SEC
Santee Electric Cooperative Inc.

PO Box 548
Kingstree, SC 29556
(843) 355-6187
(800) 922-1604
www.santee.org

Georgetown (843) 546-4521

Lake City (843) 374-3000

Hemingway (843) 558-3313

Manning (843) 473-4036

To report an outage
1-888-239-2300

Rob Ardis
President & CEO

Santee Electric Cooperative News
Adrel S. Langley, *Editor*
alangley@santee.org

The many aspects of power restoration

WITH HURRICANE SEASON not officially ending until November 30 and the possibility of an ice storm lasting all winter, now is an appropriate time to discuss how electric utilities respond to power outages. I still like the occasions–even though they are rarer now–when I get a chance to put on my old engineer's hat. I think some explanation of the process will help ease minds when questions are asked. . . "Do they know I'm out of power?"–and–"How long will it last?"

First, it's important to understand that small-scale, unexpected outages are very different from ice storms and hurricanes. When an animal (birds, snakes, and squirrels are particularly problematic for power companies) works its way into our energized infrastructure, restoration is normally as simple as clearing the fault and re-fusing the tap or transformer. When a car hits one of our poles, an entire circuit might be taken out, and a full construction crew is normally needed to direct traffic and change out the broken pole. These might sound different, and their magnitudes are, but the response is the same. As soon as the call is received, the lineman on call in that area responds and assembles whatever additional team he needs (if any) to fix the problem.

Pop-up evening thunderstorms, tornadoes, etc. are the outages that will normally have a considerable number of linemen out working all night. These events are severe enough to be more than the on-call linemen can handle. We are normally required to dispatch the majority of our linemen when these severe summer storms take a swing at us.

The outages that cause the greatest concern, however, are major storms–hurricanes and ice storms–that break poles, tear down lines, and cause our members to be out of power for days.

The order of power restoration

First, there is the order of restoration. The first level, transmission, is actually out of Santee Electric's hands. Quite often when our system is hit hard by a major storm, so is the transmission system. Once we have received transmission service to our substations, we work on bringing the major feeders online. Think of our substation as the heart and the feeders as the main arteries. Long before we can respond to individual taps and services, these main circuits have to be re-energized. Any broken poles or trees on these lines must be dealt with first. Once the main lines and other 3-phase circuits are re-energized, we turn to the taps. Taps are chosen based on bringing the most people on the fastest. Taps with more people and taps with less damage will be chosen first. Finally, when all taps have been restored, we turn to individual services that have been torn down. To answer that first question I listed at the top of this column, yes–we do know you're out. We can reach out electronically to every meter on our system to find out which are without power. As restoration of each service is winding down, this is how we make sure no one is missed.

Employee safety is also key

Santee Electric Cooperative also has to deal with the change in work schedules. For simpler events, of course, everyone works all night. During multi-day events, however, it is much more efficient to have all of the linemen work the same 16-hour days. Patrolling lines is 10-times faster and safer in the daylight than at night. This also gives us the 8-hour

period at night for the engineers and dispatchers to plan the next day's work.

A concern I hear commonly is in regards to the amount and timeliness of the help we receive from outside of our system. "You knew there was a hurricane coming, so why didn't you have 500 linemen already on site to start working the very next morning?" The answer is very simple. Every utility wants to send help, but no utility will (1) put their men and equipment in harm's way before the storm arrives or (2) send their men and equipment before they know their own system is safe. That's why it always takes a day or two (or more depending on conditions) before the full cavalry arrives.

We also have to deal with the question of whether more men and equipment is always better. If 500 men took 10 days to restore all power, then 5,000 should be able to do it in one day, right? I'm afraid it doesn't work like that. There is a point where a system can be saturated with linemen. Beyond this point, you have too many people working with electricity in close proximity to each other. Despite our overwhelming drive to restore power as fast as possible, we never want to get into a situation where we put linemen's lives in danger.

I hope this helps shed some light on the subject. (Pun intended!) We appreciate all our members' kind words and patience during outage situations, brief and extended. We encourage you to follow us on social media during these events, and we will try our best to keep you informed. Stay safe out there.

Robert G. Ardis III
President and Chief Executive Officer

October is Cooperative Appreciation Month

Join us for Member Appreciation Day from 11 a.m. until 2 p.m. at your local Santee Electric Cooperative offices:

Oct. 2 Hemingway
Oct. 3 Kingstree
Oct. 6 Lake City
Oct. 19 Manning
Oct. 26 Georgetown

We welcome all members to come by and visit your local electric cooperative office to meet the employees and learn more about the cooperative you depend on every day. Mark your calendars, and we hope to see you there!

Powering Up After an Outage

When the power goes out, we expect it to be restored within a few hours. But when a major storm or natural disaster causes widespread damage, extended outages may result. Our line crews work long, hard hours to restore service safely to the greatest number of consumers in the shortest time possible. Here's what's going on if you find yourself in the dark:

SEC
Santee Electric Cooperative Inc.