## After a major power outage

## The steps to restoring power Illustration by Katherine Fowler

**Step 1.** Transmission towers and lines supply power to one or more transmission substations. These lines seldom fail, but they can be damaged by a hurricane or tornado. Tens of thousands of people could be served by one high-voltage transmission line, so if there is damage here it gets attention first.

**Step 2.** A co-op may have several local distribution substations, each serving thousands of consumers. When a major outage occurs, the local distribution substations are checked first. A problem here could be caused by failure in the transmission system supplying the substation. If the problem can be corrected at the substation level, power may be restored to a large number of people.

**Step 3.** Main distribution supply lines are checked next if the problem cannot be isolated at the substation. These supply lines carry electricity away from the substation to a group of consumers, such as a town or housing development. When power is restored at this stage, all consumers served by this supply line could see the lights come on, as long as there is no problem farther down the line.

urricanes and ice storms. Tornadoes and blizzards. Electric cooperative members have seen them all in the last few years. And with such severe weather comes power outages. Restoring power after a major outage is a big job that involves much more than simply throwing a switch or removing a tree from a line. The main goal is to restore power safely to the greatest number of members in the shortest time possible.

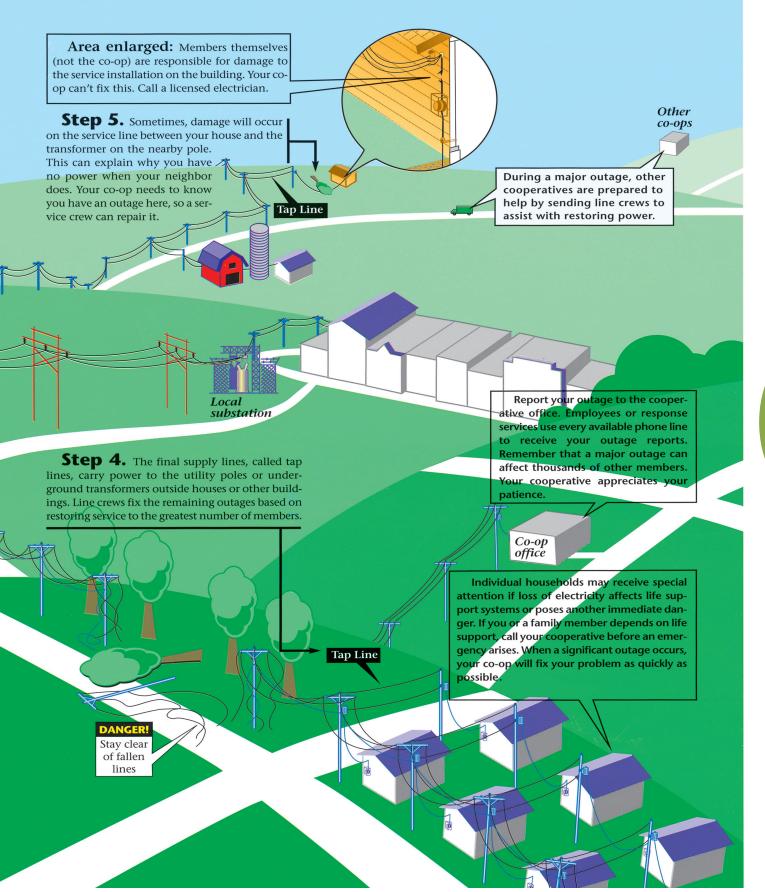
Transmission substation Local substation

local

substation

The major cause of outages is damage caused by fallen trees. That's why your electric cooperative has an ongoing right-of-way maintenance program.

The illustration on these pages explains how power typically is restored after a major disaster, such as a hurricane or tornado. While power restoration priorities may differ from co-op to co-op, electric system repairs generally follow a plan similar to the one illustrated here.



my co-op