WILDFIRE MITIGATION AND VEGETATION MANAGEMENT

How Public Policy Can Reduce the Risk of Wildfires in Colorado

COLORADO'S ELECTRIC COOPERATIVES
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CONTENTS

EXECUTIVE SUMMARY

Colorado's electric cooperatives provide electric service to over 70% of the land mass of the state of Colorado. Electric cooperative service territory includes vast tracts of public and private land that is susceptible to wildfires. In the last several years, large fires have caused significant property damage in areas served by electric cooperatives and have impacted the operations of cooperative electric facilities. The purpose of this report is to outline policy options for reducing wildfire risk in Colorado's electric cooperative service territory and throughout Colorado. More broadly, the report calls upon policymakers to take action on complex policy issues that would change the wildfire mitigation and vegetation management policies in Colorado. The report emphasizes that the cost of wildfire mitigation and vegetation management is small compared to the cost of fighting wildfires and helping communities recover once a wildfire occurs. Policymakers can rely on lessons learned and laws adopted by other states such as California, Utah, and Missouri that have taken drastic steps to ensure that utilities are supported in vegetation management, while also protecting their citizens from acts that cause wildfires.

This report by CREA outlines three policy options that can be adopted individually or together to address the concerns of Colorado's electric cooperatives about wildfire risk:

1. **Setting Standards for Vegetation Management:** The development of appropriate standards for vegetation management for electric utilities may establish a standard of care that would clarify utility liability for alleged negligence. This section looks at both California and Utah laws that have attempted to standardize vegetation management plans through a regulatory body.

2. **Evaluating Utility Right-of-Way (ROW) Policies:** Standardizing rights-of-way would improve the implementation of vegetation management plans. Policymakers in Missouri were able to address ROW inconsistencies by passing legislation that implements a standard ROW width which standardized ROW contracts, giving utilities the ability to better coordinate and execute their vegetation management plans.

3. **Clarifying Colorado's Wildfire Liability Law When a Wildfire Occurs:** The current liability law suggests that any entity can be held liable if it is found to have acted negligently and caused a fire. However, without clear standards or best practices, it is unclear if a utility's vegetation management plan is sufficient to protect the utility from liability. Due to the limitations on acquiring insurance, it is imperative to address the liability concerns or adopt a policy that would allow for the state to operate an insurance fund for wildfire recovery like California or like Florida's Hurricane Catastrophe Fund.

The report provides an overview of the policies and regulations that Colorado policymakers have implemented dating back to 2012. However, CREA believes there has been a lack of electric utility engagement in the development of these 64 pieces of legislation. Electric cooperatives are uniquely suited to implement robust vegetation management plans that are beneficial to the communities they serve. Colorado's electric cooperatives are committed to providing reliable, safe, affordable, and environmentally conscious energy to their consumer-members. Within this commitment, Colorado's electric cooperatives prioritize vegetation management and wildfire risk mitigation as a core function of their operations. This report is intended as a resource and a call to action for policymakers to take bold action to protect and preserve Colorado's natural beauty and prevent wildfires.

ABOUT COLORADO'S ELECTRIC COOPERATIVES

The Colorado Rural Electric Association (CREA) is the statewide trade organization whose members are Colorado's 22 electric distribution cooperatives and Tri-State Generation and Transmission Association. **CREA's member cooperatives provide power to approximately 1.5 million consumer-members and their service territory covers roughly 70% of Colorado's landmass.** On average Colorado's electric cooperatives serve 7.9 consumer-members per mile of line (municipal utilities average 48 consumers per mile of line and investor-owned utilities average 34 consumers per mile of line). Colorado's electric cooperatives are not-for-profit entities that face unique challenges compared to municipal or investor-owned utilities due to the low density of consumer-members and limited revenue generated through electric sales.

The cooperative model is successful because electric cooperatives rely on locally-elected boards to provide guidance to cooperative staff in an effort to provide affordable, safe, reliable, and environmentally conscious power to all of their consumer-members. A lot has changed since Colorado's first electric cooperative started providing power to rural consumers in 1936. **Now Colorado's electric cooperatives employ over 2,500 individuals and have a network of nearly 80,000 miles of distribution and transmission line.** Colorado's electric cooperatives provide electric service to farms and ranches, in towns and suburbs, and at ski resorts and businesses across Colorado.

22 locally-controlled distribution co-ops
1 transmission & generation cooperative
Serve **70%** of Colorado's landmass

80,000 miles of distribution & transmission line

1.5 million consumer-members
7.9 consumer-members per mile
Employ over **2,500** individuals

WILDFIRES IMPACT ON COLORADO'S ELECTRIC COOPERATIVE:

As Colorado's population continues to increase, many of Colorado's electric cooperatives have seen a growth in electricity sales and the number of consumer-members that they serve. Furthermore, the wildland-urban interface (WUI) where many cooperatives, and other electric utilities, operate is being stressed by new infrastructure and increased population. **The Colorado State Forest Service defines the WUI as an area or areas where human improvements are built close to, or within, natural and flammable vegetation.**[1] While this growth is great for Colorado's economy, it has led to increased wildfire risk in many of the communities our cooperatives serve. In 2018 alone, several wildfires threatened critical infrastructure and the service territory of Colorado's electric cooperatives, including:

- The Pine Tree Fire burned 4,700 acres in Routt and Moffat counties damaging over 2 miles of overhead transmission line, 33 utility poles, and 13,200 feet of conductor cable in Yampa Valley Electric Association's service territory.[2]

- The Spring Creek Fire burned 108,045 acres near Fort Garland and La Veta in San Isabel Electric's service territory. The impact of the wildfire on San Isabel Electric included damage to about 140 miles of powerline, 1,000 utility poles, and left more than 1,800 member-consumers without power. [3]

- The Lake Christine Fire in Holy Cross Energy's service territory burned 12,500 acres near Basalt, resulting in damage to 65 utility poles. However, the damage could have been far worse. If

[1] Colorado State Forest Service. "Half of Coloradans Now Live in Areas at Risk to Wildfires - Colorado State Forest Service," November 26, 2018. https://csfs.colostate.edu/2018/11/26/half-of-coloradans-now-live-in-areas-at-risk-to-wildfires/.

[2] Colorado Rural Electric Association. "Co-Op Upgrades Power Lines During Wildfire Rebuild – Colorado Rural Electric Association," June 21, 2018. https://crea.coop/2018/06/21/co-op-upgrades-power-lines-during-wildfire-rebuild/.

[3] Basin Electric Power Cooperative. "Basin Electric Member Cooperative in Colorado Battles Wildfires - Basin Electric Power Cooperative," July 12, 2018. https://www.basinelectric.com/news-center/news-briefs/colorado-member-cooperative-battles-wildfires.

the fire had not been contained, the fire would have shutdown power to Aspen over the July 4th weekend.[4]

The mountainous regions of Colorado are not the only areas that are at risk of wildfires. In 2017, a fire burned 30,000 acres in Logan County in Highline Electric Association's service territory. This fire resulted in families losing their homes and livestock.[5] Other notable fires in cooperative service territory include the 416 Fire[6] in 2018 which ravaged parts of La Plata Electric Association's service territory, the 2012 High Park Fire in Poudre Valley Rural Electric Association's service territory[7], and 2014 Waldo Canyon and 2015 the Black Forest Fire in Mountain View Electric Association's service territory.[8] Wildfire experts and advocates for better wildfire mitigation and prevention, along with boards and staff of the electric cooperatives, have expressed concerns that **Colorado's natural beauty and Colorado's critical infrastructure is at great risk due to wildfires.** The following sections will outline policy options that can help reduce the risk of wildfires and ensure that Colorado's electric cooperatives continue to provide affordable, safe, reliable, and environmentally conscious power across Colorado.

UNDERSTANDING COLORADO'S WILDFIRE PROBLEM

For many years, Colorado's electric cooperatives have used vegetation management strategies and other tactics to mitigate the risks of wildfires. The fact is that in many cases the lack of access to public and private property has reduced the effectiveness of cooperative vegetation management efforts, as well as those of other electric cooperatives. The problems that electric cooperatives, and other electric utilities, face are extremely complicated since **Colorado's utilities operate in a variety of different jurisdictions including private, local, state, and federal lands.** Each of these jurisdictions has different rules and regulations for clearing rights-of-way or trimming or cutting down trees that pose a threat to utility infrastructure. For example, a utility that identifies a "danger tree"* and takes the necessary steps to mitigate this risk, may not be able to get approval from the landowner, state, or federal land managers in a timely fashion.[9]

In January 2020, Dave Markham the CEO of Central Electric Cooperative in Oregon testified to the United States House Energy and Commerce Committee that "the risk of more wildfires in the West is heightened by government delays in allowing electric cooperatives to remove dead and dying trees from federal land near power lines."[10] Markham's quote applies to more than just the federal government and extends to the WUI in Colorado. According to the Colorado State Forest Service, nearly 2.9 million Coloradans live in areas that are close to natural terrain and flammable vegetation, which is about a 50 percent increase from 2012 to 2017.[11]

Furthermore, in a 2014 wildfire risk analysis of Colorado's Front Range published by the U.S. Forest Service, the authors note that Colorado's combination of public and privately held lands that adjoin the WUI can facilitate the spread of fires from remote lands to more populated communities.[12] While the study focuses on the wildfire risk in the Front Range, the lessons learned in the 2014 study apply to other communities that intersect with the WUI.

Dating back to 2012, the Colorado State Forest Service has identified 64 pieces of legislation that have had an impact on preventing and fighting wildfires or attempting to tackle strategic planning. For

[4] Goldfield, Emily, and Mark Dyson. "Energy Resilience in the Roaring Fork Valley - Rocky Mountain Institute," May 6, 2019. https://rmi.org/energy-resilience-in-the-roaring-fork-valley/.

[5] Hernadez, Lance. "Eastern Plains Wildfire Now 80 Percent Contained, 4 Homes, Multiple Cattle Lost," March 8, 2017. https://www.thedenverchannel.com/news/local-news/eastern-plains-wildfire-now-80-percent-contained-4-homes-multiple-cattle-lost.

[6] The Durango Herald. "416 Fire Content." Durango Herald. Accessed April 30, 2020. https://durangoherald.com/tags/1475-416-fire.

[7] Udell, Erin. "Colorado Wildfire: Fire Races North of Poudre Canyon, Homes Burn." The Denver Post (blog), June 22, 2012. https://www.denverpost.com/2012/06/22/colorado-wildfire-fire-races-north-of-poudre-canyon-homes-burn/.

[8] Maria St louis-sanchez. "Two Destructive Wildfires in El Paso County on Unique Recovery Paths Two Places Two Recoveries Looking Forward." Colorado Springs Gazette. Accessed April 30, 2020. https://gazette.com/news/two-destructive-wildfires-in-el-paso-county-on-unique-recovery-paths-two-places-two-recoveries/article_a9d8cfdb-3db6-5ef9-bfd3-f3b1ee379c22.html.

[9] Guggenmoos, Sig. "Vegetation Management Terms." T&D World, March 7, 2011. https://www.tdworld.com/vegetation-management/article/20960772/vegetation-management-terms.

* The American National Standards Institute defines a danger tree as, "any tree on or off the right-of-way that could contact an electric supply line". Danger trees are a subcategory of a hazard tree, which is any tree that is structurally unsound that could fall on a power line.

[10] Kelly, Erin. "Co-Op CEO: Wildfire Risk Made Worse by Slow Federal Action." electric.coop, January 28, 2020. https://www.electric.coop/co-op-ceo-says-wildfires-made-worse-by-slow-federal-action/.

[11] Colorado State Forest Service. "Half of Coloradans Now Live in Areas at Risk to Wildfires - Colorado State Forest Service," November 26, 2018. https://csfs.colostate.edu/2018/11/26/half-of-coloradans-now-live-in-areas-at-risk-to-wildfires/.

[12] Haas, Jessica R., David E. Calkin, and Matthew P. Thompson. "Wildfire Risk Transmission in the Colorado Front Range, USA: Wildfire Risk Transmission." Risk Analysis 35, no. 2 (February 2015): 226–40. https://doi.org/10.1111/risa.12270.

example, in 2012 the General Assembly, with the g,overnor's support passed HB12-1032 (Continue Forest Restoration Program) which extended a $1.45 million transfer to the Healthy Forest and Vibrant Communities Fund and $50,000 to the wildland-urban interface training fund.[13] In 2013, the legislature passed SB13-269 (Wildfire Risk Reduction Grant) that allocated $9.8 million to the grant program, which is now administered by the Colorado Department of Public Safety and the Colorado State Forest Service. Additionally, in 2013 the General Assembly passed SB13-082 which created the permanent Wildfire Matters Interim Committee. The goal of this committee is to work with stakeholders to develop legislation related to wildfire prevention and mitigation.[14] However, spending on mitigation has been dwarfed by the allocation of funding to ensure communities can recover from wildfires.

The Wildfire Matters Interim Committee with the support of the Colorado Department of Public Safety has proposed and passed legislation that implemented grant programs to harden the home, create defensible spaces in WUI communities, and better manage and maintain healthy forests. The General Assembly also created the Colorado Fire Commission in the Colorado Department of Public Safety in 2019 through SB19-040. The Colorado Fire Commission's charge is "to enhance public safety in Colorado through an integrated statewide process focused on the fire service's capacity to conduct fire management and use, preparedness, prevention, and response to safeguard lives, property, and natural resources, and increase the resiliency of local and regional communities."[15] In a review of the 64 pieces legislation that the Colorado State Forest Service has identified on its website, there is a concerning lack of electric cooperative input and coordination, even though electric cooperatives play a major role in wildfire mitigation and vegetation management. It is clear that the General Assembly is committed to reducing the risk of wildfire in Colorado, but the current statutory and regulatory structures are stifled by Colorado's budget constraints.

The high cost of wildfire mitigation can present a barrier to conducting appropriate mitigation strategies. **However, the cost of mitigation is small when compared to costs related to fighting wildfires or the cost of rebuilding communities after a fire occurs.** It is important to think of the cost related to wildfires as a direct and indirect cost. While fighting a wildfire is considered a direct cost, the loss of business activities and capital investment are examples of the indirect cost of a wildfire. To give an example, after the 2012 Lower North Fork Fire, a prescribed burn that went awry burning 4,140 acres and destroying 22 homes,[16] Colorado lawmakers passed HB12-1352 which eliminates the state's immunity from damages sustained during a prescribed burn. The passage of HB12-1352 resulted in the state passing SB14-223 (Payment Claims for Lower North Fork Fire), which appropriated over $17.5 million to settle damages from the fire.[17] To underscore the cost of wildfire damages, the 2018 Camp Fire in northern California is estimated to have cost $15 billion which included the cost of fighting the fire as well as damages related to real property. The Camp Fire caused the death of 88 individuals, destroyed more than 18,500 structures, and burned countless acres of WUI. Additionally, the cost of the 2017 and 2018 wildfire season caused $40 billion worth of damage to communities across the United States.[18] Because of the lack of adequate insurance for wildfire damages along with Colorado's lack of general funds to help communities recover from a wildfire, a devastating wildfire in Colorado like the Camp Fire would be detrimental to Colorado's economy and natural beauty. **Moreover, such a fire could result in serious economic consequences to electric cooperatives and other electric utilities operating in Colorado.**

...the cost of mitigation is SMALL when compared to costs related to fighting wildfires or the cost of rebuilding communities after a fire occurs.

[13] Colorado State Forest Service. "2012 Forestry Legislation in Colorado." Colorado State Forest Service. Accessed April 15, 2020. https://csfs.colostate.edu/forestry-legislation-in-colorado/2012-bills/.

[14] Colorado State Forest Service. "2013 Forestry Legislation in Colorado." Colorado State Forest Service. Accessed April 15, 2020. https://csfs.colostate.edu/forestry-legislation-in-colorado/2013-bills/.

[15] Colorado State Forest Service. "2019 Forestry Legislation in Colorado." Colorado State Forest Service. Accessed April 15, 2020. https://csfs.colostate.edu/forestry-legislation-in-colorado/.

[16] Gabbert, Bill. "Lower North Fork Fire Archives." Wildfire Today, July 29, 2014. https://wildfiretoday.com/tag/lower-north-fork-fire/.

[17] Colorado State Forest Service. "2014 Forestry Legislation in Colorado." Colorado State Forest Service. Accessed April 15, 2020. https://csfs.colostate.edu/forestry-legislation-in-colorado/2014-bills/.

[18] Center for Climate and Energy Solutions. "Record Wildfires Push 2018 Disaster Costs to $91 Billion." Center for Climate and Energy Solutions, February 27, 2019. https://www.c2es.org/2019/02/record-wildfires-push-2018-disaster-costs-to-91-billion/.

POLICY OPTION 1: STANDARDIZING WILDFIRE MITIGATION AND VEGETATION MANAGEMENT PLAN

As mentioned previously, wildfire mitigation and vegetation management can be an expensive undertaking for a utility or fire district, but mitigation and prevention are more cost-effective than recovering after a fire has already taken place. According to an article published by PowerGrid International, California utilities spent more than $250 million on vegetation management for distribution lines in one year. The article also suggests that vegetation management is the costliest expenditure a utility undertakes to maintain a reliable grid.[19] One of the biggest challenges with wildfire mitigation and vegetation management is that no standards or best practices are outlined in Colorado. However, the Environmental Protection Agency indicates the implementation of standards and best practices around vegetation management can result in better grid reliability, better protect public safety, and reduce adverse environmental and cultural impacts.[20] Ultimately, Colorado's utilities have developed and implemented vegetation management independently without an overall statewide plan or coordination.

To underscore the lack of national standards or best practices, a 2004 report produced by the Federal Energy Regulatory Commission stated that, "current oversight of UVM (utility vegetation management) activities by appropriate agencies or organizations is overwhelmingly inadequate."[21] Furthermore, the study advocates for stricter oversight of utilities through the development of measurable objectives.[22] It is worth noting that many utilities including electric cooperatives attempt to work with local land managers to coordinate efforts, but these loose arrangements differ depending on the jurisdiction. Little has changed since the 2004 report, despite the dangers of wildfires increasing throughout the West. Policymakers from around the country believe that utilities and land managers can benefit from adopting rulemaking proceedings and having a uniform mitigation standard across the state. For example, both Utah and California have adopted legislation that directs their respective public utilities commissions to adopt rules and approve a utility's mitigation plan. **Having a statewide approved plan can reduce the risk of wildfire in a utility service territory and help to limit liability in the event that a fire starts.** The following section will explore different policy options adopted by California and Utah to standardize vegetation management. While the intent of these pieces of legislation differ from state to state, there are some key takeaways that Colorado lawmakers can adopt from California's and Utah's efforts.

CALIFORNIA WILDFIRE POLICIES: SB-901 AND AB-1045

California lawmakers passed two pieces of landmark legislation during 2018 (SB-901) and 2019 (AB 1054) after devastating fire seasons. SB-901 had three main goals:

1. Increase funding for forest health and fire prevention;

2. Create exemptions for landowners with no more than 100 acres to build infrastructure that would reduce the risk of wildfires such as temporary roads for thinning forest, extend the contracts for biomass facilities, and streamline regulatory approval for prescribing burns and increased vegetation management on federal lands and in high wildfire risk areas;

3. Develop safety standards and setbacks for commercial and residential developments in high fire risk zones. Additionally, SB 901 allocated $1 billion over five years to address wildfire prevention projects.[23]

The legislation also required the California Public Utilities Commission (PUC) to initiate a rulemaking proceeding for utilities to submit wildfire mitigation plans and create an application process for investor-owned utilities to recover the cost of wildfire mitigation through borrowing money or through a rate increase. Critics of the legislation stated that it did not address California's liability issue of inverse condemnation. Inverse condemnation refers to the liability that California utilities face if a fire is started by their equipment,

[19] Malashenko, Elizaveta. "POWERGRID Cover Story: Rethinking Utility Vegetation Management." POWERGrid International, May 24, 2018. https://www.power-grid.com/2018/05/24/powergrid-cover-story-rethinking-utility-vegetation-management/.

[20] US EPA, OCSPP. "Integrated Vegetation Management (IVM) Practices around Utility Rights-Of-Way." Overviews and Factsheets. US EPA, February 5, 2016. https://www.epa.gov/pesp/integrated-vegetation-management-ivm-practices-around-utility-rights-way.

[21] Cieslewicz, Stephen R, and Robert R Novembri. "Utility Vegetation Management Final Report." CN Utility Consulting, 2004, 131.

[22] Cieslewicz, Stephen R, and Robert R Novembri. "Utility Vegetation Management Final Report." CN Utility Consulting, 2004, 131.

[23] California State Association of Counties. "SB 901: Wildfire Protection Package." California State Association of Counties, August 29, 2019. https://www.counties.org/post/sb-901-wildfire-protection-package; Dodd, Bill. Wildfires, Pub. L. No. 901, § 626 (2018). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB901.

even if the utility was not negligent. After a devastating fire season in 2017 and 2018, Pacific Gas and Electric filed for bankruptcy protection due to an estimated $40.5 billion worth of liability claims related to wildfires started from their infrastructure.[24] In response to PG&E's bankruptcy and the growing threat of wildfires, California lawmakers passed Assembly Bill No. 1054 to fill in gaps created by SB-901. While Assembly Bill No. 1054 did not directly address inverse condemnation, the bill created a Wildfire Fund that overhauled the cost recovery process for utilities regulated by the CPUC and established safety protocols and a wildfire mitigation certificate to access the Wildfire Fund. The intent of the legislation was to mitigate the liability utilities face and to make individuals whole after a wildfire.

CALIFORNIA WILDFIRE FUND FUNDING MECHANISM

The Wildfire Fund is funded through annual contributions from the utilities, matching state funding, and a $2.50 per month fee assessed to ratepayers. To participate in the fund, utilities must first make an initial contribution based on an established wildfire allocation metric, which is based on the proportion of service area that is in a high fire-threat area. The three largest utilities are estimated to contribute $7.5 billion initially along with $300 million annually. The Wildfire Fund is set to grow to $21 billion.[25] The law allows but does not require regional utilities who serve fewer than 250,000 customers to participate in the Wildfire Fund. The regional utilities that choose to participate contribute based on requirements set by the CPUC.

WILDFIRE LIQUIDITY AND INSURANCE FUND

The Wildfire Fund has two payout options reserved for utilities who choose to participate in the fund and those who do not. The Insurance Fund is reserved for utilities who participate in the fund and the Liquidity Fund is for utilities who do not pay into the fund. Each fund is capped at a $10.5 billion payout. The differences are below:

1. **Liquidity Fund Option:** If a utility does not pay into a fund or make an initial contribution, it can borrow money from the fund like a line of credit to pay third party claims. The utility is then required to pay back the fund through a rate increase that is set by CPUC.

2. **Insurance Fund Option:** If a utility makes an initial contribution, it may use the funds to pay out eligible claims. If the claims are found to be just and reasonable the utility is not required to reimburse the fund. If the CPUC does not find the claims are just and reasonable, then a cap is set for the amount of money the utility is required to pay back the fund. If the CPUC deems that the utility acted with willful disregard of rights or safety and the utility fails to hold a safety certificate from the CPUC, then there is no limit to the amount the utility is required to pay.[26]

REVISED CPUC COST RECOVERY FRAMEWORK FOR LIABILITY

AB 1054 establishes a wildfire safety division of the CPUC to review utilities application to recover wildfire costs caused by catastrophic wildfires. If the utility has a safety certificate from the CPUC, then it is presumed to have acted reasonably and the burden is passed onto other parties to demonstrate the utility was negligent. Ultimately, the review process gives greater flexibility for utilities to recover the cost from wildfires by passing the cost on to ratepayers. Furthermore, the bill allows utilities to request a financing order and issue bonds to recover expenses related to wildfire damage.[27] The CPUC in coordination with CalFire considers the following 10 aspects of a utilities' wildfire mitigation:

1. Risk assessment and mapping
2. Situational awareness and forecasting
3. Grid design and system hardening
4. Asset management and inspections
5. Vegetation management and inspections
6. Grid operations and protocols
7. Data governance
8. Resource allocation methodology
9. Emergency planning and preparedness
10. Stakeholder cooperation and community engagement[28]

[24] Eavis, Peter, and Ivan Penn. "California Says PG&E Power Lines Caused Camp Fire That Killed 85 - The New York Times." New York Times, May 15, 2019. https://www.nytimes.com/2019/05/15/business/pge-fire.html.

[25] John, Jeff St. "California Assembly Passes $21B Wildfire Fund for Utilities," July 11, 2019. https://www.greentechmedia.com/articles/read/california-assembly-passes-21b-wildfire-fund-for-utilities.

[26] Holder. et al. Public utilities: wildfires and employee protection, Pub. L. No. 1054, § Chapter 79 (2019). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1054.

[27] Holder.et al. Ibid.

[28] California Public Utilities Commission. "Attachment 1 (WMP Guidelines)." California Public Utilities Commission, December 16, 2019. http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M322/K133/322133494.PDF.

The rules of the CPUC require utilities to audit their mitigation programs to determine that the work is being completed promptly. The CPUC approval of a utility's wildfire mitigation plan is an attempt to standardize the planning and practices across California and offers financial protection if a wildfire occurs.

WILDFIRE MITIGATION REQUIREMENTS AND STAKEHOLDER REACTION

Under this law, utilities' wildfire mitigations plans must cover at least three years and the CPUC reviews the plan every three years. The law establishes a cost recovery method for mitigation, but only after the utility has spent $5 billion in safety improvements. Lastly, the bill creates the California Wildfire Safety Advisory Board, which provides advice and recommendations for wildfire mitigation best practices. California utilities were supportive of the bill, but some think that the bill did not go far enough to address inverse condemnation. Critics of the bill see this as a bailout for utilities who are just going to pass the cost of wildfire recovery efforts on to the ratepayer sparking consumer protection issues.[29] **Colorado has a unique opportunity to make systematic changes through the Colorado Fire Commission or Colorado's General Assembly to reduce the risk of wildfires and create adequate funding mechanisms to offset the cost if a fire does occur.**

LESSONS LEARNED FROM CALIFORNIA AND HOW THEY APPLY TO COLORADO

Colorado law requires that a utility must be found to be negligent to be found liable for a wildfire. Without a standardized or best practice guidance for wildfire and vegetation management, it is difficult for court of law to determine negligence. Additionally, Colorado's electric cooperatives face a unique situation compared to investor-owned utilities, who can recover the cost of wildfire mitigation through their ratepayers and can carry higher liability insurance ultimately protecting their shareholders, or municipal utilities that can utilize government immunity. Colorado's electric cooperatives have robust wildfire mitigation strategies. **However, wildfire mitigation is increasingly expensive and passing on the cost to consumer-members can be detrimental to many of the low-income communities CREA's cooperatives serve.**

These communities are also some of the most at risk for wildfires. A survey of CREA's membership reveals that many of Colorado's electric cooperatives can purchase up to $20 million in insurance to cover wildfire damages. However, some cooperatives are able to purchase additional insurance through a third-party vendor at a premium. While purchasing additionally insurance coverage relating to wildfire might make sense for some cooperatives, the cost can be prohibitive. Depending on the damages of the wildfire on cooperative infrastructure and other damages in the service territory, $20 million would not make individuals whole, thus putting the financial viability of the cooperative in jeopardy. Therefore, CREA's membership may want to support an insurance fund model as well as the approval of a wildfire mitigation strategy in California's model. Like some critics of California's legislation, CREA may want to ask Colorado policymakers to address liability concerns. Colorado policymakers could look to Utah's House Bill 66 that not only puts in place a robust approval process for wildland management to reduce wildfire risk but provides liability coverage for utilities that choose to implement such policies.

UTAH POLICY WILDLAND FIRE PLANNING AND COST RECOVERY: HB-66

In March 2020, Utah passed legislation that would enact changes to its wildland fire planning and cost recovery rulemaking through the Utah Public Service Commission (UPSC). The bill provides liability protection to a covered utility if the utility's wildfire mitigation plan is approved by the UPSC or the electric cooperative's governing body approves a plan and files the plan with the commission. The bill leaves the discretion to the electric cooperative to determine if the plan, "is reasonable and in the interest of the electric cooperative members; and appropriately balances the cost of implementing the plan with the risk of a potential wildland fire".[30] The bill stipulates that a utility must conduct mitigation planning every three years. While the bill has different requirements for investor-owned utilities, the bill language requires that an electric cooperative provide a description of the service territory that is at risk of wildland fires, a description of the procedures, standards, and time frames that the electric cooperative will use to inspect and operate its infrastructure, the steps and procedures of a vegetation management plan, and balancing the risk of wildland fires and providing electricity to a community. The bill language also requires electric cooperatives

[29] Walton, Robert. "California Tees up Wildfire Liability Bill as Utility, Consumer Groups Diverge on Solutions." Utility Dive. Accessed April 8, 2020. https://www.utilitydive.com/news/california-tees-up-wildfire-liability-bill-as-utility-consumer-groups-dive/558134/.

[30] Walton. Ibid.

to describe any possible partners that they will work with including state and local wildland managers.

The legislation ensures statutory liability coverage if the qualified utility or the electric cooperative has submitted its wildland fire mitigation plans and is implementing the plan if a fire starts in its service territory. Additionally, the bill states that a utility will not be held liable if the electric cooperative is "denied or delayed access to a right-of-way on land owned by the state, a federal agency, or tribal government"[31] after the utility requests access to the right-of-way. The legislation does allow for an individual to seek compensation if the real property was damaged during a fire but limits the award to the cost of the real property to its pre-wildland fire condition or the difference between the fair market value before the wildland fire and the market value after the fire. Compared to California's legislation that has a fiscal impact in the billions, Utah's legislation has a moderate fiscal impact for the fiscal year 2021 and 2022 totaling $18,500 in expenditures for rulemaking and the approval of a utility's wildland management plan. The fiscal note recognizes that there will be costs allocated to the utilities for submitting their plan but the fiscal note is silent on what these costs are.[32] Due to the limited fiscal impact and the benefits of protecting critical infrastructure and wildlands, the legislation could be used as a model to adopt in Colorado, if policymakers do not want to create an additional insurance fund.

CREA's membership is interested in participating in the development of standard vegetation management plans in Colorado that fit the needs of the individual cooperative and other utilities. While California and Utah have standardized their vegetation, management plans through their respective PUCs, CREA believes that any standardization in Colorado should take place within the Department of Public Safety or the Colorado Fire Commission. The Department of Public Safety or the Colorado Fire Commission has broad stakeholder engagement and has the industry knowledge to develop and approve these plans. A major benefit of Utah's HB 66 is the limited fiscal impact on the state and the statutory protection the bill provides for utilities that are unable to access a ROW. The following section will examine how ROWs play a pivotal role in wildfire mitigation and the implementation of a wildfire migration plan.

Policy 1 takeaway **CREA's membership is interested in participating in the development of standard vegetation management plans in Colorado that fit the needs of the individual cooperative and other utilities.**

[31] Albrecht, Carl, and Scott Sandall. Wildland Fire Planning and Cost Recovery, Pub. L. No. 66 (2020). https://le.utah.gov/-2020/bills/static/HB0066.html.

[32] Oritt, Maddy. "Fiscal Note: Wildland Fire Planning and Cost Recovery Amendments." Utah Legislature, March 28, 2020. https://le.utah.gov/-2020/bills/static/HB0066.html.

POLICY OPTION 2: EVALUATING UTILITY RIGHT-OF-WAY (ROW) POLICIES

Colorado's electric cooperatives' service territory covers private, local, state, and federal lands. Each of these jurisdictions has different ROW requirements which means that a utility does not have a uniform right-of-way when implementing a vegetation management plan. This can lead to danger trees falling into ROWs and potentially igniting a wildfire. **Rights-of-way are an important aspect of wildfire mitigation. If ROWs are not trimmed or cleared properly, it increases the risk of a fire from a power line.** Several different policy options have been implemented to reduce the risk of a wildfire starting in the ROW. One policy approach is that transmission developers and operators, such as WAPA, use ROWs as a fire break.

In a 2017 Department of Energy study published on the environmental impacts of the U.S. power sector, the department determined, "in addition to ensuring the reliable delivery of electricity, integrated vegetation management in powerline ROWs can prevent the spread of invasive species, provide habitat for pollinators, and act as an effective firebreak for the control and suppression of wildfire."[33] Most utilities ROWs are 10 feet on either side of the distribution line for a total of 20 feet, thus the utilities will trim or remove trees and vegetation in this area. Some utilities might experience wider ROW depending on the easement or the relationship with the local land manager if the ROW is on public land. The limited ROW and lack of uniformity is a cause for concern for CREA members because an existing ROW may not be adequate to deal with trees that are considered dangerous to their infrastructure.

In an attempt to clarify ROW easements for Missouri electric cooperatives and municipal utilities, Missouri lawmakers passed legislation that clarified the ROW for different transmission and distribution systems setting a statutory standard for the width of ROWs. For example, a utility might clear trees or vegetation within 30-feet of either side of the centerline of a 34.5 kV powerline located outside of city limits. For powerlines between 34.5 kV and 100 kV, the utility has access to 50-feet on either side of the centerline. The bill specifically gives authority to electric cooperatives and municipal utilities to trim, remove, and control trees and other vegetation to maintain safe and reliable operations. The statute also grants authority to a cooperative to trim or remove a tree of sufficient height outside of the right-of-way if the tree possesses a threat to the safety and reliability of the powerline. However, if a utility was to remove a tree outside of the designated ROW then the utility must provide written notice 14 days before service unless the powerline is in immediate danger.

Lastly, Missouri's statute provides the utility the ability to petition the landowner to expand the right-of-way if the utility deems it necessary. [34] Colorado's electric utilities would greatly benefit from similar legislation in Colorado. **Legislation that implements a standard ROW width would standardize ROW contracts, giving the utility the ability to better coordinate and execute its vegetation management plan.** Furthermore, authorizing the cooperative or a utility to trim or cut down a danger tree that has the potential of falling into a power line, could decrease the risk of wildfires in the wildland-urban interface. Lastly, legislation that defines adequate ROW could be easily integrated with other policies such as a state-approved vegetation management plan or a wildfire insurance fund.

Without addressing right-of-way concerns, other policy options such as the standardization of vegetation management plans will not be as effective in reducing the risk of wildfires in Colorado. In both Missouri's and Utah's legislation, lawmakers have protected utilities from liability when a utility is prevented from accessing a ROW and inhibited from implementing its vegetation management plan. Colorado does not have these liability protections for utilities. Colorado's liability structure and policy solutions are addressed in the following section.

Policy 2 takeaway **Legislation that implements a standard ROW width would standardize ROW contracts, giving the utility the ability to better coordinate and execute its vegetation management plan.**

[33] Massetti, Emanuele, Marilyn Brown, Isha Sharma, James Bradbury, Colin Cunliff, and Yufei Li. "Environmental Quality and the U.S. Power Sector: Air Quality, Water Quality, Land Use, and Environmental Justice." U.S. Department of Energy, January 4, 2017. https://info.ornl.gov/sites/publications/files/Pub60561.pdf.

[34] MO Rev Stat § 537.340 (270)

POLICY OPTION 3: CLARIFYING COLORADO'S WILDFIRE LIABILITY LAW WHEN A WILDFIRE OCCURS

In 2019, Wyoming state Sen. Dockstader and Rep. Eyre, ran legislation that would exempt public utilities from liability for "damages to real or personal property, including claims for economic losses" if a catastrophe is caused by an "act of God." The bill further states that a public utility would be held liable if the catastrophe was caused by the negligent action.[35] The bill passed the Wyoming Senate 29-0 with 1 abstention. However, the bill later died in the House of Representatives.

In 2011, the Las Conchas Fire in New Mexico, which burned more than 240 square miles of forest and destroyed several structures in the burn area, was started by a seemingly healthy tree outside of Jemez Mountain Electric Cooperative Inc.'s ROW that fell into its power line. In the ensuing court case, a jury found that Jemez Mountains Electric Cooperative was 75 percent negligent, Tri-State Generation Transmission Association was 20 percent negligent and the United States Forest Service (USFS) was 5 percent negligent despite adhering to their wildfire mitigation plans.[36] Additionally, since the USFS was covered by governmental immunity it was not required to pay damages. While Jemez Mountains Electric Cooperative and Tri-State were able to reach a settlement for damages related to the wildfire there are lasting impacts on the cooperatives such as higher insurance premiums and rate increases for consumer-members.[37]

As mentioned previously, California has recently applied a standard of inverse condemnation when seeking to hold utilities liable for wildfires. The legal interpretation of inverse condemnation in California is strict liability which means a utility can be held liable even if no negligent action had taken place.[38] While inverse condemnation differs from Colorado's standards based on negligence, legal scholars are predicting that more cases outside of California will try and use an inverse condemnation framework to recover damages caused by a wildfire. Lawyers in New Mexico unsuccessfully attempted to make this argument during the Las Conchas Fire case.[39] The use of inverse condemnation in a Colorado Court would be devastating for Colorado's electric cooperatives and other utilities and their ability to provide reliable and affordable power. A negligence standard is a more appropriate legal standard as it relies on a risk-based approach that was determined in United States v. Carrol Towing Co.[40] **Electric utilities and more specifically electric cooperatives operate in wildfire prone areas where it is hard to mitigate the risk of wildfire.** Despite having vegetation management plans, it is unclear if these plans would protect a utility from a negligence based standard. **The standardization of wildfire best practices would help to clarify if and when a utility is acting negligent when a wildfire occurs.**

Colorado lacks substantial case law to determine a clear liability standard for utilities, but in some cases such as the 1997 Federal Insurance Co v. Public Service Co. [41] the plaintiffs claimed that utilities should be held to stricter standards of negligence due to the fact that transmission and distribution of electricity is inherently dangerous. The lack of clear standards raises concerns about what will occur if a utility is found liable for a wildfire. In a 2019 paper, *The Growing Threat of Wildfire to the Energy Sector Recent State and Federal Activities,* that explores the legal implications of the PG&E bankruptcy filing states that:

> "The implications of the filing are widespread, raising significant concerns about its possible impact on (1) the cost of electric service to ratepayers, (2) long-term power purchase agreements that could affect renewable energy projects and climate-related goals, and (3) the ability of the victims of wildfire to recover damages for wildfire-related losses. As the bankruptcy moves forward, policy-makers will be paying close attention to how these issues are addressed in the proceedings." [42]

The lack of clear standards and best practices for vegetation management and inconsistent ROW access that offer liability protection can be detrimental to the operations of electric cooperatives, and other

[35] Dockstader, Dan, and Danny Eyre. Public utilities-liability exemption, Pub. L. No. SF0108 (2019). https://www.wyoleg.gov/Legislation/2019/SF0108.

[36] Barnitz, Katy. "Jury to Decide Compensation in Las Conchas Fire." Accessed April 7, 2020. https://www.abqjournal.com/948729/jury-to-decide-compensation-in-las-conchas-fire.html.

[37] Martinez, Amanda. "Wildfires Heat Up Jemez Co-Op Insurance Costs." Rio Grande SUN, December 15, 2018. http://www.riograndesun.com/news/wildfires-heat-up-jemez-co-op-insurance-costs/article_1bd21f8c-fe5f-11e8-85f9-c393afb98206.html.

[38] Petition for a Writ of Certiorari, San Diego Gas & Elec. Co. v. California Pub. Util. Comm'n (2019) No 18-1368.

[39] Pascale, Nick. "Wildfires: Legal Issues Still Burning." NRECA Legal Reporting Services 55, no. 6 (6/19).

[40] Pascale, Nick. "Wildfires: Legal Issues Still Burning." NRECA Legal Reporting Services 55, no. 6 (6/19).

[41] Fed. Ins. Co. v. Pub. Serv. Co., 570 P.2d 239 (Colo. 1997).

[42] Hale, Wilmer. "The Growing Threat of Wildfire to the Energy Sector Recent State and Federal Activity." JD Supra, March 7, 2019. https://www.jdsupra.com/legalnews/the-growing-threat-of-wildfire-to-the-41673/.

electric utilities, that serve the most at-risk and fire-prone areas of a state. Therefore, CREA's membership wants to seek a policy solution that ensures the safety of critical infrastructure, protects Colorado's natural beauty, supports rural communities, and safeguards the viability of Colorado's electric cooperatives.

Policy 3 takeaway **The standardization of wildfire best practices would help to clarify if and when a utility is acting negligent when a wildfire occurs.**

CONCLUSION: WHAT CAN COLORADO POLICYMAKERS DO?

Colorado's electric cooperatives, and other electric utilities, could pursue the development of a set of standards through a robust stakeholder process to help limit liability if they are acting following an approved plan in case a fire occurs. The three policy options outlined in this report would address Colorado's electric cooperatives' concerns relating to wildfire damages in Colorado. Addressing liability concerns by implementing legislation that would set standards and best practices around wildfire mitigation and vegetation management through the Colorado Department of Public Safety or the Colorado Fire Commission and clarifying ROW easements would create a robust framework that could limit wildfires in Colorado. Unlike California and Utah, which have a similar mitigation plan approval process through their respective Public Utilities Commissions, CREA believes that the Colorado Department of Public Safety (CDPS) should be the agency responsible for conducting this process. CDPS currently acts as the clearinghouse for all wildfire programs and is best suited to evaluate a utility's plan. Additionally, since cooperatives are governed through their local board of directors, submitting a plan to the CDPS rather than the Colorado PUC would ensure that Colorado's electric cooperatives maintain a culture of local control. **CREA believes that the CDPS has the industry expertise to collaborate with utilities to develop and implement wildfire mitigation and vegetation management best practices.**

However, addressing liability concerns is only one piece of the solution. CREA's membership is concerned about the implications once a fire has started. As mentioned previously, most cooperatives in Colorado are only able to secure $20 million in insurance to cover wildfire damages. For many communities, this would only be a drop in the bucket related to the costs of rebuilding homes, restoring wildlands, maintaining critical infrastructure, and ensuring that electric cooperatives continue to be financially viable. **As wildfire dangers increase in Colorado and across the West, it is imperative to make sure that individuals, businesses, and communities are made whole after a devastating wildfire.** California's insurance program that would help fill the financial gaps when recovering from a wildfire. Colorado's electric cooperatives have discussed developing a fund to offset the damages caused by wildfires; however, the cooperatives do not have the economy of scale necessary to offset the cost of a wildfire if one were to occur.

A statewide insurance program funded through a rider on a utility bill would be able to generate sufficient funds to offset a devastating wildfire. California is not the only state to implement a type of insurance program related to natural disasters. For example, in 1993, following the devastating effects of Hurricane Andrew, Florida lawmakers created the Florida Hurricane Catastrophe Fund (FHCF). Lawmakers modified the program in 2004 increasing the fund capacity to $15 billion.[43] The FHCF is a public-private partnership between insurance companies and the state of Florida, a premium (or surcharge) is collected by the state on property and casualty insurance to cover the cost of damages, if the damages exceed the insurers capacity, thus offsetting damages to make Floridians whole after a hurricane. [44] While the California and Florida insurance programs differ in scope, the intent is the same. Colorado could take

[43] Professional Insurance of Florida. "The Florida Hurricane Catastrophe Fund," 2004. https://cdn.ymaws.com/www.piafl.org/resource/collection/7C4287B4-4232-4485-9D7D-05D8C71D491C/2004-FloridaHurricaneCatastropheFund.pdf.

[44] Musulin, Rade, and Jack Nicholson. "Florida Hurricane Catastrophe Fund (FHCF or 'Cat Fund') Archives." The Actuary Magazine. Accessed April 8, 2020. https://theactuarymagazine.org/tag/florida-hurricane-catastrophe-fund-fhcf-or-cat-fund/.

steps now to protect our most vulnerable communities in high-wildfire risk by spreading the cost of risk across the whole state of Colorado. While most of the conversation around wildfire is focused on WUI in our mountain communities, the eastern plains and suburban communities are at high risk as well. Additionally, Front Range communities that access the wildlands of Colorado, should share in the cost of preserving wildland for recreational use. The goal of an insurance-based policy is not to hold a utility harmless but to make sure that all parties are made whole after a fire occurs. **Colorado has a long history of developing innovative policies, Our lawmakers could lead the way in developing an insurance program that would benefit Colorado utilities, landowners, and communities across the state.** The ability for the legislature or the PUC to pass a rider for a wildfire disaster fund might not be politically palatable at this time.

Lastly, Colorado could adopt ROW legislation similar to Missouri, by standardizing ROWs so utilities can better implement their vegetation management strategies. Legislation that provides statutory protection for a utility to remove danger trees will make a big difference in reducing the risk of wildfires starting from utility infrastructure. As mentioned previously, ROW legislation would easily be integrated with other wildfire mitigation policies.

Colorado's electric cooperatives strongly recommends using Utah's House Bill 66 as a model for standardizing wildfire mitigation strategies throughout Colorado. The bill codifies the type of wildfire mitigation strategies an electric utility is required to undertake. However, the bill allows for each plan to be adopted to the specific needs of an electric cooperative, a municipal utility, or an IOU. **A one-size-fits-all approach to vegetation management could have unintended consequences and limit the effectiveness of this policy approach.** For instance, the Utah model allows for cooperatives and municipal utilities to develop a plan that will work best for each service territory and its consumers, but still requires the utility to describe the utility's plan for vegetation management, a plan to update aging infrastructure that might be more susceptible to wildfire danger, and a timeline stating when the mitigation will be completed, along with other requirements. The report must be submitted every three years. Colorado policymakers might want to go one step further, and work with industry leaders to develop guidelines and best practices to through the Department of Public Safety or the Colorado Fire Commission to integrate with legislation. **It is imperative that Colorado policymakers give electric utilities and specifically a cooperative the ability to balance the risk of wildfires with the cost of implementing a vegetation management plan.** Utah's House Bill 66 also provides greater protections for utilities to remove danger trees, even if the tree is outside of the existing ROW. **CREA believes that Colorado policymakers, with input from a diverse group of stakeholders, can pass landmark legislation that provides liability protection for electric utilities while also taking necessary steps to protect Colorado's natural beauty and individual's personal property.**

A comprehensive approach is needed to address Colorado's wildfire risks from a utility standpoint. Already the CDPS, the Colorado Fire Commission, and the General Assembly have been working hard to address these problems and concerns. The policies outlined in this paper are an attempt to study what other states are doing and their applicability to Colorado. A combination of these three policies would create a statutory climate that would help reduce the risk of wildfires, while also protecting a long-standing tradition of self-governance. Colorado's electric cooperatives are an integral part of the utility sector in Colorado but also act as a community organization that provides value to the members they serve. Colorado's electric cooperatives are committed to providing affordable, safe, and reliable energy. Wildfire mitigation and vegetation management is a key part of the service electric cooperatives provide.

Conclusion takeaway **CREA believes that Colorado policymakers, with input from a diverse group of stakeholders, can pass landmark legislation that provides liability protection for electric utilities while also taking necessary steps to protect Colorado's natural beauty and individual's personal property.**

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