

# What the well-dressed lineman is wearing this summer

BY LE SPEARMAN

**W**hen Iowa's legion of linemen hit the streets every day, they have one mission in mind: to provide reliable power to their local electric cooperatives' customers. At face value, this may seem to be a pretty simple task—but a quick look behind the scenes reveals a group of dedicated co-op employees who are trained to deal safely with all types of challenges, ranging from installing new service lines to restoring power during outages in weather that forces the rest of us indoors.

At 99.97 percent, the reliability record for Iowa's electric co-ops—the percentage of time that power is “on” for customers—is remarkable. It's attributable to every co-op's around-the-clock commitment to customer service, employee training and safety for everyone involved.

Part of that commitment to safety includes what the linemen wear and the special tools they use on the job. If you've seen linemen working in your area, you may have noticed some of the unusual gear they have on—and how that gear changes for different tasks. For example, linemen always wear long rubber arm sleeves when they're working in a basket repairing or installing energized lines, along with a body harness to restrain them in case they're headed for a fall. And, whether they're in the air or on the ground, linemen don a hardhat, hearing protection, safety glasses and gloves.

Obviously, all of these things are more than a fashion statement—they're the first line of defense against any mishaps that could injure a line worker. But not all linemen are authorized to use all of the tools available. Just as a lineman's job level and training qualify him to handle different tasks, he also must be certified to use the specialized tools necessary to complete the advanced jobs that can't be given to linemen with less experience.

Safety specifications even exist for

pants—which must be made from 100 percent natural fibers—and shirts—which must be made from flameproof cotton material, right down to the stitching. Kyle Moore, foreman-construction at Maquoketa Valley Electric Cooperative, says, “Flame-retardant clothing is a must if you are anywhere near electricity.” Electrical arcs that cause flare-ups working with energized lines can ignite clothing, says Moore, and synthetic blends can melt and adhere to skin.


Dielectric equipment and tools—items that cannot conduct electricity—help protect linemen from accidents that could occur when working with energized wires. The rubber arm protector sleeves and rubber gloves the linemen wear are dielectric, as are the fiberglass “hot sticks” they use to move or work with energized lines.

Keeping their safety equipment in prime working condition is also an important part of the job for linemen. Of course, they check and test their equipment on a regular basis, but some items, such as the rubber sleeves and hot sticks, are sent to testing companies for safety inspections.

Linemen also go through a daily visual check on all equipment before they go out the shop door. “We have a ‘circle program,’ where we circle the truck and inspect it for oil leaks, clean the windshield, check safety items and restock the truck,” says Moore.

And here's another example of just how serious these workers are about safety: Moore's crew tests their insulated rubber gloves during their equipment check by blowing air into the gloves, holding the cuff tight as they check for escaping air. It might sound like kid's play, but not detecting a flaw could lead to a deadly consequence.

“Our safety training is extensive, and it is definitely a plus,” says Moore. “At the end of a day, we all want to go home to our kids.” ■



Mitchell McKeever, line foreman at Sac County Rural Electric Cooperative, uses a hot stick to check a hot line clamp for radio interference.

# A fair price for safety: \$1,132.83

## **Ear Protection: \$20.43**

Mounts into hardhat slots and has replaceable foam cushions. Different types have different Noise Reduction Ratings—usually a 20-30 decibel reduction.

## **Safety Glasses: \$3.25**

Nylon, one-piece frame with side panels for added protection. Sunglasses are a necessity against hazardous sun glare, particularly when working on energized lines.

## **Rubber Glove Protectors: \$28.40**

Leather gloves with Velcro tightening strap and attached orange vinyl cuff. Worn over insulated rubber glove to reduce chance of puncture or tearing from sharp objects.

## **Safety Harness: \$109.90**

Full body harness for working in elevated bucket. Harness attaches to bucket truck boom with locking snap hook.

## **Lanyard: \$54.15**

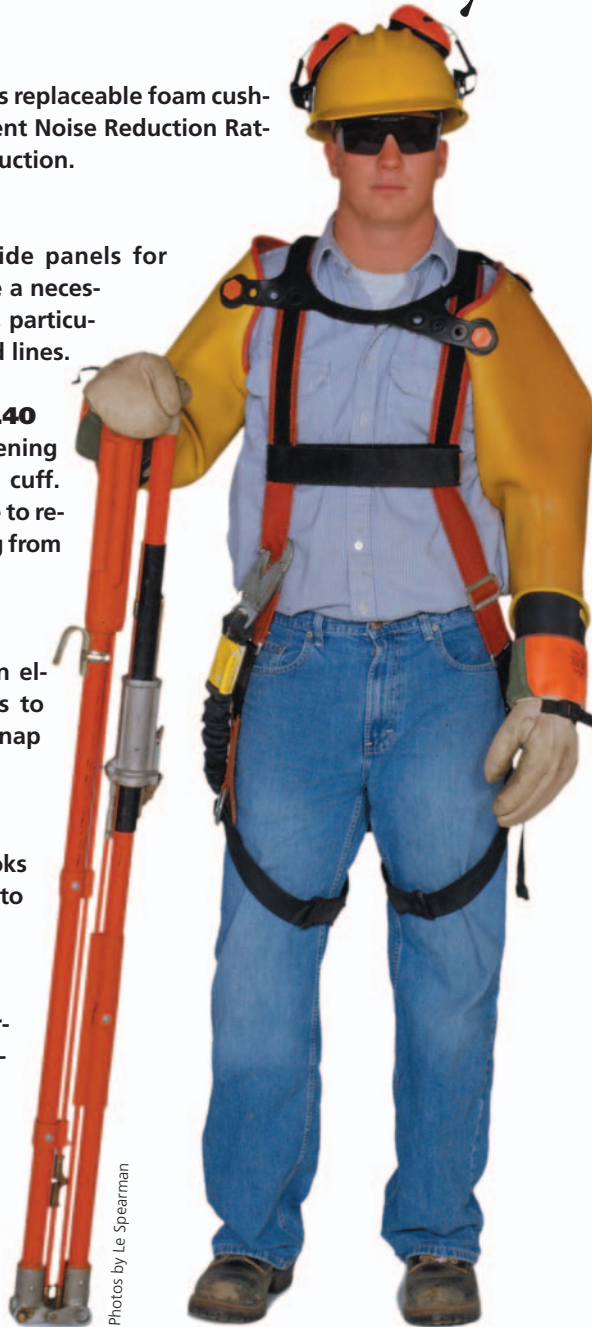
Nylon strap with locking snap hooks connects lineman's safety harness to truck boom to prevent falling.

## **Hinged Hot Stick: \$300.00**

Insulated, dielectric-tested fiberglass tool for moving or adjusting live electrical equipment.

## **Work Boots: \$165.10**

Lace-to-toe, steel- or ceramic-toe leather boots with extra arch support for climbing.



Photos by Le Spearman

## **Hard Hat: \$10.92**

Made from hard plastic with inner web suspension system; has universal slots to attach accessories such as ear muffs. Extended brim protects face from falling debris. Factory-tested for dielectric strength and discarded before dielectric breakdown.

## **Arm Protector Sleeves: \$282.93**

Dielectric-tested, seamless, vulcanized molded rubber that protects wearer's arms from unintentional contact with energized power source.

## **Shirt: \$31.40**

Long-sleeved, 100% cotton fabric and stitching with nonmetallic buttons. Requires industrial wash with no soap or chlorine bleach to maintain flame-retardant finish.

## **Rubber Liner Gloves: \$104.90**

Dielectric-tested, rubber liner insulated gloves for electrical protection. Glove thickness dictates the level of voltage line personnel may work. Ratings: Class I—10,000 volts, Class II—20,000 volts, Class III—30,000 volts and Class IV—40,000 volts.

## **Trousers: \$21.45**

Trousers or jeans made from 100% natural fibers, such as denim, cotton duck or wool.



## **Ready for the rain**

When the weather turns nasty, protective rain gear is essential. This outfit has a flame-retardant, waterproof PVC exterior with Nomex base fabric. The orange color increases visibility in low-light environments, and all hardware on the clothing is made from nonconductive plastic. Jacket: \$43.50. Bib rain pants: \$40.05. Attachable hood: \$8.65. Vulcanized rubber boots: \$68.60. Clear safety glasses: \$3.25.



## **Getting the pole job done**

Even more special equipment is necessary if the job includes climbing electrical poles. A leather/synthetic belt holds tools in a leather pouch and a strap set with padded tops that adjusts to different pole sizes. Permanent gaff climbers attach to the strap set and have triangular points that jab into a pole as the lineman climbs. Belt: \$163.70. Tool pouch: \$29.75. Pole strap: \$90.50. Gaff climbers: \$90.72.