

# COLUMBIA RURAL ELECTRIC

MANAGEMENT PROCEDURE 117:

WILDFIRE MITIGATION PLAN

## **OVERVIEW**

### **A. PLAN STATEMENT**

Columbia Rural Electric Association's (CREA) goal is to provide safe, reliable, and economical electric service to its members. To meet this goal, CREA designs, constructs, maintains, and operates its electrical lines and equipment ("**Electrical Facilities**") in a manner that minimizes the risk of wildfires posed by its electrical lines and equipment.

### **B. PURPOSE OF THE WILDFIRE MITIGATION PLAN**

CREA's area of service is in southeast Washington and northeast Oregon which seasonally experiences wildfire risk. Based on a review of local conditions and historical fires, CREA has determined that its Electrical Facilities do not pose a significant risk under normal weather conditions to ignite a wildfire. However, during extreme weather events the associated risk of damage and injury increases.

As directed by the Board in Policy 229, this document outlines a range of activities that CREA undertakes to minimize risks of its facilities causing or contributing to wildfires. CREA takes preemptive actions in its service area to help prevent and respond to the increasing risk of wildfires as abnormal weather conditions occur.<sup>1</sup> CREA closely coordinates with other local safety and emergency officials to help protect against fires and respond to emergencies. As a public utility, CREA follows applicable design, construction, operation, and maintenance codes, regulations, and requirements to reduce safety risks associated with its Electric Facilities.

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<sup>1</sup> See Center for Climate and Energy Solutions – [www.c2es.org](http://www.c2es.org)

## **OBJECTIVES OF PLAN**

### **A. MINIMIZING SOURCES OF IGNITION**

The primary goal of this Plan is to describe CREA's existing programs, practices, and measures that effectively reduce the probability that its Electric Facilities are likely to be the origin or contributing source for the ignition of a wildfire. To support this goal, CREA regularly evaluates the: (1) prudent and cost-effective improvements to its physical assets, and (2) its operations, maintenance, and training programs that can help reduce the risk of wildfires.

### **B. ELECTRIC SYSTEM RESILIENCY**

The secondary goal of this Plan is to improve the reliability and resiliency of the Electric Facilities during a wildfire event. As part of the periodic review of this Plan, CREA assesses new industry practices and technologies that will reduce the likelihood of an interruption in service and improve the restoration time of service during a wildfire.

## ROLES AND RESPONSIBILITIES

### A. COLUMBIA REA SERVICE AREA

CREA's service area generally consists of Southeast Washington and northeast Oregon serving Walla Walla and Columbia counties in Washington and Umatilla county in Oregon. For the year ending December 31, 2021, CREA served over 6000 members, had total retail sales of approximately 408 million kWh and a peak demand of 122 megawatts. CREA owns and operates its electric system, which includes transmission, substation, and distribution facilities.

### B. WILDFIRE PREVENTION

CREA's Engineering and Operations Departments work closely to establish and execute procedures for the prevention of wildfires.

The Engineering Department develops standards and creates procedures for the safe and reliable operation of the electric grid. CREA uses best practices when deploying electrical equipment to include finding alternative solutions for equipment that could pose a threat or contribute to wildfire.

The Operations Department builds, operates, and maintains the distribution and transmission facilities. This includes consistently seeking to implement new procedures and design changes in the CREA system that provide the efficient and safe delivery of electric power. Operations personnel are, typically, the first responders to CREA system incidents on a 24/7 basis.

The Department, routinely, inspects the CREA lines and poles as outlined in its System Inspection Plan. The Operations Department also implements vegetation management programs for all overhead lines.

To minimize risk associated with the ignition of wildfires, CREA takes the following proactive approaches:

- (1) Operating the system in a manner that will minimize potential wildfire risks.
- (2) Managing vegetation around energized overhead lines to maintain minimum clearance distances, and conducting inspections at regular intervals.
- (3) Taking all reasonable and practicable actions to prevent the risk of wildfire caused by its electric facilities.
- (4) Coordinating with federal, state, and local emergency management personnel as necessary or appropriate.

- (5) Immediately reporting fires.
- (6) Taking corrective action when staff observes or is notified that fire protection measures have not been properly instituted, installed or maintained.
- (7) Compiling with relevant federal, state, and industry standard requirements.

#### C. WILDFIRE RESPONSE AND RECOVERY

When CREA is notified of a wildfire that is suspected to involve utility infrastructure in its service area, CREA takes all reasonable and practicable actions to mobilize, respond and act to prevent the spread of fire which includes assisting firefighters to suppress the fire. During such incidents, CREA employs emergency protocols to respond quickly and effectively. The fire fighting activity includes closely monitoring the fire's direction and rate of spread. CREA staff takes all reasonable actions to minimize fire threats. Based on the circumstances and reports from the field, CREA Operations Department staff may use their discretion to de-energize appropriate Electrical Facilities for public and employee safety. Requests from local fire chiefs or Incident Command to de-energize lines is evaluated and implemented, as necessary.

All CREA field personnel carry backpack fire suppression sprayers in their vehicles during wildfire season. In addition, CREA has 50-gallon tanks mounted on UTV's and 250-gallon tanks mounted on flatbed trucks in each of its three service centers during fire season. These sprayers, and tanks are not intended to be used as primary fire fighting resources but are used to fight small fires when CREA crews are first on scene or as mop up on CREA facilities behind primary firefighting resources. Additives are used in the sprayers and tanks to aid with fire suppression and prevention.

CREA personnel communicate with the applicable fire departments, local hospitals, and other local government agencies. CREA also conveys information to the public through communication lines such as the CREA website, local media outlets, social media, and direct member contact as appropriate to deliver critical information.

After the wildfire has been suppressed and no further threat is determined, CREA will assess the level of damage to CREA Electrical Facilities including investigating its cause. The investigation and findings will be documented.

## WILDFIRE RISKS

Within the CREA area of service and the surrounding areas, the primary risk drivers for wildfires are the following:

- EXTENDED DROUGHT** CREA area of service has experienced extended periods of drought. Drought in combination with wind and other factors can create an ideal situation for the ignition and rapid spread of wildfires.
- WEATHER** CREA service area experiences hot summers. Average summer temperatures in the area can be as high as 100+ degrees. Winters are cold and wet. Average winter temperature is around 40 degrees. Average seasonal recorded rainfall is 8 inches in western Walla Walla County up to 30 inches in the foothills of the Blue Mountains. Extreme heat and low humidity aid in the ignition of wildfires. Lightning is common in the peak of fire season and is the most common cause of wildfire.
- HIGH WINDS** It is common to have high winds associated with weather fronts and thunderstorms during the dry season. Heat and drought complemented by strong wind will contribute to rapid spread of wildfires.
- FUEL TYPE** The majority of high fire risk vegetation in CREA service area includes dryland grain crops, irrigated farms, cropland enrolled into the USDA CRP program, and foothills or forest lands. Each vegetation type has its own wildfire risks and different suppression strategies.
- Irrigated Farms are considered low risk even with small unirrigated sections. Typically, CREA poles in these areas are away from the fields growing crops. However, access to these areas is excellent and overall fire risk is low.
- The dryland crops are especially susceptible to wildfires during harvest but also usually have the most resources readily available to fight fires. CREA facilities are usually located alongside field lines or in unfarmed areas. There is usually good access. Fire risk is moderate to high depending on the season and current conditions.
- USDA CRP areas are the most serious threat to CREA facilities. They are in remote areas of low rainfall, harsher terrain, high fuel load of grass, and low monetary value which limits suppression resources. Access to CRP areas is limited and primarily on county roads and limited farm access roads. Fire risk is high to extremely high.

Foothills and forest lands are also high-risk areas for CREA. CREA has a substantial number of facilities in these areas to serve a higher density of farms but also a growing presence of rural residential homes and cabins. These areas have extremely high fuel loads of grass, brush, and trees. They also have very steep terrain and limited access. Human activity is high in the area which increases the likelihood of a wildfire. The foothills area is included within Washington State DNR wildfire suppression authority which provides more resources and higher awareness of high-risk weather events.

**COMMUNITIES AT RISK** CREA's evaluation has determined that the cities and large communities it serves are not usually the cause of wildfires.

**EQUIPMENT FAILURES** CREA collects and evaluates data from equipment failures that could be an ignition source for a fire. Equipment that is evaluated as having a contributing factor to wildfires will be replaced with alternate equipment.

**TRANSPORTATION** State highways 12, 124, 125, and 261 run thru the CREA's service area. In addition, there are numerous county roads throughout all three counties. These roads provide access to high fire risk areas which increases the chance of man caused wildfires. They also provide access for Emergency Response and CREA crews to respond to wildfires in a timely manner. Traffic congestion and accidents on these roadways could add delays for emergency responders. There is also rail lines thru the Walla Walla Valley and north east to Prescott, Waitsburg, and Dayton. In addition, a main rail line is just south of the Snake River and east of the Columbia River. The rail lines, especially the main lines along the Snake River, are at high risk to cause wildfires.

## **PREVENTIVE STRATEGIES**

### **A. STATE RESPONSIBILITY AREAS**

The foothills of the Blue Mountains are under Washington State DNR authority and are designated as areas 631 and 633. DNR will issue fire risk warnings and restrictions. Any firefighting during the dry season is controlled and managed by DNR Incident Commanders.

### **B. DESIGN AND CONSTRUCTION STANDARDS**

CREA Electric Facilities are designed and constructed to meet or exceed the applicable federal, state, or industry standards. Additionally, CREA monitors and follows as appropriate the Institute of Electrical and Electronics Engineers (IEEE) standards and National Electric Safety Code. CREA continuously evaluates and makes modifications to existing designs to address any potential threats. In a continuous effort to enhance public safety, increase reliability and address wildfire risks, CREA is currently implementing and evaluating the following equipment or design changes:

#### **1. REPLACE WOOD POLES**

CREA has completed a pilot project to replace damaged wooden poles with ductile-iron poles at selected locations having high fire risk. Ductile-iron poles have significantly lower burning properties than wood poles.

#### **2. REPLACE VINTAGE CONDUCTOR**

A portion of CREA overhead distribution lines consists of #6 and #8 CWC, #6 steel, and #4 HD copper. Some segments of these conductors have experienced brittleness and have shown signs of corrosion. During fault and high wind conditions some of these lines tend to break and may make contact to ground. CREA has assessed such locations and has prioritized the replacement of such conductors and has a line item in each year's budget for their replacement.

#### **3. NEW FUSE INSTALLATION**

CREA has identified locations in its distribution lines where installation of a fuse cutout will isolate a portion of circuit reducing hazards and increase reliability to its system. Fuse cutouts are installed at radial tap lines of the distribution feeders, as determined. These expulsion type fuses can cause wildfires. The arc produced has the possibility of initiating a fire under the right circumstances. CREA needs to evaluate alternatives in high wildfire risk area for fuses which suppresses and contains the arc. These fuses



substantially reduce the risk of initiating wildfires. Alternately reclosers or new electronic overcurrent devices are available to replace fuses altogether.

#### 4. AVIAN PROTECTION

System events caused by bird contact can cause a wildfire as birds use utility structures for a variety of reasons. Although CREA has made many improvements in recent years to limit avian contacts it has not adopted a comprehensive avian protection plan. However, CREA has implemented several strategies to improve avian protection. Strategies include – the use of perch deterrents, insulator covers, jumper covers, avian diverters, fiberglass crossarms, and installation of nesting platforms.

#### C. VEGETATION MANAGEMENT

CREA meets or exceeds the minimum industry standard vegetation management practices.

The recommended "time-of-trim" guidelines do not establish a mandatory standard, but instead provide useful guidance to utilities. CREA will use specific knowledge of tree growth rates and tree species to determine the appropriate time-of-trim clearance in each circumstance.

To comply with industry, state, and federal standards, CREA maintains the following internal vegetation management procedures. These procedures provide the methodology in preventing encroachment into minimum vegetation clearance distance of energized overhead lines and on clearing vegetation from the energized lines by maintaining safe clearance. The vegetation management program currently has the service area divided into three areas. Each area has an intensive trim every three years. Each area is also spot trimmed as needed. The clearances between energized parts and vegetation has been increased from 10' to 15' in recent years.

CREA contracts with a licensed, bonded, and insured tree trimming service to maintain clearance around its power lines and structures. All contractors and CREA personnel are required to use spark arrestors on their equipment to minimize sparks and maintain the clearances around the energized lines in a safe and reliable manner so that no safety issues - including fire hazards - arise. They are also made aware of State DNR requirements and directives.

In addition, CREA facilities that have fused equipment attached have the ground sterilized surrounding the structure to prevent any vegetation from growing up around the pole. The clearing of this vegetation in a defined radius around the pole will help prevent any vegetation from growing and becoming potential fuel for any ensuing fire that could be ignited by the explosive fusing on the pole.

#### D. INSPECTIONS

CREA's Distribution System Inspection and Preventive Maintenance Plan guides the inspection methodologies and establishes the criteria for repair of the energized power lines.

CREA understands that equipment failure can lead to ignition of nearby vegetation or other flammable material. Distribution equipment (switches, insulators, transformers, surge arrestors etc.) is inspected per the CREA Inspection and Maintenance Plan to minimize hazards related to equipment failure. When defective equipment is found, the equipment is removed from service until repairs or replacement is completed.

#### E. RECLOSING POLICY

Distribution reclosing devices are normally set to automatically re-energize the electric line. However, the reclosing function is turned off on underground feeders. CREA seeks to minimize the fire threat by monitoring reclosing tendencies that may contribute to the ignition of a wildfire. This includes modifying the reclosing policy on a case-by-case basis.

For imminent threats during adverse weather conditions in high-risk fire areas, adjustments to relay settings are evaluated in consideration of the impact on safety and reliability.

#### F. DE-ENERGIZATION

Due to the low risk of a catastrophic fire within CREA's area of service, CREA is not considering de-energization for public safety during critical fire weather conditions. CREA is not adopting specific protocols for executing a public safety power shutoff to any portions of its electric distribution system.

**Community Outreach**

CREAs Member Services Department is responsible for public information management including public relations, media relations, advertising, social media, and crisis communications. The website, direct mail, e-mail, local media outlets, social media and paid advertising are all tools utilized to educate and inform its members.

Member Service Department is in regular communication with key accounts. Communications include informing members of any change in operating conditions, coordinating scheduled outages, addressing situational awareness and other important topics.

**RESTORATION OF SERVICE**

CREA will follow an established set of procedures for the restoration of service after an outage.

For any outages due to a fault on the lines, the standard procedure is to:

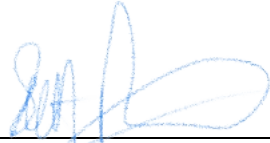
- (1) PATROL THE LINES
- (2) REPAIR ANY DAMAGES, OR IF NO DAMAGE IF FOUND
- (3) RESTORE SERVICE

CREA line crews patrol the electrical facilities and any damages to the equipment identified during the patrol are repaired. Re-energization process is initiated only after a lineman confirms that all issues have been corrected and lines are safe to energize.

Restoration of service after a wildfire event may be delayed and outage duration extended depending upon the extent of damage done to the electrical infrastructure and time required to repair the equipment. It may also be delayed when requested by the Incident Commander or other emergency management reasons.

Approved this 22 day of Feb, 2022.

COLUMBIA REA

  
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Scott Peters, CEO