

# WHY WE TRIM TREES

Electric cooperatives check growth along power lines to keep them safe and help prevent outages

**T**rees may seem harmless on a calm, sunny day. But add a strong wind or ice accumulation on a stormy night, and trees may threaten your home's electric supply.

"Most of our storm outages are related to trees contacting power lines," says Tommy C. Greer, director of job training and safety for the North Carolina Association of Electric Cooperatives. "Regular trimming of trees and brush along power lines helps prevent the number of outages as well as blinks."

Electricity interruptions can occur when branches break and fall across power lines, or when trees tumble onto power lines. When strong winds blow, limbs growing too close to power lines may sway and touch wires. These momentary power disruptions (called "blinks" or "blips") can damage computers and other sensitive electronic equipment and leave digital clocks flashing. And then there's

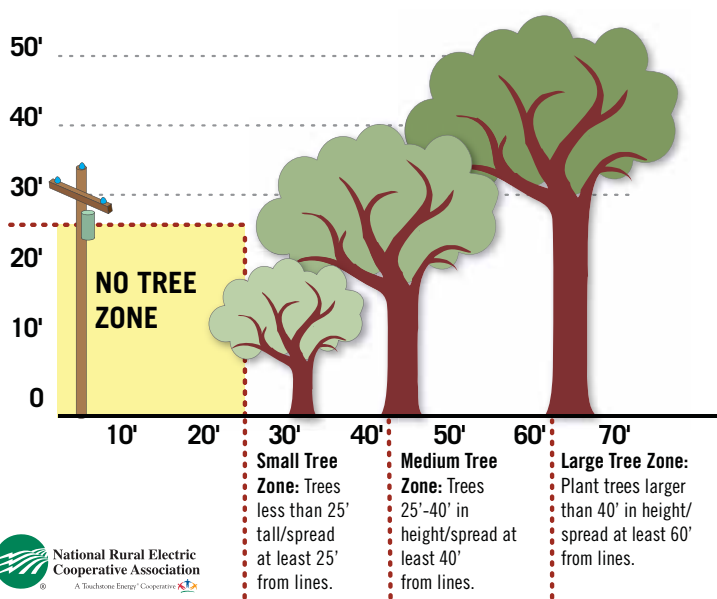
arcing—when electricity uses a nearby tree as a path to the ground—which could spark a fire.

Your electric cooperative sends crews on a scheduled basis to clear growth away from power lines as a way of

reducing potential outages and safety risks. As a rule of thumb, 25 feet of ground-to-sky clearance should be available on each side of utility poles to give power lines plenty of space.

Maintenance along power line rights

## Tree Planting Guide



## Why not bury all electric lines?

Your cooperative must consider many financial, logistical and local issues when determining whether to bury power lines.

Underground and overhead technology differ from each other. Installing underground lines requires training and equipment that are not the same as for overhead lines.

Generally, overhead lines are more affordable to construct, repair and maintain. They're more accessible for maintenance and repair. Faults on the line can be visually inspected, and repairs are usually more quickly achieved.

However, overhead lines are viewed by some as unsightly and are vulnerable to damage caused by falling trees and limbs, as well as vehicle crashes.

Underground lines are not visible and are protected from damage caused by falling trees and errant vehicles. However, when

underground cables fail, locating them and repairing them requires special equipment, which usually slows the power restoration process. Also, in a flood emergency, restoration on underground lines cannot occur until the water recedes.

Electric cooperatives generally place power lines underground in new, planned residential developments. Routing the lines involves relatively easy right-of-way access, and laying them requires little or no disruption to existing buildings. The lines cost more to install than overhead lines, and the higher costs typically are contained in a developer's costs and pricing structure.

Installing underground lines is considerably more difficult and expensive in established residential and commercial areas. Additional right-of-way or easements may be required. Working around existing homes, buildings and other utility lines generally increases costs.

of way has led to a drop in vegetation problems. For the first time ever, no outages were reported last year along transmission lines anywhere in the U.S., according to the North American Electric Reliability Corporation (NERC), which oversees reliability of the transmission system that blankets most of North America.

### Making the cut

Typically, a cooperative's crews will not remove trees. Instead, they trim away limbs and branches too close to power lines.

Your co-op respects your property. Tree maintenance decisions are made based on the amount of clearance needed around wires, as well as the voltage coursing through lines, the tree's growth rate, and the right-of-way maintenance cycle (how frequently trimming along the line is performed).

"The co-op's primary objective is to prevent electrical hazards as well as outages," explains Tommy Greer.

For long-standing trees that have grown too close to overhead lines, several trimming options are employed. A V-cut prunes branches back toward the center of the tree's crown, basically carving a V-shape through the middle to provide proper line clearance. If limbs grow too close to lines on one side of a tree, the crew will side-trim—branches on the entire side are removed. Finally, the notch method clips limbs on one side of a tree from the top to a safe area



*Inspecting the EnergyUnited right of way are Eddie Bridges (left) of the North Carolina Wildlife Habitat Foundation and Jay Jordon of the National Wild Turkey Federation.*

### Protecting habitat under power lines

EnergyUnited, the Touchstone Energy cooperative serving more than 120,000 member-consumers in 19 North Carolina counties, has been recognized on numerous occasions for its award-winning right-of-way maintenance program. Its science-based integrated vegetation management system selectively applies environmentally safe herbicides to control growth in the right-of-way corridors. The herbicides used are approved by the Environmental Protection Agency and applied by trained and licensed personnel.

In coordination with two organizations—the National Wild Turkey Federation's Energy for Wildlife Program and the Pollinator Partnership—EnergyUnited crews preserve plant and wildlife habitat, including federally designated endangered species, while caring for right-of-way areas. The selective herbicide applications interrupt the photosynthesis process on undesirable vegetation, leaving grasses, shrubs, vines and legumes to flourish. The programs not only promote biodiversity and provide food and shelter for wildlife, but also help control erosion and reduce air pollution.

"We also maintain safe working conditions in these areas," says Steve McCorkle, System Forester for EnergyUnited. "If there's a power interruption, crews need safe access to our poles and equipment."

It's a system that works. EnergyUnited kept power on for its entire membership 99.97 percent of the time in 2009, one of the best reliability records in the nation.

underneath, leaving a canopy that will not cause any problems.

In general, co-op crews will not work on trees under a building's service drop (the line that runs from the pole to your building).

### Other causes of outages

Trees and branches are the primary cause of outages, but other offenders include vehicles running into poles or animals getting too close to pole-mount transformers or equipment in substations. Electrical components can also be damaged by lightning and flying objects such as drifting balloons. To help reduce power interruptions from these causes, co-ops use tree trimming, lightning arrestors, line patrols and animal guards.

### What you can do

If you want to remove a tree near a power line, your electric co-op will work with you. Contact your co-op before tackling the project on your own.

When you plant trees, keep utility poles in mind. In general, tall-growing trees or varieties with wide canopies shouldn't be placed near utility poles. A local nursery can provide information outlining how tall and quickly a tree will grow. Several guides are available, including the Arbor Day Foundation at [www.arborday.org](http://www.arborday.org).

Stay alert to children climbing trees. Contacting a live wire could be fatal.

If you notice any dead, dying, or severely leaning trees near power lines in your area, contact your cooperative. 📞