

## Success Story: Bexar Metro 9-1-1 Network District



# Eaton Answers the Call for Backup Power

#### Product:

Eaton® 9170+ UPS

#### Location:

San Antonio, Texas

#### Markets Served:

Metropolitan area

*"We are in a business where seconds count. Our main concern is having reliable power at all times."*

*- Bill Buchholtz, executive director,  
Bexar Metro 9-1-1 Network District*

#### Background

The Bexar Metro 9-1-1 Network District supports the 9-1-1 emergency response services for three counties in the metropolitan area of San Antonio. As one of the largest districts in Texas, its area of responsibility has a population of approximately 1.6 million people and stretches beyond 2,600 square miles.

Bexar Metro's responsibility is to ensure that citizens have the ability to connect with the appropriate Public Safety Answering Point (PSAP), or call center, to dispatch the necessary emergency response needed. The district acquires, installs and maintains the specialized equipment, while also managing the network, database, mapping and related infrastructure within each of the 20 PSAPs in its area of responsibility. With almost two million calls a year, including life-threatening situations, reliable power remains critical to keep the 9-1-1 telecommunications services and infrastructure operational.

#### Challenges

Bexar Metro made a decision to upgrade its 9-1-1-related equipment in each call center with sophisticated software and highly technical computers. As part of this initiative, Bexar Metro was looking for a reliable backup power solution that would seamlessly phase into each of its emergency call centers over a short period of time.

As part of the project, a reliable uninterruptible power system (UPS) was needed at each location since a small disturbance in utility power could terminate or prevent 9-1-1 calls from being completed.

"We are in a business where seconds count. Our main concern is having reliable power at all times," said Bill Buchholtz, executive director, Bexar Metro 9-1-1 Network District. "Typically it takes two or three seconds to bring a generator online during a power event. These seconds are critical and we have to bridge that gap with a dependable UPS to make sure there is no loss of power. In our business, we may receive emergency service calls at any time and our goal is to be ready and available for citizens in distress."

Brett Schneider, director of operations, Bexar Metro, researched different vendors to ensure that the power requirements for this extensive upgrade were met. After a complete comparative analysis, he selected Eaton 9170+ single-phase UPSs.

Bexar Metro relied on Eaton's power expertise to help manage the power for its mission-critical applications. "With previous units, the entire system failed if the power module went out. This would result in a loss of power to the 9-1-1 equipment on site," Schneider said. "When we sought a new backup solution we wanted a UPS that was reliable but also resilient and scalable. The solution needed an architecture that could grow to meet our future demands and we found that in the Eaton 9170."

#### Solution

The Eaton 9170+ single-phase UPS, with its scalable, modular and redundant design, offers the highest level of backup power protection, power quality and reliability and lowest cost of ownership of any UPS power supply in the 3–18 kVA range.

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The 9170+ eliminates system-level single point-of-failure; the logic and power are housed in the module and not in the enclosure, making the UPS inherently redundant.

Bexar Metro worked with Eaton power specialist Power Associates, Inc. to develop the final specifications and deployment plan. "They are striving to provide the best services to their district," said Mike Hodde, president, Power Associates. "Bexar Metro management selected the 9170+ UPS for its fault-resilient features, ability to scale and extended runtime offerings."

Based upon previous experience, Bexar Metro wanted the ability to monitor all of the units deployed throughout the district. With Eaton's eNotify Remote Monitoring and Diagnostics Service, Bexar Metro has 7x24 monitoring and on-site support for its UPS network. "Our IT staff can now check system availability, generate monthly reports and monitor the health of each UPS," said Buchholtz. "The eNotify service is an efficient way for us to manage and anticipate any critical events, especially when we have our UPSs in multiple locations across a large geographic area."

### Implementation

As part of the multi-phase process to upgrade to the 9-1-1-related equipment that supports each call center, Bexar Metro worked closely with

Power Associates to develop an installation schedule for the UPSs. "It was a significant time-phased operation," said Buchholtz. "Between construction, electrical work, fiber and new equipment installations and connecting the network, we decided to make the UPSs a top priority because we wanted to secure reliable power before we installed the high-tech computers."

During the planning process, Bexar Metro worked with Power Associates and electricians to identify potential site issues and develop an implementation plan for the 9170+ UPSs, electrical panels and bypasses in each of the call centers. Of the 20 emergency call centers Bexar Metro is responsible for, they installed 9170+ UPSs in 15 locations and intend to upgrade the remaining locations in the near future. The team worked at a rapid pace of one installation per day.

### Results

With the 9170+ UPSs in place, Bexar Metro has the ability to deliver reliable, scalable and consistent power protection to support 9-1-1 emergency response services for 1.6 million citizens in the San Antonio metropolitan area.

"Emergency call center supervisors have gone out of their way to tell us about their equipment functioning flawlessly during a power failure, thanks to the UPSs," said Schneider.

Bexar Metro does not anticipate the need for additional 9-1-1 call centers although its expectations are that call volume will increase with population growth. Consequently, the company sized its installations to enable expanding the number of call-taking stations with minimal changes to infrastructure.

"Bexar Metro is a prime example of a customer that has planned for the future. They installed enough equipment to handle today's needs but are also positioned to scale their power needs for years to come," said Hodde.

As a result of the new infrastructure deployment, Bexar Metro can now:

- Eliminate single point-of-failure with N+X power and logic redundancy
- Ensure extended runtimes during a power disturbance
- Monitor the health of each UPS in different locations with Eaton's eNotify services
- Grow as its IT environment changes by incorporating the scalable design of the 3 kVA power modules and batteries



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