



Evaluating Outage Management in a COVID-19 World

The pandemic should serve as a catalyst to focus utility attention on lateral improvements to bolster grid reliability.

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Living in the “new normal” during the COVID-19 pandemic has led to significant changes for everyone. People don’t leave their homes without a mask, traditionally large gatherings are postponed, and many individuals have shifted from working in office environments to conducting business from the safety of their own homes.

This shift has resulted in the largest number of people working from home in our history, and many organizations are taking this opportunity to test how having most of their team work remotely will impact business in the long term.

Those of us working from home have gotten creative and have

found ways to help improve our new work environments. But of all the variables we can adjust to make home offices effective, ensuring a reliable power supply is not one of them. That is dependent on the local electric utility.

Our digitally driven world relies on continuous power and in many places utilities have not bolstered the lateral lines that directly serve customers to help ensure they can stay online all day, every day.

Before the pandemic, a momentary outage in the middle of the day was easy to ignore. Most residents were either at work or school during the outage, and, aside from a few flashing

digital clocks, everything would be normal when they got home. Today, with so many power users at home all day, an outage of any length, and at any time, can have a significant impact on productivity in a home office.

Anyone working from home has likely experienced themselves or a colleague drop off in the middle of the “now standard” video calls that have taken the place of meetings. That is a small inconvenience but a blink in power has the potential for large, negative impacts as well. Picture dropping off a call in the middle of a heated customer meeting. Imagine the confusion and frustration when a teacher is bumped offline, leaving a virtual classroom of elementary students with no instruction. Consider the ramifications of someone working with the stock market who falls offline moments before a large trade.

Regardless of the industry, nearly everyone who is working from home needs reliable power and internet access to maintain their productivity.

When a momentary outage occurs, home-office professionals can safely assume power will be restored soon. However, environmental challenges, such as tropical storms, tornadoes, microbursts, heatwaves, and blizzards, can result in home-office professionals losing power for days at a time.

Utilities have made great strides reducing the length of these outages through the implementation of resiliency solutions and it's easy to argue that a five-day outage following a storm is better than the 10-day outage customers would have experienced 15 years ago.

With home offices becoming standard for many professionals in the wake of the pandemic, how is anyone supposed to maintain their job function without power for days at a time?

It is questions like this that expose the need for improving lateral distribution systems. Utilities in storm-prone areas have

invested time and energy into hardening the grid to help navigate severe weather following devastating storms. However, many utilities throughout the country haven't put as large a focus on improving and strengthening the lateral distribution system that directly serves residential customers.

The pandemic should serve as a catalyst to focus utility attention on lateral improvements to bolster grid reliability and, in turn, customer satisfaction.

Advanced lateral-protection strategies exist which can reduce the number of customers affected by any given outage through the use of smart protection devices. The lateral system needs protective devices in a variety of ratings to support all locations of the system, not just the head of the lateral. Increased line segmentation helps limit the number of customers affected by momentary or sustained outages. These devices also can prevent transient overhead faults from becoming sustained outages, eliminating the need for a line crew to service the system and thus keeping the lights and computers running for customers.

Advanced lateral-protection solutions are designed to precisely pinpoint where an outage has occurred to reduce the time it takes line crews to find and repair the fault when their assistance is needed in the field. Fewer outages and faster recovery times not only benefit a utility's bottom line and overall reliability but also directly impact customer satisfaction by keeping the lights on more consistently.

As the world continues to navigate the COVID-19 pandemic, we will be faced with many unknowns. But one thing we can count on is that society will be less forgiving of outages of any duration while so much of their life is spent at home. Now is the time for utilities to consider the range of solutions available to reduce the impact of outages in residential areas by reevaluating existing lateral-protection strategies. **TDW**