

CELLULAR TELEPHONE TOWER SITE

POWER SOLUTIONS
CASE STUDY of
NEXTEL



STAYING CONNECTED WITH NEXTEL COMMUNICATIONS

UNITS
50 kW Diesel Genset

LOCATION
Cary, North Carolina

When you operate a cellular telephone and data transmission network that thousands of users rely upon, it's imperative to keep it operating twenty-four hours a day, seven days a week. Any interruption of service will be a serious inconvenience, resulting in considerable lost revenue and dissatisfied customers. That's why Nextel Communications relies upon backup generator sets from Generac Power Systems to supply emergency on-site power for twenty-two of its critical cellular tower sites throughout the Raleigh-Durham area of North Carolina.

Nextel is the nation's leading provider of fully integrated, all-digital wireless service, with an array of offerings for business and personal communications. The Nextel National Network provides customers with a 4-in-1 business solution: guaranteed all-digital cellular coverage, Nextel Direct

Connect® service, Nextel Wireless Web, and text / numeric messaging capabilities. Nextel services also feature built-in call security and cloning protection through the use of integrated Digital Enhanced Network (iDEN®) technology developed by Motorola.

The company itself is a telecommunications giant, with

over 5 billion dollars of revenue per year, and more than 8 million digital subscribers nationwide. The Nextel National Network provides service to thousands of communities across the United States, including over 180 of the top 200 markets.

In the Raleigh-Durham area, Nextel serves its digital wireless customers through 140 cellular tower sites. Each of the 22 enhanced sites features a tower, a telecom shelter containing critical equipment and an uninterruptible power system (UPS) battery bank, as well as a stand-alone Generac genset in a Series 2000 enclosure. The generators are 50-kilowatt diesel-powered units with a 182-gallon fuel tank, which will allow them to operate continuously for more than 40 hours, if necessary. The gensets were installed in the spring of 2000, and have been providing standby power ever since.

The Cary facility shown here is typical of Nextel's generator-backed sites in the Raleigh-Durham area and throughout the southeastern United States. Although

“ From a 7.5 kilowatt genset for a cell tower to a 6000 kW unit at a company headquarters, Generac seems to have the most complete and versatile products to satisfy this end user's special requirements. ”
Frost & Sullivan



Nextel's system is more reliable because of its investment in Generac standby gensets.

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well inland, this region is within range of powerful hurricanes and ice storms that can disrupt traditional power and communications networks. That makes having reliable backup power essential to keep the Nextel system fully operational in the event of extreme weather. "We test the systems once a month," says Rob Bacon, senior field technician for Nextel. "They also cycle themselves once a week on a normal exercise routine."

In addition to the fixed installations at each site, Nextel's regional office also maintains a fleet of four trailer-mounted 50 kW gensets for temporary use. "The mobile generators are on call for coverage during maintenance, or in the event of emergencies," says Mickey Farr, Nextel's RF operations manager. "When needed, they also provide power to new remote sites before utility connections are made."

Nextel's standby generators in the Raleigh-Durham area were installed by Nextgen Power Systems, the local Generac dealer that also provides service and maintenance for the units. "We do everything for Nextel to provide them with a turnkey solution. We

handle site permits, installation of the equipment, and quarterly maintenance of each unit under a yearly contract," notes Brian McGeary, Nextgen's regional vice president for national accounts.

Generac Power Systems is a key supplier to a number of top telecom companies in North and South America, Nextel among them. Frost & Sullivan, an international strategic market consulting firm, has recognized Generac as a leader in telecommunications products with its Product Line Strategy Award. As Frost & Sullivan notes, "From a 7.5 kilowatt genset for a cell tower to a 6000 kW unit at a company headquarters, Generac seems to have the most complete and versatile products to satisfy this end user's special requirements. As demand for backup power increases in the telecommunications industry, Generac can expect the head start of its product line strategy to benefit the company today and in the future."

GENERAC®

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