Success Story:
Filmwerks International

Market Served
Broadcast and Events

Portable Eaton fleet becomes MVP of live sporting events

Location:
Wilmington, N.C.

Product:
Eaton® 9390, 9130, Intelligent Power Manager and Cellwatch

Problem:
Spotty utility power, coupled with excessive generator fuel requirements, prompted the company to seek a more reliable and environmentally-friendly solution to meet the critical uptime requirements of networks and viewers.

Results:
The Eaton solution provides the high-quality battery backup needed to ensure clean, continuous power for live broadcasts and other key events.

"In our industry, you really can't recover from a 30-second power loss … We like to push the envelope, and Eaton has been wonderful in helping us to do that."

Michael Satrazemis, president and founder of Filmwerks

Background

Since its establishment in 2000, Filmwerks International has been supplying generators for all types of major events, including concerts, sporting events, fashion shows, movie productions and corporate functions. The company has provided power for some of the largest and most-watched events in the nation, such as presidential inaugurations, Super Bowl XLVIII, the Final Four, NASCAR, the PGA Tour, the Masters and the GMA Concert Series.

Challenge

In the high stakes world of live broadcast, relying on utility power alone can be risky business. Consider the debacle of 2013's Super Bowl, when a blackout plunged New Orleans' Superdome into darkness, halting play and leaving millions of TV viewers in the dark. That was followed by the 2015 World Series, when an ill-timed outage affected a network's broadcast truck and interrupted the telecast of Game One.

While even non-sports fans are sure to remember those widely publicized fiascos, many other power quality mishaps have proved just as devastating. Whether it's a pay-per-view event such as ultimate fighting, a lucrative golf tournament, or a highly anticipated boxing match, even a few seconds of downtime can result in irreparable damage for broadcasters.

"When you lose something like that, it's the shot heard round the world," emphasize Michael Satrazemis, president and founder of Filmwerks. Pointing out that a pay-per-view event can generate up to $100 million in subscriptions, Satrazemis says subscribers have the right to demand a refund if the network fails to keep the program on air.

EATON
Powering Business Worldwide

Filmwerks technicians begin preparation for the Super Bowl by setting up an Eaton UPS.

"If they lose 30 seconds of an event, people can insist on getting their money back," he explains. Similarly, advertisers invest millions of dollars for 30-second commercials during a Super Bowl or World Series game —and expect the promised airtime. "In our industry, you really can't recover from a 30-second power loss," Satrazemis continues. "If you lose the connection with the satellite, it can take 20 minutes for the broadcast truck to reboot. You've lost the show."

Potentially even more damaging than the monetary loss is the dent in a broadcaster's reputation. "These things end up all over social media," cautions Filmwerks' General Manager Chad Corbin. "The outage becomes the headline event."

That's why Filmwerks—which was not responsible for the power supply in New Orleans or the World Series—wanted to take a revolutionary approach to ensuring continuous uptime for its clients. "Those big outages really played into what we have been building," Corbin reveals. "There's much more awareness now of how critical power is, and the importance of mitigating problems any way you can."

At the same time, the company sought relief from some other challenges associated with its previous model of paralleling redundant generators, including noise, transportation weight and especially, excessive fuel consumption.

"We were burning a lot of fuel," acknowledges Satrazemis, adding that the company may be on site anywhere from two days for an NFL game to up to two months for a tennis tournament.

Yet relying on utility power alone was definitely not an option. "When we are in regional areas of New York, for example, we see the utility power fluctuate as low as 198 volts and as high as 222 volts," Satrazemis says. "That's just unacceptable.

Solution

To guarantee their broadcasts are televised without a hitch, Filmwerks began exploring the use of uninterruptible power systems (UPSs). The company has always prided itself on delivering cutting edge technology to its customers, so when it came to selecting a UPS manufacturer, Eaton emerged as the clear MVP.

"We opted to invest in the most innovative UPS technology, rather than settling on old UPS products that are inefficient or otherwise outdated," Corbin explains."Eaton's reputation is great."

Filmwerks' ever-growing team of UPSs includes the Eaton 9390 and 9130 UPSs, plus battery cabinets and both power and battery monitoring software. Ever since the units were first deployed in 2015, their reliability and durability has been scoring big points with Filmwerks—and more importantly, with its clients.

"We are using Eaton in a unique environment—on the road," Satrazemis points out. "This is not a typical pristine data center. We may be in 120 degree weather out in Arizona, or zero degrees in Minnesota. We're pushing parameters, but the UPSs are responding without fail."

Exceptional reliability, a compact and modular design, superior battery management, inherent redundancy, and the ability to monitor and communicate remotely were all driving factors in the company's selection of the 9390. The Eaton 9130 UPS delivers online power quality and scalable battery runtimes with a high efficiency rating to cut energy costs.

"Another reason we looked at these particular units is that they are available in 208 volt models, which is very appealing to us because it eliminates our having to bring 3,000 pounds of transformers with us," Satrazemis adds.

Thanks to the Eaton UPS solution, Filmwerks is not only changing the way broadcasters approach ensuring uptime, but the company has significantly reduced fuel costs and carbon emissions. Additionally, the UPSs' modular design and small footprint preserve valuable space and occupy less weight within their trucks. And the UPSs are not only more environmentally friendly, but require fewer parts than the generators and have eliminated the noise.

"We love these UPSs," Satrazemis enthuses. "We don't burn through fuel, we aren't putting a million hours on our generators, which will make them last a lot longer, and we are using utility power with a great comfort level."

The Eaton units made their debut for Filmwerks at the 2015 U.S. Open tennis tournament, amid tremendous success. "The utility was rough and people were impressed that they stayed at 208 volts with no issue, while everything around them fluctuated," Satrazemis reports.

The success and reliability of the solution subsequently delivered a knock-out punch for MMA fight operators, whose preferred method of powering broadcasts is now the UPSs. Furthermore, at the 2015 U.S. Open, the Eaton gear performed "amazingly" and delivered "perfect and constant 208 volt power," according to Filmwerks.

This year, the company has successfully backed up a broad range of events with its fleet of Eaton UPSs, including Super Bowl XLVIII, weekly WWE events and the NCAA's Final 4 in Houston, just to name a few. Filmwerks is now preparing to roll out its UPS convoy at the Stanley Cup, the U.S. Open, and for Thursday Night Football in the fall. "All the other networks are watching us to see what we do," Satrazemis reveals.

It's critical that all the technology is portable and road-friendly. Here UPS batteries are on casters to easily transport into the stadium.

In addition to the Super Bowl, Filmwerks supported the 2016 pre-game and post-game shows in Santa Clara.

For a typical NFL game, Filmwerks deploys the larger Eaton 9390 units to supply backup power to an average of 10 broadcast trucks in the parking lot. Other equipment, such as the motors that run the aerial cameras and LED booth lighting, are also safeguarded by the large UPSs. Meanwhile, dozens of smaller Eaton 9130 units are responsible for backing up critical TV cameras throughout the stadium.

When it came to powering Super Bowl XLVIII in San Francisco—home to the state that led the country in outages the past three years—Filmwerks safeguarded the Super Bowl using 594,000 watts of Eaton backup power, ensuring no viewer missed a single pass, tackle or turnover.

And to make sure clients are able to see just how the UPSs are performing, Filmwerks provides dashboards within their trailers. Using Eaton's Intelligent Power Management (IPM) software and Cellwatch battery monitoring, Filmwerks is able to demonstrate to clients how the UPSs seamlessly adjust voltage levels, as well as receive alerts and status updates around any power condition.

"Our job is to provide our customers with insurance that power won't go out or vary beyond a parameter that would cause an issue with the sensitive electronic equipment," Satrazemis says. "This allows us to show people in a visually appealing way exactly how that is accomplished."

Throughout the procurement process, Eaton representatives have worked closely with Filmwerks to help the company overcome a number of key challenges, including implementing a UPS system with the least amount of weight and designing customized travel cabinets for the units. Looking to the future, Filmwerks is already exploring a number of options to enhance the flexibility of its UPS deployments, such as the use of lightweight lithium batteries and the possibility of constructing a battery backup solution within the actual trucks.

"Ours is an unconventional method of deployment," Corbin acknowledges. "But so far it's been embraced. We are a small, agile company, and although Eaton is big, we have been pleased with their responsiveness and attention to detail in helping us to meet our needs."

"We want to do things that others don't," Satrazemis adds. "We like to push the envelope, and Eaton has been wonderful in helping us to do that. We're very excited about the future."

Results

Thanks to the Eaton products, Filmwerks has established a new benchmark when it comes to providing uptime to critical live broadcasting and Entertainment events. "This should be—and likely will be —the standard in the broadcasting industry," Satrazemis says of the UPS solution.

- Ensure reliable and continuous uptime to live broadcasts and for other critical events
- Significantly reduce fuel consumption and generator noise
- Reduce transportation weight to and from events
- Receive immediate notification of all power events through IPM software and Cellwatch

For more information, please visit:
Eaton.com/powerquality

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Printed in USA
Publication No. CS153068EN / GG
June 2016

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