

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

In the Matter of)	
)	
Resilient Networks)	PS Docket No. 21-346
)	
Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications)	PS Docket No. 15-80
)	
New Part 4 of the Commission's Rules Concerning Disruptions to Communications)	ET Docket No. 04-35

**REPLY COMMENTS OF THE NATIONAL ASSOCIATION OF STATE UTILITY
CONSUMER ADVOCATES (NASUCA)
ON THE NOTICE OF PROPOSED RULEMAKING**

I. INTRODUCTION

On October 1, 2021, the Federal Communications Commission (FCC or Commission) released a Notice of Proposed Rulemaking (NPRM)¹ which proposed steps to improve the reliability and resiliency of communications networks during emergencies. The NPRM sought comment on three major issues: 1) whether the Wireless Resiliency Cooperative Framework (Framework) could be improved to enhance the reliability of wireless networks during emergencies and whether some or all of the Framework should be codified in FCC rules; 2) how

¹ In the Matter of *Resilient Networks*, PS Docket No. 21-346, *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 15-80, and *New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Adopted September 30, 2021, Released October 1, 2021.

the Commission can promote greater situational awareness through its Disaster Reporting Information System (DIRS) and Network Outage Reporting System (NORS) outage reporting processes; and 3) communications resiliency strategies to address power outages, which are one of the primary reasons for communication network service disruptions.² The National Association of State Utility Consumer Advocates (NASUCA) hereby submits these Reply Comments in response to the Notice.³

II THE COMMISSION SHOULD IMPROVE THE WIRELESS NETWORK RESILIENCY COOPERATIVE FRAMEWORK

The NPRM asked for comment on whether the Commission should act to improve the Framework to enhance the reliability of communications networks.⁴ The discussion in the NPRM, comments from parties and the experiences of states demonstrate that changes to the Framework are necessary and should be codified in the Commission's Rules. At a minimum the Framework should be modified to require participation of facilities-based carriers, including those who operate facilities used to provide backhaul necessary to support other communications services.⁵

² *Id.*, ¶ 3.

³ NASUCA is a voluntary association of 59 consumer advocates. NASUCA members represent the interests of utility consumers in 44 states, the District of Columbia, Puerto Rico, Barbados and Jamaica. NASUCA is incorporated in Florida as a non-profit corporation. NASUCA's full members are designated by the laws of their respective jurisdictions to represent the interests of utility consumers before state and federal regulators and in the courts. Members operate independently from state utility commissions. Some NASUCA member offices are separately established advocate organizations while others are divisions of larger state agencies (e.g., the state Attorney General's office). NASUCA's associate and affiliate members also represent the interests of utility consumers but are not created by state law or do not have statewide authority. Some NASUCA member offices advocate in states whose respective state commissions do not have jurisdiction over certain telecommunications issues.

⁴ NPRM, ¶ 3

⁵ NPRM, ¶ 16; APCO, p. 2.

The Framework was adopted in December, 2016, it applies solely to wireless carriers, and, as noted in the NPRM, it is voluntary.⁶ The Commission adopted the Framework as an alternative to a different FCC proposal that would have required facilities-based Commercial Mobile Radio Service (CMRS) providers to “submit to the Commission for public disclosure, on a daily basis during and immediately after major disasters, the percentage of cell sites within their networks that are providing service.”⁷ Under the Framework, wireless providers that *choose* to participate commit to five types of actions related to emergencies: 1) providing roaming arrangements; 2) mutual aid for other carriers; 3) enhancing public preparedness and restoration; 4) increasing consumer readiness and preparation; and 5) improving public awareness and stakeholder communications on service and restoration status.⁸ Currently, only seven wireless carriers are signatories to the Framework.⁹ The Framework only applies when the Federal Emergency Management Agency (FEMA) activates ESF-2 (Emergency Support Function-2) or the Commission activates the Disaster Information Reporting System (DIRS). DIRS reporting is also voluntary, a carrier may choose whether or not it reports outages.¹⁰

The NPRM recognizes that there have been “gaps in the Framework’s coverage” and delays in its implementation.¹¹ The California Public Utilities Commission (California PUC) provided extensive comments documenting the failure of both wireless and wireline communications networks during widespread emergencies and power outages following adoption for the Framework.¹² These incidents include the failure of networks operated by both

⁶ *Id.*, ¶8.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*, ¶16.

¹⁰ *Id.*, ¶5.

¹¹ *Id.*, ¶ 13.

¹² California Public Utilities Commission (California PUC), pp. 1-14.

signatories and non-signatories to the Framework. These problems have been well documented in California legislative hearings and in a California PUC proceeding addressing network reliability.¹³ The problems cited by the California PUC include the failure of communications services provided to first responders,¹⁴ widespread service outages,¹⁵ failure of carriers to provide timely information about outages to the California Office of Emergency Services (Cal OES) emergency state operations center and to other state and local agencies during major emergencies,¹⁶ and the failure of carriers to design their networks to be resilient.¹⁷ Public Knowledge cites to numerous instances of similar communication network failures in Texas, Oklahoma, Louisiana, Iowa and Florida with many widespread communications outages associated with power outages.¹⁸ The experiences in these states demonstrate that the Framework has not delivered network resiliency.

The Association of Public-Safety Communications Officials (APCO), comprised of 36,000 members who are primarily the state and local government employees that manage and operate public safety communications systems are well-positioned to comment on the adequacy of the existing wireless cooperative framework.¹⁹ APCO succinctly confirms the experience in California and other regions when it states that “the voluntary nature and narrow scope of the Framework have proven inadequate.”²⁰ Public Knowledge argues that “without any imperative to

¹³ *Id.* Information about specific California legislative hearings, legislation, California PUC analysis and proceedings is set forth in footnotes at pp. 1-14.

¹⁴ California PUC, CITE

¹⁵ *Id.* CITE

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ Public Knowledge, p. 8.

¹⁹ APCO, p. 1.

²⁰ APCO, p. 2.

participate, the Framework does not include all service providers, particularly those in more vulnerable areas with less infrastructure.²¹ As the California PUC states:

For numerous years, both the FCC and the state of California relied on the voluntary efforts of communications service providers to contribute significantly to our efforts in ensuring public safety. These voluntary efforts have not yielded optimal, desirable, or merely acceptable results.²²

NASUCA further agrees with APCO and the California PUC that that the Framework should be modified to require that any service provider who plays a role in the delivery of 9-1-1 or other emergency alerts should be subject to resiliency requirements.²³ The requirements should apply to both facilities-based wireless and wireline carriers, and to providers that offer backhaul service necessary to transport wireless, wireline and other communications services. An example from Colorado demonstrates the importance requiring providers of backhaul services to comply with the Framework:

On July 15, 2019, a fiber cut occurred within the network of Colorado's SSP [911 System Service Provider], causing outages or partial outages in multiple locations throughout the state. Due to network configuration, PSAPS [Public Safety Answering Points] were notified that they were potentially affected by the outage, even if they were not. Thirty-one separate locations across the state were notified that they were potentially affected. The State's Emergency Operations Center activated to help coordinate communication. The confusion regarding which locations were affected and which were false alarms hampered the ability of the State and the local communities to develop a coherent communications strategy. The outage persisted for almost 12 hours, and it was not until days after the outages resolved that any level of certainty was achieved in determining who was directly affected and who wasn't.

Because this outage occurred within the underlying SSP's network, and that network also serves as backhaul for a number of wireless providers, rural local exchange carriers, and other providers. [sic] Knowing which of these originating service providers had been affected, and which had not, would have helped narrow down the actual locations

²¹ Public Knowledge, p. 6.

²² California PUC, p. 18.

²³ APCO, p. 2.; California PUC, pp. 18-19.

affected considerably. This information could have helped the communications strategy of the local agencies and the State's Emergency Operations Center.²⁴

The California PUC prioritizes backhaul in its network resiliency requirements. In reaching its decision to address backhaul, the California PUC considered Cal OES's concern that "when backhaul connections are affected, especially during fires, several modes of communications will be lost and/or go down."²⁵

The California PUC comments are grounded in an extensive record, developed in a rulemaking, demonstrating the failure of the voluntary Framework to deliver accurate and timely situational information to both state and local emergency services officials. NASUCA supports APCO, the California PUC, Public Knowledge, and CWA in recommending that the Framework should be mandatory,²⁶ not voluntary, and should include all providers of communications network facilities that are necessary for wireless and wireline services to provide continuous access to 9-1-1, otherwise the framework will not promote reliable communications during emergencies.²⁷

²⁴ In the Matter of Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications, PS Docket No.15-80 and Petition of California Public Utilities Commission and the People of the State of California for Rulemaking on State's Access to the Network Outage Reporting System ("NORS") and a Ruling Granting California Access to NORS (PS-1580 and RM No. 11588), NANSAs Initial Comments to Second Further Notice of Proposed Rulemaking on NORS and DIRS Information Access April 30, 2020, p. 4-5.

²⁵ California PUC, p. 21.

²⁶ APCO, p. 2; California PUC, p. 18; Public Knowledge, p. 6; CWA, p. 2.

²⁷ Public Knowledge, p. 17.

II. THE COMMISSION SHOULD IMPROVE NORS AND DIRS REPORTING TO ENHANCE SITUATIONAL AWARENESS.

The NPRM seeks comment on how NORS and DIRS reporting can be improved so that the Commission may improve its situational awareness of communications outages.²⁸ As described in the NPRM, NORS and DIRS data serve two different functions. NORS data reflects outages that occur once a threshold of 900,000 user minutes for affected customers is met. Commission staff analyses NORS data to assess the magnitude of outages, identify trends and promote network reliability.²⁹ NORS reporting is required of wireline and wireless carriers and applies to only voice service. In contrast, DIRS data reporting is voluntary, is activated only during emergencies and is intended to provide real-time outage information.³⁰ When DIRS reporting is initiated, NORS reporting is waived.³¹

A. DIRS Should be Modified to Improve its Usefulness

Currently, DIRS reporting is not a reliable means of assessing the status of state and national telecommunications systems. Because reporting is voluntary, the Commission and states using the data are limited to information from carriers that choose to participate. Because carriers can experience outages and choose not to report them, the Commission, national, state and local emergency officials and regulators cannot obtain a complete picture of the state of communications and what customers might be affected by an outage during an emergency. The NPRM notes that many smaller carriers choose not to file DIRS reports.³² The experience in

²⁸ NPRM, ¶3.

²⁹ Id., ¶ 30.

³⁰ NPRM, ¶ 27.

³¹ NPRM, ¶ 27-28.

³² NPRM, ¶ 27.

California showed that during major service outages in 2014 and 2015, many wireline and VoIP carriers did not provide outage information to Cal OES, and Cal OES turned to DIRS reports for outage information. Upon investigation, Cal OES determined that the outage data obtained through DIRS did not match the outage data provided by the California Utilities Emergency Association (CUEA), and Cal OES “found significant differences in the number of facilities and customers that lost functionality and service between the two data sets.”³³ The California PUC argues that DIRS is insufficient for situational awareness because communications service provider participation is voluntary, the information in the reports is at least twelve to twenty-four hours old, and DIRS reports only show data on an aggregated basis meaning that they cannot be used to identify the precise location of outages. NASUCA shares these concerns.

The NPRM asks whether the voluntary DIRS reporting system should be modified to encourage broader participation during disasters; or, alternatively, whether DIRS reporting should be required of a much larger set of national communications providers that would include cable, Direct Broadcast Satellite, television and radio, CMRS and other wireless providers, wireline and VoIP providers. NASUCA agrees with parties that recommend The Commission modify DIRS to be a mandatory reporting system. Mandatory reporting should be required of all wireline, wireless, VoIP providers, and carriers that provide backhaul service to support emergency communications.³⁴ All of these providers operate essential communications networks and services that are necessary to carry 9-1-1, reverse 9-1-1 calls and Wireless Emergency Alerts.³⁵

³³ California PUC, pp. 12-13.

³⁴ See, e.g., APCO, p. 3; Public Knowledge, p. 27.

³⁵ NASUCA has no position on whether reporting should apply to radio, television or Direct Broadcast Satellite.

Further, DIRS should be modified to provide more granular information. The California PUC states that wireline outage data is currently aggregated at the state level and wireless outage data is aggregated at the county level. These levels of aggregation do not allow officials at any level, be it national, state or local, to receive timely, accurate information during an emergency. States are large areas, and some counties cover a wide swath of territory. Reporting aggregated data at the state or county level is not sufficient for emergency response. The Commission and state and local officials responsible for responding to emergencies need to know where communication networks and services are functioning and where they are not. This can be a matter of life or death. For example, it is important to know if customers in a specific area are unable to receive emergency alerts or contact 9-1-1 due to a communications outage. As discussed by the California PUC, to address the failure of carriers to provide adequate outage information, the California Legislature passed a law statute that requires real time outage reporting by carriers to Cal OES of any communications outage that leaves a community located in a high fire threat area isolated from the outside world. The bill (SB 670) was partially intended to improve outage reporting for rural areas at high risk for disasters such as fires, that are too small for important outages to be captured by the 900,000 NORS user minute reporting threshold, and where outages were often not reported at all prior to California acting to address the problem.³⁶ As described by the California PUC, the legislation requires providers of telecommunications services that provide access to 911 to give outage, repair and restoral

³⁶ California PUC, p. 25.

information to Cal OES within 60 minutes of the discovery of an outage.³⁷ As the California PUC states:

The required reporting is triggered when an outage lasts at least 30 minutes while *potentially* affecting at least 100 end users in a single zip code, at least half the end users in a zip code (if the zip code has fewer than 100 end users), or at least half of a mobile telephony provider’s coverage area in a single zip code.³⁸

The California community isolation reporting requirements were initially implemented as emergency rules, effective July 1, 2020. While the emergency rules were in effect, Cal OES received data from carriers pursuant to the interim rules, with reports of outages at the zip code level and at a much lower numerical outage threshold than the 900,000 user minute NORS threshold. When Cal OES moved to adopt permanent rules in February, 2021, the agency issued an “Initial Statement of Reasons, Problem Statement of Purpose,” providing the rationale for the rules. In this Statement of Reasons, Cal OES stated that it had assessed the outage reporting data received under the emergency regulations and those requirements had been effective in achieving the purpose of the legislation.³⁹

The Commission should consider that California, a state with approximately one-tenth of the national population, a large and diverse geographical footprint, and with much of the state located in high fire threat areas, has successfully adopted a near real-time communications outage reporting system, with precise information about the location of important outages that has greatly increased the situational awareness of state and local emergency services officials and first responders. NASUCA suggests that the Commission study the example of California and

³⁷ California PUC, p. 17. Codified as Cal. Pub. Util. Code § 776.2, amending Cal Pub. Util. Code § 910, and amending Cal. Govt. Code § 53122. *See*

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB341

³⁸ California PUC, p. 18.

³⁹ California Governor’s Office of Emergency Services, *Initial Statement of Reasons, Problem Statement and Purpose*, February 12, 2021, p. 3. *See*

<https://www.caloes.ca.gov/PublicSafetyCommunicationsSite/Documents/InitialStatementofReasons02.12.2021.pdf>

consider modifying DIRS by making reporting mandatory for all facilities-based providers, at a more granular level than in the current system, and requiring that data be reported more quickly.

B. The Commission Should Require Broadband Outage Reporting for NORS

NORS and DIRS reporting reflects outage data for wireline and wireless telephone service. The NPRM seeks comment on whether NORS should be modified to require broadband outage reporting.⁴⁰ NASUCA agrees with APCO⁴¹ and Public Knowledge⁴² that broadband outages should be reported, for both NORS and DIRs. This issue was addressed in prior comments, in PS Docket No. 15-80 in 2020. NASUCA supported requiring broadband outage reporting.⁴³ In comments to that proceeding, the Massachusetts Department of Telecommunications and Cable argued that the reporting should be expanded to include Broadband Internet Access Service (BIAS) outages.⁴⁴ As Massachusetts pointed out, the Commission began considering whether to extend reporting requirements to BIAS in 2005, and "over the past few months BIAS has proven not only important, but essential to the life and safety of Americans and to the functioning of our businesses and public institutions."⁴⁵ Broadband is used to provide emergency information to the public about emergency situations.⁴⁶ The question of broadband reporting has now been on the table for 17 years, and it is time for the Commission to act.

⁴⁰ NPRM, ¶30.

⁴¹ APCO, p.4.

⁴² Public Knowledge, p. 26.

⁴³ PS-1580 and RM No. 11588, Reply Comments of the National Association of State Utility Consumer Advocates on the Second Further Notice of Proposed Rulemaking, June 1, 2020, p. 7.

⁴⁴PS-1580 and RM No. 11588, Comments of the Massachusetts Department of Telecommunications and Cable , April 30, 2020, 12-14.

⁴⁵ *Id.*, p. 12.

⁴⁶ *See, e.g.,* California Public Utilities Commission, pp. 14, 17, 26.

III. BACKUP POWER

The NPRM seeks comment on power outages as a cause of communications network outages.⁴⁷ NASUCA has long been an advocate of enforceable policies to ensure reliable wireline and wireless communications during power outages. This concern is described in NASUCA Resolution 2013-02 *Calling for the Development of National and State Policies to Ensure Reliable Wireline and Wireless Communications During a Power Outage*.⁴⁸ The resolution recognizes that communications networks are evolving and that wireless, VoIP and broadband all rely on networks that cannot function during power outages unless there is adequate back-up power in both the networks and at the customer premises.

Comments from parties support this view. The California PUC recommends a minimum backup power duration of 72 hours.⁴⁹ California PUC's comments provide numerous examples of telecommunications services during critical emergencies failing due to widespread power outages.⁵⁰ Public Knowledge also supports requiring robust backup power, citing the extensive reliance on cell phones and wireline infrastructure that requires commercial power to function.⁵¹ Public Knowledge pointed out that “[d]uring the 2020 earthquakes in Puerto Rico, the overwhelming majority of cell-site outages resulted from power loss, not damage to infrastructure.”⁵² Emphasizing the need to provide back-up power to ensure 911 access for all basic fixed telephone service, including VoIP, Public Knowledge rightly points out that “each stage of communications infrastructure” requires backup power. For example, if a customer

⁴⁷ NPRM, ¶ 3.

⁴⁸ NASUCA Resolution 2013-02. See <https://www.nasuca.org/2013-02-calling-for-the-development-of-national-and-state-policies-to-ensure-reliable-wireline-and-wireless-communications-during-a-power-outage/>

⁴⁹ California PUC, p. 3

⁵⁰ *Id.*, pp. 6-9.

⁵¹ Public Knowledge, pp. 19-25.

⁵² Public Knowledge, p. 19.

subscribing to VoIP voice service has a generator but the VoIP network provider has failed to provide backup power, the customer will lose service.

California has addressed the critical importance of ensuring reliable backup power by requiring carriers to provide network resiliency plans. The plans identify which elements of their networks rely on commercial power and need backup power to function during power outages, and describe how they will provide backup power to network elements to ensure that they continue to function when the power is out.⁵³

The Commission should enact backup power requirements for all networks and services that are used to provide 911 service and emergency alerts. The backup power requirements should include all infrastructure necessary to provision service. As Public Knowledge commented, the options for backup power have evolved.⁵⁴ The Commission has already required 72 hours of backup power for central offices that route calls to 911 centers. California has extended this requirement to apply to all cell towers, all wireline service (including VoIP) that serves critical locations (e.g., first responders, hospitals, utilities) and wireline service for all locations in high fire threat areas. The Commission should consider the extensive record developed in California, and work undertaken in other jurisdictions, to determine the feasibility of a 72 hour backup power requirement.

⁵³ California PUC, pp. 19-21.

⁵⁴ Public Knowledge, p. 22.

IV. FOSTERING RESILIENT COMMUNICATIONS NETWORKS SHOULD BE A COLLABORATIVE EFFORT INVOLVING THE FCC AND STATES, AS WELL AS COMMUNICATIONS PROVIDERS

The California Public Utilities Commission (California PUC) emphasizes that improving network resiliency is a necessity and it requires collaboration between the Commission and states. California argues that the FCC's adopted requirements should serve as a floor, not a ceiling.⁵⁵ NASUCA agrees with the California PUC. The FCC's network resiliency rules should serve as a baseline. States and, in particular state regulators, are required by statute to ensure that telecommunications providers offer safe, reliable service adequate to promote public health and safety.⁵⁶ This includes ensuring, to the best of their ability, that networks are reliable and able to support emergency communications. Every state has unique circumstances that affect public safety and communications reliability issues, and states should have the ability to adopt stricter measures in addition to those established by the Commission as necessary to protect the health and safety of the public.

⁵⁵ California Public Utilities Commission (California PUC), p. 3.

⁵⁶ See, e.g., California Public Utilities Code Sec. 451, and Ohio Revised Code Sec. 4927.0

V. CONCLUSION

NASUCA supports the Commission's efforts to improve the resiliency of the Nation's communications networks. It is vitally important that communications networks and services are resilient and reliable at all times, and especially during emergencies, when Americans need them the most.

Respectfully submitted,

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Respectfully submitted,

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