

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Improving the Resiliency of Mobile Wireless) PS Docket No. 13-239
Networks)
)
Reliability and Continuity of Communications) PS Docket No. 11-60
Networks, Including Broadband Technologies)
)
)

To: The Commission

COMMENTS OF T-MOBILE USA, INC.

Kathleen O'Brien Ham
Steve B. Sharkey
Harold Salters
Shellie Blakeney

T-MOBILE USA, INC.
601 Pennsylvania Ave., NW,
North Building, Suite 800
Washington, DC 20004
(202) 654-5900

January 17, 2014

TABLE OF CONTENTS

Introduction and Summary	2
I. The Percentage of Operational Cell Sites Does Not Equate to Available Geographic Coverage	3
II. The Percentage of Operational Cell Sites Does Not Reflect Network Resiliency	5
III. Disclosing the Percentage of Operational Cell Sites in the Aftermath of a Disaster Would Be Misleading	6
IV. The Public Disclosure of Performance Data During Disasters Will Discourage the Very Voluntary Industry Efforts Touted by the Commission	7
V. The <i>Notice</i> Is Premature.....	10
Conclusion	11

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Improving the Resiliency of Mobile Wireless Networks)	PS Docket No. 13-239
)	
Reliability and Continuity of Communications Networks, Including Broadband Technologies)	PS Docket No. 11-60
)	
)	
)	

To: The Commission

COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”)¹ hereby responds to the Commission’s *Notice of Proposed Rulemaking* (“*Notice*”) in the above-referenced proceeding.² As discussed below, the wireless industry is effectively addressing network reliability and continuity issues, including through the Commission’s own advisory committees. The proposal to require the public disclosure of the percentage of cell sites operational in the wake of disasters while well-meaning is unnecessary and would not achieve the Commission’s goals. This proposed metric does not accurately reflect the available geographic coverage or resiliency of networks after a disaster. The proposal therefore would confuse and mislead consumers, and also would discourage voluntary industry efforts to improve network performance in the wake of disasters. In light of carriers’ recognition of the importance of ensuring the reliability and continuity of wireless

¹ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

² *Improving the Resiliency of Mobile Wireless Communications Networks; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, Notice of Proposed Rulemaking, 27 FCC Rcd 14373 (2013) (“*Notice*”).

infrastructure, rather than pursue the proposal, the Commission should continue to support industry's ongoing and productive efforts.

INTRODUCTION AND SUMMARY

The Commission seeks comment on “the reporting and disclosure of information to enable consumers to compare how well various mobile wireless networks are able to withstand and recover from disaster conditions.”³ Specifically, the Commission proposes to require commercial mobile radio service (“CMRS”) providers “to provide for public disclosure the percentages of sites operational in their networks during major emergencies.”⁴ This proposal while well-meaning could lead to adverse unintended consequences.

T-Mobile recognizes the importance of ensuring the reliability and continuity of its wireless infrastructure. In this regard, T-Mobile has invested millions of dollars to ensure the reliability and continuity of its networks and has incorporated best practices into its network architecture and day-to-day operations. T-Mobile also actively assists in the development of best practices through its voluntary involvement in the Alliance for Telecommunications Industry Solutions (“ATIS”) Network Reliability Steering Committee (“NRSC”), the Network Reliability and Interoperability Council (“NRIC”), and NRIC’s successor, the Communications Security, Reliability, and Interoperability Council (“CSRIC”). Such groups already have developed hundreds of best practices independent of any Commission rules. In fact, the CSRIC and the Commission’s Technological Advisory Council (“TAC”) currently are analyzing issues relating to improving wireless network resiliency.⁵

³ *Id.* ¶ 20.

⁴ *Id.* ¶ 23.

⁵ *Id.* ¶ 8.

Despite these ongoing industry efforts, the Commission now is proposing to require the public disclosure of the percentage of cell sites operational in the wake of disasters.⁶ The Commission theorizes that such reporting on a percentage basis could provide the public with useful information regarding the performance of wireless networks.⁷ It suggests further that the public disclosure of this information could increase competitive pressure on carriers to improve network resiliency.⁸ In practice, however, the proposal would not achieve the Commission’s goals. As discussed below, the percentage of operational cell sites may not accurately reflect the availability of service or network resiliency in any given disaster. Therefore, rather than being “meaningful and useful to consumers in making the choice among mobile wireless service providers,”⁹ the public disclosure of this information would confuse and mislead consumers. Moreover, as discussed below, it would discourage voluntary industry efforts to improve network performance in the wake of disasters. Accordingly, we respectfully assert that the Commission should refrain from adopting its proposed rule. The better course is to rely on the active and ongoing efforts of the TAC and CSRIC to address network resiliency and reliability – efforts that are already underway.¹⁰

DISCUSSION

I. THE PERCENTAGE OF OPERATIONAL CELL SITES DOES NOT EQUATE TO AVAILABLE GEOGRAPHIC COVERAGE

The premise of the Commission’s proposal is that the percentage of operational cell sites in the aftermath of a disaster “could provide consumers with a reasonable ‘yardstick’ for

⁶ *Id.* ¶ 23.

⁷ *Id.* ¶ 25.

⁸ *Id.* ¶ 26.

⁹ *Id.* ¶ 25.

¹⁰ *Id.* ¶ 8.

measuring how well mobile wireless networks maintain service during disasters.”¹¹ This premise is fundamentally flawed. In numerous circumstances, the percentage of operational cell sites would not reflect the geographic scope of coverage available from a carrier.

The inappropriateness of this proposed metric can best be illustrated by example. In a first hypothetical scenario, Carrier A deploys ten cell sites along a highway corridor and all sites remain operational in the wake of a disaster. Carrier B deploys fifty cell sites throughout an entire market, but five sites are rendered inoperable in the wake of a disaster. In this example, 100% of Carrier A’s cell sites are operational, whereas only 90% of Carrier B’s cell sites are operational. Despite the loss of five sites and the lower percentage of operational cell sites, however, Carrier B still would be providing superior geographic coverage as compared to Carrier A.

In a second scenario, Carrier A and Carrier B both deploy fifty sites in a market. Carrier A loses five sites, but only sites that provide coverage to the southern half of the market. Carrier B loses eight sites, but these sites largely are fill-in sites deployed to increase capacity spread throughout the market. Although Carrier A would have a higher percentage of operational cell sites (90% versus 84%), Carrier B would have broader coverage throughout the market. Carrier B would have lost some capacity in certain areas (which may have been infill capacity), but may not have lost any coverage. Nevertheless, under the Commission’s proposal, consumers would be misled to believe that Carrier A’s network was superior even though service to a portion of the market was unavailable from Carrier A and Carrier B retained the ability to serve the entire market. Both of these simple examples show that the Commission’s proposed metric does not equate to available geographic coverage.

¹¹ *Id.* ¶ 1.

It is important to note that a network's geographic coverage and the consumer experience may vary based on numerous factors beyond the number of cell sites deployed. These network configuration factors include, but are not limited to, the spectrum band utilized, cell-splitting configurations, small cell and distributed antenna systems, and roaming agreements. Therefore, geographic coverage could very well vary dramatically between two networks with the same number of cell sites and the same number of sites operational post disaster. Accordingly, the Commission's proposed metric would not necessarily convey an apple-to-apples comparison and may lead consumers to inaccurate conclusions.

II. THE PERCENTAGE OF OPERATIONAL CELL SITES DOES NOT REFLECT NETWORK RESILIENCY

The Commission's proposal also is premised on the notion that the number of operational sites reflects the resiliency of a network. Accordingly, the *Notice* seeks comment on "whether this metric provides a reasonable means of comparing how well networks withstand emergency conditions."¹² The metric does not because the Commission's underlying premise is flawed.

Disasters are unique events. The unique nature of these events can create impacts that affect certain carriers' networks more than others. These disparate impacts happen regardless of whether the carriers follow best practices and/or must comply with Commission mandates.

Illustrative examples again demonstrate these truths. In a first scenario, Carrier A deploys backup power at every cell site, in addition to a state of the art switch. In contrast, Carrier B does not deploy backup power and utilizes an older switch prone to more outages during normal operations than the Carrier A switch. An earthquake strikes and the epicenter is at Carrier A's switch. Carrier A's entire facility would be destroyed in the event. Although Carrier A invested substantially more to make its network resilient, the Commission's disclosure

¹² *Id.* ¶ 24.

proposal would lead the public to incorrectly believe that Carrier B, and not Carrier A, had taken the steps necessary to deploy the more resilient network.

In a second scenario, Carrier A again deploys backup power at every cell site and a state of the art switch, whereas Carrier B does not deploy backup power at every cell site and utilizes the older, outage-prone switch. Instead of an earthquake, a category F5 tornado touches down on the Carrier A switch, destroying the entire facility. Like the scenario above, the Commission's proposed disclosure regime would leave the public to believe that Carrier B, and not Carrier A, had taken the steps necessary to deploy the more resilient network. These scenarios during which the Disaster Information Reporting System ("DIRS") would typically be invoked, could be repeated with myriad disasters, such as wildfires and terrorist activity. In each such situation, the percentage of operational cell sites would not accurately reflect network resiliency.

III. DISCLOSING THE PERCENTAGE OF OPERATIONAL CELL SITES IN THE AFTERMATH OF A DISASTER WOULD BE MISLEADING

The Commission seeks comment on whether disclosing the percentage of operational cell sites during emergencies "would enhance consumer choice and facilitate network improvements."¹³ Further, the Commission asks whether "the information [could] be meaningful and useful to consumers in making the choice among mobile wireless service providers...."¹⁴ This information, however, is not meaningful and would be misleading to consumers. In fact, to the extent that consumers used the information to compare providers, it could lead them to erroneous conclusions regarding carriers' networks.

As the examples above clearly demonstrate, the percentage of operational sites does not reflect either the scope of geographic coverage or the general resiliency of a network. Thus, the

¹³ *Id.* ¶ 25.

¹⁴ *Id.*

metric does not identify the network with the best geographic coverage or the network with the most investments to improve resiliency. As a result, use and disclosure of the percentage of sites operational in the aftermath of a disaster fails to provide the consumer a complete picture. Consumers likely would be led to believe that the network with the highest percentage of operational sites is the “superior” network, but this conclusion may not be correct. Instead, this “superior” network may have just been the lucky network, avoiding the worst of the disaster irrespective of the carrier’s practices. Further, there is no basis to believe that a carrier with the “superior” network performance in the wake of one disaster will have “superior” performance in a subsequent disaster. Therefore, under the Commission’s proposal, “consumers who may have heightened concerns about maintaining communications during emergencies”¹⁵ may switch carriers based on network performance results after a disaster with the expectation of superior network performance in a subsequent disaster – however, a decision based on the metric will not necessarily guarantee this result.

IV. THE PUBLIC DISCLOSURE OF PERFORMANCE DATA DURING DISASTERS WILL DISCOURAGE THE VERY VOLUNTARY INDUSTRY EFFORTS TOUTED BY THE COMMISSION

The Commission also must consider the likely unintended consequences that would flow from a requirement to publicly disclose performance data in disasters – carriers may be discouraged from undertaking creative, positive, and collaborative efforts. In fact, if the Commission successfully were to provide carriers with incentives to compete with each other based on network performance in the wake of disasters, carriers necessarily would have an incentive not to assist other carriers’ outage restoration efforts in order to maintain a competitive

¹⁵ *Id.* ¶ 26.

advantage. This result ultimately would undermine the promotion of public safety at times of great need.

Outage information appropriately has been deemed confidential for competitive reasons.¹⁶ Specifically, in 2004, “[g]iven the competitive nature of many segments of the communications industry and the importance that outage information may have on the selection of a service provider or manufacturer,” the Commission “conclude[d] that there is a presumptive likelihood of substantial competitive harm from disclosure of information in outage reports.”¹⁷ This confidentiality treatment has been essential to voluntary industry efforts to improve network resiliency. In 2003, NRIC Focus Group 2, observed that the “confidentiality of outage reports ... was critical in establishing industry trust in the process and its benefits, and in achieving participation by the NRIC VI service provider members.”¹⁸ The Commission should not take any action that would potentially jeopardize these productive voluntary industry efforts – requiring public disclosure of certain outage information may do just that.

¹⁶ See 47 C.F.R. § 0.457(d)(1)(vi); 47 C.F.R. § 4.2. In 2007, the Public Safety and Homeland Security Bureau (“PSHSB”) launched DIRS, the “voluntary, efficient, web-based system that communications companies ... can use to report communications infrastructure status and situational awareness information during times of crisis.” *The FCC’s Public Safety & Homeland Security Bureau Launches Disaster Information Reporting System (DIRS)*, Public Notice, 22 FCC Rcd 16757, 16757 (PSHSB 2007). During “times of crisis,” wireless carriers voluntarily submit the number of cell sites that are not operational, the direct inverse of the information the Commission now proposes should be publicly disclosed. In the DIRS context, however, the PSHSB appropriately recognized that input to DIRS, including the number of non-operational cell sites, is “sensitive, for national security and/or commercial reasons,” and therefore should be treated as presumptively confidential. This same reasoning applies to the information covered by the Notice – the percentage of operational cell sites during a disaster – and, therefore, should be treated as confidential and exempt from public disclosure.

¹⁷ *New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830 ¶ 45 (2004).

¹⁸ NRIC IV Focus Group 2 – Network Reliability, Final Report (Nov. 17, 2003).

Furthermore, the importance of fostering a tradition of cooperation and treating outage information as confidential has been recognized by other facets of government. As noted by the Department of Homeland Security,

The communications companies that own, operate, and supply the Nation's communications infrastructure have historically factored natural disasters and accidental disruptions into network resilience architecture, business continuity plans, and disaster recovery strategies.... The interconnected and interdependent nature of these service provider networks has fostered crucial information sharing and cooperative response-and-recovery relationships for decades. Even in today's highly competitive business environment, the community has a long-standing tradition of cooperation and trust, which is imperative because problems with one service provider's network inevitably impact the other providers.¹⁹

Indeed, the spirit of collaboration has been demonstrated in more recent events which has prompted some wireless carriers to provide mutual aid in the wake of disasters. For example, in the aftermath of Superstorm Sandy, T-Mobile and AT&T agreed to share certain assets to improve service available from both carriers.²⁰ If the Commission's proposal is adopted and network performance in the wake of disasters becomes a competitive factor, carriers may be more apprehensive to quickly enter into these types of arrangements in the future. Aiding a competitor with service restoration would undermine a carrier's competitive standing in the

¹⁹ Testimony of Roberta Stempfley, Acting Assistant Secretary, Office of Cybersecurity and Communications, National Protection and Programs Directorate, Department of Homeland Security, Before the U.S. House of Representatives, Energy and Commerce Committee, Subcommittee on Communications and Technology, *Hearing on Cybersecurity of Communications Networks*, at 2 (Mar. 28, 2012), available at <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/CT/20120328/HHRG-112-IF16-Wstate-RStempfley-20120328.pdf>; see also Department of Homeland Security, *Communications Sector-Specific Plan: An Annex to the National Infrastructure Protection Plan*, at 2 (2010). The confidential treatment of outage reports and performance information has been critical in establishing this "long-standing tradition of cooperation and trust" among providers.

²⁰ See, e.g., Heather Kelly, *AT&T, T-Mobile share networks to help Sandy victims*, CNN (Oct. 31, 2012), <http://www.cnn.com/2012/10/31/tech/mobile/att-tmobile-networks-sandy/>.

market and thus joint recovery efforts would be hampered – a result that clearly would not favor consumers or public safety.

V. THE NOTICE IS PREMATURE

For the reasons stated above, T-Mobile respectively believes that the Commission’s proposal to require the disclosure of the percentage of operational cell sites immediately following a disaster would be counterproductive. However, even if the proposal had merit—and it does not—considering the proposal at this time is premature. Instead, the Commission first should allow carriers and multistakeholder groups to complete their ongoing efforts on network resiliency and reliability. These multistakeholder processes are an appropriate vehicle for determining whether the Commission’s proposed metric is valid, considering whether an outage disclosure requirement will benefit or harm consumers, and providing other recommendations to the Commission.

Chairman Wheeler has noted the importance of relying, in the first instance, on the work of multi-party stakeholder groups to evaluate and propose metrics.²¹ According to Chairman Wheeler, reliance on such stakeholder groups is preferable to mandates imposed by the Commission:

The multistakeholder process makes a lot of sense. Getting the people who are involved around the table, reaching consensus on what needs to be done, is nimble, it’s fast, and it’s far preferable to the five of us sitting up there on the dais and banging a gavel and saying, “Thus shall it be.”²²

T-Mobile agrees that, as a general matter, multistakeholder approaches to improving best practices are preferable to regulatory mandates. Focusing on multistakeholder efforts is

²¹ See Matthew Schwartz, *FCC Will Be ‘Cattle Prod’ When Multistakeholder Process Fails, Wheeler tells CSRIC*, Communications Daily, at 4 (Dec. 5, 2013).

²² See *id.*

particularly appropriate here because *multistakeholder groups are already working on directly relevant issues*. Both the TAC and the CSRIC currently are evaluating issues related to network resiliency.²³ The TAC’s Resiliency in a Broadband Network working group is broadly “examin[ing] what the goals should be for a resilient communications infrastructure.”²⁴ CSRIC-IV’s Working Group 9, chaired by T-Mobile’s Jay Naillon, is looking at short-term and long-term solutions and opportunities for sharing infrastructure in the wake of disasters. This working group, which is emblematic of the multistakeholder process, is working to deliver “a set of best practices that service providers could use to more rapidly apply infrastructure sharing methods to sustain communications in future emergencies.”²⁵ These best practices will enable carriers to cooperate further in the future in order to maintain and restore communications after disasters.

Any unproven metric, such as the percentage of operational cell sites, that has not been validated by either the TAC or the CSRIC likely will lead to unintended consequences. More fundamentally, unproven metrics likely will fail to provide meaningful and useful information to consumers. Therefore, to the extent the Commission wishes to consider adopting metrics-based rules intended to improve network resiliency, it should first allow the industry experts to work on, develop, and validate appropriate and effective metrics.

CONCLUSION

For the reasons provided, we urge the Commission to abandon its proposed disclosure requirement, which would be unnecessary and counterproductive. We all share an interest in

²³ *Notice* ¶ 8.

²⁴ FCC Encyclopedia, Technological Advisory Council, <http://www.fcc.gov/encyclopedia/technological-advisory-council>.

²⁵ CSRIC IV Working Group Descriptions, at 8 (updated Dec. 31, 2013), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC_IV_Working_Group_Descriptions_12_31_13.pdf.

deploying and maintaining resilient networks. We ask that alternatively, the Commission should continue to support the ongoing and productive efforts of the TAC and CSRIC.

Respectfully submitted,

T-MOBILE USA, INC.

By: /s/ Kathleen O' Brien Ham

Kathleen O'Brien Ham

Steve B. Sharkey

Harold Salters

Shellie Blakeney

601 Pennsylvania Ave., NW

North Building, Suite 800

Washington, DC 20004

(202) 654-5900

January 17, 2014