Katrina Panel Report Generates FCC Back-up Power Requirement

A major change for the siting industry comes in the form of an order from the FCC that may prove to be expensive for carriers and a boon for generator manufacturers.

by Richard P. Biby, P. E.

The FCC has taken several initiatives that affect tower owners or its licensees or both.

The biggest change for the wireless infrastructure industry is found in paragraph 77 of an *Order* the FCC released on June 8.

The paragraph reads, "We will require all local exchange carriers (LECs), including incumbent LECs (ILECs) and competitive LECs (CLECs), as well as commercial mobile radio service (CMRS) providers to have an emergency back-up power source for all assets that are normally powered from local AC commercial power including those inside central offices, cell sites, remote switches and digital loop carrier system remote terminals. LECs and CMRS providers should maintain emergency back-up power for a minimum of 24 hours for assets inside central offices and eight hours for cell sites, remote switches and digital loop carrier system remote terminals that normally are powered from local AC commercial power."

Wow. My recommendation? *Buy stock in companies that make generators.*

The two surprises here are the broad threshold requirements for back-up power paired with relatively short required running times. This requirement is for CMRS, which includes cellular providers with more than 500,000 subscribers. If you are going to put in back-up power, 8 hours of running time sounds short. With a loss of a major portion of the commercial power network, could you keep a network of sites in operation if their minimum up time were 8 hours? Sounds like a lot of driving to me.

This proposed new requirement raises questions regarding the space that would be needed for the back-up power systems, the storage of fuel and acids that could fall under regulations for hazardous materials, and the availability of resources both human and mechanical to deploy such a large number of back-up power systems.

For example, the deployment of several generators with associated fuel tanks at one location could, in the aggregate, trigger hazardous material reporting and safety requirements as if the fuel were stored in one large tank with an equivalent capacity. Similarly, the deployment of a large quantity of lead-acid batteries for back-up electrical power could rise above the threshold for reporting and safety requirements.

Some aspects of the *Notice of Proposed Rulemaking* (NPRM) stemming from the Katrina Panel report that affect the tower industry include:

Development of a readiness checklist: This is a softball from a regulatory standpoint, but the idea is to identify key

What's behind the FCC's actions

In early 2006, the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks (the "Katrina Panel") released a document outlining areas of failure in communications networks during and following the hurricane's landfall. Based on that report, the FCC released an *Order* in both EB Docket No. 06-119 and WC Docket No. 06-63 on June 8 and a *Notice of Proposed Rulemaking* on June 19 in EB Docket No. 06-119. Both actions are titled "In the Matter of Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks."

Additionally, the FCC issued its *Second Report and Order and Further Notice of Proposed Rulemaking* in its review of the Emergency Alert System in EB Docket No. 04-296.

Visit ***www.fcc.gov/eb/hkip*** for additional information.

players and work to develop policies and best practices in an effort to assure service continuity in various vertical parts of the communications industry.

Awareness program on alternative technologies: The idea is that in time of need, various technologies such as off-the-shelf Wi-Fi, GPRS, amateur radio and other alternatives may be best to solve short-term communications needs; thus, the NPRM encourages the development of a way to help identify the capabilities of such systems and educate the potential beneficiaries of their advantages. To the siting industry, this program offers an opportunity to develop internal policies on how to let various groups use antenna structures for short-term needs, and how to identify what resources the wireless infrastructure industry may have available to contribute in time of need.

Recovery coordination: This was a large problem for companies after Hurricane Katrina's landfall. Without a standardized identification system, vendors and contractors whose products and services were important to the recovery were unable to gain access to affected areas to restore service. This NPRM addresses how clear credentialing should be adopted. The siting industry has a need to form a group to consider and set credentialing standards and then work with government agencies and jurisdictions to obtain universal acceptance. Who should be qualified, and under what conditions? Anyone who owns a tower? A rooftop? Are two sites enough? Are 10? Is an unlicensed WISP qualified? How about tower climbers? Battery technicians?

One example involved was delivery trucks filled with diesel for generators for telecommunications sites being commandeered by police officers on an ad-hoc basis for "redistribution." Although the example may be anecdotal, some say it was documented.

The idea of agreeing what resources would be used by what infrastructure and in what order seems blatantly missing from this NPRM. The reason could be that without the generators working at the communications facilities, it isn't possible to work out the logistics to establish priorities.

Need any new toys? A $1 billion public safety interoperability program would be funded as part of the NRPM.

Moreover, the NPRM would facilitate clearing the 700 MHz TV bands through expedited requests by digital TV stations to cease analog operations.

The NPRM does have some gaps when it comes to basic needs, including simple items such as power cords compatible with cigarette lighter sockets in vehicles for use in charging hand-held radios. When AC power failed following the hurricane's landfall, there was no way to charge handsets; that is, for system's with base stations that remained functional, or for using the handsets in a default point-to-point mode, sometimes knows as "talkaround."Interoperability is the holy grail of communications networks, but some basic preparedness steps could bring users much closer to using the sophisticated interoperability networks.

Emergency Alert System

A *Further Notice of Proposed Rulemaking* (FNPRM) involving the Emergency Alert System addresses several areas of technology.

The FNPRM proposes the adoption of a *common alerting protocol* (CAP) as a common message format to share event and geographic information among dispatch systems and various networks components.

Another important component of the FNPRM involves its Emergency Alert System (AES) enhancements, which are to include multiple language capabilities, accommodation for the hearing impaired, and others. The AES component addresses cell phones, along with and digital television, cable TV and other non-local broadcasters.

It will be fun to watch the new standard unfold. I've worked with the Modeo system, and I've studied the Qualcomm MediaFlo network. I'm convinced that these broad pipes can offer efficient downlink steams to readily address delivery of various levels and multiple formats and languages easily. CDMA Revision A also has some nifty capabilities. The FNPRM will leave the adoption of the AES standards to another committee currently addressing such issues.

In the foreground lies the radio tower for the Jefferson Parish Sheriff's Office, destroyed by Hurricane Katrina. FEMA provided a National Communications System trailer-mounted portable communications tower 107 feet tall. ***Marvin Nauman/FEMA photo.***

Readiness, awareness of alternative communications technologies and coordination of recovery efforts including credentialing all should play a role in actions taken by telecommunications service providers under the provisions of the NPRM. The FCC's *Order* takes the matter to a higher level with its requirement for back-up electrical power at cell sites. agl