

# A Power Protection Solution Programmed for Success



## Customer

Public Broadcasting Company

## Markets served

Atlanta TV and Radio

*"We felt it was pretty important to our job to be able to send out warnings under adverse conditions," York explains, "which this UPS will allow us to do."*

## Background

For more than 50 years, WPBA-TV (PBA-30) and WABE-FM (90.1FM), operating under the marketing umbrella of Public Broadcasting Atlanta, have been dialed in to being the premier sources of cultural, educational and informational entertainment for Atlanta's eclectic television and radio audiences.

## Challenge

A mandate by Congress requiring federally licensed TV broadcasters to convert from analog to digital signals prompted PBA Channel 30 to undertake its own version of a TV home makeover. Spurred by the February 2009 deadline—after which TV stations will only be able to broadcast digital signals, which increase

efficiency with their ability to carry more information over less frequency bandwidth—the station is in the process of deploying a comprehensive modernization campaign throughout its 52-year-old facility.

"That was the driving impetus," John York, director of engineering at PBA 30, says of the federal mandate's role in the station upgrade. "But our equipment was aging and we needed to modernize it one way or another."

Among the most critical components to PBA Channel 30's renovation was a revamped power protection strategy, which was needed to safeguard the station's new computer-based systems, as well as the entire signal chain for both television and radio transmissions.

"In the past, a simple power glitch would take us off the air, and it would take 10 or 15 minutes to reboot the system," York explains. "We needed a facilities-wide uninterruptible power system (UPS) that would provide clean, continuous power to all of our computers and protect the new digital television transmitter."

Even more, because the station's WABE 90.1 FM serves as the secondary source for Georgia's Emergency Alert System (EAS), the ability to ensure high availability and uptime was critical. "We felt it was pretty important to our job to be able to send out warnings under adverse conditions," York explains, "which this UPS will allow us to do."

Eaton  
Electrical Group  
8609 Six Forks Road  
Raleigh, NC 27615  
800-356-5795  
[www.poweware.com/9390](http://www.poweware.com/9390)

Eaton and Power Xpert are trademarks of Eaton Corporation. All other trademarks are property of their respective owners.  
© 2008 Eaton Corporation  
All Rights Reserved  
COR72CSS

Finally, says York, "We were looking for something that was big enough to carry the load of both the TV and radio stations, without busting the budget."

## Solution

PBA Channel 30 discovered all the requirements it was looking for—and then some—in the Powerware® 9390 80 kVA UPS from Eaton®. Working with local contractor Derris McLean of McLean Electrical Service, the station chose the unit for its impressive combination of power performance, battery management, scalable architecture, flexibility, power density, and a comprehensive warranty and service plan. "It offers a lot of features," McLean says of the UPS.

Designed to meet the current and future power protection requirements of data centers, manufacturing operations, medical facilities and other mid-range applications, the Powerware 9390 delivers unmatched power performance with a high efficiency of 94 percent and output power factor of .90, which lowers total cost of ownership for the TV station by reducing the cost of power to support protected loads. Because the Powerware 9390 runs efficiently and produces less heat, it also lowers facility cooling costs. This benefit is especially appealing to PBA Channel 30, as the UPS provides more power to the station's unity power factor servers.

In addition, the UPS's low total input harmonic current distortion (THD) of less than 4.5 percent enhances compatibility with upstream power systems, most notably generators, while the unit's input power factor of 0.99 minimizes auxiliary generator sizing requirements. This advantage will be realized for PBA Channel 30 in the near future, as the station plans to purchase a generator as part of its ongoing modernization campaign.

Another key feature that makes the Powerware 9390 such an ideal choice for the broadcasting industry is the unit's exceptional battery management system, according to McLean. Noting that industry personnel have a tendency to overlook their power protection solution—often until it's too late—McLean says that the reliability of the Powerware 9390 makes it a perfect fit. Indeed, the UPS uses advanced battery management technology to extend battery life and optimize recharge time, while the unit's integrated battery management system tests and monitors battery health. "Most people want to be able to just stick a UPS in a room and forget about it," McLean reveals. "You don't have to spend time worrying about this UPS."

In the future, PBA Channel 30 will also have the opportunity to take advantage of the Powerware 9390's Hot Sync® wireless paralleling technology, which allows up to six UPS modules to be paralleled for redundancy or capacity, providing a maximum capacity of 480 kVA. Furthermore, the UPS's 160 kVA models can be paralleled up to 960 kVA. "It's a work-in-progress," McLean says of the solution. "We have future plans to add on to the unit, and the nice thing is we didn't have to pay for everything right now."

Another benefit that prompted McLean to recommend the Powerware 9390 is its superior warranty coverage, which includes a one-year factory warranty, start-up service, a UPS performance check, one year of battery replacement labor coverage, and one year of web remote monitoring of both the UPS and batteries.

## Implementation

The small footprint and flexibility of the Powerware 9390 made installation a breeze for the television station, which placed the UPS in a cramped

basement. Even more, the station appreciates the unit's convenient, front-panel access, which increases serviceability and reduces the time required for any repairs.

In addition to deploying the Powerware 9390 UPS, PBA Channel 30 also purchased a four-breaker Cutler Hammer maintenance bypass panel, which allows the computer-based systems and the entire signal chain to stay up and running on utility power if the UPS requires service. To further enhance protection, McLean replaced an aging switch inside an existing cabinet with Eaton's Pringle switchgear product.

"We are very satisfied," York reports of the solution. "It's been working great."

## Result

Since its installation, the Powerware 9390 has played an Oscar-worthy role for the TV station, not only conquering several harsh weather conditions in the Atlanta area, but also proving instrumental in the station's ability to broadcast important tornado and thunderstorm warning messages to the community through its role as an EAS provider.

"We were able to be the backup we needed to be, in order to get the message out to the people," York reports.

Going forward, the station hopes to bolster its protection even further by adding a 160 kVA Powerware 9390 UPS at the site of its digital transmitter, as well as purchasing a diesel generator. Having applied for grant funding from the Public Telecommunications Facilities Program (PTFP) to complete these projects, PBA Channel 30 is currently awaiting word on whether it will receive the funds.

Since deploying the Eaton solution, PBA Channel 30 is now able to:

- Provide uninterrupted, clean power to its computer-based systems, including the entire signal chain for both the TV and radio transmissions
- Meet its role as the secondary station to transmit Atlanta's EAS
- Accommodate future growth plans with the ability to add supplemental battery cabinets
- Reduce energy and cooling costs through best-in-class efficiency performance

Eaton, Powerware and Hot Sync are trade names, trademarks, and/or service marks of Eaton Corporation or its subsidiaries and affiliates.



Powerware 9390