Power Quality Problems Solved at a Customer Call Center

Background

A large nationwide retailer has a network of thirteen customer call centers in the U.S. These call centers provide a single point of contact for all customer needs. Thousands of customer service and sales associates are networked through the company's computer system, giving them the ability to quickly handle most calls. To meet the retailer's objective of total customer satisfaction, it is essential that electric power never be disrupted to the computer and telephone systems of these facilities.

The problem

One large call center is located in Alabama, in an area that often experiences strong, drenching thunderstorms. This facility had endured numerous computer and telephone system problems attributable to power interruptions of less than 30 seconds. It also had experienced frequent, but brief voltage sags due to its close proximity to the utility substation serving the facility.

The telephone problems were readily resolved by the installation of a small, conventional UPS system. The computer problems proved to be more

challenging, however . . .

Approximately 800 personal computers are distributed throughout the facility. Most are accessed sixteen hours a day and are used to assist service representatives in handling the 20,000 calls that come in daily.

The call center manager estimated that a short-term power quality problem costs upwards of \$6000. She pointed out that "a

computer reset can take 15 to 30 minutes . . . time that we are not servicing our customers. Hundreds of service associates can do little except wait for their computers to reboot."

And, of course, there is the intangible additional cost of customer inconvenience and dissatisfaction associated with these power quality problems.

Action taken

Once the call center decided that this issue needed to be addressed, they contacted their local utility, who, coincidentally, had recently formed an energy solutions division to deal with these types of problems.



Several solutions were investigated, including the installation of a small UPS at each PC. But that idea was quickly rejected due to the cost and complexity of installing the large number of units required.

Another solution considered was a large conventional UPS system, which would be installed in the computer room and protect the computer loads.

The third solution considered was an S&C PureWave UPS System, which would be installed outdoors and protect *all* of the facility's loads.

What did they do?

After considering the costs and benefits of each solution, the call center chose the S&C PureWave UPS System. A 250-kW unit was installed outdoors at the incoming service point.

The PureWave UPS System not only offered the lowest initial cost and best performance, but also saved valuable floor space in the computer room. And the PureWave UPS System had the added benefit of providing redundant UPS protection for the phone system.

Results

Within three months of its installation, the PureWave UPS System had already protected the call center from over 50 power disturbance events. On one particularly stormy day, the system saved over \$30,000 in computer downtime and related efficiency losses.

The PureWave UPS System reacts quickly to power disturbances. It

normally transfers from the utility source to battery power in 2 to 4 milliseconds . . . fast enough to prevent costly computer shutdowns.

The PureWave UPS System provides enough energy for 60 seconds of backup power at full load, protecting the call center from over 99% of the power quality problems it had been experiencing. The PureWave UPS System has been integrated with the existing backup generator serving the facility, thus providing 100% protection from extended outages.



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