

**Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Amendments to Part 4 of the Commission's Rules Concerning Disruption to Communications)	PS Docket No. 15-80
)	
New Part 4 of the Commission's Rules Concerning Disruptions to Communications)	ET Docket No. 04-35
)	
The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting To Interconnected Voice over Internet Protocol Providers and Broadband Internet Service Providers)	PS Docket No. 11-82
)	

COMMENTS OF CTIA

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To: The Commission		

COMMENTS OF CTIA

CTIA¹ hereby submits the following comments in response to the Further Notice of Proposed Rulemaking (“*Further Notice*”) in this proceeding, which proposes to expand the Commission’s outage reporting rules.²

¹ CTIA® (www.ctia.org) represents the U.S. wireless communications industry. With members from wireless carriers and their suppliers to providers and manufacturers of wireless data services and products, the association brings together a dynamic group of companies that enable consumers to lead a 21st century connected life. CTIA members benefit from its vigorous advocacy at all levels of government for policies that foster the continued innovation, investment and economic impact of America’s competitive and world-leading mobile ecosystem. The association also coordinates the industry’s voluntary best practices and initiatives and convenes the industry’s leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, D.C.

² *Amendments to Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 31 FCC Rcd 5817 (“*Further Notice*”).

INTRODUCTION AND SUMMARY

CTIA supports the Commission's recent *Report and Order* that revised the outage reporting rules as they apply to commercial mobile radio service ("CMRS") providers.³ Adopting a standardized method to calculate the number of CMRS users potentially affected by an outage, and revising the rules for reporting outages affecting PSAPs and special offices and facilities, will improve the reporting process.

Yet even before the new reporting requirements take effect, the Commission has proposed to expand them in multiple, problematic ways. The *Further Notice* proposes a duplicative and unnecessary reporting overlay for mobile broadband. Rather than focus on obtaining data on outages that disrupt service to customers, the Commission's proposed rules would require wireless carriers to supply, in real time, detailed reports to the Commission on how their networks are performing – even though no outage has occurred. CTIA opposes this probing of wireless carrier operations. The *Further Notice* fails to demonstrate what tangible benefits will flow from the proposed rules, or show why any purported benefits exceed the burdens and costs wireless providers would incur to comply. Specifically:

- A broadband Internet access services ("BIAS") outage rule for CMRS is unnecessary, because the Commission has deemed mobile BIAS to be CMRS, and CMRS providers already must report outages. Moreover, the proposed throughput-based metric for what it terms "hard down" outages is inappropriate for CMRS, particularly given that throughput varies dynamically across CMRS networks, as the Commission has acknowledged. Triggering outage reports based on throughput would impose substantial unwarranted burdens on providers.

³ These actions were taken in the Report and Order which the Commission adopted together with the *Further Notice* ("*Report and Order*").

- The proposal for a separate “degradation” reporting rule improperly inserts the Commission into policing wireless network quality, exceeding the scope of Part 4 rules. This proposal compounds the problems with the proposed hard down BIAS outage rule by requiring reports when changes in metrics such as speed and latency occur, even where there is no actual outage.
- The Commission should decline to require reporting when cell sites are operating at full capacity and may not be able to handle additional calls, as there is no outage in this situation.
- The proposal to require wireless carriers to report when a certain number of cell sites in rural areas experiences an outage is unnecessary in light of the new CMRS outage reporting metric adopted in the *Report and Order*. The new rule captures the same level of outages, whether they occur in rural or urban areas, because all of a carrier’s cell sites count equally toward triggering a report, regardless of the number of users any individual site serves.
- Finally, continuing to safeguard the confidentiality of outage reports is critical and the Commission should not alter that treatment to achieve undefined “transparency” objectives. If the Commission were to allow access to those reports – a move CTIA opposes – it must adopt stringent safeguards to ensure the reports are accessed only by persons and agencies with national security or public safety responsibilities, and have adequate protections in place to guard against public disclosure.

The proposals to require reporting when there are no outages are particularly unjustified because they insert the Commission into the engineering decisions affecting mobile networks.

Wireless providers compete vigorously based on performance, as the enormous amount of advertising focused on network quality and reliability shows. They invest billions of dollars in their networks to differentiate their services and constantly improve the customer experience. A mandate that carriers report to the Commission those instances where a cell site is operating at capacity and some calls cannot be immediately completed risks skewing investment in favor of over-engineering parts of the network to avoid reporting. A reporting requirement for non-outages may, for example, drive carriers to shift capital investment away from deployment in rural or other unserved areas, and instead spend dollars to increase capacity in urban areas to avoid Part 4 reporting where no outages have occurred. The Commission should steer clear of

injecting itself into how wireless carriers engineer their networks to best serve their customers. The competitive marketplace is driving expanded and improved service today.

The recently modified outage rules ensure the Commission receives appropriate reports on wireless network outages that affect wireless customers. Further expanding those rules is unwarranted. The proposed rules lack any demonstrated benefits, but would needlessly increase costs and burdens on wireless carriers to implement the extensive new tracking and reporting systems that would be required to comply. Accordingly, the Commission should not adopt the proposed new rules for wireless providers.

I. BECAUSE CMRS IS SUBJECT TO OUTAGE REPORTING, AND MOBILE BIAS IS CLASSIFIED AS CMRS, THERE IS NO BASIS TO APPLY A BIAS OUTAGE RULE TO CMRS PROVIDERS.

A. The Proposed BIAS “Hard Down” Outage Rule for Mobile Services Is Unnecessary and Inappropriate.

The *Further Notice* proposes to adopt a new outage reporting rule “to extend the scope of our rules to BIAS, for the first time.”⁴ But this rationale is not correct as to mobile services, because the outage rules *already* apply to CMRS,⁵ and the Commission’s *Open Internet Order* classified mobile BIAS as CMRS.⁶ The *Further Notice* does not acknowledge these facts or discuss the existing CMRS rule at all. Nor does it identify any specific incremental benefit from

⁴ *Further Notice* ¶ 109.

⁵ See 47 C.F.R. § 4.9(e), specifying outages that “wireless service providers” must report, and § 4.3(f), defining “wireless service provides” as including “Commercial Mobile Radio Service communications providers that use cellular architecture and CMRS paging providers.”).

⁶ *Report and Order on Remand, Declaratory Ruling and Order, Protecting and Promoting the Open Internet*, 30 FCC Rcd 5601 (2015) (“*Open Internet Order*”), *aff’d*, *United States Telecom Association, et al. v. FCC*, No. 15-1063 (D.C. Cir. June 14, 2016). CTIA and other parties have filed petitions for rehearing *en banc* with the D.C. Circuit, which remain pending. See Petitioner CTIA’s Petition for Rehearing *En Banc*, No. 15-1063 (filed July 29, 2016).

a BIAS rule that does not already flow from the current rule. For example, it does not identify CMRS outage data that the Commission expects to receive under the BIAS rule that it would not otherwise obtain. It thus fails to explain why a stand-alone BIAS rule is warranted for CMRS providers. A rule that lacks a factually supported rationale does not comply with the Administrative Procedure Act.⁷

A new rule governing mobile BIAS outages is, in fact, unnecessary. Cell sites transmit BIAS along with voice, messaging and other data traffic over a mobile service provider's radio access network to end users. When CMRS customers, a 9-1-1 special facility, or other special offices and facilities cannot receive service (including BIAS, which is now CMRS) because the cell sites that serve them are not operating, that outage is reportable when it exceeds any of the reporting thresholds in Section 4.9(e), the wireless outage rule. Cell site outages affecting mobile BIAS are thus already covered. If the outage occurs elsewhere in a mobile network, the existing thresholds also can capture it. For example, the *Report and Order* increased the network threshold for reporting a wireless outage affecting network capacity from a DS3 to an OC3 capacity metric, finding that “[t]here is substantial record support for moving our metric to a standard based on higher capacity levels (*e.g.*, to OC3 or higher).”⁸ CMRS providers must file a report when “they have experienced on *any* facilities that they own, operate, lease, or otherwise

⁷ *E.g.*, *Northeast Coalition on Nuclear Pollution v. NRC*, 727 F.2d 1127, 1128, 31 (D.C. Cir. 1984) (where an agency's “rule is not supported by its accompanying statement of basis and purpose” in a manner that “demonstrates a rational connection,” remand under the APA is necessary); *Wiley v. Bowen*, 824 F.2d 1120, 1123 (D.C. Cir. 1987) (“it is a well-established principle of administrative rulemaking that an agency's failure to cogently explain why it has exercised its discretion in a given manner renders its decision arbitrary and capricious and subject to remand for the purposes of explaining the basis and purpose”).

⁸ *Report and Order* ¶17.

utilize, an outage of at least 30 minutes duration ... that affects at least 667 OC3 minutes.”⁹

When this lost capacity threshold is triggered, the outage will be reported, whether it affects voice or data. An additional BIAS rule applied to CMRS would serve no purpose.

An outage on mobile providers’ networks that only affects mobile BIAS (and not voice or messaging) is in any event unlikely because, unlike traditional circuit-switched telephony, which establishes a dedicated circuit between the parties to a voice transmission, mobile IP networks that transmit BIAS rely on packet switching, which divides the transmission into packets and sends them over the fastest available route. Mobile broadband networks are designed to reroute traffic if portions of the network become inoperable. For this reason, an outage affecting only a part of a CMRS provider’s IP network would typically not prevent the IP network from continuing to send and receive traffic – meaning no outage for the end user. Loss of broadband service to a customer is more likely where rerouting may not be available, as might occur in the “last mile” connection to the cell site. But in that event, as explained above, the outage would still be reportable under the existing CMRS rule.

Far from demonstrating an incremental benefit from imposing a stand-alone BIAS rule on CMRS providers, the *Further Notice’s* discussion of the new reporting threshold for BIAS outages reveals that it sought to replicate the existing trigger of 900,000 wireless user minutes contained in Rule 4.5(e)(2), because it designed the 1 Gbps threshold for BIAS reporting to be “calibrated with the current 900,000 user minute threshold.”¹⁰ This rationale underscores the lack of any independent benefit from a BIAS rule as applied to CMRS providers.

⁹ 47 C.F.R. § 4.9(e)(3) (emphasis added).

¹⁰ *Further Notice* ¶ 130.

At the same time, the *Further Notice*'s proposal to adopt a throughput-based metric to calculate when a BIAS outage is reportable underscores why the new BIAS rule would ill-fit mobile services. For example:

- The *Further Notice* seeks to explain its throughput metric by asserting that “[i]n today’s broadband environment, a typical user requesting ‘advanced telecommunications capability’ requires access to actual download speeds of at least 25 Mbps.”¹¹ That figure, however, is drawn from data on *wireline* broadband, not on *mobile* broadband. In fact, the Commission has declined to use 25 Mbps as the benchmark for measuring mobile broadband availability because of the different technical parameters affecting mobile networks.¹²
- The *Further Notice* proposes a loss of 1 Gbps of throughput as the threshold for defining a BIAS outage, asserting this is the “modern-day equivalent of the DS3 (45 Mbps) unit originally adopted in 2004.”¹³ But it fails to explain why the DS3 unit is relevant, given that the *Report and Order* replaced it with an OC3 metric, or why it is appropriate in any event for mobile BIAS.
- The discussion of the proposed reporting trigger of an outage affecting 22,500 Gbps user minutes for at least 30 minutes includes no explanation as to why that number is appropriate for CMRS networks.

In short the *Further Notice* supplies no basis for imposing a new, stand-alone BIAS rule on CMRS providers because BIAS is already deemed CMRS.

¹¹ *Id.*

¹² *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 2016 Broadband Progress Report, 31 FCC Rcd 699, ¶¶ 56-61 (2016) (“*2016 Broadband Report*”). The Commission’s most recent analysis of CMRS completion reported that its speed testing data showed median download speeds for the four national mobile carriers during the second half of 2015 ranged from 5 to 12 Mbps. *Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Eighteenth Report, 30 FCC Rcd 14515, ¶¶ 126-27 (2015) (“*Wireless Competition Report*”).

¹³ *Further Notice* ¶ 130.

B. Enacting a BIAS-Specific Rule Would Impose Unjustified Costs and Burdens on CMRS Providers.

The *Further Notice* asserts that the benefits of a BIAS rule would exceed the compliance costs to providers, but it does not acknowledge that mobile BIAS is classified as CMRS under the *Open Internet Order* and that CMRS providers offering BIAS are already subject to the wireless network outage rules. The demonstrated benefits of extending outage rules to cover BIAS are thus nil in the mobile context. Against the absence of benefits, the proposed BIAS rule would impose significant burdens and costs on CMRS providers, because it would require them – for the first time – to monitor, track and report outages based on a radically different threshold standard: data throughput. The *Further Notice* attempts to craft a threshold that is “calibrated” to the current 900,000 user minutes threshold so that the same magnitude of customer impact triggers reporting. But with throughput as the metric, CMRS providers would need to revamp their systems to be able to measure throughput reductions that exceed the proposed 1 Gbps threshold, and at any time and any location across their networks.

Using throughput would be problematic for mobile wireless providers for other reasons:

- Throughput in mobile networks is more dynamic than in fixed wireline networks, because either or both of the sending and receiving devices not only are portable but also can be moving during the data session. The Commission recognizes that the inherent characteristics of mobile networks cause throughput to fluctuate even when the networks are operating as designed.¹⁴ For this reason, it would be impractical for providers to comply with a rigid reporting threshold of 1 Gbps.
- Mobile wireless networks have multiple links connecting cell sites, mobile telephone switching offices, servers, points of interconnection with other carriers, and other network facilities. The proposed rule appears to assume that a 1 Gbps

¹⁴ Throughput and other mobile wireless performance characteristics “may vary greatly with a number of real world factors such as the service provider’s received signal quality, cell traffic loading and network capacity in different locations, as well as the capacity of consumers’ devices. ... [C]ell traffic loading or demand is dependent on the overall number of concurrent active mobile broadband users sharing the same cell, which in turn depends on user locations, the day of the week, and time of the day.” *Wireless Competition Report* ¶¶ 125-26.

decrease in throughput is the appropriate trigger for all of these links, but offers no justification for that single rigid metric.

- The *Further Notice* also suggests that the BIAS provider would be the “central reporting point” for outages that decrease throughput anywhere on network facilities, even those facilities that the provider does not control. In contrast, some other network providers would not be subject to reporting requirements.¹⁵ The Commission offers no justification for such an unfair and infeasible requirement. CMRS providers cannot properly be held accountable for reporting outages on others’ networks where those other parties have no obligation to report their own outages. The *Further Notice* also fails to explain how CMRS providers could comply with such a requirement.

Given the existing CMRS outage rule, this burden cannot be justified.

C. The Commission Should Not Adopt its Proposal for “Degradation” Reporting.

In addition to requiring reporting of “hard down” BIAS outages, the Commission resurrects a proposal from its 2011 rulemaking notice that would require reporting of “performance degradation” events.¹⁶ The *Further Notice* proposes to define such events as occurring when throughput is reduced by at least 1 Gbps or when other network characteristics such as packet loss and latency are adversely affected – *even though the network suffers no outage or disruption*. The record developed in response to the Commission’s 2011 proposal

¹⁵ *Further Notice* ¶ 112. The *Further Notice* states that its proposals “avoid[] the need to subject other service providers (such as Internet backbone providers) to these reporting requirements.” *Id.* ¶ 110.

¹⁶ *The Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, Notice of Proposed Rulemaking, 26 FCC Rcd 7166 (2011) (“2011 Notice”).

exposed numerous flaws with it, and the Commission did not adopt it.¹⁷ There are no grounds to reopen it now.

First, there is no basis to expand a reporting regime intended to collect data on actual outages into one that regulates changes in network performance as a reportable event. The proposal sharply diverges from the longstanding outage framework, which is premised on actual loss of service. But the proposed metrics of throughput, packet loss and latency relate to quality of performance, not loss of service. Variations in these metrics do not mean that customers are unable to reliably send or receive data. The Commission fails to articulate how or why collecting such data would advance its network reliability objectives. Mandated reporting of network performance divorced from actual outages does not square with the rationale for this proceeding.

Second, defining a specific level of performance degradation that would trigger a report would be inherently arbitrary. The *Further Notice* supplies no facts or studies supporting its assumption that a decrease in throughput of 1 Gbps is an appropriate threshold in the mobile BIAS context. It provides no technical data or analysis to demonstrate that such a decrease would even be noticed by customers, let alone that it would prevent reliable use of BIAS. In short, there is no factual basis to support the *Further Notice*'s premise that a decrease of a particular amount of throughput “degrades” the customer experience.

Third, a requirement to report decreases in mobile BIAS throughput would be extremely burdensome, if not infeasible, for CMRS providers to implement given the dynamic nature of

¹⁷ *The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, Report and Order, 27 FCC Rcd 2650, ¶ 114 (2012) (“2012 Report and Order”).

wireless networks in which traffic is managed to optimize quality, reliability and speed. Providers would need to purchase and install devices to measure throughput across their entire networks, as well as monitoring systems to notify personnel when throughput decreased by the amount set by the Commission so that the mandated reports could be created and filed. Even with comprehensive monitoring in place, a 1 Gbps decline in throughput can occur sporadically and temporarily due to traffic surges at events at stadiums, parades, conventions, and other high-volume situations – again, with no outage event occurring. Mobile network throughput is, moreover, dynamic; it constantly ebbs and flows as congestion and other network conditions fluctuate even apart from high-traffic events. As the Commission has acknowledged, throughput, packet loss and latency on mobile wireless networks constantly fluctuate with traffic surges, levels of congestion, time of day, and many other variables.¹⁸ The *Further Notice* does not attempt to explain how mobile carriers could effectively track and report such inherently dynamic network conditions to comply with a “degradation” rule.

Fourth, the Commission intimates that it may further expand outage reporting to encompass other events that may raise cybersecurity issues, but are not outages. For example, it asks, “[S]hould the Commission receive information on distributed denial of service (DDoS) attacks?” “[S]hould a route hijacking that diverts packets to another country, but still delivers the packets to the consumer be a reportable outage?”¹⁹ Considering ways to minimize these and other cybersecurity-related events is appropriate for industry and the Commission to discuss through CSRIC or other groups. But they do not involve outages and the Commission should not conflate providing information about them with reporting network outages.

¹⁸ *Wireless Competition Report*, ¶¶ 125-26.

¹⁹ *Further Notice* ¶¶ 124-25.

The *Further Notice* alternatively proposes to define “degradation” even more broadly, in terms of “packet loss, latency and throughput.” This approach would exacerbate the problems with a single throughput-based metric. CMRS providers would have to report a situation where one or more of these triggers occur – again, with no outage event taking place. To be able to comply with the reporting mandate, providers would need to constantly measure each trigger, and implement monitoring systems that would immediately capture them so that they could be reported. Again, the *Further Notice* supplies no technical data or analysis showing why customers would be adversely affected by changes in these inherently dynamic characteristics of network performance, or what appropriate benchmarks would be.²⁰ Nor does it explain why collecting such granular data would advance the stated objectives of this proceeding. These reporting requirements would be exceedingly complex and do not indicate that the customer is having a poor experience; to the contrary, customers using many types of programs or applications are unlikely to notice variations in these metrics. Conversely, the costs and burdens of installing and maintaining network systems to measure each of these metrics would be even greater than measuring only throughput.

The Commission’s “degradation” reporting proposal would not advance the purpose of the rulemaking, is based on unsupported assumptions, and would impose substantial unwarranted

²⁰ The Commission has acknowledged elsewhere that it “lacks sufficiently comprehensive data on latency” for adopting a metric based on that network performance metric for evaluating the availability of advanced telecommunications services, even for fixed services. *2016 Broadband Report*, ¶¶ 64-67. As noted above, latency and other performance characteristics vary even more on mobile networks. The *Further Notice*’s proposal to include latency as a trigger is inconsistent with that conclusion. CTIA is aware of no viable or valid latency metric that could be set as the trigger for outage reporting.

costs and burdens on mobile wireless providers. Accordingly, the Commission should decline to adopt this proposal.

I. THE COMMISSION SHOULD NOT ADOPT A NEW “CALL FAILURE” RULE FOR RADIO ACCESS NETWORKS.

In its 2015 Notice of Proposed Rulemaking in this proceeding, the Commission proposed to require wireless carriers to report what it termed “call failure” events in radio access networks, when a cell site is operating at full capacity so that additional calls may not be processed.²¹ Carriers universally opposed this proposal, and it is no more appropriate or valid today than it was a year ago. For numerous reasons detailed below, the Commission should decline its proposed “call failure” rule.

First, a “call failure” rule would not advance the Commission’s stated purpose for this proceeding, to “update our Part 4 outage reporting requirements to address more comprehensively the increasingly essential element in our nation’s communications networks: broadband.”²² The Commission grounds its outage reporting rules on keeping it “abreast of major communications disruptions” and assisting it in promoting “the safety of life and property through the use of wire and radio communication.”²³ The call failure proposal, however, does not involve any outages or disruptions, let alone “major” ones. To the contrary, it would force carriers to file reports even when their networks are performing as designed, and even when cell sites are not only not “out,” but are in fact fully operational. The proposal is not confined to

²¹ *Amendments to Part 4 of the Commission’s Rules Concerning Disruptions of Communications*, Notice of Proposed Rulemaking, 30 FCC Rcd 3206 ¶ 14 (2015) (“2015 Notice”).

²² *Further Notice* ¶ 3.

²³ *Id.* ¶¶ 1, 3.

“major” disruptions that block the transmission of traffic, but would compel CMRS providers to collect and submit information about how radio access networks perform in times of peak usage even though there is no actual outage. Requiring carriers to report when networks are operating at 100 percent capacity, with no outage or disruption event, goes far beyond the purpose of the Part 4 rules and the rationale for this rulemaking.

Second, the proposal fails to grapple with the Commission’s 2004 decision rejecting reporting on the performance of radio access networks.²⁴ There, the Commission determined that it is preferable to measure wireless outages at the Mobile Switching Center (“MSC”) switch, not the radiofrequency (“RF”) portion of the wireless network, because the MSC switch “operates in a stable, controlled environment and easily accommodates the measurement of call connections potentially lost during an outage.”²⁵ This avoids, as the Commission concluded, “the computational difficulties that result from the fluidity of the RF portions of each wireless network....”²⁶ The Commission does not explain why its 2004 analysis is no longer valid, nor does it point to new facts that would justify reversing course and adopting a call congestion reporting requirement that takes into account the RF portion of the network.

Third, the Commission neither articulates what a rule aimed at collecting data on congestion would accomplish, nor justifies extending regulation into the ways radio access networks operate. In the highly competitive wireless marketplace, each carrier is compelled to improve network reliability and avoid call failures as a result of radio access network congestion.

²⁴ *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 (2004) (*2004 Outage Reporting Order*).

²⁵ *Id.* ¶ 111.

²⁶ *Id.*

Carriers are investing billions of dollars annually in network infrastructure and systems to expand capacity and reliability. CTIA has described in detail the wireless industry's commitment to strategies that promote the resiliency of communications infrastructure in the *Resiliency of Mobile Wireless Communications Networks* proceeding and in response to the prior *Network Reliability NOI*.²⁷ The Commission and the wireless industry share the objective of ensuring the resiliency and reliability of wireless networks. The *Further Notice* fails to explain why a new rule imposing reporting obligations based on RAN congestion would advance this goal, but establishing that “rational connection” is essential for a rule to pass muster under the Administrative Procedure Act.²⁸

Fourth, the Commission dismisses carriers' objections to its previous call failure reporting proposal because required reporting “should not be interpreted to mean that providers must engineer their networks to account for sporadic spikes in calls.”²⁹ But the Commission belies its own assurance that it will not use this rule to police network quality by indicating it will do precisely that: it declares the rule “allows the Commission to work with industry to *address*

²⁷ See, e.g. Comments of CTIA, PS Doc. Nos. 13-239, 11-60, at 3-8 (Jan. 17, 2014); Comments of CTIA, PS Doc. No. 11-60, at 3-6 (Aug. 17, 2012); Reply Comments of CTIA, PS Doc. No. 11-60, at 3-5 (Sept. 4, 2012).

²⁸ See *Northeast Coalition on Nuclear Pollution v. NRC* (note 6, *supra*); see also *Judulang v. Holder*, 55 U.S. 42, 55, 64 (2011) (an agency's regulations must be based on “non-arbitrary, relevant factors,” meaning its actual “approach must be tied, even if loosely, to the purpose of the [underlying] laws, or the appropriate operation of the [regulatory] system.” A regulatory rule, in its implementation, may not be “unmoored from the purposes and concerns of the [underlying] laws.”) (internal citations omitted).

²⁹ *Further Notice* ¶ 175.

situations where the network consistently fails to address ‘bursty’ call patterns . . . ”³⁰ In other words, regulating how carriers manage their networks is exactly what the rule will do.

Fifth, the proposed rule would be exceedingly difficult and burdensome to meet because it ignores the dynamics of network traffic management. The rule would deem a cell site to be “out” when it is unable to process any additional calls for 75 percent of the time during a period of at least 30 minutes. But as CTIA explained above, mobile traffic volumes and thus available capacity constantly fluctuate. The *Further Notice* does not explain how carriers can measure (and quickly report) such fluctuating data. Building the monitoring systems for each cell site and training sufficient personnel to report such data in near real-time would impose significant burdens on carriers.

The proposed rule would make compliance even more complex because it would impose a “rolling” standard, in which CMRS providers would need to calculate whether a site is operating at 100 percent capacity, and for each successive 30 minutes, determine whether, during any 22½ minutes of any 30-minute period, any calls did not go through. This would require carriers to monitor and record data every minute whenever any of its cell sites is operating at peak capacity and cannot process a single additional call for a brief period.

Finally, the *Further Notice* fails to consider alternatives for gaining insight into how wireless networks operate in congested situations, such as cooperatively working with carriers to obtain congestion data for particular events. During a number of previous high call volume events, carriers have voluntarily provided information to the Commission. There is no reason why that process cannot continue or why it would not supply the data the Commission asserts it needs to have.

³⁰ *Id.* (emphasis added).

In times of high call volumes, wireless network engineers are busy determining whether and how to reroute traffic to nearby cells, add capacity, or take other steps to ease congestion. They should not be distracted from this work to perform monitoring and reporting to address service quality inquiries about how often sites may operate at capacity and experience congestion. The proposed call failure rule should be rejected.

II. THE REVISED WIRELESS OUTAGE REPORTING RULE REMOVES ANY BASIS FOR A SEPARATE RURAL AREA REPORTING REQUIREMENT.

The Commission’s recent adoption of the “average user” standard for calculating wireless outages makes it unnecessary to pursue the proposal for a separate standard for reporting cell site outages in rural areas. As the *Further Notice* acknowledges, “We recognize that this issue may become less critical as wireless providers begin to comply with the new standardized method, adopted in the above Report and Order, for calculating the number of potentially affected users during a wireless outage.”³¹ The issue is not just “less critical” – it no longer exists.

In the *2015 Notice*, when the Commission first proposed a “rural area” outage reporting requirement,³² the Part 4 rules then in place calculated a reportable outage based in part on the number of wireless users served by each cell site. The FCC noted that this could result in less reporting of widespread or lengthy outages in rural areas, because rural sites typically serve fewer users. It raised the concern that the 900,000 “user minute” threshold may not be triggered for an outage in a rural area of a particular duration and at a particular number of sites, even though an outage of the same duration and affecting the same number of sites in an urban area would be reportable because those sites had more users.

³¹ *Further Notice* ¶ 188.

³² *2015 Notice* ¶ 34.

But the new “average user” rule, Section 4.7(e)(2), eliminates the variable per-site user number that weighed sites with more user traffic more heavily. Instead, every site now counts the same. Specifically:

In determining the number of users potentially affected by a failure of a switch, a wireless provider must multiply the number of macro cell sites disabled in the outage by the average number of users served per site, which is calculated as the *total number of users for the provider divided by the total number of the provider’s macrocell sites*.³³

Under this new rule, it is irrelevant whether a cell site experiencing an outage is in New York City or in a sparsely populated area – each counts equally. Outages covering the same number of sites and lasting for the same duration will be reported if they exceed the trigger, regardless of how many users actually receive and send traffic through those sites, or *where* the sites are, because the number of users for outage reporting purposes is fixed based on the carrier’s entire network. In short, rural areas will see the same reporting for the same level of outages as urban areas. There is no rationale for a separate “rural” rule and the separate reporting methodology it would require carriers to maintain.

III. SAFEGUARDS SHOULD BE ADOPTED FOR ACCESS TO OUTAGE REPORTS BY STATES AND OTHER FEDERAL AGENCIES.

In the *2015 Notice*, the Commission asked for comments addressing whether and on what conditions state agencies and other federal agencies should be allowed access to carriers’ outage reports that are filed in the Network Outage Reporting System (“NORS”).³⁴ Given the wide variation in commenters’ positions, the Commission adopted no outage report access rules or

³³ 47 C.F.R. § 4.9(e)(2) (emphasis added).

³⁴ *2015 Notice* ¶¶ 38-43.

procedures in the *Report and Order*, but is seeking recommendations from Commission staff and additional input from commenters, particularly on access to reports covering BIAS outages.³⁵

CTIA is concerned by the Commission's indication that it may depart from its longstanding position that outage reports are treated as confidential and withheld from public inspection. It first states, "We propose to extend this same presumptive confidential treatment to any reports filed under rules adopted pursuant to this Further Notice including broadband outage reporting filings."³⁶ CTIA supports this action. However, the Commission then warns that "this approach of presumed confidentiality may need to evolve as networks, and consumer expectations about transparency, also evolve. Accordingly we seek comment on the value and risk of increased transparency with respect to information about, or select elements of NORS reports filed under the current Part 4 rules and any additional rules adopted pursuant to this Further Notice."³⁷

There are no grounds to reconsider the confidential treatment of outage reports based on the "evolution" of networks or consumer expectations. The Commission determined in the *2004 Outage Reporting Order* that the potential consumer benefits of public disclosure of network outage information are "substantially outweighed by the potential harm to the public and national defense that might result from disclosure."³⁸ As a result, reports filed in NORS are presumed confidential and thus withheld from routine public inspection.³⁹ The Commission's actions on

³⁵ *Report and Order* ¶¶ 88-89, *Further Notice* ¶¶ 145-48.

³⁶ *Further Notice* ¶ 145.

³⁷ *Id.*

³⁸ *2004 Outage Reporting Order* ¶ 45.

³⁹ 47 C.F.R. § 4.2.

NORS report access should be guided by the same principles that led to the decision to make NORS data confidential in the *2004 Outage Reporting Order*. Nothing in the development of broadband services, the evolution of networks, or the expectations of consumers alters that calculus. In relevant areas, the Commission and wireless providers have taken actions to improve transparency for consumers, including “transparency” rules for BIAS providers,⁴⁰ and voluntary disclosure of cell site outage information.⁴¹ But NORS reports serve fundamentally different purposes and there are no grounds to alter their longstanding confidential treatment.

Should the FCC determine that it is appropriate to share outage data with requesting state regulatory commissions and federal agencies, it must implement effective safeguards designed to protect such data and mitigate the risks of unauthorized disclosures. Those safeguards should include at least the following:

- NORS information should be shared with only those state or federal agency employees that have a direct and urgent need to know and who agree that they will only use NORS data consistent with the purposes for which it was provided by carriers.
- Agency employees obtaining NORS data should first be required to provide an attestation that they are directly employed by the agency and have the necessary qualifications, as determined in advance by the Commission, to access such information due to their specific national security or emergency preparedness role. Any employee who does not need access to information for a specific national security or public safety purpose should not be provided access.

⁴⁰ See, e.g., *Open Internet Order* ¶¶ 154-185 (adopting “enhancements” to existing broadband transparency rule). See also, CTIA Comments on Proposed Information Collection Requirements, GN Docket No. 14-28 et al., (filed July 20, 2015); CTIA Application for Review, GN Docket No. 14-28 et al., (filed June 20, 2016).

⁴¹ See Letter from Joan Marsh, AT&T, Scott Bergmann, CTIA, Charles McKee, Sprint, Steve Sharkey, T-Mobile USA, Grant Spellmeyer, US Cellular and William H. Johnson, Verizon, to Marlene H. Dortch, FCC, Improving Resiliency, Reliability and Continuity of Mobile Wireless Communications Networks, PS Docket Nos. 13-239 and 11-60 (Apr. 27, 2016).

- Under no circumstances should a state or federal agency be permitted to make public or share the data with other persons or agencies.
- An agency that is granted access to NORS reports should be required to disclose to the carrier whose report it obtains which agency employees have access.
- The agency should be required to notify the Commission and affected carriers in the event of a data breach, implement audit tools to identify data breaches and their sources, and terminate access to parties that are unable to protect sensitive reports from disclosure.
- As the Commission requires before granting access to NRUF data, it also should require each agency requesting access to outage data to evaluate and report on the specific state laws and regulations that will be used to protect NORS data.
- Prior to authorizing access to a state agency, the Commission should analyze that state's Sunshine or public access laws that may put confidential reports collected through NORS at risk of disclosure.

The Commission also should create and maintain an audit log for its NORS database, recording which data was accessed, when and by whom. This audit log should be available for several years to aid investigations after data breaches. Agencies should be required to verify that only valid and active accounts exist and the Commission should audit all of the accounts it has granted to state and federal agencies every six months. Any accounts that have not been used in six months should be shut down to reduce the security risk of maintaining large numbers of unused accounts. The Commission should make the results of the account audits available to the carriers that provide reports to NORS. Finally, periodic reports should be provided that record how many active accounts are maintained by each state and federal agency and the number of reports accessed by each.

CONCLUSION

For the reasons described above, the Commission should not make further changes to the outage reporting rules for wireless providers. The recently modified rules will ensure the Commission receives appropriate reports on outages affecting wireless customers. Further expanding those rules is unnecessary and unwarranted.

Respectfully submitted,

CTIA

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