

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Reliability and Continuity of Communications) PS Docket No. 11-60
Networks, Including Broadband Technologies)
)
Effects on Broadband Communications Networks of) PS Docket No. 10-92
Damage or Failure of Network Equipment or Severe)
Overload)
)
Independent Panel Reviewing the Impact of) EB Docket No. 06-119
Hurricane Katrina on Communications Networks)

To: The Commission

REPLY COMMENTS

T-Mobile USA, Inc. (“T-Mobile”) hereby responds to comments submitted in response to the Commission’s *Notice of Inquiry* in the above-referenced proceeding.¹ The record demonstrates that the CMRS industry is effectively addressing network reliability and continuity issues and Commission intervention is not needed at this time. The cooperative approach toward the development of industry standards and best practices – an approach involving the Commission, carriers, equipment vendors, and other interested parties – was supported by many parties as being successful. As discussed below, the few proponents of Commission intervention in the marketplace fail to demonstrate that voluntary industry efforts are insufficient to advance network reliability.

¹ *Reliability and Continuity of Communications Networks, Including Broadband Technologies, Notice of Inquiry*, 26 FCC Rcd 5614 (2011) (“*NOP*”).

I. COMMISSION REGULATIONS REGARDING CONTINUITY, RELIABILITY, AND RESILIENCY ARE UNNECESSARY FOR WIRELESS NETWORKS

The record demonstrates that Commission regulations are unnecessary to ensure the continuity, reliability, and resiliency of wireless networks.² Carriers are committed to providing reliable service to customers. They compete with each other based on a number of factors, including coverage and network quality, and have every incentive to ensure that their networks are resilient and reliable. In this regard, T-Mobile and other CMRS carriers implement multiple layers of protection to minimize the possibility of a single point of failure in the network. The wireless industry has invested hundreds of billions of dollars to improve network coverage, reliability, and resiliency,³ and continues to invest substantial sums to deploy, maintain, and improve network facilities. These efforts clearly demonstrate carriers' interest in maintaining a reliable network and obviate the need for the Commission to adopt mandatory requirements.

Some of the aforementioned carrier investments are associated with the integration of Internet Protocol ("IP") technology into carrier wireless networks. The Commission appears to believe that this technology undermines the reliability and resiliency of networks.⁴ The record,

² See, e.g., T-Mobile Comments at 3-18; Alliance for Telecommunications Industry Solutions ("ATIS") Comments at 21; AT&T Comments at 2; CenturyLink Comments at 17-19; CTIA – The Wireless Association[®] ("CTIA") Comments at 2; NextG Networks, Inc. Comments at 1-10; National Cable & Telecommunications Association Comments at 16; Telecommunications Industry Association ("TIA") Comments at 6-20; United States Telecom Association Comments at 4-7, 10; Verizon and Verizon Wireless ("Verizon") Comments at 1-2, 13-17.

³ See T-Mobile Comments at 1-2 (citing *CTIA[®] Year-End Top-Line Survey Results (2011)*, available at http://files.ctia.org/pdf/CTIA_Survey_Year_End_2010_Graphics.pdf ("CTIA Semi-Annual Survey")); ATIS Comments at 3; Verizon Comments at 1.

⁴ See *NOI*, 26 FCC Rcd at 5623-24; T-Mobile Comments at 15-16.

however, demonstrates that the implementation of IP technology has the opposite effect.⁵ As T-Mobile demonstrated:

IP networks are generally more robust, reliable, and resilient than legacy circuit-switched networks. IP networks perform error-checking and retransmission functions that simply are not available on legacy circuit-switched networks.⁶

Moreover, the record demonstrates that the CMRS industry has proactively adopted best practices designed to ensure network reliability, continuity, and resiliency.⁷ The President's National Security Telecommunications Advisory Committee ("NSTAC") recently concluded that "market incentives will remain the fundamental driver of industry practices and standards [and] companies will continue to offer services that are as resilient and secure as customers' preferences dictate."⁸

The record also establishes that permanent backup power may not be possible at many sites due to factors beyond the control of carriers, such as space constraints, local zoning regulations, health and safety regulations, lease restrictions, *etc.*⁹ Permanent backup power is merely one component of a network continuity plan and that, in many cases, other contingency

⁵ See, e.g., T-Mobile Comments at 15-16; ATIS Comments at 12 ("The transition to IP-based systems has in fact increased overall resiliency.") (emphasis in original); Edison Electric Institute ("EEI") Comments at 7 ("[I]t is important to note that the issue for electric utilities is not whether IP technologies will be less reliable than legacy systems. Rather, the chief concern for electric utilities is how to ensure adequate reliability of the legacy systems themselves."); Utilities Telecom Council ("UTC") Comments at 8 ("[T]here should not be an inherent reliability or resiliency issue with the use of IP technologies.").

⁶ T-Mobile Comments at 15-16.

⁷ See, e.g., T-Mobile Comments at 12-13, 17; ATIS Comments at 6-9; AT&T Comments at 2-8; CTIA Comments at 11-12; TIA Comments at 10-19; Verizon Comments at 2, 13.

⁸ NSTAC, NSTAC REPORT TO THE PRESIDENT ON COMMUNICATIONS RESILIENCY 14 (2011) ("NSTAC Report") available at [http://www.ncs.gov/nstac/reports/NSTAC Report to the President on Communications Resiliency \(2011-04-19\)\(Final\)\(pdf\).pdf](http://www.ncs.gov/nstac/reports/NSTAC%20Report%20to%20the%20President%20on%20Communications%20Resiliency%20(2011-04-19)(Final)(pdf).pdf).

⁹ See, e.g., T-Mobile Comments at 9-12; TIA Comments at 8.

plans – such as the deployment of cell sites with overlapping coverage and the purchase of portable cell sites and generators – may be preferable for promoting resiliency in lieu of installing permanent backup power at sites.¹⁰ In many situations, such as when a cell site is destroyed by a disaster, portable equipment is more valuable than more permanent forms of backup power. Because carrier resources are not unlimited, however, a Commission requirement that carriers deploy more permanent forms of backup power at all sites may restrict the flexibility carriers need to appropriately respond to incidents.

Finally, based largely on a Congressional mandate to rely on market forces rather than regulation, the Commission has previously concluded that regulation of the CMRS industry is warranted only where there has been a market failure.¹¹ Without a clear demonstration of market failure by the carriers, the adoption of network reliability regulations would be inconsistent with congressional intent.

II. THE RECORD DOES NOT JUSTIFY REGULATIONS GOVERNING NETWORK RELIABILITY, RESILIENCY, AND CONTINUITY

Only four parties submitted substantive comments in favor of new regulations mandating specific network reliability, resiliency, and continuity requirements.¹² Two of these parties are

¹⁰ T-Mobile Comments at 8-9; AT&T Comments at 12; TIA Comments at 8; Verizon Comments at 7, 9.

¹¹ See *Orloff v. Vodafone AirTouch Licenses, LLC*, Memorandum Opinion and Order, 17 FCC Rcd. 8987, 8997 n.69 (2002) (“With respect to CMRS, the Commission generally has relied on market forces, rather than regulation, except where there is a market failure.”); *Implementation of Competitive Bidding Rules To License Certain Rural Service Areas*, Report and Order, 17 FCC Rcd 1960, 1968 (2002).

¹² EEI Comments at 3; Generac Power Systems’ Comments at 4; New York State Public Service Commission Comments at 1-6; Oncor Electric Delivery Company (“Oncor”) Comments at 15. Generac Power Systems’ comments appear to be an attempt to generate sales of its backup power systems through federal regulation. UTC submitted comments urging a dialog between all interested parties – the Commission, carriers, utilities, and critical infrastructure industries (“CII”) – to address network reliability and resiliency issues. UTC did not recommend

electric utilities/electric utility trade associations (collectively “Electric Utilities”).¹³ The Electric Utilities argue that regulations are necessary because commercial networks are not designed to serve the needs of utilities and, in particular, lack backup power, redundancy, capacity, and priority restoration abilities.¹⁴

It appears that the comments were filed in an effort to demonstrate that commercial wireless networks cannot be used to satisfy the needs of utilities (thus implying that additional spectrum is needed for utility communications systems), rather than to provide a productive dialog regarding network reliability and resiliency issues. Utilities have a variety of communications needs and rely on a combination of commercial and private solutions to satisfy them.¹⁵ Commercial wireless networks can be used to satisfy many of these needs. However, it would be inappropriate, and in fact, extremely difficult to develop standards that require carriers to meet certain mission-critical utility communication specifications because “utility communications networks are not standardized.”¹⁶ As UTC states:

Because different utilities have different functional requirements depending on a variety of factors including service territory and smart grid applications, UTC refrains from recommending any particular minimum standards with regard to backup power, nor does it make any assessment of the relative advantages and disadvantages of different backhaul technologies at this time. Instead, UTC urges commercial service providers and the FCC to work together with utilities and CII to develop systems that ensure continuity of service generally. As the Commission recognizes, it

mandatory regulations. UTC Comments at 7. The American Petroleum Institute (“API”) submitted an ex parte supporting UTC’s comments. API Ex Parte (July 15, 2011).

¹³ EEI Comments at 1 (“EEI is an association of the United States investor-owned electric utilities and industry associates worldwide.”); Oncor Electric Delivery Company Comments at 1 (“Oncor is an electric utility . . .”).

¹⁴ EEI Comments at 5; Oncor Comments at 2-3.

¹⁵ See UTC Comments at 4.

¹⁶ *Id.* at 6.

would be difficult to implement such requirements and they may not be appropriate in all cases.¹⁷

Given the wide disparity in communication network requirements based on various user needs, the Commission should continue to allow market forces to drive solutions that suit various stakeholders. UTC already has begun proactively working with the CMRS industry toward this end.¹⁸ Such an approach is preferable to mandatory standards that may not be suitable in all environments or for all users.

CONCLUSION

Network reliability, resiliency, and continuity are important issues that the CMRS industry has expended considerable resources addressing. Although T-Mobile recognizes the Commission's continued interest in the reliability and resiliency of wireless and broadband networks, voluntary efforts and continuing enhancement of best practices remain the best approach to follow.

Respectfully submitted,
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¹⁷ *Id.* at 7.

¹⁸ *See, e.g.*, "Utilities Telecom Council and Verizon to Study Utility Communications Needs," UTC Press Release (June 17, 2010) *available at* <http://www.prnewswire.com/news-releases/utilities-telecom-council-and-verizon-to-study-utility-communications-needs-96551034.html>.