



Standby power

> Case History

Remote cellular sites, New York, USA



Our energy working for you.™

Where:

Remote cellular antenna sites for Verizon Wireless in upstate New York, USA

What:

More than 300 40 kW diesel generating sets providing standby power at remote cellular sites; 500 kW and 750 kW units at several major switching stations

Purpose:

Standby power to prevent loss of cellular phone service

Primary choice factors:

Product reliability, PowerCommand® integrated digital controls and maintenance contract

Standby generators keep Verizon Wireless connected in blackout

ROCHESTER, NEW YORK, USA — The massive Northeast blackout of 2003 affected more than 50 million people and shut down communications, transportation and businesses from the Great Lakes to the Atlantic. While the cause of the outage was widely debated by industry experts and utility regulators, the impact of the event fell hardest on those who were not prepared for a power disruption of any duration. Food spoiled in home refrigerators and supermarkets. Service stations were unable to pump gasoline. And businesses without standby power systems were out of commission for as long as five days.

Television news coverage frequently showed long lines at public telephones. Traditional landline telephones still worked because that system was backed up with batteries and standby generator systems. But many cell phones stopped working when some wireless service providers lost power at their cell antenna sites. Only those wireless companies that made critical investments in standby power systems avoided the consequences during the blackout.



During a utility outage, the Cummins 40 kW diesel generator can power this cellular antenna site for up to three days without refueling.



Nearly 300 Verizon Wireless remote cell sites are backed up by standby generators from Cummins Power Generation.

Can you hear me now?

Verizon Wireless, which serves upstate New York, made the investment and continued to operate normally throughout the outage. Verizon's familiar television commercials ("Can you hear me now?") proved amazingly prescient for their customers during the blackout. This was because more than 300 Verizon Wireless cell antenna sites throughout upstate New York had recently been equipped with on-site standby power systems from Cummins Power Generation Inc.

According to Rick Polatas, director of network services for Verizon Wireless, "The outage had no impact whatsoever on service to our customers. Every Cummins generator at our remote cell sites and switching stations started and ran perfectly."

Polatas said that Verizon Wireless began installing standby power systems from Cummins Power Generation three years before the blackout and that this outage was the largest test of the system to date. Each of the company's remote cell sites surrounding Syracuse, Buffalo and Rochester, NY, is backed up with a 40 kW diesel generator.

However, just backing up the remote antenna sites is not enough, so each of the company's regional switching facilities is also protected by either a 500 kW or 750 kW Cummins standby generator. These, too, operated flawlessly during the outage.

"Verizon Wireless was one of the leading cell phone providers in the telecommunications industry to make this kind of an investment in power reliability," said Dan Bush, a Cummins sales engineer located in Rochester, NY.

Up and running within 15 seconds

Each Verizon Wireless remote cell antenna site consists of telecommunications gear running on utility power. To make sure that even short outages don't disrupt cell phone service, each site is backed up with a bank of batteries to power the gear for eight to ten hours. However, it is normal for the Cummins 40 kW diesel generator to start and assume full load within 15 seconds after utility power is lost.

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The new 40 kW generator has a state-of-the-art digital control system that is unusual for a generator of its size. With the new PowerCommand 2100 digital controller comes more precise voltage regulation, better combustion efficiency, remote and local networking capabilities, and real-time information.

Diesel engine generators are reliable and require minimal maintenance. All the units are covered by a standard Cummins Power Generation maintenance agreement that consists of an inspection every six months, a yearly fluid and filter replacement, and topping off the fuel tank.

For more information about integrated standby power systems, contact your local Cummins Power Generation distributor or visit www.cumminspower.com.

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