Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications	)	PS Docket No. 15-80
	)	
	)	

To: The Commission

COMMENTS OF T-MOBILE USA, INC.

Steve Sharkey
Eric Hagerson
Shellie Blakeney

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

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COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. ("T-Mobile")[1] respectfully submits these comments in response to the Further Notice of Proposed Rulemaking ("*FNPRM*") issued by the Federal Communications Commission ("Commission") regarding proposals intended to "ensure that the Commission's outage reporting system keeps pace with technological change. . . ."[2] The Commission seeks comment on whether to close a gap in its network outage reporting rules by adopting new rules applicable to Broadband Internet Access Services ("BIAS") and/or whether additional improvements should be made to the network outage reporting regime given technological changes since the rules were adopted.[3] T-Mobile agrees with the importance of ensuring the reliability of the nation's wireless infrastructure, but cautions against adopting rules that create confusion for companies over applicable rules, subject companies to multiple outage reporting regimes, convert the outage reporting system into a performance/cybersecurity monitoring system, or impose burdens without clearly identified corresponding benefits.

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

[2] *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications*, Further Notice of Proposed Rulemaking, 31 FCC Rcd 5817, 5819 (2016) ("*FNPRM*").

[3] *Id.* at 5819, 5856.

INTRODUCTION AND SUMMARY

T-Mobile is committed to ensuring the reliability of its wireless infrastructure and has invested billions of dollars in support of this objective. The company actively assisted in the development of network best practices through its long-time, 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").[4] These efforts have proven successful as Americans remain very satisfied with the wireless industry.[5]

The proposed regulations were introduced on the same day new rules were adopted by the Commission governing wireless outage reporting. Before moving forward with new outage reporting requirements, the Commission should evaluate the effectiveness of its newly adopted regulations and then assess the need for additional ones. It should rely on competition to drive network performance rather than adopt regulations in areas where no problem exists. At a minimum, the Commission should proceed cautiously to avoid confusion and to ensure it does not undermine the overarching goals of outage reporting.

First, if the Commission moves forward with its proposal to adopt BIAS outage reporting rules, it should clarify that any new BIAS rules do not apply to Commercial Mobile Radio

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[4] The NRIC and CSRIC are Commission-convened advisory committees that include many industry representatives and analyze issues relating to improving wireless network resiliency, among other things.

[5] Americans remain very satisfied with the wireless industry. *See, e.g.*, American Consumer Satisfaction Index, Wireless Telephone Service *Benchmarks*; *Wireless Telephone Service*, http://theacsi.org/index.php?option=com_content&view-=article&id=147&catid=&Itemid=212&i=Wireless+Telephone+Service (last visited Aug. 23, 2016); ACTwireless, *2014 National Consumer Survey* ("2014 National Consumer Survey"), http://www.my-wireless.org/media-center/data-center/2014-national-consumer-survey (last visited Aug. 23, 2016).

Service ("CMRS") providers already subject to the Part 4 rules. BIAS available from CMRS providers is delivered over the same network used to provide other wireless services. Thus, any network outage would prevent both wireless and BIAS connectivity. Duplicative reports are unnecessary.

Second, the Commission should refrain from adopting any proposals that essentially would transform the Part 4 outage reporting regime into a network performance and cybersecurity monitoring system. This approach is inappropriate for the wireless industry. The Commission has long recognized that network performance and quality of service need not be regulated in competitive wireless markets. Moreover, adoption of a network performance reporting regime would be inconsistent with Executive Orders and contravene Supreme Court precedent requiring agencies to engage in meaningful cost-benefit analyses before adopting rules. The expected benefits of these proposed rules for the wireless industry have not been clearly defined in light of the expected significant implementation and operational costs. The Commission certainly has not provided a realistic assessment aligning these important considerations.

Third, the Commission should streamline the outage reporting process by eliminating the initial report. Such reports provide little value and cannot be justified pursuant to a realistic cost-benefit analysis – the reports generally mirror the notification yet impose substantial compliance costs on carriers. The need to prepare the initial report also diverts resources from the outage investigation and restoration process.

Finally, the Commission should refrain from adopting a special outage reporting system for rural areas. Competition alone ensures that rural consumers will receive quality service. Moreover, the imposition of additional burdens on carriers serving rural areas may create a disincentive for carriers to expand service into these areas.

I. CMRS PROVIDERS SHOULD BE SUBJECT TO ONLY ONE SET OF OUTAGE REPORTING RULES

CMRS providers have been subject to the Commission's network outage reporting rules for more than a decade and should not be subjected to additional outage reporting rules designed to capture newer services that previously were not subject to outage reporting requirements. To avoid confusion as technologies evolve and new network outage reporting rules are adopted, the Commission should clarify that CMRS providers remain subject to a single set of network outage reporting rules.

For example, CMRS providers offer BIAS as part of their wireless service offerings. The proposed new BIAS rules thus could be read to apply to CMRS.[6] For the reasons discussed below, CMRS providers only should be subject to the Part 4 wireless reporting rules.

First, the proposed BIAS rules are being proffered to close a gap in the Commission's network outage reporting regime.[7] CMRS carriers already are subject to network outage reporting requirements, including data outages,[8] and therefore the underlying rationale for the new BIAS rules is inapplicable. The same network used to provide CMRS is used to provide BIAS. Thus, because CMRS providers already must report outages occurring on their CMRS network, there should be no need for duplicative BIAS outage reporting. Subjecting CMRS

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[6] Similarly, VoLTE services offered by CMRS carriers arguably could be read as covered by both the wireless outage reporting rules, as well as the interconnected VoIP outage reporting rules. *Compare* 47 C.F.R. § 4.9(e) *with* § 4.9(g). These services should remain subject to a single set of outage reporting rules, the wireless outage reporting rules for which wireless carriers have implemented procedures to ensure compliance. CMRS providers also may offer interconnected VoIP as an ancillary service for their CMRS customers. If these services are unavailable, customers can rely on their CMRS connections. Network outage reporting should be triggered only if these CMRS connections are unavailable.

[7] *See, e.g.*, *FNPRM*, 31 FCC Rcd at 5856.

[8] To eliminate any uncertainty, the Commission should eliminate the "2nd generation or lower" limitation from current Section 4.9(e)(2) (which will become Section 4.9(e)(1)(ii) when the new rules become effective).

providers to a second set of outage reporting obligations will cause needless confusion and, because the Commission already receives outage reports from CMRS providers, provide little, if any, additional benefit. In fact, the *FNPRM* fails to identify any data that it would obtain by overlaying a BIAS outage reporting regime on the wireless industry that would not otherwise be captured by the existing wireless outage reporting requirements.

Second, the metrics proposed for BIAS outage reporting clearly indicate that the Commission did not intend to extend the requirements to the CMRS industry. The Commission bases its outage metrics on consumer expectations for "'actual download speeds of at least 25 Mbps.'"[9] These metrics were based on expectations for fixed services,[10] however, and the Commission earlier this year concluded that "the current record is insufficient to set an appropriate speed benchmark for mobile service."[11] It thus would be inappropriate to apply this metric to the wireless industry for outage reporting purposes.

In the CMRS context, the Commission has noted that "[m]obile transmissions are subject to environmental factors that fixed line transmissions do not encounter and, thus, cannot achieve the same kinds of consistent speeds at the current level of technology."[12] Moreover, network performance is in part tied to spectrum availability which, in turn, is a shared resource. As more

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[9] *FNPRM*, 31 FCC Rcd at 5871 (quoting *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2015 Broadband Progress Report and Notice of Inquiry of Immediate Action to Accelerate Deployment, 30 FCC Rcd 1375 (2015)); *see Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2016 Broadband Progress Report, 31 FCC Rcd 699, 701 (2016) ("*2016 Broadband Progress Report*").

[10] *See Broadband Progress Report*, 31 FCC Rcd at 701, 707.

[11] *Id.*

[12] *Id*. at 712.

consumers are loaded onto a cell site, download speeds will decrease to allow more consumers network connectivity, something that is vitally important because it equates to access for more consumers who may need to call or text to 911. Download speeds also will vary depending upon the technology being used to carry the connection. 3G/HSPA networks for years have delivered dependable broadband connections for consumers at less than 10 Mbps. Although LTE networks will increase the speeds available to consumers, the dynamic nature of allocating the limited resources associated with wireless networks means that applying an arbitrary threshold to CMRS, in this case 25 Mbps, as a trigger for reporting does not take into account well established principals of wireless network engineering.

The latest crowdsourced report from OpenSignal showed that even the fastest national LTE provider's average download speed – T-Mobile's 16.3 Mbps[13] – is below the 25 Mbps benchmark for wired BIAS. The Commission's own Speed Test App reflects that, last year, nationwide CMRS networks operated with a mean LTE download speed of 14.13 Mbps, and a median LTE download speed of 9.07 Mbps.[14] Ookla, which uses crowdsourced data to measure network speed, produced similar results for LTE networks.[15] Non-LTE networks would offer lower download speeds.[16] Additionally, average wireless throughput speeds vary throughout the day based on consumer usage patterns and can be affected by other inputs such as the amount of licensed spectrum a carrier has in a given market and conditions that impact the received signal

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[13] OpenSignal, *State of Mobile Networks: USA* (August 2016), http://opensignal.com/reports/2016/08/usa/state-of-the-mobile-network (last visited Aug. 23, 2016).

[14] *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Eighteenth Report, 30 FCC Rcd 14515, 14597 (WTB 2015) ("*Eighteenth Report*").

[15] *Id.* at 14596. RootMetrics and CalSPEED data also demonstrates that LTE networks do not currently satisfy the throughput metrics contemplated for BIAS. *Id.* at 14599-00.

[16] *Id.* at 14597.

strength such as terrain and the location of a user.[17] Thus, the proposed outage reporting metrics[18] are technically infeasible for CMRS carriers. Extension of the proposed BIAS outage reporting metrics to the CMRS industry would require perpetual outage reports by CMRS carriers.

II. THE COMMISSION SHOULD NOT ADOPT THE OUTAGE REPORTING PROPOSAL REGARDING WIRELESS CALL BLOCKING

The *FNPRM* seeks comment on requiring CMRS carriers to file outage reports when networks are fully functional, but when a certain pre-determined quantity of cell sites are at full capacity for 75 percent of the time over a 30 minute interval.[19] This proposal was initially proffered in the earlier *NPRM* and the Commission recognizes that commenters opposed the requirement "for a variety of reasons."[20] Nevertheless, the *FNPRM* again seeks comments on this proposal.

T-Mobile continues to oppose this proposal. The *FNPRM* fails to identify any concrete benefits that would be achieved.[21] In fact, the Commission recognizes that the collection of data on call blocking due to mass calling events "will not prevent them from occurring in the future. . . ."[22]

Rather than collect information that can be used to prevent outages, the wireless call blocking proposal would effectively convert the Part 4 rules from an outage reporting regime to a network performance monitoring system. Furthermore, even if a cell site is operating at full

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[17] T-Mobile continues to urge the Commission to make more licensed spectrum available to wireless carriers in order to meet growing consumer demands for wireless services and lauds efforts such as the current 600 MHz incentive auction.

[18] *See FNPRM* at App. C, 47 C.F.R. § 4.9(i).

[19] *Id.*, 31 FCC Rcd at 5887.

[20] *Id.* at 5886.

[21] *Id.* at 5887-88.

[22] *Id*. at 5887.

capacity, it does not mean that there are blocked calls. It is quite possible that a macro site could be operating at full capacity but no calls are being blocked because they are being carried by small cells[23] deployed within the macro cell footprint to add capacity or by adjacent macro cells. As Commissioner Pai recognized:

> [T]he Commission does not limit its proposal to cell towers that are down. Instead, it tentatively concludes that providers must file outage reports when their towers are fully functional and operating at capacity. It does not matter if there are no call failures. It does not matter if excess demand never materializes. And it certainly does not matter if the report diverts resources that could be used to identify and repair actual outages. The Commission proposes that providers must nonetheless report that these towers are "out." Tellingly, it places the word "out" in quotation marks throughout this section, which just highlights its refusal to focus on actual outages.[24]

Not every cell site in a network is designed to meet the same objectives and performance criteria. Some sites are designed to focus on providing a broad coverage footprint, whereas others are designed to provide a small footprint with much higher capacity. The Commission's proposal contemplates uniformity of cellular design and an over-design given general capacity requirements. Not only is such an approach economically infeasible, the substantial record compiled in response to the initial *NPRM* demonstrates that it is infeasible to engineer CMRS networks to have excess capacity at all times.[25] As ATIS noted:

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[23] Small cells refer to a variety of technologies designed to increase capacity and can include, but are not limited to, cell sites that cover a smaller area for added capacity, distributed antenna systems, and micro cells.

[24] *Id*. at 5944 (Statement of Commissioner Pai). Commissioner O'Rielly referred to the proposal as an "utterly ridiculous idea." *Id*. at 5948 (Statement of Commissioner O'Rielly).

[25] *See* Comments of the Alliance for Telecommunications Industry Solutions, PS Docket No. 15-80, at 6 (filed July 16, 2015) ("ATIS Comments") (outage reporting should not be triggered by congestion alone); Comments of AT&T, PS Docket No. 15-80, at 24-25 (filed July 16, 2015) (same); Comments of CTIA – The Wireless Association, PS Docket No. 15-80, at 5-8 (filed July 16, 2015) ("CTIA Comments") (same); Comments of Sprint Corporation, PS Docket No. 15-80, at 2-4 (filed July 16, 2015) ("Sprint Comments") (noting that an outage does not occur when the network is fully functional but calls are blocked due to congestion); Comments of Verizon, PS

> Wireless networks, like their wired counterparts, are engineered to be reliable and resilient and to meet consumer needs. However, *it is not feasible to engineer networks to have excess capacity in all situations, nor should the Commission attempt to require carriers to do so*. During natural disasters or terrorist events, wireline and wireless usage may spike, resulting in congestion. These events are not a failure of communication systems and should not be treated as outages.[26]

Moreover, in order to determine whether call blocking has occurred for 75 percent of the time over a 30 minute interval, carriers would have to monitor capacity on a minute-by-minute basis in a wide variety of environments under conditions that may vary on a sector-by-sector or cell site-by-cell site basis. Such an approach would be costly and likely would not capture data representative of the actual customer experience.

Simply put, the Commission should not adopt rules requiring wireless outage reporting due to capacity constraints alone. Long-standing precedent recognizes that market forces are sufficient to ensure high service quality.

A. Competition Ensures Satisfactory Network Performance

Commission monitoring of CMRS network performance is unnecessary. When the FCC first adopted its duopoly cellular system rules, it stated that it "favor[ed] allowing the interplay of market forces to determine the grade of service delivered."[27] The Commission reaffirmed this

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Docket No. 15-80, at 5-6 (filed July 16, 2015) (same); Comments of XO Communications, LLC, PS Docket No. 15-80, at 3 (filed July 16, 2015).

[26] ATIS Comments at 6 (emphasis added); *accord* CTIA Comments at 6 ("[W]ireless networks are designed with a certain amount of total capacity to carry reasonably predictable traffic loads, based on typical calling patterns. There is not nearly enough spectrum allocated to commercial wireless providers to handle every temporary surge in traffic and, even if there was, it would be inefficient to over-engineer the networks.").

[27] *Cellular Communications Systems*, Report and Order, 86 FCC 2d 469, 509 (1981) (subsequent history omitted). This cemented the Commission's tentative proposal to rely on market forces in lieu of mandated quality standards when it proposed its rules. *See Cellular Communications Systems*, Notice of Inquiry and Notice of Proposed Rulemaking, 78 FCC 2d 984, 1003 (1980) ("[W]e expect to rely heavily on market forces to reduce or eliminate the need for quality standards. We will, however, entertain suggestions for quality standards if there are areas in

conclusion when it later developed rules to permit the deployment of new cellular technologies. In deciding against regulating service quality, the Commission found that "market forces compel service providers to offer the quality and quantity of products sought by consumers."[28] The Commission has repeatedly expressed its preference to "rely on competition over regulation"[29] and, as Chairman Wheeler has regularly stated, the need for regulation is low where competition exists.[30]

The level of competition in the CMRS industry is substantially greater now than it was during the cellular duopoly and the Commission continues to emphasize the importance of inter-carrier competition with respect to quality of service. The most recent CMRS competition report stressed that quality of service is a critical aspect of non-price rivalry among mobile wireless

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which we are persuaded that market forces will not produce systems capable of quality comparable to the landline telephone network.").

[28] *Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service*, Report and Order, 3 FCC Rcd 7033, 7038 (1988) (subsequent history omitted); *see also Allocation of the 849-851/894-896 MHz Bands*, Report and Order, 5 FCC Rcd 3861, 3872 (1990) ("We are not imposing any requirements regarding quality of service. We believe that such provisions are unnecessary in a competitive environment . . . ."). The Commission most recently reiterated the "practical and technical difficulties" associated with establishing a minimum service quality level in its *Open Internet Order*. *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd 5601, 5649 (2015).

[29] *See, e.g., Rates for Interstate Inmate Calling Services*, Further Notice of Proposed Rulemaking, 30 FCC Rcd 12763, 12900 (2015); *Rates for Interstate Inmate Calling Services*, Report and Order, 28 FCC Rcd 14107, 14128 (2013); *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, Report and Order, 22 FCC Rcd 15817, 15831 (2007).

[30] *See, e.g.*, Remarks of FCC Chairman Tom Wheeler, International Institute of Communications Annual Conference (Oct. 7, 2015) ("Some of you may have heard me describe this approach as the regulatory see-saw. It works like this, when competition is high, regulation can be low."); Statement of Chairman Tom Wheeler, Committee on Small Business, U.S. House of Representatives (Sept. 17, 2014) ("competition is superior to regulation, and competition is the Commission's most effective tool for driving innovation, investment, and consumer and economic benefits").

providers.[31] It certainly is much easier for consumers to express displeasure with carrier performance today by simply switching carriers, especially with the increasing adoption of no contract plans, than it was under the cellular duopoly where competition was sufficient to ensure quality of service.

Nothing in the *FNPRM* demonstrates a need for the Commission to reverse course and adopt wireless performance metrics. Deviating from decades of well-established and long-held policy of not regulating wireless performance quality metrics, and effectively disregarding the substantial record opposing such metrics compiled in response to the *NPRM*, the Commission now is considering the adoption of wireless performance metrics. While the *FNPRM* does not explicitly acknowledge that the new outage reporting metrics constitute performance quality standards, we believe that such standards would be the *de facto* result of establishing outage reporting rules requiring reporting based on possible congestion alone. The Commission should not allow its Part 4 outage rules, intended to ensure prompt identification of, and response to, outages, to be transformed into *de facto* service quality mandates.

Adoption of such performance metrics also could undermine collaborative efforts by carriers to address network issues. It is not uncommon today for carriers to open up their networks for use by competitors when competitor networks are non-functioning due to an unexpected "force majeure" event, but carriers will be more reluctant under the Commission's proposal because sharing their network could result in cell sites operating a full capacity for extended periods of time, thus triggering "outage" reporting by the carrier who allowed other carriers' customers to roam on its network even though its network was functioning properly.

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[31] *Eighteenth Report*, 30 FCC Rcd at 14581, 14594-602; *accord Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Seventeenth Report, 29 FCC Rcd 15311, 15404-12 (WTB 2014).

B. Adoption of Network Performance Regulations Would Violate Executive Orders and Supreme Court Case Law Requiring Meaningful Cost-Benefit Analysis

The *FNPRM* recognizes that the Commission collects outage data "to identify and address systemic vulnerabilities" and to promote "collaborative efforts" that will lead to "measurable improvements in network reliability and resiliency."[32] It also recognizes, however, that its proposed CMRS call blocking reporting requirement – which is aimed at tracking blockages due to mass calling events – "will not prevent them from occurring in the future. . . ."[33] The costs of such a proposal thus would clearly outweigh any benefits and, therefore, is inconsistent with various Executive Orders and the principles embodied in the Paperwork Reduction Act.

Pursuant to Executive Order 12866, agencies must "assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating" before adopting new regulations.[34] In particular, agencies must "propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."[35] President Obama reaffirmed these requirements through Executive Order 13563, requiring agencies to evaluate potential regulations "based on the best available science" and "identify and use the best, most

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[32] *FNPRM*, 31 FCC Rcd at 5855.

[33] *Id*. at 5887.

[34] Exec. Order No. 12866, 58 Fed. Reg. 51735, 51735 (Oct. 4, 1993).

[35] *Id.* at 51736.

innovative, and least burdensome tools for achieving regulatory ends."[36] This Executive Order was specifically extended to Independent Agencies in July 2011.[37]

The Supreme Court of the United States has also weighed in on this and agrees with the Executive Orders. The Court has specifically stated that a consideration of costs is necessary in determining whether to regulate and the failure to meaningfully consider costs has been held to be fatal to the validity of such regulations. The Supreme Court has made clear that an agency's duty to engage in "reasoned decisionmaking" requires it to follow a "logical and rational" process, which takes into account the "relevant factors."[38] This process, the Court held, requires consideration of the costs, in addition to the benefits:[39] an "Agency must consider cost – including, most importantly, cost of compliance – before deciding whether regulation is appropriate and necessary."[40]

In this regard, the Commission has not adequately considered or correctly estimated the costs associated with its proposed rules. First, the Commission has recognized that the data collected will not prevent future mass calling outages.[41] Thus, the Commission essentially proposes to collect data for the sake of collecting data.

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[36] Exec. Order No. 13563, 76 Fed. Reg. 3821, 3821 (Jan. 21, 2011); *see also* Office of Information & Regulatory Affairs, Memorandum for the Heads of Executive Departments and Agencies, and of Independent Regulatory Agencies, on Executive Order 13,563, M-11-10 (Feb. 2, 2011), https://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-10.pdf.

[37] Exec. Order No. 13579, 76 Fed. Reg. 41587, 41587 (July 14, 2011) (stating that regulatory decisions "should be made only after consideration of their costs and benefits").

[38] *Michigan v. EPA*, 135 S. Ct. 2699, 2706 (2015) (quoting *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U. S. 359, 374 (1998) and *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U. S. 29, 43 (1983)) (internal quotation marks omitted).

[39] *Michigan v. EPA*, 135 S. Ct. at 2707-08.

[40] *Id.* at 2711.

[41] *FNPRM*, 31 FCC Rcd at 5887.

Second, the Commission has long held that wireless performance regulations are not justified in the absence of a market failure. It has concluded that "one of the main statutorily based principles of our regulatory approach is to limit our regulatory intervention as much as possible and to rely, in the first instance, on marketplace forces to direct the development of the communications industry."[42] There is no evidence of a market failure triggering a need for federal regulation.

Third, the preparation of outage reports imposes substantial costs on covered carriers. As ATIS previously noted in this proceeding, "the Commission has historically substantially underestimated the burdens associated with outage reporting."[43] Moreover, the CMRS industry generally does not collect data in the intervals contemplated by the rules. The costs of complying with the proposed call blocking requirement thus must include costs associated with implementing new performance tracking mechanisms. These costs – which would include significant back office data storage and mining costs – are not included in the current cost-benefit analysis, which superficially assumes that the only costs would be those entailed in filing 420 reports annually, at $160 per report.[44] There is no consideration given to the sunk costs of establishing tracking mechanisms or the ongoing cost of operating, maintaining, and testing such tracking systems. Nor does the cost estimate accurately account for the hours spent troubleshooting the outage and reviewing reports. The cost-benefit analysis also does not consider the impact of the requirements on the processing power of CMRS networks. The resources available to consumers would decrease as processing power is diverted from serving

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[42] *Serv. Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289, 15367 (2007); *accord Jacqueline Orloff*, Memorandum Opinion and Order, 17 FCC Rcd 8987, 8998 (2002).

[43] ATIS Comments at 3.

[44] *See FNPRM*, 31 FCC Rcd at 5887.

their needs to gathering and processing the information contemplated by the proposed reporting requirements. Absent a reasoned industry-wide estimate of such costs, the Commission cannot perform a rational cost-benefit analysis (nor can it engage in the burden analysis required by the Paperwork Reduction Act). Accordingly, the Commission should carefully revisit the estimated burdens associated with its proposed rules.

Consistent with Executive Order 13563, before imposing new reporting obligations on CMRS providers, the Commission must conclude that the traditional (and less burdensome) approach – reliance on competition – is insufficient to achieve its goals.

III. THE COMMISSION SHOULD ELIMINATE THE THREE-STEP REPORTING PROCESS

T-Mobile opposes the Commission's proposal to move to a uniform three-step outage reporting process and instead urges adoption of a uniform two-step process that eliminates the "initial" report due within 72 hours of outage discovery.[45] Currently, the network outage reporting rules contain two different reporting schedules: a two-step process for interconnected VoIP and a three-step process for other covered carriers.[46] Moving to a two-step process would reduce regulatory burdens without undermining Commission objectives.

In response to the initial *NPRM* in this proceeding, a number of parties – including T-Mobile – urged the Commission to extend the two-step process to all covered services and eliminate the three-step process.[47] Parties noted that initial outage reports provide little benefit because they generally contain incomplete or inaccurate information as providers still are

[45] *See id.* at 5870, 5883.

[46] *See, e.g.*, 47 C.F.R. §§ 4.9(e) (three-step wireless process), (g) (two-step interconnected VoIP process).

[47] *See, e.g.*, Reply Comments of T-Mobile USA, Inc., PS Docket No. 15-80, at 7-8 (filed July 31, 2015) ("T-Mobile Reply Comments"); ATIS Comments at 4; Sprint Comments at 5-6.

troubleshooting the scope and root cause of the outage.[48] The root cause analysis for many outages generally is not available within 72 hours and carriers often have little information beyond that provided in the initial notification two hours after discovering an outage.

For example, once T-Mobile is alerted to a potential outage, it engages various teams to investigate and troubleshoot the cause of the outage. This process includes, among other things, reviewing various internal logs and meeting with technical, developmental, and performance teams. These steps cannot be completed within the 70 hour window between the outage notification and the initial report. As a result, the information contained in the initial report often mirrors the notification and subsequently changes in the final report once more data is gathered.

Not only do these initial reports contain little additional information beyond that contained in the notification, the initial reports impose substantial costs on covered carriers. Substantial resources are diverted from outage resolution to outage reporting.

Given the limited benefit associated with the initial reports, the requirement should be eliminated. Streamlining the reporting regime from a three-step to a two-step process also would be consistent with the Executive Orders discussed above which prohibit the adoption of unnecessary regulations.

IV. THE COMMISSION SHOULD NOT INCORPORATE CYBERSECURITY REPORTING INTO THE NETWORK OUTAGE REPORTING SYSTEM

T-Mobile opposes efforts to convert NORS into a threat incident reporting system. The *FNPRM* sets forth a confusing proposal that potentially would require covered carriers to submit reports when no outage has occurred, but calls have been hijacked via unauthorized modifications to network software, firmware, or databases.[49] The reporting requirement is not

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[48] *See, e.g.*, T-Mobile Reply Comments at 8; Reply Comments of CenturyLink, PS Docket No. 15-80, at 5 (filed July 31, 2015).

[49] *FNPRM*, 31 FCC Rcd at 5869-70, 5883.

tied to any outage and reports would be required even if the network provided the requested service.

T-Mobile agrees with Commissioner O'Rielly that:

> [T]he Commission is trying to edge its way into the realm of cybersecurity, an area where the Commission does not have authority and other agencies, such as DHS, have jurisdiction and already engage with Internet providers about breaches. The Commission should not attempt to use reporting as a backdoor method to insert itself into the cyber debate.[50]

At a minimum, given the significant jurisdictional and policy issues raised by adoption of a cyber threat incident reporting system, such a proposal should not be buried in an *FNPRM*. Here, the cyber reporting proposal is set forth in a few sentences in a FNPRM of nearly 100 pages. There is no separate heading providing the industry with any indication that such a proposal is being considered. Before adopting any such requirement, the Commission should clearly notice the proposal so that adequate comments can be obtained from industry.

V. THE COMMISSION SHOULD NOT ADOPT A DIFFERENT NETWORK OUTAGE REPORTING REGIME FOR RURAL AREAS

The Commission should refrain from adopting a different wireless network outage reporting regime for rural areas as proposed.[51] The Commission theorizes that a different approach is warranted because rural networks may never reach the 900,000 user minute threshold and, as a result, persistent outages may occur in these areas without Commission notification. This theory fails to recognize that the new macro cell outage reporting proposal treats an outage of a cell site in a rural area as impacting the same number of subscribers as an outage at an urban cell site. The number of subscribers is divided equally among all a carrier's

[50] *Id.* at 5945 (Statement of Commissioner O'Rielly).

[51] *See id.* at 5889-91.

macro sites.[52] This approach potentially could result in over-reporting outages in rural areas, rather than under-reporting. Thus, rather than adopt new regulations, the Commission should review the impact of the new outage reporting rules in rural areas to determine whether there actually is a problem that needs to be addressed.[53]

Moreover, as noted above, market forces are sufficient to ensure that CMRS quality of service remains high. The CMRS industry is competitive and, in such a competitive environment, customer satisfaction is necessary to retain wireless subscribers. Rural subscribers have carrier options and, therefore, carriers are incented to ensure quality network performance. Absent evidence of a market failure, regulations simply are unnecessary to ensure quality of service.

Adoption of a rural outage reporting regime also may undermine federal efforts to spur rural wireless and broadband deployment. The federal government – including the Commission – is constantly evaluating steps to promote further buildout in rural areas.[54] T-Mobile agrees with the National Association of Counties ("NACo") that rules which place additional administrative burdens on carriers may discourage further buildout in rural areas.[55] The proposed rule would require carriers to modify their network monitoring capabilities to manually identify "rural" areas as defined in the *FNPRM*. This process will be time consuming and costly.

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[52] *See id.* at 5909 (App. B, 47 C.F.R. § 4.9(e)(1) (pending OMB approval)).

[53] A separate reporting regime for rural areas also would create confusion and uncertainty in determining what sites should be classified as "rural." Given the nature of wireless coverage, many sites may cover both rural and suburban areas.

[54] *See, e.g.*, FCC, Broadband Opportunities for Rural America, Broadband Opportunities; FCC Proceedings Related to Wireless Broadband, http://wireless.fcc.gov/outreach/index.htm-?job=fcc_proceedingswireless (last visited Aug. 23, 2016); FCC, Broadband Opportunities for Rural America, Broadband Opportunities; Funding for Rural Broadband Services, http://-wireless.fcc.gov/outreach/index.htm?job=funding (last visited Aug. 23, 2016).

[55] *See FNPRM*, 31 FCC Rcd at 5888 (citing Letter from Deborah Cox, Legislative Director, NACo, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-80 (filed Aug. 7, 2015)).

Accordingly, separate outage reporting requirements for wireless carriers serving rural areas should not be adopted.

CONCLUSION

T-Mobile supports efforts to ensure network reliability and resiliency, but opposes the imposition of additional, costly regulations that produce little, if any, benefits. Thus, T-Mobile opposes adoption of (i) BIAS rules applicable to CMRS providers, (ii) additional "outage" rules designed to measure performance or detect cybersecurity threats, (iii) a uniform three-step outage reporting process, rather than a two-step process, and (iv) unique wireless outage reporting rules for rural areas.

Respectfully submitted,

By: /s/ Steve Sharkey

Steve Sharkey
Eric Hagerson
Shellie Blakeney

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

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