



Jefferson County
Public Utility District

Vegetation Management Policy

Scott Bancroft, Special Projects Manager
January 28th 2020

Can you see the power lines?



Trees are recognized for their tremendous contribution to the environment. Unfortunately, trees growing in the wrong place have the potential to threaten the reliability of one of the most important commodities upon which our modern society is quite dependent—electric service.



Branch across all phases on East Quilcene Road. January 15, 2020 at 4:26 pm.

Many electric utilities recognize trees as the leading cause of unplanned service interruptions, including both sustained duration outages and momentary interruptions. Trees growing in and around electric facilities can cause electrical faults and impede access to facilities when emergency or routine repairs are required. Trees also provide an environment that is conducive to wildlife populations, which are another common cause of electric service interruptions.



Branch across all phases on East Quilcene Road. January 15, 2020 at 4:26 pm.

Possibly most important, however, the safety of the general public, utility personnel, and contract employees may be compromised by trees close to energized equipment. For many utilities vegetation management is the single largest distribution maintenance expense. Fortunately, there is clear evidence that proper vegetation management strategies can stabilize maintenance costs while maximizing public and worker safety and minimizing service interruptions.



Phase to Phase fault, one line severed. January 15, 2020 at 4:29 pm.
Results, 290 customers out of power in a matter of 3 minutes.

Report Reveals Cause of Twisp Fire

Sat., May 21, 2016

By Associated Press

SEATTLE – An investigation by the Washington state Department of Natural Resources found that tree branches rubbing on a power line started the 2015 blaze near Twisp that killed three U.S. Forest Service firefighters.

The agency's report says ignition likely happened as a light wind moved the branches against a sagging Okanogan County Electric Cooperative distribution line on Aug. 19, 2015. The investigation says burning foliage then dropped to the ground and spread flames. The Seattle Times obtained the DNR document through a public records request.

PG&E caused Camp Fire that destroyed Paradise and killed 85

It's official. Pacific Gas & Electric caused the Camp Fire.

State fire officials announced Wednesday a six-month investigation has determined what many already thought: PG&E power lines in the high hills of Butte County ignited the devastating blaze that destroyed nearly 19,000 buildings and killed 85 people, almost all in one frantic November day.

The announcement came during a whirlwind of news at the state Capitol involving the troubled utility company.

Power Company to pay \$360 million to settle wildfire lawsuits

Southern California Edison has reached an agreement to settle lawsuits with 23 public entities for taxpayer losses caused by wildfires attributed to the power company's equipment. The settlement is related to damage and expenses incurred during and after three fires in 2017 and 2018, the [Thomas Fire](#), [Woolsey Fire](#), as well as the [Koenigstein Fire](#) which burned into the Thomas Fire. The agreement also addresses the debris flows that killed 20 people in Montecito when rains washed mud off the barren slopes of the Thomas Fire.

The \$360 million settlement is for public entities only and does not affect the claims of residents, individuals, or businesses affected by the fires and debris flows.

How are we doing?

In 2019 PUD bid out seven tree trimming bids accounting for 42.5 miles of power line clearing.

PUD had contract tree crews on time and material for another 38.0 miles of power line clearing.

Contract tree crews removed 32 hazard trees. Hazard trees meaning, “trees outside the right-of-way corridor, which are dead, dying, structurally defective or otherwise pose a danger of falling on the lines.”



Areas of Improvement

Record Keeping

Public Relations

Education



Record keeping

To effectively manage a line clearance operation, considerable data are needed to support decision-making efforts. Managers of line clearance programs have often had to rely on their own experience and intuition as the data source for their plans and decisions. Often, more comprehensive records are desired by the program manager and demanded by top management as well as state and federal agencies. A comprehensive record-keeping and reporting system is an essential component of an effective line clearance program.

Public relations

The PUD's public relations efforts should include information about vegetation management activities, which can be one of the more highly visible and controversial aspects of utility operations. Consumers and the public should continually be informed of the electric utilities responsibility to cost-effectively control vegetation that threatens the safety and integrity of overhead electrical facilities. Proper supervision and the implementation of appropriate field practices will provide the basis for establishing or maintaining a professional and positive public image.

Education

Attending seminars, workshops, and conferences that present information on arboriculture, proper pruning techniques, and other industry-related topics is an excellent way to obtain additional training. Conferences also provide an invaluable opportunity to network and share ideas with other industry professionals. Vegetation management personnel, including managers and supervisors, should take advantage of workshops, seminars, and classes at local educational institutions and attend relevant conferences whenever possible.



Any Questions?



Fire Mitigation

Tod Eisele,
Colton Worley

January 28th, 2020

Photo: 2015 fire along BPA
Powerlines in Mason County
from the PT Leader

Strategies and Technologies Designed to Minimize the Threat of Electric Power-induced Fires

- Preventative Maintenance
- Strategic Operational Practices
- System Hardening
- Enhanced System Protection

Preventative Maintenance

- Tree Trimming
- Inspection and Repair of Aging Infrastructure
- Find Hot Spots Using Flir Camera



Port Ludlow Substation

Strategic Operational Practices

- Based on Fire Risk Factors
- Non-reclose
- Hot Line

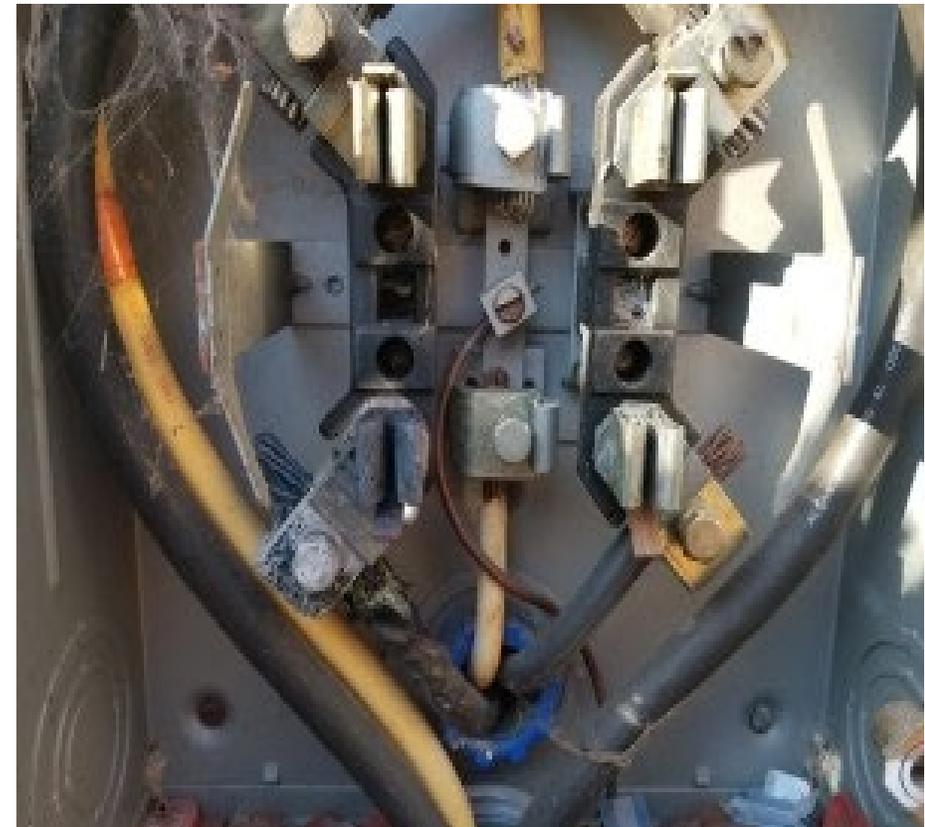




**REDUCE ARC-FLASH
HAZARDS**

System Hardening

- Underground High-Risk Circuits
- Tree Wire
- SCADA
- Hot Socket Detection

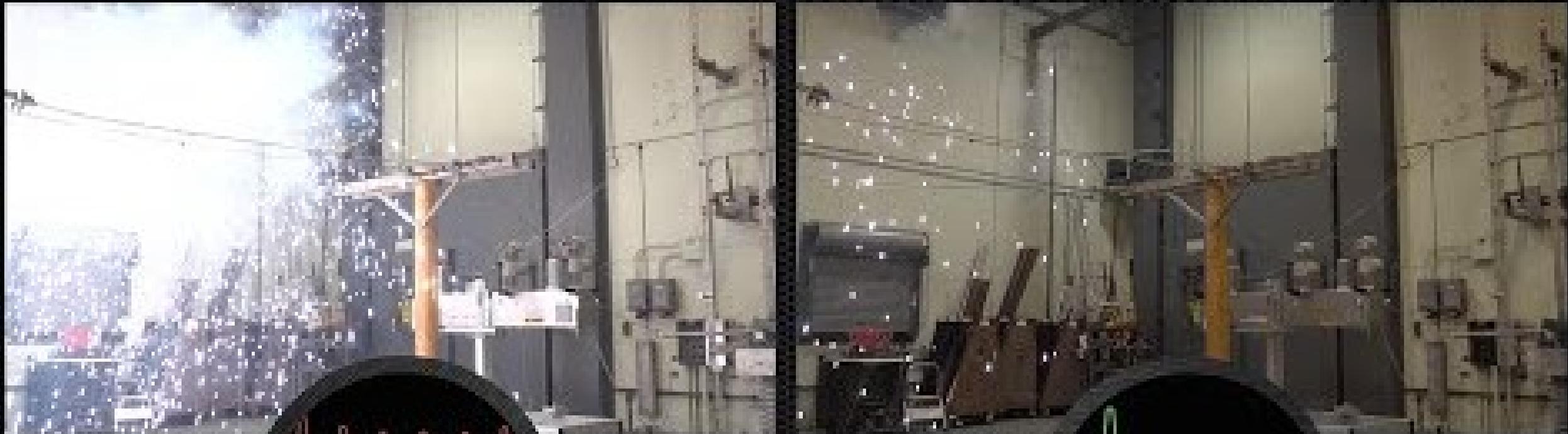


Enhanced System Protection

- Relays
- Reclosers
- Protection Study
- Communication Assisted Trips



PulseClosing[®] Technology Demo



A large fire is burning, with thick, dark smoke rising into the sky. The fire is bright orange and yellow, with a large plume of smoke extending upwards. In the foreground, there is a fence made of wooden posts and wire. In the background, there are silhouettes of trees and power lines. The overall scene is dark and dramatic.

Any Burning
Questions?