

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Improving 9-1-1 Reliability)	PS Docket No. 13-75
)	
Reliability and Continuity of Communications)	
Networks, Including Broadband Technologies)	PS Docket No. 11-60

**COMMENTS OF THE
EDISON ELECTRIC INSTITUTE**

The Edison Electric Institute ("EEI")¹ on behalf of its member electric utilities submits these comments in response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking ("NPRM") issued on March 20, 2013 in the above-captioned proceeding in which it sought comment on issues of reliability, resiliency and continuity of communications networks, including 9-1-1 networks.²

EEI's members make extensive use of communications as providers of critical utility services, both as owners and operators of private communications systems, and as end-users of the commercial communications networks that form the subject of this inquiry. Electric utilities, in fact, are among this nation's largest users of communications networks and services, which are vital to utilities' core mission of safely and reliably delivering electric service to most, if not all, of the nation's residential and business consumers. It is in this regard that reliable and resilient

¹ EEI is an association of United States investor-owned electric utilities and industry associates worldwide. Its U.S. members serve almost 95 percent of all customers served by the shareholder-owned segment of the U.S. industry, about 70 percent of all electricity customers, and generate about 70 percent of the electricity delivered in the U.S. EEI frequently represents its U.S. members before Federal agencies, courts and Congress in matters of common concern, and has filed comments before the Commission in various proceedings affecting the interests of its members.

² *In the Matter of Improving 9-1-1 Reliability; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, Notice of Proposed Rulemaking, PS Docket Nos. 13-75 and 11-60 (Mar. 20, 2013).

communications networks are essential to the day-to-day operations of EEI's member utilities across the country at all times, but particularly during and in the close aftermath of natural and other disasters, when both communications and electric services may be disrupted.

Our members have a long history of reliability, a proven commitment to maintaining high standards of service as technology evolves, and an understanding of the need to be able to restore critical facilities and services as soon as possible during emergency situations. The reliability of the commercial communications networks on which they depend is therefore an issue of great interest to our utility members. While electric utilities do substantially own and/or operate independent, dedicated communications networks, many utilities also rely on commercial networks to support various critical functions, in turn creating interdependencies between commercial and private utility networks.

EEI supports FCC's efforts in the NRPM to take steps to ensure that communications networks of all types promote safety of life and property,³ and agrees that the Commission has a key role to play in this effort. In particular, EEI encourages the Commission to promote industry-driven voluntary requirements and best practices to address network reliability issues and backup power deficiencies, as well as periodic certification for service providers as a means of assurance to utilities and other critical infrastructure industries ("CII") that commercial networks contain adequate levels of backup power. However, while the Commission focuses its NPRM on reliability and backup power issues at central offices, these obstacles reach all aspects of a network, and EEI urges the Commission to expand its consideration of these issues to encompass a broader picture of communications network infrastructure.

³ See NPRM at P 2

As further discussed below, EEI strongly supports the Commission's implementation of voluntary requirements which call for network service providers to employ sufficient backup power to ensure continuity of critical communications which, in EEI's view, must include communications by and among CII, including electric utilities.

I. Reliable, Resilient Communications Networks are Essential to Electric Utilities in Carrying Out Their Critical Services and in Meeting Public Safety Needs.

Electric utilities, in their provision of safe and reliable electric service, depend upon robust and reliable communications systems in even the most difficult conditions, which inevitably will occur. Reliable communications networks are vital to utilities' critical operations, and made all the more significant with increased use of broadband technologies and applications for utility operations, including system restoration. Electric utilities have a mandate to serve the public interest, similar in many ways to obligations traditionally imposed on common carriers under the Communications Act, and the critical services provided by utilities are relied on by most, if not all, of the nation's residential and business consumers. Not only must electric utilities stand ready to provide these services under normal conditions, in times of disaster utilities must be able to maintain or quickly restore critical services.

Maintaining a stable grid during numerous types of events – natural and otherwise – is in the interest of public safety, as reliable power is needed for military bases, government and public safety facilities, as well as hospitals, traffic signals and other critical infrastructure. Indeed, the national interest requires that communications networks relied on by electric utilities remain as reliable and resilient as possible – particularly after severe weather events when other forms of communications often are disrupted – in order to meet the operational demands of both telecommunications service providers as well as electric utilities, as owners and operators of

critical infrastructure. To be sure, the electric utility industry is a well-recognized CII⁴ which relies on communications for the protection of life and property – whether to control or monitor generation, transmission and distribution so as to maintain reliable power, or to coordinate and facilitate the natural restoration of electric service. The Commission itself has acknowledged the significance of utilities’ communications, which it recognized as:

[...] a critical tool for responding to emergencies that could impact hundreds or even thousands of people... Although the primary function of these organizations is not necessarily to provide safety services, the nature of their day-to-day operations provides little or no margin for error and in emergencies they can take on an almost quasi-public safety function. Any failure in their ability to communicate by radio could have severe consequences on the public welfare...utility companies need to possess the ability to coordinate critical activities during or following storms or other natural disasters that disrupt the delivery of vital services to the public such as provision of electric, gas, and water supplies.⁵

Among the nation's largest users of communications services, utilities rely on commercial and private communications systems to safely and reliably deliver power to consumers. Reliable communications systems are vital to support a multitude of utility responsibilities, including maintenance, remote control and monitoring, dispatch of field crews in service territories, and communication with customer meters. Electric utilities further depend on communications systems for various internal uses which include mapping and locating outages or other problems, transmitting schematics, blueprints and data to field crews, and maintaining video surveillance to prevent copper theft and to provide overall security throughout the grid. These networks, too,

⁴ See Critical Infrastructures Protection Act, 42 U.S.C. § 5195c(b)(2) (finding that “[p]rivate business, government, and the national security apparatus increasingly depend on an independent network of critical physical and informational infrastructures, including. . . energy. . .”); National Infrastructure Protection Plan, Department of Homeland Security, at 15-16, 23, 55, 132 (2009), available at http://www.dhs.gov/xlibrary/assets/hr_5005_enr.pdf. Moreover, Department of Defense documents have identified electric utility infrastructure as critically important to key military facilities, and have indicated that loss of power to those facilities could have significant public safety concerns. See GAO, *Defense Critical Infrastructure: Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DOD Critical Assets*, GAO-10-147, at 22 (October 2009), available at <http://www.gao.gov/new.items/d10147.pdf>.

⁵ *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services*, PR Docket No. 92235, *Second Report and Order*, 12 FCC Rcd 143, 14329 (1997).

serve a vital purpose for internal utility communications to improve operational efficiency and to quickly and effectively respond to weather events.

II. Interdependencies Between Commercial and Private Utility Networks Underscore a Need for the Commission to Broadly Address Communications Network Reliability and Continuity.

Driven by their need for reliable, resilient communications networks to meet operational demands as CII, and to ensure availability of reliable communications at all times, electric utilities to a substantial degree own and/or operate independent, dedicated communications networks. Though common, this is not universal, and for various reasons and to varying degrees many utilities rely on commercial networks to meet the communications requirements of their critical functions. For many utilities, satisfying their varied communications needs requires reliance on both private and commercial communications networks, including licensed wireless radio, licensed wireless microwave, unlicensed wireless, fiber, other private network, commercial wireless (licensed), commercial wireless (unlicensed) and commercial wireline.

While utilities make extensive use of their own privately-owned communications networks to meet their communications requirements and to support critical functions, as noted above many are significant users of commercial networks, in turn creating close interdependencies between commercial and private utility communications networks. However commercial networks often are not designed or built to offer the levels of reliability, survivability, availability and/or coverage that are necessary to meet utility communications needs as CII, particularly in times of emergency. Commercial communications network reliability and resiliency can suffer for various reasons, though the Commission is correct to recognize in its NPRM that inadequacy of backup power remains a key culprit.⁶ Some

⁶ See, e.g., NPRM at P 14.

commercial systems do not have sufficient levels of backup power or fuel for backup power which is essential to maintain communications in areas where a power outage has occurred. This is particularly problematic to utilities, which rely on communications networks during and immediately following major events – times when electric service is most likely to be disrupted.

To address these issues in particular, and communications reliability generally, EEI agrees with the Commission in its NPRM and with recommendations in the *Derecho Report*⁷ that proper focus must be given to the extent and adequacy of backup power within commercial networks. Discussed below, EEI sees a key role for the Commission in this regard, to ensure that commercial service providers take steps to maintain robust, resilient backup power. EEI further agrees with the Commission's statement at P 2 of its NPRM that "[c]entral to this important responsibility is promoting the reliability and resiliency of critical communications infrastructure at all times, including in times of natural and other disasters." Without question, ensuring a sufficient level of network reliability is a task incumbent upon many. As situations are sure to arise in which both communications and electric service will need to be restored, the electric utility industry recognizes a shared responsibility among the Commission and the telecommunications and electric industries to ensure reliability and prompt restoration of service.

While FCC focuses its NPRM on sufficient backup power at central offices,⁸ it cannot be overstated that the network reliability and backup power issues underlying this proceeding reach well beyond the extents of service providers' central offices, to include a variety of network infrastructure, such as towers and other facilities, upon which utilities rely for their

⁷ FCC PUB. SAFETY & HOMELAND SEC. BUREAU, IMPACT OF THE JUNE 2012 DERECHO ON COMMUNICATIONS NETWORKS AND SERVICES: REPORT AND RECOMMENDATIONS at 40-41 (PSHSB, rel. Jan. 10, 2013), available at <http://www.fcc.gov/document/derecho-report-and-recommendations> (*Derecho Report*).

⁸ See, e.g., NPRM at P 46.

communications service. EEI urges FCC, as it examines these issues, to look more broadly to all sites and critical nodes, and to be mindful of the need for adequate backup power at each network location. To be sure, a lack of sufficient backup power at any critical node within a communications network is sure to adversely impact reliability across that network to the detriment of the electric utilities and other CII users who rely on those networks.

III. The Commission Should Improve Network Reliability and Backup Power through Promotion of Voluntary Industry Requirements and Best Practices as well as Certification.

In its NPRM the Commission asks whether it should institute requirements with respect to backup power, including testing and maintenance of backup power equipment, and whether new or expanded best practices might offer additional guidance to industry necessary to help maintain reliable backup power.⁹

Preliminarily, EEI notes that robust standards already exist within the communications industry which address various aspects of carrier communications practices and provide guidelines for the physical and structural components of carrier systems. While some of these standards are rigid, others provide carriers with a good deal of flexibility to account for, among other things, local conditions. Given the existence of such standards, as well as the nature of communications networks and the need for a certain level of flexibility, EEI believes that adoption by the Commission of proscriptive rules or standards is not an ideal solution to address reliability deficiencies and backup power issues. Nonetheless, steps can and should be taken to ensure that an adequate level of network reliability is timely achieved. To this end, EEI sees value in an approach by the Commission which encourages prompt but thoughtful development of voluntary, industry-wide requirements aimed at improving communications network

⁹ NPRM at PP 45-46.

reliability and ensuring adequate backup power is in place. FCC should promote industry engagement and collaboration in the substantive development of any such requirements. In addition, EEI believes that new or expanded best practices would provide valuable guidance to industry, and would go far to promote maintenance of reliable backup power.¹⁰

EEI further supports the Commission's suggestion at P 48 of its NPRM regarding periodic certification by service providers that they have in place sufficient backup power at key locations, or conform with specific best practices. Certification will serve the dual function of establishing a transparent means for ensuring service providers routinely meet a certain threshold for backup power, and providing electric utilities and other CII users of communications networks up-front knowledge as to the reliability of a given network.

The Commission should ensure that any actions taken to address network reliability and backup power issues are consistent with the ultimate design of the First Responder Network Authority ("FirstNet") Network. EEI is hopeful that the FirstNet Network will implement standards at the first responder and utility level, and urges the Commission to be mindful of these ongoing efforts.

IV. FCC Should Implement Requirements For Service Providers to Maintain Sufficient Backup Power to Ensure Continuity of Critical Communications.

As the Commission recognizes at P2 of its NPRM, central to its efforts here to "encourage and facilitate a 'reliable' nationwide 'infrastructure for communications . . . to meet the Nation's public safety and other communications needs," and its broader responsibility of promoting safety of life and property,¹¹ is promoting the reliability and resiliency of critical

¹⁰ NPRM at P 45.

¹¹ NPRM at P 2 (quoting 47 U.S.C. § 151, and Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, § 2(b), 113 Stat. 1286).

communications infrastructure at all times, including in times of natural and other disasters. To be sure, this is an obligation shared by electric utilities as CII in their provision of critical electric services, as discussed above. EEI firmly believes that in furtherance of this goal, the Commission should implement requirements which call for telecommunications service providers to have in place and to maintain sufficient backup power to ensure continuity of critical communications.

In designating what "critical communications" might entail, EEI commends to FCC's attention the definition of "critical infrastructure" employed by Congress in the Critical Infrastructure Protection Act of 2001, which classifies the term to mean:

systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.¹²

This is a good starting point for the Commission, though it is essential in EEI's view that any definition of "critical communications" developed by the Commission extend to all communications by and among CII, including electric utilities.

It bears mentioning that electric utilities share a vital role with public safety entities as "essential service providers" during and in the immediate aftermath of emergency situations and other events, when utility service crews in the field work to maintain or restore electric service.¹³ Often in a disaster, power utility workers are essential before the first responders can be

¹² Critical Infrastructure Protection Act of 2001, Pub.L. 107-56, § 1016(e), 115 Stat. 400 (2001). EEI notes that the definition of "critical infrastructure" adopted by Congress here is employed in substantial part by certain Federal agencies. *See, e.g.*, <http://www.dhs.gov/what-critical-infrastructure>.

¹³ Electric utilities fall within the definition of "essential service provider" under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. 93-288, as amended, 42 U.S.C. § 5121, *et seq.* Section 427 of the Stafford Act defines "essential service provider" to mean "an entity that... (1) provides... electrical power . . . (2) is . . . a private, for profit entity; and (3) is contributing to efforts to respond to an emergency or major disaster." Stafford Act, Sec. 427, 42 U.S.C. § 5189e(a).

effective. While electric utilities plan to operate in an environment with limited communications support following a wide scale disaster, restoration of electric service proceeds much faster when the incumbent's communications facilities are operational. Electric utilities rely on communications in this regard for purposes of emergency response – to ensure the safety and protection of consumers and electric utility service personnel, as well as for purposes of service restoration – to facilitate the recovery of infrastructure and to more effectively dispatch field crews.

V. Conclusion

EEI supports the Commission's efforts and direction in this proceeding, and asks that these comments be reflected in the shape of any Commission action taken with respect to communications network reliability and backup power issues.

Respectfully submitted,

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