

Clay Electric Cooperative AMI Case Study

# Weathering the Storm with Comprehensive Outage Management and Rapid Service Restoration



Landis+Gyr



Clay Electric Cooperative (Clay Electric), headquartered in Keystone Heights, FL, is one of the largest electric co-ops in the United States. Organized in 1937, the co-op has traditionally been known for its excellent service. With an expansive service territory, the utility's nearly 200,000 members receive power from 14,000 miles of distribution and transmission lines and enjoy an excellent 99.91% Average Service Availability Index. This is especially impressive given the fact that Clay Electric's 15-county service territory is in one of the most active hurricane areas in the country.

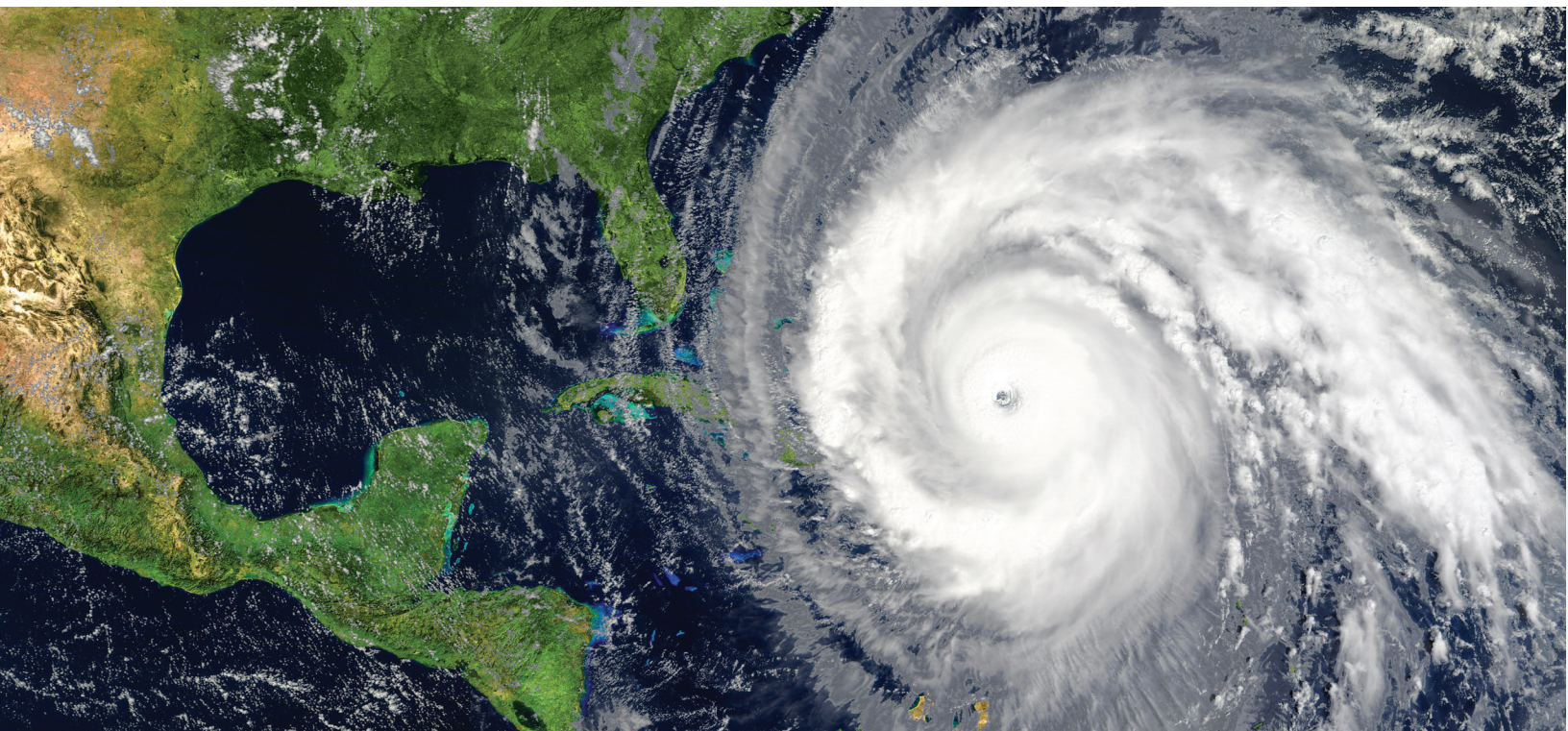
The utility was an early adopter of Advanced Metering Infrastructure (AMI) technology, deploying Landis+Gyr's Mesh IP network in 2017—a secure, standards-based communications network that enables reliable, two-way data exchange between smart meters and utility systems. This implementation has enabled consistent high-speed communications and visibility with around 200,000 smart meters deployed across urban and rural areas, supporting comprehensive outage management and rapid service restoration. In 2024, this infrastructure was put to the test above and beyond normal daily operations, as Clay Electric's territory was hit by three named hurricanes in a single storm season, impacting anywhere from 20 to 50 percent of the utility's member base.

## AMI in the Eye of the Storm

Leveraging its AMI and Outage Management (OMS) systems, Clay Electric put in place a series of processes to better utilize data to prepare for weather events and bring field networks online faster during restoration.

**Before the storm arrives**, they increase system resources in anticipation of need, especially for their OMS and Mapping / GIS app servers, and they restart all of

their AMI servers to create a “clean” environment to work from during the storm. In addition, Clay Electric disables any scheduled jobs that may be resource-intensive and negatively impact critical system performance. Finally, they reboot all collectors to allow meters to layer correctly – ensuring they are all communicating and keeping track of abnormal AMI via status groups.



**During the storm**, the challenge is to maintain integrations to the OMS, CIS, and data warehouse, watching for and suspending any unnecessary tasks or jobs, and bringing any dropped AMI devices back online where possible. Hurricane Helene was the worst in this regard, as it moved slowly over the utility's service territory, preventing Clay Electric from getting out and responding quickly. However, they were communicating with their customers and were watching things through the AMI network.

Bryan Stroup, Clay Electric Applications Support Manager explained, ***"We could see exactly where everything was, we could see what it was, and we could plan ahead without even having to get out and do damage assessment."***

***"AMI was essential in our restoration activities and a key differentiator in improving our restoration times, because we could identify those outages, quickly deploy crews, and resolve them through the storm,"*** Brent Richardson, CIO of Clay Electric, confirmed.

**After the storm**, monitoring of integrations to OMS, CIS, and data warehouse continues. Field Area Network (FAN) traffic is minimized as much as possible to allow meter pings to assist with feeder / line-level actions. Gap processes are enabled overnight when crews are finished for the day, then disabled the next morning as work continues. Using Landis+Gyr's Head End System's *Real Time Outage Tracker* helps guide work on non-communicating meters in "Lost Status," if area has power restored. Downloading meter data flagged as "Normal Status," but with no reads, the utility is able to filter by district to focus their restoration work. They keep track of known meter issues by using meter status groups, making the Not Logging list easier to use for restoration efforts. Once restoration is completed, gap processes are enabled as normal, and maintenance jobs, exports, and HES processes are restarted.

According to Eric Hoegler, Clay Electric Engineering Analysis Manager, ***"The AMI system has allowed us to use data from the endpoints out in the field, information that we couldn't see prior to AMI, voltage issues, outage issues, and it's allowed us to fine tune some of our devices out in the field. We've reduced the number of outages, we've reduced the number of people that are impacted by the outages, and we've reduced the length of the outages."***

## Making Outage Management Proactive

While outage restoration—whether widespread and storm-driven or localized and isolated—is typically a reactive process, Clay Electric has improved member satisfaction by proactively reaching out to members experiencing an outage before they even have a chance to report it. Landis+Gyr's integration with the utility's NISC OMS enables it to receive proactive notifications from the AMI system. The OMS then uses the AMI data in its integration with the *MyClay* web portal / mobile app to provide members with a map that indicates outages by area, letting them know the utility is aware of the outage.

***"It's more information to the members as well as for us, where we can go to that area and we ride that line, figure out where the breaks are, deliver a line crew and get our members' service restored, and then that map is also updated back to the members through the MyClay electric app."***

—Ben Thomas, Clay Electric Energy Services

## AMI Beyond the Storm

Beyond storm management, Clay Electric and its members enjoy fair-weather value from their AMI implementation year-round. With a robust Mesh IP network covering the utility's entire service area, Clay Electric enjoys the benefits of having connected meters and intelligent devices wherever needed. Their AMI implementation supports improved operational efficiency through load control, street light management, and Distribution Automation. The solution also empowers Clay Electric to elevate member services—offering pre-pay options, accelerating outage resolution, and deepening engagement through the integrated MyClay web portal / mobile app.

Hoegler added, *"I think we're just scratching the surface of the value that we've realized using Landis+Gyr's AMI system. We've got a lot of benefits to date, and I think we're a stronger company because of it. I think we're providing more value to our members because of it. I think it's a really big win for us."*

### KEY UTILITY BENEFITS



Provides consistent **communications and visibility** for 200,000 smart meters across urban and rural areas.



Enables **better utilization of data** to prepare for weather events and bring field networks online faster during restoration.



Supports **comprehensive outage management** and rapid service restoration.



**Reduces number of outages** and impact on members, and shortens outage durations.

Landis+Gyr is a leading global provider of integrated energy management solutions. We measure and analyze energy utilization to generate empowering analytics for smart grid and infrastructure management, enabling utilities and consumers to reduce energy and water consumption. Our innovative and proven portfolio of software, services and intelligent sensor technology is a key driver to decarbonize the grid. Having enabled 9 million tons of CO<sub>2</sub> savings in FY 2024 through our product offerings, Landis+Gyr manages energy better – since 1896. With sales of USD 1.7 billion in FY 2024, Landis+Gyr employs around 6,300 talented people across five continents. For more information, please visit our website [www.landisgyr.com](http://www.landisgyr.com).