

Success Story: Granville County 911 Center



9-1-1 For Availability

Product:

Eaton® 9390 UPS

Location:

Oxford, N.C.

Market Served:

Emergency Services

"We can see in the very near future having to upgrade and add more equipment in the center ... and we know the UPS is going to be able to cover it or we can add to it."

*- William Wheeler,
9-1-1 call center manager*

Background

As a fully functional, state-of-the-art, enhanced 9-1-1 operations center, Granville County Emergency Communications provides 7x24 emergency assistance to approximately 55,000 local residents. Part of the Granville County Government, the agency is responsible for coordinating responses for fire services, medical services, law enforcement and animal control.

While the number of incoming calls requiring emergency dispatch averages between 80 and 150 per day, the presence of a major interstate running directly through the county can prompt phone line activity to spike at any moment.

"When there's an accident, we can receive 80 to 125 calls in 3 minutes' time," reports William Wheeler, manager of the 9-1-1 center. "The 9-1-1 environment is changing rapidly because of Sept. 11," he adds, "and it's going to change more, so we have to be prepared. We've got to be able to provide emergency services to our citizens all the time; they count on us to do that."

Challenge

The ability for Granville County 9-1-1 to sustain clean power and continuous uptime for its emergency response equipment can literally mean the difference between life and death.

In March 2007, the agency completed a major overhaul of its call center, replacing aging devices with cutting-edge equipment including a top-of-the-line radio system, computer aided displays and monitors, and new telephone and mapping systems.

"Our equipment hadn't been upgraded in 15 years," explains Wheeler. "We went from having a dinosaur-age communications system to stepping into the new century."

At that time, Granville County sought an uninterruptible power system (UPS) that would not only be able to keep pace with its slew of modern technology, but also safeguard it through any emergency situation. "Without the UPS, if the power went out, we wouldn't be able to do our job," notes Wheeler, adding that the agency's previous UPS was not powerful enough to protect the new equipment.

Topping the county's UPS preparedness wish list was high availability, as the area is prone to frequent power interruptions from a variety of sources such as brownouts, ice on power lines, lightning strikes and automobile accidents. The 9-1-1 call center also desired a power protection solution capable of accommodating the agency's future expansion and evolving equipment needs. Another consideration was a unit that would easily fit into the call center without occupying substantial floor space.

Solution

Responding to the call with proven performance was the Eaton 9390 UPS from the Powerware® series. Recommended to Granville County by Carolina Power Systems, the three-phase UPS delivers a best-in-class combination of power performance, battery management, scalable architecture, flexibility, power density, and warranty and service.

With a double-conversion design that offers the highest level of protection available, the 9390 shields equipment from the most common power problems, including outages, sags, surges, spikes, brownouts, line noise, frequency variation, switching transients and harmonic distortion. The scalability of the 9390—which is available up to 160 kVA—was one of the primary reasons the agency chose

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the UPS. The unit allows up to six equivalent modules to be paralleled for additional capacity or redundancy.

"We're a small county but we're a growing county," Wheeler acknowledges. "We can see in the very near future having to upgrade and add more equipment in the center, and we know the UPS is going to be able to cover it, or we'll be able to add to it."

For the time being, the agency's initial 40 kVA investment is more than sufficient to handle its load requirements. "Because we have so much equipment, our previous UPS wasn't big enough to sustain power," Wheeler explains. "But the 9390 can do it—run all of our equipment at one time without the generator being on."

Enhancing the reliability of the 9390 is the unit's superior battery management system—ABM® technology—which extends battery service life and optimizes recharge time. In addition, an integrated battery management system tests and monitors battery health.

"It's a very efficient battery process," notes Wheeler. "It's not like you're charging all the batteries at one time and then waiting for them to bleed down and charge them all up again."

In addition, the 9390 offers a high efficiency rating of 99 percent with Energy Saver Mode. Combined with an output power factor of .90 that powers more of today's modern equipment, the UPS lowers total cost of ownership while reducing the cost of power to support protected loads. Due to its high efficiency rating, the 9390 also produces less heat, which in turn lowers facility cooling costs. Furthermore, the unit's low input current THD enhances generator compatibility, another important factor for Granville County.

It is very dependable, always providing good, clean continuous power," Wheeler says of the unit. "If the power goes out, we don't even see it blink. We only know it happens because we can hear the generator fire up."

Implementation

Working with electricians contracted by the county, an Eaton customer service engineer (CSE) performed the 9390's initial start up. Placed within the corner of an equipment room at the 9-1-1 center, the unit's installation occurred seamlessly, according to Wheeler.

"The technician explained everything, showed us all of the different screens; basically, walked us through everything," he says.

With its small footprint and flexible deployment options, the 9390 reduces both the time and costs associated with installation. "The amount of power that's provided in that small footprint is one of the reasons we went with the 9390," Wheeler acknowledges. "Our previous UPS took up a lot of floor space, especially with the batteries."

Furthermore, convenient front-panel access increases the unit's serviceability, while also reducing repair time. "The UPS is very easy to manage," Wheeler confirms. "We had no trouble just rolling it right in since it has castor wheels, and it also provides easy access for maintenance."

Having purchased a preventive maintenance plan that includes quarterly UPS service performed by an Eaton CSE, Wheeler praises both the knowledge and the professionalism of the technicians. "They respond very quickly because they know the UPS is a piece of emergency equipment for us," he says. "It's very easy to get maintenance done."

Result

With the 9390 pulling round-the-clock shifts, Granville County Emergency Communications knows that it is always in safe hands. "Any 911 center in the nation has got to have a backup supply for the electricity and power," says Wheeler. "The 9390 provides the peace of mind that we can serve our citizens."

With the 9390 UPS, Granville County is now able to:

- Provide continuous uptime for critical 9-1-1 support systems
- Expand its power protection as needed with the 9390's scalability
- Ensure critical equipment remains completely isolated from all power anomalies and connectivity



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