

■ DC Power, Outside
Plant & Services for
Business-Critical Continuity

Meeting the FCC Backup Power Mandate

From Site Audit to Total Site Solutions



Integrated Backup Power Solutions to increase your network reliability in times of disaster

Coping with an aging utility infrastructure and increased demand

An aging power distribution network and increased demand have stretched the utility power grid to its limits, even under normal conditions. At the same time, the communications network has grown ever more dependent on utility power as

consumers switch to wireless voice communication and as data transmission services expand. When disaster strikes and utility power is disrupted, the effect can be devastating on personal safety, commerce and national security, particularly since wireless backup power standards for remote sites have evolved from a different requirement than wireline.

Emerson Network Power has the expertise to evaluate the backup power readiness of your wireless sites and remote terminals, recommend and implement optimized battery, fuel cell, generator, or other backup power solutions and provide national service support for all your DC power installations.





When Hurricane Katrina struck on August 29, 2005, communication throughout the Gulf Coast was severely affected. Three million phone lines were out and 1,000 cell sites were destroyed, along with 35 Public Safety Awareness Points (PSAPs) responsible for responding to and routing E911 calls.

FCC mandate follows in the aftermath of Hurricane Katrina

In response to Katrina, the Federal Communication Commission (FCC) appointed an independent panel to review disaster preparation, recovery coordination, first responder communication and emergency communication to the public. Panel recommendations addressed redundancy and backup of the 911 and E911 backbone, the establishment of a nationwide emergency broadcast band, and the resiliency of wireline and wireless networks. The result was FCC Mandate 07-107.

Of major significance to service providers is the FCC 07-107 requirement to provide eight (8) hours of emergency backup power at remote terminals or wireless sites and 24 hours of power backup at central offices or switch sites. While specific compliance dates have not yet been set, the end of 2009 is a likely target.

Although the FCC is specific about results, the provider must determine how to achieve them. Many face major investments – without government assistance. More batteries or other emergency power sources may be required. Those choosing batteries may need added power equipment to recharge them,

along with a battery testing and monitoring program to protect their investment. Those opting for combustion-engine-powered generators face environmental concerns. Providers considering fuel cell backup will need expert guidance and dependable equipment.

Emerson Network Power has the expertise to audit your site, assess your needs, and provide a wide variety of battery enclosure solutions, DC power equipment, engine generator and fuel cell resources to help you comply with FCC 07-107 – plus a nationwide service organization to be sure you're ready when disasters strike and utility power goes down.



From survey to implementation to service — Emerson has the backup power solutions you need to meet the FCC mandate

7: Support Services

To eliminate your ongoing concerns regarding remote-site DC power, we can provide service and maintenance contracts that include DC power, OSP cabinets, batteries, air conditioners / heat exchangers, gensets, hydrogen fuel cells, thermography, fault isolation, thermal analysis, alarm testing, load rationalization, inventory and preventive maintenance. We can assemble spare part kits, provide advance equipment exchange, depot and on-site repair services and component upgrades. We offer 24/7/365 tech support and nationwide emergency field service and repairs. We will also provide basic DC power & OSP product maintenance and troubleshooting training for your technicians if desired.

6: Program Management

To handle your multiple-site deployments in the most efficient way, our program management team will map out the entire project, then prepare prints, wiring diagrams, Bills of Material and other documentation for each site to eliminate delays on the job. We will furnish all necessary equipment including batteries and many third-party products and materials. We will pre-stage and configure all equipment to minimize installation time. Our technicians will install all equipment and third-party infrastructure items. We will also arrange for and supervise necessary subcontractors. Finally, we will test and turn-up all equipment to verify operation and alarming.

1: Site Survey

If your network has evolved over several years, you probably have a variety of backup power deployments in place and a variety of needs to update them to new standards.

Emerson will survey the typical sites in your network to establish the adequacy of your current equipment.

2: Report & Recommendations

Based on site survey results, we will prepare a detailed report and recommend the necessary battery plant augmentation, DC power system upgrades if required, or alternate energy backup sources. Once the site is brought to code, Emerson can compose a report confirming that the mandate has been met per FCC regulations.

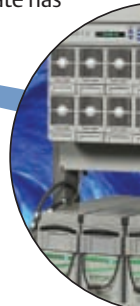
Nationwide Services

Wherever your remote sites are located, Emerson Network Power will engineer, install and maintain the power enclosures, battery cabinets, engine generators or fuel cell solutions you need to meet the FCC mandate for upgraded backup power.

5: NetXtend™ Fuel Cell Backup System Enclosure Solutions

With the soaring price of batteries and the pollution and noise issues surrounding engine generators, fuel cells have now become a practical backup power alternative – particularly when battery replacement cost is considered. Emerson Network Power works with leading

fuel cell manufacturers to integrate fuel cell technology into enclosure solutions that specifically address telecom needs. Emerson supports these integrated solutions with application expertise as well as installation and field services.



3: NetSure™ DC Power Systems

If your current site plant is not equipped for 8-hour backup, or your existing DC power system won't be able to handle 24-hour recharge of additional batteries, we will recommend the correct NetSure™ DC power system to satisfy your needs.

This next-generation power platform combines global standards for reliability with proven adaptability to meet local application requirements.



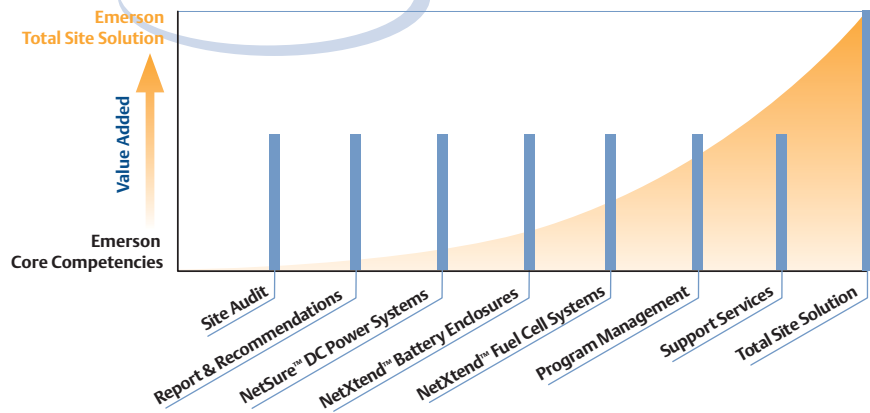
4: NetXtend™ Battery Enclosure Solutions

NetXtend battery enclosures are available in a wide variety of styles and sizes to meet individual provider preferences and power requirements. They are adaptable to both -48v and +24v radio systems and can be equipped with a variety of battery types from well-known vendors. They meet Telcordia® GR487-CORE and UL standards for safety and environmental control and are configurable to accommodate DC power recharging systems and other ancillary equipment.



Emerson Total Site Solutions

Experts in FCC mandate compliance.



For More Information

The Emerson Network Power website...

EmersonNetworkPower.com/EnergySystems

Or use the information below to reach specific areas of interest:

| Area of Interest | Toll Free Number | Direct Dial Number |
|--------------------|------------------|--------------------|
| Customer Service | 800-800-1280 | 440-246-6999 |
| Technical Support | 800-800-5260 | 440-204-7670 |
| Power Depot Repair | 800-978-8810 | 440-204-5169 |
| Power Spare Parts | 800-927-2780 | 440-204-5197 |
| Training | 800-398-8867 | 440-204-7650 |

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- Surge Protection

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