

## Success Story: U.S. Navy's Tactical Training Group Pacific



# Eaton 9395 makes uptime smooth sailing for Navy

#### Product:

Eaton® 9395 UPS

#### Location:

San Diego, Calif.

#### Market Served:

Military

*"The Navy doesn't want to put in something that's not energy efficient. Everyone is trying to save money these days, and energy efficiency is an important part of that."*

*- Tom Hurst, facilities manager*

#### Background

The mission of the Navy's Tactical Training Group Pacific is to provide advanced tactical training to the military's strike groups and amphibious-ready groups in an effort to improve proficiency in war fighting and joint operations, as well as meet the requirements of the unified commander. The San Diego-based operation executes this task through the implementation of numerous classroom and synthetic training events for all West Coast deploying troops.

#### Challenge

Because the training center relies on a broad range of sensitive electronic equipment to help facilitate instructional procedures, it is imperative that the devices remain fully accessible and operational at all times. With that in mind, the Navy last summer embarked on an overhaul of the power system within one of the site's main buildings.

"We needed to rewire power distribution for the lower floor of the building," explains Tom Hurst, facilities manager for the Navy's Tactical Training Group Pacific. "We had to bring it up to current standards for our training equipment."

At the time, the center's existing power protection solution was not only maxed out at capacity, but the unit couldn't be wired into the facility's new power scheme. As a result, the Navy began investigating options for a new uninterruptible power system (UPS).

Of utmost importance was a UPS capable of delivering exceptional reliability, considering the unit is tasked with safeguarding the command's large fleet of servers and PCs used for training. "Our primary mission is to train deploying strike groups," Hurst explains, noting that sailors are aboard ships in multiple locations including Hawaii, Japan and the Persian Gulf. "We send signals worldwide, and need to have that equipment available."

Also desired by the training facility was a centralized UPS to facilitate easy manageability. And while a robust, powerful solution was critical, the center didn't have much floor space to allocate for the new unit. "Footprint was a concern, because we had a limited area where we could put it," Hurst reveals.

Finally, buoyed by rising energy costs, the facility manager sought a highly efficient UPS. "That was a definite factor, as the Navy doesn't want to put in something that's not energy efficient," Hurst acknowledges. "Everyone is trying to save money these days, and energy efficiency is an important part of that."

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## Solution

In order to meet all of its requirements in a power protection solution, the Navy's Tactical Training Group enlisted the Eaton® 9395 UPS—designed with a range of technological advancements that combine to create an unparalleled level of reliability. The 9395 relies on double conversion topology to completely isolate output power from all input power anomalies and deliver conditioned sine wave output even during the most severe power disturbances—a level of protection the Navy values tremendously.

“Without a reliable UPS, if we had a power outage, training would go down for the entire west coast—or beyond,” Hurst points out.

For even greater reliability, the 9395 can be configured with an inherent redundancy option, a capability that other manufacturers cannot provide without requiring the addition of a costly second UPS.

In addition to exceptional reliability, the 9395 also features an unprecedented level of efficiency. Its innovative design operates at greater than 94 percent efficiency, reducing utility costs and creating cooler operating conditions, which in turn enhance reliability and extend the overall life of the UPS components.

The Navy also has the option of further increasing efficiency using Eaton's new Energy Saver System (ESS), which detects incoming power quality and engages modules as needed, resulting in 99 percent efficiency across the entire operating range. The energy savings from ESS typically enables a company to recover the full cost of the UPS over just a three- to five-year time period. For example, when operating at 250kW of critical load, the savings is equivalent to \$4,000 per year per point of efficiency gain. Even more, backing up that load with an ESS UPS is comparable to removing 29 cars from the road.

Surprisingly, the 9395 packs all of these benefits into the smallest footprint in the industry—50 to 60 percent less than competitive units. Not only does the unit fit a redundant design into the same footprint as a traditional non-redundant UPS, the 9395's reduced weight lowers freight costs and makes handling and setup significantly easier. In this manner, the unit was an ideal choice to meet the Navy's space restrictions.

Yet another selling point of the 9395 is its scalable architecture, which can adapt to future changes in load requirements without requiring the purchase of a new UPS. Available in models ranging from 225 to 1100 kVA, the flexibility of the multi-module UPS enables it to grow as needed. For example, a 275 kVA module can easily be added in the field to achieve N+1 redundancy or additional capacity.

While the Navy is confident that the 275 kVA model it purchased will be able to accommodate the training center's equipment needs for the immediate future, the option of expanding its power protection solution is another welcome advantage.

## Implementation

Included with every 9395 at no additional charge is Eaton startup service and customer training. “It went very well,” Hurst reports of the installation process.

Indeed, as a completely integrated pre-wired system, the 9395 is not only easier to install than competitive UPSs, but also significantly reduces the time required, as well as the cabling costs. Traditional multi-module UPS installations require up to three times the footprint for power modules and tie cabinets

Furthermore, the ongoing performance of the Navy's unit is simplified thanks to easy serviceability with the 9395's front-accessible, service-friendly design, which enhances maximum uptime and availability. In addition, for routine service and maintenance, an Eaton field technician can completely isolate and service one UPS module while the other module carries the load, with no need to go to bypass.

“The bottom line is, we haven't had a problem,” Hurst reveals. “As far as I'm concerned, it's working perfectly.”

## Results

It's been smooth sailing for the Navy's training facility ever since it deployed the 9395 UPS. With the unit in place, the training center is now able to:

- Ensure the continuous uptime of critical training equipment with the unit's unmatched reliability
- Save on power and cooling costs, thanks to industry-leading efficiency
- Easily accommodate space restrictions with the UPS's small footprint and weight
- Adapt to future changes in load demands or reliability requirements with the 9395's scalable architecture



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