

Shut Offs Are Not Part of San Isabel Electric's Fire Mitigation Strategy

BY RYAN ELARTON GENERAL MANAGER



RYAN ELARTON

Many large utilities are under scrutiny for de-energizing lines during high fire danger periods — typically during stage three fire restrictions or red flag days. These periods span almost the entire spring through fall season in southern Colorado.

San Isabel Electric doesn't issue shut offs

At San Isabel Electric, we will not issue pre-emptive shutdown orders unless directed by government agencies during an extreme weather event or active fire.

During this summer's Oak Ridge Fire and the 2018 Spring Fire, emergency managers requested lines only be de-energized where the fire was actively burning to protect firefighters from downed lines and other hazards. The cooperative's proactive vegetation management program, coupled with concentrated efforts to harden the grid, has resulted in a more resilient power delivery system. This resilience significantly reduces the need for complete shutdowns, ensuring that our community remains powered even during high-risk periods.

What we do to prevent fires

We have developed outstanding working relationships with local emergency managers and first responders. Those relationships are critical in serving our communities during a crisis.

In 2020, we rolled out a comprehensive fire mitigation program designed to address fire risks without resorting to shut offs. When the National Weather Service issues a red flag warning, SIEA proactively places high-risk portions of our system's protective devices called "reclosers" into a "one-shot" operation. This means our system becomes highly sensitive, and even the smallest interruption — including a momentary blink — triggers an outage in that area. Re-energizing after these devices operate requires a physical inspection by a line crew to ensure no objects or dangerous conditions are present which, while causing more frequent and longer outages, prioritizes safety over convenience.

Our strategy is based on geographic analysis, allowing us to identify high-risk areas within our service territory. Factors like landscape, human population, natural resources, risk ratings, burn probability, and fire intensity scale predictions are considered to effectively target our efforts.

A cornerstone of our fire prevention strategy is vegetation management. Overgrowth near power lines can create significant fire hazards. In response, SIEA increased the size of our tree-trimming crews and re-evaluated our trimming cycle. We maintain a three-year cycle in rapid growth areas, and a seven-year cycle in slower growth areas. We urge our members to report trees that appear too close to power lines and to keep their own trees and bushes regularly trimmed. Professional trimming by trained personnel is crucial for maintaining safe clearances around power lines.

For homes situated in or near grasslands, shrublands, foothills, or mountains, being in the wildland-urban interface inherently increases wildfire risk. Review the Colorado State Forest Service guide for tips to reduce your home's wildfire risk. Scan this QR code with your smartphone to see these tips.



Fire prevention is personal

The Spring Fire of 2018 personally impacted many SIEA employees and member-owners and underscored the importance of our fire mitigation strategies. This fire, one of Colorado's largest on record, required us to de-energize lines within the burn area to protect firefighters and prevent additional fires starting from damaged lines. Our team worked tirelessly to rebuild the lines and restore power once the fire was contained, demonstrating our commitment to our community.

SIEA employees live and work in southern Colorado. We are deeply integrated into the fabric of our community — our children play with the children of our members, we worship together, and see each other at the grocery store. Our primary role is being their friends, family, and neighbors; our service-oriented role as their electric co-op comes second. Whether it's helping someone evacuate their family, giving someone a hug, or rebuilding poles to get their power back on, we prioritize the well-being of our member-owners first.

BOARD ELECTION CANDIDATES

The SIEA Nominating Committee met at the Pueblo West office on June 26. There are three board of directors seats up for election this year. The following people were nominated by the committee for each district:

District 3 – Gardner, Trinidad East and Vicinity

Ray Garcia

District 5 – Town of Walsenburg

Jacque Sikes

District 7 – Aguilar, Trinidad West, and Vicinity

No Nomination

San Isabel Electric's Innovative Mobile Substation

Mobile substations might sound and look like science fiction, but they are ingenious machines that serve as priceless assets to electric utilities. While we hope to never use them, they can really save the day in an emergency.

A fixed substation manages and directs the flow of electricity in the electric grid. Damage to a substation can cause significant outages lasting days if there are no nearby resources to take on the extra electrical load.

When a substation needs maintenance or suffers damage, a mobile substation acts as a life-support machine, maintaining the grid and ensuring a smooth flow of electricity during upgrades and repairs.

“We have all the equipment we need to back up an entire substation in an emergency in about 12 hours, all on one gigantic trailer,” SIEA System Engineering Manager Clinton Smith said.

This powerhouse on wheels can electrify between 8,000 to 10,000 meters, covering all of Pueblo West and more. Imagine it like the machines in the “Transformers” movies. Our mobile substation is an Autobot of the electrical network. When folded up, it’s a compact 8.5 feet wide, transported by a convoy stretching several feet long. Once on site, it expands into a formidable structure, 22 feet wide and 102 feet long, ready to take over the heavy lifting of a fixed substation. You can almost hear the famous transformer Optimus Prime’s rallying cry, “Autobots, transform and roll out!” as it unfolds and gears up for action.

While we haven’t yet deployed our mobile substation for an emergency within our network, it has helped neighboring electric co-ops. Mountain View Electric Association reached out to SIEA about 15 years ago, requesting to use SIEA’s mobile substation due to a failed transformer.

“After switching as much as we could to get the lights on to as many members as possible, there were still 1,700 members out of power. With the use of San Isabel Electric’s mobile substation, we were able to restore power much more quickly to all members and complete the repairs at our substation,” said David Waldner, MVEA’s vice president of engineering.

SIEA Assistant Line Superintendent Logan Reese has driven and set up the mobile substation several times to assist with substation maintenance projects. “The whole thing is really cool. It’s a multi-million dollar piece of equipment that weighs about 80 tons. But



▲ If we could make our mobile substation a character in the “Transformers” franchise, its name would be *Megawatt – the Silent Guardian*, always ready to leap into action and keep the power flowing.

it’s not fun to drive around, especially through towns, navigating corners, starting, and stopping,” Reese said.

Smith and System Technician Roger Lemons activated the mobile substation for the first time just after Memorial Day. The sub was rolled out to SIEA’s Huerfano River Wind substation, which distributes the power generated by the four wind turbines just north of Walsenburg.

“It was good to get familiar with it, get it out, learn it when we have the time to learn, rather than going through the growing pains in an emergency,” Smith said.

SIEA’s mobile substation isn’t just a piece of equipment; it’s a testament to our dedication to innovation and reliability. We hope that knowing we have such a robust contingency plan provides peace of mind and reinforces the trust you place in us to keep your homes and businesses powered — no matter what.

A promotional graphic for the San Isabel Electric Annual Meeting. It features the text "Save the Date!" in a red script font, followed by "San Isabel Electric Annual Meeting September 21" in blue and teal fonts. At the bottom, there are illustrations of a red and white striped popcorn bucket, two bingo cards, and a pink balloon. A teal starburst shape contains the text "10 a.m. Walsenburg Junior/Senior High School".

New Tree Scanning Software Will Help Reduce Outages, Costs, and Fire Risk

The largest maintenance costs for San Isabel Electric Association are related to the weather and vegetation. Vegetation management is the largest controllable maintenance cost. Given that about one third of SIEA's territory is considered forested, managing this greenery is crucial.

Although most trees do not present a problem, some of them grow into or crowd power lines or other utility equipment. When greenery becomes overgrown it can cause power outages and fire hazards.

In July, the co-op added innovative software from Sheltera to its vegetation management program, making it Sheltera's first Colorado client to use this advanced tree scanning technology.

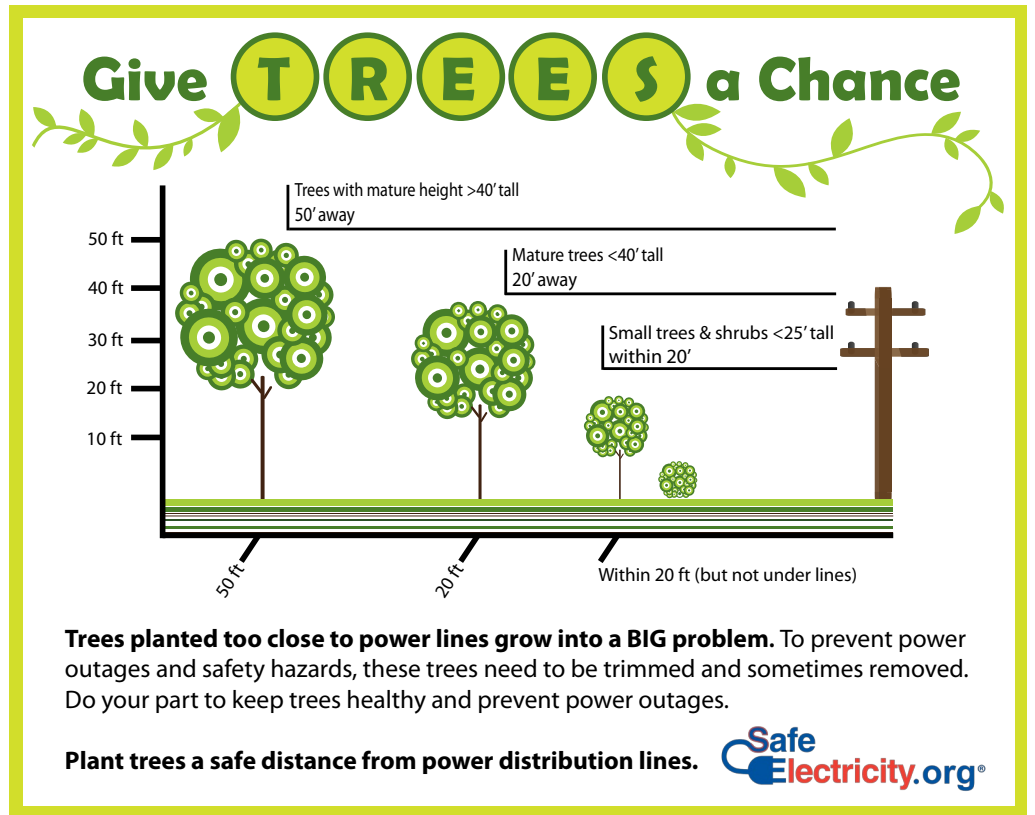
Sheltera's system combines satellite imagery, light detecting and ranging laser systems (LiDAR), and artificial intelligence to monitor vegetation growth around power lines. This allows SIEA to get detailed reports quickly, pinpointing areas where vegetation could cause problems.

Here's how the process works:

1. High-resolution satellite images assess the density and health of the foliage.
2. LiDAR imaging maps the height of the vegetation, highlighting areas that intersect with power lines.
3. AI and machine learning create a heat map that prioritizes high-risk areas, giving each tree cluster a threat code based on urgency.

Reducing outages

This system may help reduce power outages and cut down on maintenance costs. SIEA has a tree trimming program that trims vegetation every seven years in low-growth areas and every three years in high-growth areas. Since starting this aggressive vegetation management program in 2017, the number of outages have decreased significantly. With the addition of Sheltera's software, SIEA hopes to see even further improvement in reliability.



Reduced maintenance costs

The increased efficiency of the territory-wide scans will also cut down on maintenance costs.

Unexpected maintenance costs, which are usually related to outages, are a significant expense. Reducing tree-related or vegetation-related outages should result in some cost savings.

The efficiency of Sheltera's scans means that what previously took months — riding along the power lines to identify hazards — now takes only a few days. This rapid assessment is not only cost effective but also enhances crew safety — especially during storm-related outages, which pose significant risks to SIEA workers.

Reduced fire risk

Perhaps most importantly, this technology helps with wildfire mitigation, a critical concern for the community. By working together, SIEA and its members can ensure a safer environment, keeping both power lines clear, and neighborhoods protected from fire hazards.

Every year, San Isabel Electric sends two high school students on a week-long, all-expenses-paid trip to Washington, D.C., for the Electric Cooperative Youth Tour. Hundreds of students from all 50 states attend this event. Local SIEA youth members Laura Borrego from Aguilar, and Phoenix San Roman from Hoehne, share some highlights of their June trip to Washington, D.C.

Our trip to Washington, D.C.



▶ SIEA members Phoenix San Roman (left) and Laura Borrego (right) stand in front of a granite column representing Colorado at the World War II Memorial.

“I learned that even the representatives that have never lived the country life, still fight for people like me and our rights. It makes a citizen and a young adult feel important and heard.” - *Laura*

▶ Phoenix San Roman (left) poses with new friend Taryn Petruncola with the Capitol in the background.

Phoenix San Roman (right) poses in front of U.S.A Alpha-lites at the National Harbor.



“I learned that the media mainly focuses on all the drama that is going on in the capital rather than what is actually happening.” - *Phoenix*



DONATION IMPACT REPORT

The following donations were approved at the June 2024 board meeting

San Isabel Electric operates under seven cooperative principles, which includes practicing a Concern for Community. Each board member lives in the community he or she serves, and we all work together to help our communities thrive.

Each month, the board of directors donates to community projects to help keep our communities strong and growing. All philanthropic giving funds come from unclaimed capital credits, not from member rates and electric bills. Our process for using unclaimed capital credits follows state law for unclaimed property. Unclaimed capital credits cannot be used for system improvements, maintenance, payroll, or other overhead costs.

For more information about capital credits and unclaimed capital credits, visit siea.com/capitalcredits.

\$5,000

Las Animas County Fair Board —
Las Animas County Market Sale

\$5,000

Huerfano County 4-H Fair Board —
2024 Huerfano County 4-H Fair

\$1,000

Town of Rye —
2024 Town Square Fair

\$1,000

Pueblo Diversified Industries —
Dancing with the Pueblo Starz 2024

\$750

Trinidad National Bank - Huerfano
Branch — School Supply Drive

\$750

Valley First — Greenhorn Valley Days

\$500

Huerfano County Chamber of
Commerce — Huerfano Summer
Scavenger Hunt

\$500

Pueblo West Chamber of Commerce
— 4th of July Community BBQ

\$500

Soaring Eagles Center for Autism —
14th Annual Comedy Night

\$500

Mt. Carmel Wellness and Community
— Safe Balance for Seniors

\$500

Rye Youth Baseball — 2024 Rye Youth
Baseball Golf Tournament Fundraiser

