

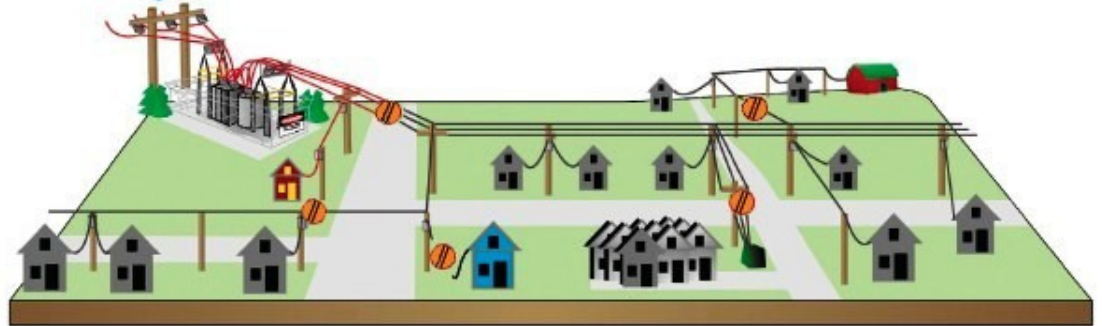
# Restoring Power After a Storm

Most of us come to expect that if we lose electric service it will be restored within a few hours. But when a devastating event like a major lightning and thunderstorm, a tornado, ice or snow storm causes major damage to Bluestem's system, longer outages cannot be helped.

BEC's crews work long hours restoring service, but it's a task that needs to be done methodically and safely. Every electric cooperative follows a basic principle when it comes to restoring power—priority goes to the lines that will get the most people back in service the quickest. This usually begins with the main lines from the substation (which can affect 200 to 600 members) and continues out to tap lines (which may affect 30 to 200 members) and then to individual service lines (affecting just one to five members).

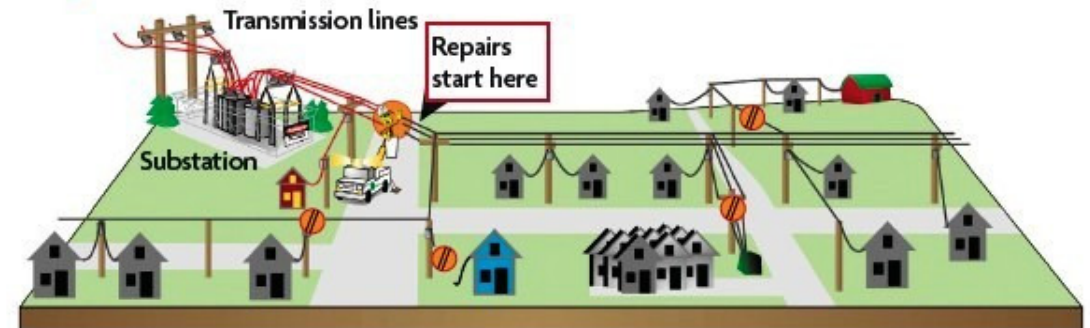
For example, a major storm has just hit the electric cooperative system. To the right, is a simplified look at how Bluestem typically goes about the task of restoring your electric service.

## The Outage



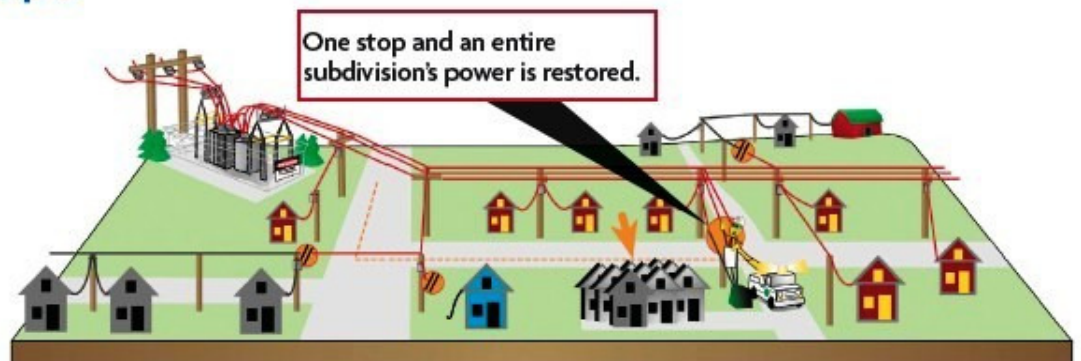
In this simplified diagram, most of the countryside is in the dark. Fortunately, the substation serving the area is energized. It's receiving power from the transmission lines, shown in red. But a main distribution line from the substation to most of the area is damaged, leaving most of the consumers in this area without power.

## Step 1



The substation is energized but a main distribution line is damaged near the substation, leaving most members without power. All repairs start with the main line. A large number of members (shown with an orange arrow) will have power returned once the main line is fixed. All other repairs would be pointless until this line is restored as it feeds all the other lines. With the main line now fixed (now shown in red), the electric cooperative line crew can better isolate other damage and prioritize repairs.

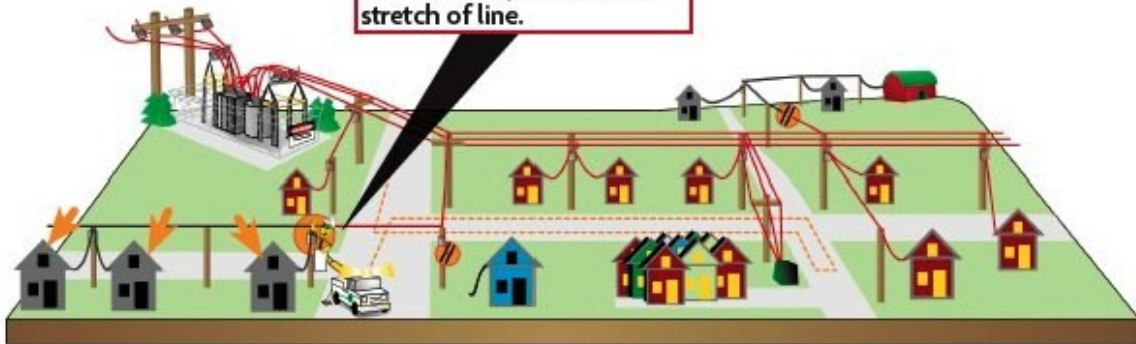
## Step 2



With the main line restored (now shown in red), the line crews can isolate other damage and prioritize repairs. Crews begin making repairs that will get the largest quantity of member's power restored. Though a couple of repairs were closer, fixing the line that serves the sub-division down the road will get a larger number of consumers on more quickly.

### Step 3

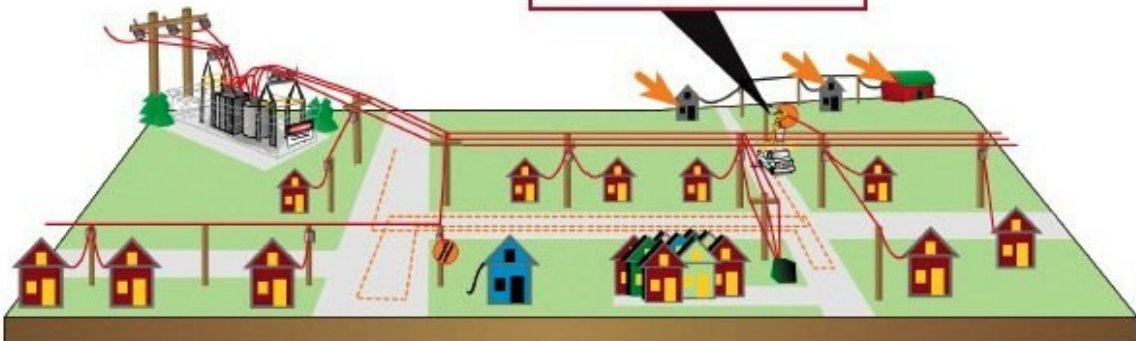
Back down the road, the line crew makes one repair and restores power to this stretch of line.



Moving back down the road to fix this tap will restore electricity to the three homes marked with arrows.

### Step 4

This repair restores power to these homes and farm.

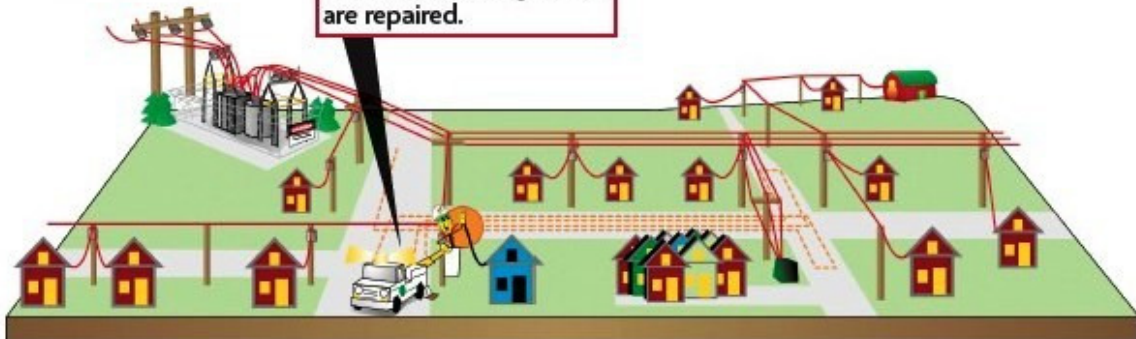


A smaller tap serving a number of homes and the farm on the hill is next on the list for the line crew. The move probably doesn't make the folks in the blue house too happy. They've seen the crew driving by their home and working right across the road. They see lights in homes of all their neighbors but they don't have power!

That's because even though electricity is coming to their pole (that happened with the first repair in Step 1), the service line from their pole to their meter is damaged. Individual repairs come after all distribution and tap lines are restored.

### Step 5

Individual repairs begin once all other larger lines are repaired.



Only after the tap lines are repaired do the crews start working on individual service lines. The crews have been past the blue home three times and could have stopped to restore power anytime after the first main line was repaired and electricity was flowing to the pole nearby. But, it's not fair to other members for a crew to spend hours fixing one outage, when the crews can move down the road and restore power to dozens of homes in the same amount of time.

**Please remember, with any major storm, be patient. Call your local Bluestem office to report any outage of emergency status that poses a serious threat to life, or just for an update of restoration progress.**