

# Umatilla Electric Cooperative builds a better grid with Siemens CMR compact modular reclosers

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Umatilla Electric Cooperative (UEC) serves a sprawling and rural portion of northeast Oregon.

Unlike for-profit electric utilities that typically serve denser populations, UEC is a local, non-profit, and consumer-owned electric cooperative, in operation only to serve its member customers.

Today, Umatilla County and its surrounding areas are experiencing tremendous industrial, agricultural, and residential growth.

"We cooperate with our membership across the board—they are part of our company," says Ryan Young, Electric System Engineer for UEC. "Everything we do is focused on providing safe reliable power to our members."

Young explains that, although UEC serves about 17,000 meters across its service area, the system's peak load is quite high given the number of connected meters - in the 800MW range. And, given the rural nature of this territory, facilitating a reliable power supply from substation to end user can be even more complex. "If the power goes out, it's not as simple as dispatching a truck. It can take several hours to drive out to some areas of our service territory. If it snows, we need specialized equipment to clear the road before we can even get a line truck out there," he says.

UEC is always focused on creating more resilience for its power system. In recent years, UEC has been rebuilding lines, expanding substations, and installing Siemens compact modular reclosers (CMR) to deliver uninterrupted operation and reliable service.

"If a traditional recloser locks open, it requires a truck roll and line crew to manually switch the power back online. The environment and temperature can also affect the performance of these older reclosers. But the Siemens CMR can take care of itself and everything down the line of it automatically," says Young.

## About the Siemens compact modular recloser (CMR)

The CMR is a direct substitute for traditional, single-phase, hydraulic reclosers that eliminates regular hydraulic maintenance and utilizes line voltage for its power supply. These new, solid dielectric vacuum reclosers feature fully configurable protection and four operations in a sequence, making it ideal for clearing transient faults on long, rural distribution lines.





#### Siemens CMR improving uptime and utility service for Umatilla membership

The CMR features a self-contained, fully-insulated design that improves safety and network reliability by ensuring no operators or wildlife can come into contact with live components of the device. This feature combines with the CMR's remote connectivity to help eliminate prolonged and unnecessary outages for UEC.

"We're seeing a positive impact on uptime. And when there is an outage, we can get it restored much faster in the areas where we've installed the CMR," says Young.

He illustrates with an example: "Let's say a squirrel gets in the line and causes an outage. With the old reclosers, it could take a few hours to send out a line crew to investigate the outage and restore power. Now, however, it could be just seconds for the outage that is probably not even noticed by our customers when using the Siemens CMR. The other big added benefit is that the CMR works the same in the winter snow as it does in the summertime."

#### Improving wildfire mitigation plans with Siemens CMR

Like many utility providers in the western U.S., UEC works hard to address wildfire concerns, which represent a real danger to people, homes, forests, and wildlife in the area. In fact, many wildfires start in rural areas where monitoring utility infrastructure is more difficult.

Ongoing preventive measures like tree trimming and clearing underbrush are one part of UEC's wildfire mitigation program. The Siemens CMRs are also central to these plans.

"The Siemens CMRs are a lot more resilient to circuit dynamics than the old-style reclosers, and they're rated to handle higher currents for a short period of time. So, if a power line falls, the Siemens reclosers will operate in a more efficient and safe manner, making them a key aspect of our wildfire mitigation plan."

#### Lightweight design eases installation for UEC

On top of its positive impact on uptime, resilience, and wildfire mitigation, UEC appreciates the CMR's lightweight design and simple mounting options, too. "The Siemens CMR has a smaller form factor and weighs only about 45 pounds. You could literally climb a power pole while carrying it if you absolutely had to, whereas the old hydraulic reclosers weighed a couple of hundred pounds. So, it's lightweight and easy to install in part because you don't need any heavy equipment onsite to lift it to the top of the pole," says Young.

So far, about two dozen of UEC's oldest reclosers have been replaced with Siemens CMRs, and Young expects that they will ultimately install more than 65 CMRs in the coming months and years.

#### Uptime, resilience, performance

Umatilla Electric Cooperative has relied on Siemens power distribution equipment and outdoor systems for many years because of the good working relationship that UEC engineers and Siemens support team members have established. "If we have a question about anything related to our system, we can call Siemens and know they can get us an answer quickly. Having that type of relationship is really key," says Young.

He concludes: "We take pride in our system and making sure it's top-notch for our membership. That's what is important: safety, uptime, resiliency, and improving performance indices on behalf of our members. This project – installing the Siemens CMRs – is at the center of that commitment."



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