



# PROTECTING COLORADO'S CRITICAL UTILITY INFRASTRUCTURE

## COLORADO RURAL ELECTRIC ASSOCIATION

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## INTRODUCTION

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The safe delivery of electricity, natural gas, water, telecommunications service, and other utilities services are vital to the public health and welfare of residents and the economic security of the state. Malicious interference with such services not only results in significant economic losses, but also puts at risk the lives of the state's residents who rely on such services. Further, protecting Colorado's critical infrastructure is essential to meeting Colorado's climate

goals through electrification. However, current penalties for malicious attacks on Colorado's utility distribution systems are woefully inadequate when compared to the magnitude of the potential harm to the lives of Coloradans and the local economy. Many other states have taken the lead to strengthen criminal penalties for damage to physical utility infrastructure, and CREA believes Colorado must do the same.

## CREA AND COLORADO'S ELECTRIC COOPERATIVES

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The Colorado Rural Electric Association (CREA) is the statewide trade association representing Colorado's electric cooperatives. CREA's members include 21 distribution cooperatives and Tri-State Generation and Transmission Association, the wholesale electric supplier to 42 cooperatives in Colorado, Wyoming, New Mexico, and Nebraska. Colorado's electric cooperatives provide power to approximately 1.5 million consumers in a service territory covering roughly 70% of Colorado's landmass, including some of the most economically challenged regions of the state. The economics of Colorado's electric cooperatives are different from municipal or investor-owned utilities, largely due to the low density of consumers and limited revenue generated through electric sales. On average Colorado's electric cooperatives serve 7.9 consumers per mile of line, compared to 48 consumers per mile for municipal utilities and 34 customers per mile for investor-owned utilities.

Unlike investor-owned utilities, electric cooperatives are not-for-profit entities owned by the customers they serve. The cooperative model is successful because electric cooperatives are governed by locally elected boards which develop programs to provide to provide affordable, safe, reliable, and sustainable energy based on the unique needs and desires of the customers they serve. Although electric cooperatives were initially formed to provide service to customers in rural areas in the mid-1930s, today's cooperatives employ over 2,500 individuals and have a network of nearly 80,000 miles of distribution and transmission lines that serve a diverse customer base including farms and ranches, towns and suburbs, businesses, and ski resorts across Colorado.

Colorado's electric cooperatives are focused on maintaining reliability and affordability, advancing innovative solutions, and enhancing community resilience of our electric system.

## BACKGROUND

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### THE THREAT TO PHYSICAL UTILITY INFRASTRUCTURE

Electricity is delivered to Coloradans through an interconnected network of generators, transmission lines, and distribution lines that draws on a diverse set of generation sources and provides power to homes and businesses across the state. Electric transmission lines deliver electricity at high voltages (typically 115 kilovolts and higher) from generation sources within Colorado and from sources outside the state. Electricity is "stepped down" to lower voltages through large transformers at transmission substations, where it can be distributed within the service territories of local distribution utilities. These "sub-transmission" lines (usually at voltages between 35 kV and 69 kV) can span hundreds of miles until power is again "stepped down" to lower voltages through transformers at

distribution substations. From there, electricity is delivered within towns and neighborhoods at much lower voltages until it is finally delivered to individual homes and businesses.

The electric transmission system (also known as the "bulk electric system"), which delivers electricity at high voltage and is interconnected to the interstate electric grid, is regulated by federal agencies, such as the Federal Energy Regulatory Commission (FERC), and is subject to safety and reliability standards promulgated by the North American Electric Reliability Corporation (NERC). Local electric distribution facilities which operate at lower voltages, however, are regulated at the state level. While transmission facilities in Colorado deliver much higher quantities of electric power and energy at higher voltages, the distribution facilities delivering electric power



and energy at the local level include significantly more miles of electric lines, transformers, and other distribution facilities. For example, Tri-State Generation and Transmission Association, the cooperative serving wholesale electricity to 17 cooperatives in Colorado, operates 5,213 miles of transmission lines across a four-state territory. In contrast, Colorado's electric distribution cooperatives operate more than 70,000 miles of electric distribution lines.

Recent news reports from across the country have detailed an alarming increase in attacks against our nation's utility infrastructure, including attacks against electric substations in North Carolina and the State of Washington which resulted in loss of electric service to thousands of individuals. On November 30, 2022, the United States Department of Homeland Security published a bulletin warning that lone offenders and small groups "motivated by a range of ideological beliefs and/or personal grievances continue to pose a persistent and lethal threat" to critical infrastructure of the United States, and 2022 saw a record number of physical attacks on the nation's utility infrastructure. Attacks have been increasing over the past five years and in 2022, there were 163 attacks across more than three dozen states, impacting about 90,000 customers.

The recent attack in North Carolina resulted in a loss of power to approximately 45,000 customers. If such an attack were to occur in Colorado, it could cause a wide scale outage and severe impacts on Colorado citizens, including those who rely on oxygen and other medical devices and families who may be unable to heat and cool their homes. Given ongoing supply chain issues, such outages could be of an extended duration resulting in broader impacts to Colorado's economy until service is restored.

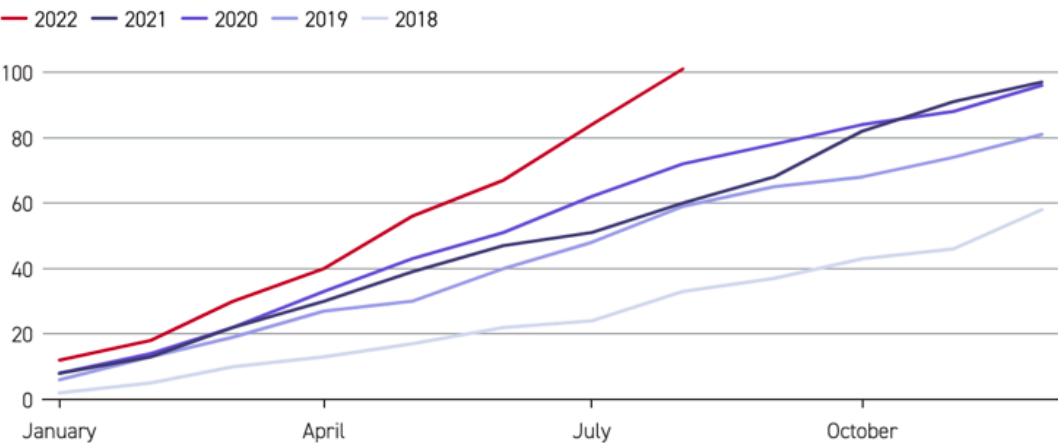
**Colorado's electric cooperatives have seen an uptick in the number of attacks on their physical infrastructure as well, although the majority of these attacks appear to be random acts of vandalism rather than terrorism or other attempts to interrupt utility service**

Colorado's electric cooperatives have seen an uptick in the number of attacks on their physical infrastructure as well, although the majority of these attacks appear to be random acts of vandalism rather than terrorism or other attempts to interrupt utility service. However, the threat remains. Although electric cooperatives are taking proactive measures to protect against such attacks, it is simply not possible to secure all of our state's electric infrastructure from potential attacks.

As Colorado's population grows and our state continues to electrify utility services to meet its climate goals, the amount of physical infrastructure is increasing. This means the number of potential targets for individuals or groups with malicious intent are also increasing. Despite the critical nature of electric, gas, water, telecommunications and other utility service, and the magnitude of the risk presented by individuals or groups who may present a threat to those critical services, Colorado's criminal code lacks any meaningful penalties for malicious attacks against such services.

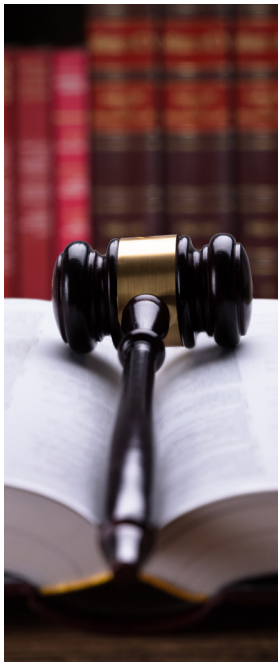
### Power grid attacks are on the rise this year

Cumulative number of reported human-caused attacks on power grid infrastructure in the past five years



SOURCE: Politico/Department of Energy





## **COLORADO HAS A LACK OF MEANINGFUL PENALTIES:**

**Despite the critical nature of electric, gas, water, telecommunications and other utility service, and the magnitude of the risk presented by individuals or groups who may present a threat to those critical services, Colorado's criminal code lacks any meaningful penalties for malicious attacks against such services.**

### **CURRENT CRIMINAL PENALTIES FOR DAMAGE TO PHYSICAL UTILITY INFRASTRUCTURE**

Under Colorado law, a person tampering “with a facility of utility transmission with intent to cause damage, malfunction, nonfunction, theft, or unauthorized removal of material,” which would interrupt performance of utility transmission or “result in a creation of a substantial risk of death or serious bodily injury to anyone,” commits a class 3 felony, which carries a prison sentence of four to 12 years and fines of up to \$750,000. C.R.S. § 18-9-115. This statute, however, applies only to transmission facilities operating at more than 30 kV.

With respect to electric distribution facilities which operate at lower voltages, the penalties for damage or destruction of such facilities are substantially less although such facilities are more numerous. Currently, there are two statutory provisions addressing physical damage to distribution utility infrastructure: the general “criminal mischief” statute and the “criminal tampering” statute, as summarized below:

#### **Criminal Mischief Under C.R.S. § 8-4-501**

An individual commits “criminal mischief” when “he or she knowingly damages the real or personal property of one or more other persons, including property owned by the person jointly with another person.” C.R.S. § 8-4-501. This statute, which applies to any property and not just the physical infrastructure of a utility, provides varying penalties based on the value of the property damaged, ranging from as little as a \$300 fine for property valued at \$300 or less to eight to 24 years in prison and fines of up to \$1 million for damage to property valued at \$1 million or more.

With respect to utility property, however, the value of facilities damaged or destroyed may be minimal, meaning only minimal criminal penalties would be available. The statute fails to consider the resulting losses to utility customers served by those facilities, which could be devastating. Thus, the “criminal mischief” statute fails to provide adequate sanctions for damage to critical utility infrastructure.

#### **Criminal Tampering Under C.R.S. § 18-4-505**

The “criminal tampering” statute is specific to tampering with utility property “with intent to cause interruption or impairment of a service rendered to the public.” However, like the “criminal mischief” statute, the “criminal tampering” statute fails to consider the impact to, or losses suffered by the customers whose service is interrupted. The penalties provided for such actions against utility services are not more than 120 days in jail and/or a fine of up to \$750.

When compared to the penalties imposed for other offenses with less significant public impact, such as civil monetary penalties of \$1,000 for the sale of eggs that are not “cage free” (C.R.S. § 35-21-206) or penalties of between \$2,000 and \$500,000 for the sale of low-efficiency flushometer-valve water closets (C.R.S. § 6-7.5-110), it is clear that the legal protection for electric distribution facilities in Colorado is woefully inadequate.



## APPROACHES TO PHYSICAL SECURITY TAKEN IN OTHER STATES

In response to the growing threat to physical utility infrastructure, state legislatures across the country have been adopting more stringent criminal penalties for malicious attacks on critical infrastructure. For example:

- In 2023, the Georgia legislature adopted House Bill 227, which imposes criminal penalties of between two and 20 years imprisonment for any person who “[k]nowingly and without authority and by either force or violence or by electronic means interferes with the proper operation of any critical infrastructure or any vital public service.”
- North Carolina adopted Senate Bill 58 in 2023, making it a “Class C” felony to “willfully (i) destroy, injure, or otherwise damage, or attempt to destroy, injure, or otherwise damage, an energy facility or (ii) obstruct, impede, or impair the services or transmissions of an energy facility, or attempt to obstruct, impede, or impair the services or transmissions of an energy facility.”

A Class C felony carries a prison term of 44 to 182 months. Enhanced penalties are imposed if the actions result in death.

- In 2023, Utah adopted H.B. 370, which among other things makes it a criminal offense to destroy, damage, or tamper with a critical infrastructure facility, including any electric power generating facility, substation, switching station, electric control center, or electric power lines and associated equipment infrastructure. The penalties for violating the statute include imprisonment from five years to life for an intentional violation and one to fifteen years if the violation was reckless.
- In 2022, the Montana legislature adopted H.B. 481, which imposed criminal penalties including fines of up to \$150,000 and prison terms of up to 30 years for any person who willfully damages, destroys, vandalizes, defaces, or tampers with equipment in a critical infrastructure facility, including “an electric generating facility, substation, switching station, electrical control center, or electric transmission and distribution lines and associated equipment infrastructure.”

## CREA RECOMMENDATIONS

In light of the actions being taken across the country, Colorado is clearly lagging behind in its legal protection for critical utility infrastructure, especially its electric distribution infrastructure. CREA recommends that the General Assembly pursue changes to the criminal code to, among other things:

- increase penalties for a malicious attack on utility infrastructure, commensurate with the penalties in other states for similar actions.
- more clearly define protected utility infrastructure to include any electric power generating facility (such as solar, wind, geothermal, hydropower, batteries, or other generation facilities), substation, switching station, electric control center, or electric power lines and associated equipment infrastructure.
- include enhanced penalties if the tampering or interference with electric utility infrastructure results in physical injury or death to any person.

### CONCLUSION

**Clearer definitions of prohibited tampering or interference with utility infrastructure, combined with increased penalties for such conduct, would provide a deterrent to persons who may seek to cause damage to or interruption of critical utility service in the state and would make the penalty for those who commit such crimes more consistent with the magnitude of the harm presented.**