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Lincoln Electric
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Press Release

Tempting Fate

Two chilling stories of what not to do when working around high-voltage power lines

With over 820 miles of overhead and underground power lines scattered around Lincoln Electric's service area, there are numerous opportunities for co-op members and construction contractors to expose themselves to a lethal dose of electricity. In the interest of public safety, I would like to recount two recent incidences, taken from actual LEC hazard reports, where people put themselves and others in jeopardy when working around our 14,400-volt distribution lines. Each of these incidences could have easily resulted in a fatality.

The Wind in the Willows nearly becomes Gone with the Wind

A line crew was recently dispatched to a scene of an outage after a report of a loud explosion and sparks during a late evening thunderstorm. Imagine the horror our crew experienced upon arriving and seeing an aluminum ladder leaning up against a large willow tree with several freshly cut limbs scattered around the base. Noticing the top limbs were precariously close to our three-phase power line, the crew anticipated the worst as they entered the fenced yard, expecting to find a body laying at the base of the tree.

Luckily instead, they found a shaken up homeowner who sheepishly recalled the following events that had just occurred: During the wind and rainstorm the homeowner noticed some top limbs of the tree smoking when they brushed the power line. Deciding not to "bother the co-op," he took it upon himself to trim the branches. Standing an aluminum ladder at the base, he proceeded to climb into the tree. His added weight on the tree was enough to cause the tree limbs to make solid contact with the wires.

At that instant, all hell broke loose, with fire, arcing and explosions directly over his head. Unbelievably, he was not immediately electrocuted, and reacted by jumping from the soggy tree. As he stood and watched, the burning treetop, now leaning heavily into the power line, finally allowed about 3,000 amps of fault current to pass through the tree to ground, kicking out the line back at the substation.

Seeing the lights go out at his residence, our determined (though careless) member now felt bold enough to climb back into the tree and finish his trim job. Little did he know that our standard outage restoration procedure allows LEC to reenergize lines after determining crews are in the clear. If our linemen had not carefully surveyed the scene, they could have easily requested the crewmember in the substation reenergize the line – immediately electrocuting our misguided helper.

After a stern scolding from our crew, we hope our member has a new found appreciation for working around electricity. Lessons to be learned: 1) Never attempt to remove trees or limbs around our power lines. Contact LEC and we will send qualified personnel to the scene to remove the hazard. 2) Never assume a power line is dead. During the restoration process, we may reenergize at any given moment.

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Tin Man Exposes Crew to High Voltage

A little over a year ago, a new large steel building was constructed up Pinkham Creek. Nothing unusual about that, except for the fact that the 60' long building was built directly under LEC's power line. The metal building's ridge, which paralleled the power line, was a mere 50 inches from an energized conductor carrying nearly 15,000 volts.

Discovered by line crews working in the area, the property owner was immediately contacted, and a plan was put in place to correct the dangerous situation. It took a four-man crew almost a day to insert two new taller poles on each side of the building to meet the National Electrical Safety Code's (NESC) required clearance of 12.5 feet.

It was the most blatant violation of code I've seen while working for the Co-op. How that contractor put all that steel up there without contacting the energized line is beyond me, just lucky I guess.

When all was said and done, the property owner received a bill for the Co-op's expense in correcting the situation, and the contractor received a visit and citation from the Occupational Safety & Health Administration (OSHA). It's the property owner's responsibility to correct this dangerous violation of code, and the contractor is accountable for keeping his crews out of the 10' minimum working distance from our energized lines.

According to the contractor, the property owner told him the power line "shouldn't have been where it was." That apparently was the reasoning for not contacting us, and proceeding with the construction; even though that line was built long before the property owner took possession of the parcel. We had to take action on this one. Lessons to be learned: 1) Members contemplating building anything under our power lines are asked to contact the co-op so a site assessment can be made, and a solution found for the project. 2) Contractors need to abide by the all-applicable standards of the NESC when working around energized conductors.

So there you have it, two alarming tales of close encounters with high voltage. The bottom line is electricity and human life doesn't mix. If you tangle with 15,000 volts the consequences could be life changing for you – and your family. Now, can I tell you about the backhoe operator who dug into our underground cable - nearly digging his own grave in the process? I'll save that one for another day.