12-foot clearance around primary lines.

C. WILDFIRE RESPONSE AND RECOVERY

During a wildfire event the Electrical Superintendent and (or) the Lead line worker will keep in direct contact and provide regular updates as to the event status with the following Departments and organizations:

- City of Biggs Administrator
- Butte County Sheriff's Office
- CalFire
- Biggs Public Works Department

Electrical utility staff have the following obligations regarding fire prevention, response and investigation:

- Take all reasonable and practicable actions to prevent and suppress fires resulting from Biggs electric facilities.
- Follow Electrical Department's protocols during Red Flag Warnings.

D. COORDINATION WITH WATER UTILITIES/DEPARTMENT

Electrical Department will coordinate with the City of Biggs Public Works Department to insure the reliable delivery of water during any Red Flag or wildfire event, and as needed enlist the help of Biggs Public Works personnel to combat any wildfires caused by City of Biggs Electrical Equipment or to aid in any repairs' of Biggs electrical equipment that may cause a wildfire condition.

E. COORDINATION WITH COMMUNICATION INFRASTRUCTURE PROVIDERS

During a wildfire event that involves equipment of outside agencies Communication equipment, the City of Biggs will contact the involved agencies as soon it is feasibly possible.

F. STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a local governmental agency,[1] Biggs has planning, communication, and coordination obligations pursuant to the California Office of Emergency Services' Standardized Emergency Management System ("SEMS") Regulations,[2] adopted in accordance with Government Code section 8607. The SEMS Regulations specify roles, responsibilities, and structures of communications at five different levels: field response, local government, operational area, regional, and state.[3] Pursuant to this structure, Biggs annually coordinates and communicate with the relevant safety agencies as well as other relevant local and state agencies. [Describe POU's role within the local and operational level].

[1] As defined in Cal. Gov. Code § 8680.2.
[2] 19 CCR § 2407.
[3] Cal. Gov. Code § 2403(b):

> (1) "Field response level" commands emergency response personnel and resources to carry out tactical decisions and activities in direct response to an incident or threat.
>
> (2) "Local government level" manages and coordinates the overall emergency response and recovery activities within their jurisdiction.
>
> (3) "Operational area level" manages and/or coordinates information, resources, and priorities among local governments within the operational area and serves as the coordination and communication link between the local government level and the regional level.
>
> (4) "Regional level" manages and coordinates information and resources among operational areas within the mutual aid region designated pursuant to Government Code §8600 and between the operational areas and the state level. This level along with the state level coordinates overall state agency support for emergency response activities.
>
> (5) "State level" manages state resources in response to the emergency needs of the other levels, manages and coordinates mutual aid among the mutual aid regions and between the regional level and state level, and serves as the coordination and communication link with the federal disaster response system.

Under the SEMS structure, a significant amount of preparation is done through advanced planning at the county level, including the coordination of effort of public, private, and nonprofit organizations. Butte serves as the Operational Area and is guided by the Butte County Disaster Council that is made up of representatives of Butte. The Operational Area includes local and regional organizations that bring relevant expertise to the wildfire prevention and recovery planning process. These participants include [provide a detailed list of relevant school districts, utilities, Fire Districts, non-profits (such as the United Way and/or the American Red Cross), Hospitals, special districts, communications providers, and other similar organizations].

Pursuant to the SEMS structure, Biggs participates in periodic training exercises.

IV. WILDFIRE RISKS AND DRIVERS ASSOCIATED WITH DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

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

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

- Extended drought;
- Vegetation type;
- Vegetation Density;
- Weather;
- High winds;
- Terrain;
- Changing Weather Patterns (Climate Change)
- Communities at Risk
- Fire History

B. ENTERPRISEWIDE SAFETY RISKS

Within Biggs Distribution system the primary risk drivers for wildfire are the following:

- Electrical system equipment failure
- Falling trees or vegetation
- Animal contact with energized electric equipment
- Human error or causation

C. CHANGES TO CPUC FIRE THREAT MAP

None

V. WILDFIRE PREVENTATIVE STRATEGIES

A. HIGH FIRE THREAT DISTRICT

Biggs directly participated in the development of the California Public Utilities Commission' s (CPUC) Fire-Threat Map,[4] which designates a High-Fire Threat District. In the map development process, Biggs served as a territory lead, and worked with utility staff and local fire & government officials to identify the areas of Biggs' service territory that are at an elevated or extreme risk of power line ignited wildfire. Biggs has incorporated the High Fire Threat District into its construction, inspection, maintenance, repair, and clearance practices, where applicable.

B. WEATHER MONITORING

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

- United States National Weather Service
- CalFire
- On line weather data and information
- Local news outlets

Biggs assigns one of four operating conditions based on the relevant weather data and knowledge of local conditions:

(1) Normal: During normal conditions, no changes are made to operations or work policy.

(2) Elevated: During elevated fire-risk conditions, Electrical crews are asked to report any areas of concern on or around Bigg's electrical system for potential Wildfire conditions, and to address these concerns during the pre-job tail Board discussion

(3) Extreme: During extreme fire-risk conditions, and when working in an area at risk to wildfire conditions crews are to prioritize projects, should it be necessary to proceed with the project, crews will asked to report any areas of concern on or around Biggs' electrical system for potential Wildfire conditions, and to address these concerns during the pre-job tail Board discussion and if possible to de-energize the lines during the project. ensure the job site has adequate fire suppression equipment

(4) Red Flag: If the National Weather Service declares a Red Flag Warning for any portion of Biggs service territory, any work performed in a wildfire prone area is postponed unless it is deemed an emergency priority, should it be deemed an emergency condition, crews will asked to report any areas of concern on or around the electrical system for potential Wildfire conditions, and to address these concerns during the pre-job tail Board discussion and if possible to de-energize the lines during the project. ensure the job site has adequate fire suppression equipment, extra personnel and equipment will be

[4] Adopted by CPUC Decision 17-12-024.

enlisted to monitor the project from ground for potential fire, and to suppress any fire caused by the project. If deemed necessary, CalFire will be contacted to stand-by during the project.

C. DESIGN AND CONSTRUCTION STANDARDS

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

D. VEGETATION MANAGEMENT

Biggs meets or exceeds the minimum industry standard vegetation management practices. For transmission-level facilities, Biggs complies with NERC FAC-003-4, where applicable. For both transmission and distribution level facilities, Biggs meets: (1) Public Resources Code section 4292; (2) Public Resources Code section 4293; (3) GO 95 Rule 35; and (4) the GO 95 Appendix E Guidelines to Rule 35. These standards require significantly increased clearances in the High Fire Threat District. The recommended time-of-trim guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. Biggs will use specific knowledge of growing conditions and tree species to determine the appropriate time of trim clearance in each circumstance.

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

Appendix E Guidelines to Rule 35		
The radial clearances shown below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293.		
Voltage of Lines	**Case 13**	**Case 14**
Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volts	4 feet	12 feet
Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts	6 feet	20 feet
Radial clearances for any conductor of a line operating at 110,000 or more volts, but less than 300,000 volts	10 feet	30 feet
Radial clearances for any conductor of a line operating at 300,000 or more volts	15 feet	30 feet

Within the High Fire Threat District, Biggs performs an evaluation of every tree that has the potential to strike overhead facilities it if were to fail on an annual basis. Biggs performs more frequent and detailed inspections of any such trees, and in cases where "hazard trees" (Dead, Dying, Diseased or leaning) could strike the facilities, will work with the land owner to remove the tree or portion of the tree that poses a risk.

E. INSPECTIONS

Biggs meets or exceeds the minimum inspection requirements provided in CPUC GO 165 and CPUC GO 95, Rule 18. Pursuant to these rules, Biggs inspects electric facilities in the Hight Fire Threat District more frequently than the other areas of its service territory. Additionally, Biggs staff uses their knowledge of the specific environmental and geographical conditions to determine when areas outside of the High Fire Threat District require more frequent inspections.

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

Biggs works to ensure that all inspections to be performed within the High Fire Threat District are completed before the beginning of the historic fire season, [typically September 1]. Biggs monitors drought conditions and other relevant factors throughout the year to determine if inspections should be completed on a shorter timeframe.

F. WORKFORCE TRAINING

Biggs has implemented work rules and complementary training programs for its workforce to help reduce the likelihood of the ignition of wildfires.

Biggs has implemented into its daily operations 4 conditions based on current weather conditions.

- Normal
- Elevated
- Extreme
- Red Flag

Biggs has added a WildFire Mitigation Plan, and fire safety training to it safety training program

G. RECLOSING POLICY

During Red Flag Warnings:

Line Reclosers- will be put in a non- reclosing setting. Should a Line Recloser open during this period, the Line reclosing device shall not be closed until the distribution line it serves has been inspected for the cause of the equipment's operation. When the equipment and distribution line is re-energized, the distribution line will be inspected for safe operation.

Substation Circuit Breaker- relays will be put in a non-reclosing setting. Should a relay operate during this period, the relay device will not be closed until the distribution line being served by the affected relay is inspected for the cause of the operation. When the substation breaker is closed the distribution line being served by the breaker will be inspected for safe operation.

H. DEENERGIZATION

Biggs has the authority to preemptively shut off power due to fire-threat conditions; however, this option will only be used in extraordinary circumstances. Biggs will make a case-by-case decision to shut off power based on the following considerations:

- Red Flag Warnings issued by the National Weather Service for fire weather zones that contain Biggs circuits;
- Biggs staff assessments of local conditions, including wind speed (sustained and gust), humidity and temperature, fuel moisture, fuel loading and data from weather stations;
- Real-time information from staff located in areas identified as at risk of being subject to extreme weather conditions;
- Input from Biggs/CalFire, fire experts and vegetation experts;
- Input from local and state fire authorities regarding the potential consequences of wildfires in select locations;
- Alternative ways to reroute power to affected areas;
- Awareness of mandatory or voluntary evacuation orders in place;
- Expected impact of de-energizing circuits on essential services;
- Other operational considerations to minimize potential wildfire ignitions, including the blocking of reclosers on the identified circuit(s);
- On-going fire activity throughout Biggs territory and California;
- Ability to notify customers;
- Notifications to local governments and public officials; and
- Potential impacts to communities and customers

1. IMPACTS TO PUBLIC SAFETY

The following conditions may occur during a fire threat power shut down:

- Residential areas will lose power
- Schools will lose power
- Stores will lose power
- Gas stations will lose power
- Traffic signals will be on battery back-up power
- Streetlights will not work
- Water supply will be on Back-up Generation Power
- Sewer will be on Back-up Generation Power
- Police department will be on Back-up Generator Power

2. CUSTOMER NOTIFICATION PROTOCOLS

Biggs will make every attempt to give advance notice to its customers of any planned wildfire prevention power shut downs. Should a wildfire prevention power shut down be planned, Biggs will attempt to notify its customers in the following ways:

- Signage at City Hall
- Local news paper
- Monthly Bill mailings

- Website messaging
- Social Media messaging

VI. COMMUNITY OUTREACH AND PUBLIC AWARENESS

Biggs will utilize its City web site, social media and newsletters to increase and improve public awareness.

VII. RESTORATION OF SERVICE

Biggs will make every attempt to restore power to residents as soon as possible.

Priority inspections of distribution infrastructure and power restoration will be given to critical circuits such as, water, sewer, CalFire, and Schools.

VIII. EVALUATION OF THE PLAN

A. METRICS AND ASSUMPTIONS FOR MEASURING PLAN PERFORMANCE

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

METRIC 1: FIRE IGNITIONS

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

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

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

METRIC 2: WIRES DOWN

The second metric is the number of distribution and transmission wires downed within the service territory. For purposes of this metric, a wire down event includes any instance where an electric transmission or primary distribution conductor falls to the ground or on to a foreign object. Biggs will divide the wires down metric between wires down inside and outside of the High Fire Threat District.

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

B. IMPACT OF METRICS ON PLAN

In the initial years, Biggs anticipates that there will be relatively limited data gathered through these metrics. However, as the data collection history becomes more robust, Biggs will be able to identify areas of its operations and service territory that are disproportionately impacted. Biggs will then evaluate potential improvements to the plan.

C. MONITORING AND AUDITING THE PLAN

This Wildfire Mitigation Plan will be presented to Biggs City Council and will present this plan to the Biggs City Council on an annual basis.

D. IDENTIFYING AND CORRECTING DEFICIENCIES IN THE PLAN

Any identified plan deficiencies will lead to corrections in future mitigation plans.

E. MONITORING THE EFFECTIVENESS OF INSPECTIONS

The City Administrator and Electric Superintendent will investigate any incidents as to causation, preventability and the effectiveness of any related prior inspections.

IX. INDEPENDENT AUDITOR

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

A qualified independent evaluator will be likely be sought via a Request for Qualifications and/or Request for Proposals process.