

## CABLE TV & TELEPHONE NETWORK

POWER SOLUTIONS  
CASE STUDY of  
COX COMMUNICATIONS



### WHERE THE CABLE TV IS ALWAYS ON

#### UNITS

3 kW & 75 kW  
LP/Natural Gas Gensets

#### LOCATION

San Diego County, California

When your company is in the business of delivering digital cable television, High Speed Internet<sup>SM</sup>, and telephone services to a vast network of end users, the issue of system reliability is a key concern. When you operate in California's challenging energy environment, where power outages and rolling blackouts are more than just an occasional nuisance, having reliable backup electricity to power your network is imperative. In San Diego County, this is a continual challenge for Cox Communications, the pre-eminent supplier of cable TV and telecom services. Fortunately, they've found a superior solution combining battery-powered uninterruptible power supplies (UPS) with gaseous-fueled generator sets from Generac Power Systems.

Cox Communications has been providing cable television service throughout the San Diego metropolitan area since 1960. Today, its infrastructure includes over 6000 miles of cable in and around the city, with 40,000 powered amplifiers throughout the network to boost and extend its main trunk and feeder lines. Cox currently delivers individual or bundled service to approximately 1.2 million cable TV subscribers, High Speed Internet<sup>SM</sup> users, and telephone customers in the area.

To keep this massive system operational 24 / 7, Cox relies upon over 1,000 Generac standby gensets – approximately 800 of which are rated at 7.5 kilowatts, with the remainder being smaller 3 kilowatt units. Most of the generators are fueled by natural gas, but approximately fifty of the most remote units rely upon LP gas for their operation.

Each genset is matched with a UPS battery system, which provides instantaneous emergency power for short duration outages (that Cox defines as up to twelve minutes). If utility power is not restored within that time, the genset starts up and seamlessly takes on the load for as long as necessary, without interruption of service to the customers.

"This arrangement has been very successful in keeping our system running during rolling blackouts," says Jaime Soto, Cox's fiber optics team leader. "The combination of UPS and generator backup works well for us."

To increase its competitive edge,

“We've had 160 starts during rolling blackouts, without a single failure,” says James Marler, Cox technical specialist, “and the generators were powering significant portions of the network during that time.”



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reducing system downtime has been a top priority for Cox Communications over the last several years. “Service reliability is very important to us,” Soto emphasizes. “By increasing the number of generators backing up the system, we’ve reduced annual outages per customer from 53 minutes per year in 2001 to just 15.6 minutes currently.”

In California’s uncertain energy environment, that’s an especially impressive success. “We’ve had 160 starts during rolling blackouts, without a single failure,” says James Marler, Cox technical specialist, “and the generators were powering significant portions of the network during that time.”

Marler is also pleased with the reliability numbers cited by Soto. “In 2003, we were able to maintain an average reliability of 99.9879%,” he notes. “We’re pretty proud of that accomplishment.”

Generac Power Systems is a major supplier to a variety of telecommunications companies, and produces a line of backup power generation products specifically designed for these kinds of demanding applications.

“This is a market segment that is very important to us,” says Paul Bazzetta, Generac’s vice president of strategic accounts. “We work with a variety of top companies that deliver all kinds of telecommunications services, and we tailor our equipment to their requirements. We’re always looking for ways to improve our products and we enjoy meeting the challenges of this environment. Our position as one of the largest suppliers of backup gensets to this market keeps us focused on its special requirements.”

Generac’s Strategic Account Team works in conjunction with its dealers nationwide to provide comprehensive support for companies that purchase generators for numerous locations. “Our group is dedicated to serving corporate clients throughout the consultation, specification, and implementation process,” Bazzetta says. “Our dealers provide a local presence to facilitate the installation and start-up, and then follow that up with periodic maintenance and warranty support. It’s an integrated program that focuses on each company’s particular needs.”

## **GENERAC®**

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