

**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)	PS Docket No. 15-80
Communications)	
)	
New Part 4 of the Commission's Rules)	ET Docket No. 04-35
Concerning Disruptions to Communications)	

REPLY COMMENTS OF PUBLIC KNOWLEDGE

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EXECUTIVE SUMMARY

Public Knowledge respectfully submits the following reply comments in the above-captioned proceeding to highlight the need for a modern resiliency plan that requires all carriers to act before, during, and after a disaster. As the Commission’s recent post-disaster reports, the NPRM, and the proceeding’s record all make clear the wireless industry’s voluntary Wireless Network Resiliency Cooperative Framework remains woefully insufficient. While Public Knowledge acknowledges the investments of major carriers, in the words of the R&B Band Lawrence, “baby, baby, baby it’s not all about you.”¹ Despite incremental improvements over the six years since the Framework’s inception, the inconsistent practices and viewpoints of wireless carriers on display in the comments, and the resulting consequences to their customers and neighboring carriers’ customers, lay bare the need for meaningful and binding protections for the public instead of continued reliance on inadequate and ad hoc industry measures.

In addition to the previous recommendations, Public Knowledge encourages the Commission to expand the current proceeding on updating the broadcaster Emergency Alert System (EAS) to include consideration of how to add broadcasters to the Disaster Information Reporting System (DIRS). Public Knowledge also supports the comments of REC Networks, which highlight the importance of Low-Power FM broadcasters and the obstacles LPFM licensees face based on continuing hostility from the National Association of Broadcasters (NAB) and some state broadcasting associations.² The Commission should take steps to make

¹ LAWRENCE, *It’s Not All About You*, on Hotel TV (Beautiful Mind Records 2021); Lawrence, *It’s Not All About You (Official Music Video)*, YOUTUBE (Dec. 6, 2019), <https://bit.ly/3FykGXE>.

² Comments of REC Networks, PS Docket No. 21-346 et al., at 5 (filed Dec. 10, 2021) (“REC Comments”).

sure that LPFMs are given access to the same resources as full power licensees, and ensure their inclusion in local, state and national emergency preparedness planning and coordination.

I. INTRODUCTION

The Commission asked for comment on measures to ensure communications networks remain resilient in the face of major emergencies and to enhance the ability of service providers to restore communications.³ While broad enough to allow for incremental improvements, the non-binding Cooperative Framework⁴ does not do nearly enough to advance the resiliency and restoration of our nation's communications infrastructure. The vulnerabilities in the current Cooperative Framework are as numerous as they are severe. The carriers' comments in this proceeding help illustrate the kinds of contradictory and self-serving policies that have frustrated disaster recovery for years. While voluntary cooperation among wireless providers is essential to timely restoring communications services,⁵ goodwill only goes so far. The time has come for bold action that ends the threat of damaging and prolonged communications outages that disrupt the nation's economy and endanger lives. Preparation and restoration also cannot start and stop with only the national mobile wireless carriers. True resiliency requires all communications providers, including regional operators, broadcasters, public safety organizations, and utility services, to participate in the planning and restoration process. This proceeding offers the hope of renewing the Commission's commitment to ensuring all Americans have access to high-quality, reliable communications even when disasters strike. Public Knowledge urges the Commission to

³ *Resilient Networks et al.*, Notice of Proposed Rulemaking, FCC 21-99, PS Docket No. 21-346 et al., ¶ 1 (rel. Oct. 1, 2021) ("2021 NPRM").

⁴ Letter from Joan March, AT&T et al., to Marlene Dortch, Secretary, FCC, PS Docket Nos. 13-239 & 11-60, at 1 (Apr. 27, 2016) ("Framework").

⁵ *October 2018 Hurricane Michael's Impact on Communications: Preparation, Effect, and Recovery*, Report and Recommendations, PS Docket No. 18-339, ¶ 5 (PSHSB 2019) ("Hurricane Michael Report").

take this opportunity to adopt binding rules that ensure meaningful resilience and timely restoration of America’s communications networks when they are needed most.

II. RESILIENCY AND SAFETY REGULATIONS ARE NOT A PUNISHMENT.

Disasters cost lives and destroy livelihoods. Improving the nation’s ability to withstand and recover from disasters is not only good for consumers, but also good for business. Exploring the adoption of new network resiliency requirements is neither punishment for the Framework’s shortcomings, nor a denial of the progress that operators have made in making network infrastructure more robust.⁶ Instead, resiliency rules simply provide clear-cut, minimum standards to ensure that every American community operators serve can reduce its vulnerability before disasters strike and recover quickly after an outage occurs. While some operators have improved their disaster-response mechanisms, the voluntary industry-made Framework has not produced clear and industry-wide advances on even its most basic policy elements, such as roaming and activation criteria, and these shortcomings continue to leave consumers at risk. The nation needs a modern resiliency plan with clear, meaningful, and objective measures that reflect the lessons learned from recent outages and ensure accountability. The Commission has already identified many straightforward resiliency measures in its numerous post-disaster reports.⁷ Making recommendations found in the post-disaster reports, including the development of

⁶ Nor does anyone seriously contend that requiring more resiliency measures will somehow end devastating weather events. Comments of AT&T, PS Docket No. 21-346 et al., at 1-2 (filed Dec. 16, 2021) (“AT&T Comments”).

⁷ See, e.g., Hurricane Michael Report ¶¶ 5, 48-55; *2017 Atlantic Hurricane Season Impact on Communications Report and Recommendations*, Report, PS Docket No. 17-344, at 28-33 (PSHSB 2018) (“2017 Hurricane Report”); Comments of Public Knowledge, PS Docket No. 21-346 et al., at 13 (filed Dec. 16, 2021) (“Public Knowledge Comments”).

preemptive reciprocal roaming arrangements,⁸ additional backup capabilities,⁹ and more substantial reporting requirements,¹⁰ binding on carriers would improve disaster response by reducing the frequency and severity of service disruptions,¹¹ holding carriers accountable to their customers and the communities they serve,¹² and most importantly, saving lives.¹³

A. Regulations that foster mutual support will benefit all carriers.

Public Knowledge recognizes the positive developments made by several wireless carriers and other communications service providers over the past several years to harden their physical infrastructure. Increases in capital investments, such as the transition from wood to steel for modern wireless infrastructure,¹⁴ new permanent generators in historic flooding areas, and updated risk-analysis modeling software,¹⁵ as well as new collaboration among carriers, utilities, and municipalities, all represent steps in the right direction. Carriers and utility companies continue to develop novel technologies to ameliorate or avoid catastrophic infrastructure damage. AT&T's Network Disaster Recovery program, its Cell on Wheels, Cell on Light Trucks, and other response and backup capabilities¹⁶ – all outside of the Framework's commitments – exemplify the type of ingenuity, custodianship, and investment into communities

⁸ Hurricane Michael Report ¶ 6.

⁹ 2017 Hurricane Report at 33.

¹⁰ *Id.* at 29.

¹¹ 2021 NPRM at 46 (Statement of Commissioner Starks).

¹² Building Resilient Networks, Before the Subcomm. on Commc'ns, Media, and Broadband, 117 Cong. ___, at 11 (2021), <https://bit.ly/3IgNWoe> (Statement of Harold Feld, Senior Vice President, Public Knowledge).

¹³ *See* 2021 NPRM at 43-44 (Statement of Commissioner Carr).

¹⁴ Comments of CTIA, PS Docket No. 21-346, at 5 (filed Dec. 16, 2021) ("CTIA Comments").

¹⁵ *Id.* at 4-5.

¹⁶ AT&T Comments at 3-4.

that customers expect from their wireless providers, especially if their region is choice-limited to one or two carriers on whom they must rely for service.

Public Knowledge encourages carriers to continue investing their profits back into customers' communities and hardening portions of their public infrastructure, particularly if these funds are coming directly from taxpayers.¹⁷ But again, this list of individual investments and achievements is no substitute for a common set of industry-wide rules that ensure a basic level of communications to everyone. The question is not whether the AT&Ts and Verizons of the world are "doing enough." The question is how to preserve a basic level of communications in every community during a crisis – without regard to who the provider is.

The comments of the largest providers and their trade associations underscore the fundamental mindset that must change to achieve a modern, resilient telecommunications network that uses the redundancy of multiple providers and the flexibility of IP networks. As Public Knowledge noted in its previous comments, providers must switch from thinking of themselves as individual actors responsible solely for their own networks in a crisis, to recognizing the power of collective and coordinated action.¹⁸ We must move from the idea that carriers provide "aid where needed, when possible" to "mutual support throughout the crisis."

Public Knowledge recognizes the concern of carriers for "free riders" and the possibility of discouraging investment. But regulations designed to foster mutual support in times of crises need not be constructed in a way that discourages investment. To the contrary, Public Knowledge has suggested that the Commission consider ways to provide suitable incentives for

¹⁷ Jon Brodtkin, *AT&T Gets \$6.5 Billion to Build US-Wide Public Safety Network*, ARSTECHNICA (March 30, 2017), <https://bit.ly/3qlW9Rk>.

¹⁸ *See generally* Public Knowledge Comments.

larger carriers to render aid, such as relief from regulatory fees or the potential to earn bidding credits suitable for use in future spectrum auctions.¹⁹ Additionally, although larger carriers may not realize this now, they will ultimately benefit from a framework where competing carriers share their resources in times of crisis. Nevertheless, Public Knowledge also believes that regulation will be necessary to ensure nationwide minimum standards and maximize resiliency in all communities.

B. There is no conflict between minimum standards and the flexibility to respond to unique situations.

Some commenters mistakenly claim that commonsense minimum standards – like those proposed by Public Knowledge, Next Century Cities,²⁰ Communications Workers of America,²¹ and others – inherently conflict with the flexibility necessary to respond to unique scenarios²² and would curb these types of investments into communities. Not so. There is a fundamental difference between “cookie-cutter” and “learning from experience.”

Basic measures such as mandatory roaming on a bill-and-keep basis, looser activation requirements, backup power, and data collection are – by design – intended to provide carriers (and the communities they serve) with the flexibility necessary to respond to unique situations, and, most importantly, to keep their customers connected regardless of the disaster that strikes. Far from some industry members’ claims, long mandatory wait times for roaming on others’

¹⁹ *Id.* at 28-29.

²⁰ Comments of Next Century Cities, PS Docket No. 21-346 et al. (filed Dec. 16, 2021).

²¹ Comments of the Communications Workers of America, PS Docket No. 21-346 et al. (filed Dec. 16, 2021).

²² *See, e.g.*, Comments of the Alliance for Telecommunications Industry Solutions, PS Docket No. 21-346 et al., at 5 (filed Dec. 16, 2021) (“Because no two disasters are identical, the industry must have the flexibility to adapt to the circumstances of that particular event.”).

networks, stricter activation criteria, and fewer backup sources result in less response capability and less flexible responses.

Additionally, the larger carriers and their trade associations underestimate the transactional costs and difficulties that confront smaller carriers under a voluntary framework. For example, as the record reflects, small local carriers have found the process of trying to negotiate emergency roaming agreements difficult or impossible.²³ A mandatory, standardized roaming agreement would eliminate the transactional costs that contribute to these barriers. Nor do these transactional costs fall solely on small carriers. Opponents of standardization and regulation argue that every location is unique. While true, each location also has many similarities with other locations. Requiring every local and state jurisdiction to negotiate their own, unique agreements needlessly imposes enormous transactional costs on the operators, the localities, and ultimately, the consumers least equipped to pay them. Creating rules that provide a set of standardized expectations to deal with the common elements of every disaster scenario will remove these transactional costs and enhance the ability of localities to deal with those elements that genuinely are unique to each locality.

As the R&B band Lawrence so eloquently explained, large carriers need to understand: “Baby, baby, baby it’s not all about you.”²⁴ Emergency response involves dozens of different actors who must coordinate and act with situational awareness. A set of national minimum standards for responsibilities, such as data collection, basic roaming, interconnection agreements, and other improvements supported by the record will improve the ability of smaller carriers, local officials, state and federal emergency responders, and citizens impacted by the crisis to

²³ Comments of NTCA – The Rural Broadband Association, PS Docket No. 21-346 et al., at 6-7 (filed Dec. 16, 2021) (“NTCA Comments”).

²⁴ LAWRENCE, *supra* note 1.

respond by providing a baseline environment in every situation. Even if mandatory minimum standards imposed some cost and loss of flexibility on the part of the larger carriers – an assumption Public Knowledge disputes – the improvements to network resiliency and emergency response overall would more than offset these costs.

C. Wireless carriers agree that objective standards can be practicable and effective.

Public Knowledge is also encouraged to see other potentially positive ways to increase carriers' responsibilities to their customers, and specifically notes proposals from Verizon and CTIA to expand the use of the Disaster Information Reporting System (DIRS), and to broaden the criteria that would trigger emergency action. CTIA supports sharing NORS and DIRS outage data with public safety entities while Verizon supports expanding DIRS for all facilities-based wireless providers and requiring these providers to post county- and company-specific DIRS information.²⁵ Public Knowledge notes that expanding DIRS to all facilities-based wireless carriers would improve situational awareness by providing state agencies with as much information as possible. Submitting status updates and situational awareness information to DIRS and the Network Outage Reporting System (NORS) during an outage would provide much more detailed and near-instantaneous information that is vital for first responders and other stakeholders. Improved data would also help the FCC coordinate federal resources that could assist victims of outages by informing and accelerating a federal response to a major outage event.

Publicly available post-outage reports that detail the impact of the event on a carrier's network and the carrier's response would also provide the Commission and consumers with vital

²⁵ CTIA Comments at 17; Comments of Verizon, PS Docket No. 21-346, at 19 (filed Dec. 16, 2021) ("Verizon Comments").

information. More inclusive reporting would help to identify the efficacy of certain practices and allow carriers to more rapidly put those lessons into practice as they build and upgrade networks around the country. Access to comprehensive reporting would also allow the Commission and relevant utilities to determine the probable cause of outages, and better position the Commission, other federal agencies and utility commissions to issue guidance aimed at preventing future outages. Such data collection and dissemination would therefore go a long way to resolve a common concern raised in the proceeding by wireless carriers who question the capabilities of the power industry and the underlying power grid.²⁶

Considering the importance that the existing Framework and nearly all commenters in this proceeding place on information-sharing with other sectors and federal, state and local entities, all of these various parties would be served by carriers filing annual reports with the Public Safety and Homeland Security Bureau detailing their disaster response and resiliency practices. Objective criteria that the FCC and on-the-ground actors can measure and enforce would represent a vast improvement to the status quo.

As for activation criteria, CTIA notes that having to wait for the Department of Homeland Security to declare its Emergency Support Function 2²⁷ (ESF-2) is not tenable, particularly in light of the near-constant wildfires that do not rise to ESF-2 activation. Nor does

²⁶ Comments of NCTA, PS Docket No. 21-346 et al., at 23 (filed Dec. 16, 2021); AT&T Comments at 20; Verizon Comments at 20-21.

²⁷ “DHS/Federal Emergency Management Agency (FEMA) activates ESF #2 when a significant impact to the communications infrastructure is expected or has occurred. When activated, ESF #2 provides communications support to the impacted area.” *Emergency Support Function #2 – Communications Annex*, FEMA, at 2 (Jan. 2008), <https://bit.ly/34E5vzk>.

such a stringent criterion reflect carriers' existing best efforts. Codifying objective activation triggers would "aid cooperative efforts during events that impact communications networks."²⁸

III. DESPITE IMPROVEMENTS IN SOME AREAS, THE EXISTING FRAMEWORK REMAINS INSUFFICIENT.

While the record demonstrates some positive developments, the crucial question the Commission presents in this proceeding is not whether there has been any progress made to the nation's infrastructure over the past few years, but what are the best solutions to achieve a resilient network, and whether the existing Framework meets the nation's needs. Again, the message to the major carriers must be: "it's not all about you."

As Public Knowledge concluded in its initial comments in this proceeding,²⁹ a series of voluntary and vague commitments by a handful of wireless providers does not sufficiently serve consumers during emergencies. Instead, the inconsistent and often clashing practices of the nation's wireless carriers evidenced in their comments are clear indications of market failure that a voluntary Framework from those at the top is incapable of solving.

D. Market forces have not led to agreement within the wireless industry on how to implement the Framework's most basic functions.

When its drafters established the Framework nearly six years ago, their first objective was to facilitate "reasonable roaming ... when technically feasible."³⁰ However, in response to this primary tenet of the Framework – something that the Commission has observed to be a key element of a resilient network strategy³¹ – nearly every corner of the wireless industry is still at

²⁸ CTIA Comments at 16.

²⁹ Public Knowledge Comments at 4.

³⁰ Framework at 1.

³¹ Hurricane Michael Report ¶ 6. "Specifically, at least *some* wireless providers did not take advantage of the types of disaster-related roaming agreements envisioned in the Framework,

odds on what to do about roaming. AT&T, for example, does not guarantee to offer roaming in the first seven hours following a disaster.³² T-Mobile, by contrast, calls for immediate roaming. T-Mobile states that “the public interest is best served by opening its network for roaming immediately upon a carrier’s request following (or in anticipation of) a disaster, rather than potentially deny service to consumers while it evaluates the network post-disaster”³³ and calls for a “default position” where carriers would prepare to “activate roaming as quickly as reasonably possible when requested to do so by another carrier, absent extenuating circumstances, without further evaluation on the impact of the traffic.”³⁴

In light of this broad disparity in how some of the nation’s largest wireless carriers interpret “reasonable roaming,” it is no wonder then, that other wireless carriers, including NTCA’s and the Rural Wireless Association’s members, condemn the larger carriers for continuing to “balk” at commonsense roaming measures.³⁵ For example, in stark contrast to AT&T’s plan, NTCA recommends that the Commission require carriers to negotiate bilateral roaming agreements with terms and conditions in place for emergency scenarios and that “any

allowing their customers to remain in the dark rather than roam on a competitor’s network. At least tens of thousands wireless customers had to wait days, unnecessarily, for their mobile phone service to be restored while their provider held off entering into roaming arrangements.” *Id.* ¶ 50 (emphasis in original).

³² See AT&T Comments at 5 (proposing to allow carriers up to four hours post-disaster to perform a network health assessment, and an additional three hours to activate roaming).

³³ Comments of T-Mobile, PS Docket No. 21-346 et al., at 9 (filed Dec. 16, 2021) (“T-Mobile Comments”).

³⁴ *Id.*

³⁵ NTCA Comments at 6-7. See also Joint Comments of the Rural Wireless Association and NTCA – The Rural Broadband Association, PS Docket No. 11-60 (filed April 29, 2019).

roaming restrictions imposed after bilateral testing is complete be capable of being lifted within a two-hour window in order to gain access to the serving carrier's network."³⁶

While the "issues around roaming can be complex,"³⁷ the growing device and software ecosystem around 4G and 5G technologies makes mandatory roaming agreements more practical than ever.³⁸ Even were expanded roaming to result in temporary modest degradation during a disaster for customers that already have service, preserving connectivity for an entire community so that non-customers can call 911 or alert their loved ones that they are safe is a commonsense step forward, and one that the Commission is best positioned to implement.

E. The Framework has led to a hodgepodge of opaque power backup initiatives.

As the Communications Workers of America notes, the Department of Homeland Security concluded years ago that the addition of battery backups, uninterruptible power systems and backup power generators "greatly increases the resiliency of the communication functions and supports critical operations."³⁹ To this end, Verizon concludes "There is no secret to maintaining and restoring backup power: providers must simply invest in generators, fuel, and the employees to maintain them."⁴⁰ However, despite recent examples of mass outages, new efficient and inexpensive backup power options, and the industry's own recognition in this proceeding of the importance of battery backup, carriers still rely on voluntary, industry-created

³⁶ Comments of NTCA at 6-7.

³⁷ T-Mobile Comments at 9.

³⁸ Public Knowledge Comments at 17.

³⁹ Comments of the Communications Workers of America at 9 (citing *Public Safety Communications Resiliency: Ten Keys to Obtaining a Resilient Local Access Network*, Department of Homeland Security, at 7 (July 2017), <https://bit.ly/3zUIKEa>) ("CWA Comments").

⁴⁰ Verizon Comments at 21.

best practices, which each carrier seems to interpret in its own way.⁴¹ This ad hoc approach leaves the consumer at the whim of unclear “network planning and engineering judgments about the risk that commercial power will be lost, the ease with which generators can be refilled in a particular area, and where service would remain available from other sites, among other things,”⁴² which the consumer can only hope are in some way untethered from their provider’s annual profit/loss considerations.

After six years of trial and error, voluntary best practices fall demonstrably short of the kinds of measures needed for meaningful network resiliency and even the half-baked reforms are unlikely to diffuse across the industry as a whole without some form of mandatory measures.

IV. A MODERN RESILIENCY PLAN REQUIRES PARTICIPATION FROM ALL COMMUNICATIONS PROVIDERS AND PUBLIC SAFETY SERVICES.

As the Commission noted in the NPRM, “there may be targeted opportunities to improve the voluntary Framework and network resiliency – not just of wireless networks, but of communications networks as a whole.”⁴³ Wireless providers are not the only potential contributors to vital emergency information. Rather, all local FCC licensees and utilities play an important role when disaster strikes.

⁴¹ See, e.g., AT&T Comments at 14 (“We recognize that most other carriers are not in a position to amass anything close to the backup fleet that AT&T has[.]”); T-Mobile Comments at 14-15, (outlining its wireless service resiliency planning, noting that “T-Mobile’s wireless service resiliency planning includes contingencies for the loss of commercial power” including, among other things, equipping “many sites with fixed generators that can compensate for the loss of commercial power.”); CTIA Comments at 16 (“Commercial power outages may be the source of many out-of-service cell sites, but wireless providers have plans to restore service—and maintain it—well before commercial power is back up and running.”).

⁴² Verizon Comments at 22.

⁴³ 2021 NPRM ¶ 14.

F. Broadcasters are a key component of a modern framework.

Radio and television broadcasters have historically played an important role in disaster response and offer vital services to their communities.⁴⁴ Broadcasters correctly assert that their technologies and business models offer different incentives to stay on air during an emergency, particularly in more rural areas.⁴⁵ In such scenarios, a local broadcaster may be a community's only source of information, as seen during recent California wildfires.⁴⁶ If NAB is correct that broadcasters are "Americans' most trusted source for timely, detailed news and information about emergencies,"⁴⁷ broadcasters' participation in a modern resiliency framework and in DIRS is all the more important. These stations, which are already familiar with established technical standards as Emergency Alert System (EAS) participants, are built to withstand severe weather, and have pre-existing relationships with local utilities, are perhaps best positioned to anchor a modern framework that requires a set of reporting standards, hardened facilities and existing power backup sources.⁴⁸

Even in the face of individual expressions of uncertainty "as to the value of DIRS reporting" or the concern that DIRS is a "one-way road," NAB "acknowledges the potential

⁴⁴ Comments of the National Association Broadcasters, PS Docket No. 21-346 et al., at 12 (filed Dec. 16, 2021) ("NAB Comments"); Joint Comments of the State Broadcasters Associations, PS Docket No. 21-346 et al., at 6 (filed Dec. 16, 2021).

⁴⁵ NAB Comments at 12-13.

⁴⁶ Leila Miller, et al., *California Suffered Widespread Cellphone Outages During Fires. A Big Earthquake Would be Much Worse*, LA TIMES (Nov. 5, 2019), <https://lat.ms/3lxcnrx>.

⁴⁷ NAB Comments at 1.

⁴⁸ *Id.* at 2.

benefits of DIRS participation.”⁴⁹ As the Commission actively considers changes to EAS,⁵⁰ now would also be an ideal time for the Commission to initiate a new proceeding to determine how best to incorporate broadcast into the DIRS system. Broadcast’s unique attributes, including (i) its ubiquity and reliability in even the most rural and otherwise underserved areas, and (ii) its experience reporting during emergencies, make broadcasters a distinctly important cog in any modern resiliency and reporting framework. As the trustees of the public’s airwaves, broadcasters take on the “essential obligation”⁵¹ of serving their local communities, which coincides with the Commission’s conclusion that participating in DIRS “[e]nhances the ability of broadcasters to aid their community during a disaster.”⁵²

Also, as ATSC 3.0 develops as a wireless service, broadcasters may soon find themselves in a position closer to that of existing wireless carriers than they do today. This confluence of factors, including broadcast’s vital role in their local communities, their existing infrastructure and weather reporting mechanisms, as well as the evolving wireless capabilities made available through the next-gen TV standard, all make broadcasters ideal participants in a modern resiliency framework.

Finally, Public Knowledge agrees with the assessment of REC Networks that Low-Power FM broadcasters (LPFM) licensees are a critical part of local response in an emergency.⁵³ As

⁴⁹ *Id.* at 6.

⁵⁰ *See Amendment of the Commission's Rules Regarding the Emergency Alert System*, Notice of Proposed Rulemaking and Notice of Inquiry, FCC 21-125, Docket No. 15-94 (rel. Dec. 15, 2021).

⁵¹ *The Public and Broadcasting*, FCC (Sept. 2021), <https://bit.ly/33A8TdZ>.

⁵² *DIRS: The FCC’s Disaster Information Reporting System*, FCC, <https://bit.ly/3FpUdf0> (last visited Jan. 13, 2022).

⁵³ REC Comments at 5.

small community-based broadcasters, these licensees are uniquely situated to provide detailed news updates and emergency alerts to communities overlooked by national networks or broadcasters focused on major markets. But, as REC points out, the NAB and many state broadcasting associations continue to show hostility to LPFMs, treating them as invaders rather than as part of the broadcast ecosystem. The Commission should be mindful of this when considering appropriate rules and standards for broadcaster participation in emergency response. In particular, the Commission should use its oversight to ensure that LPFM licensees receive the same access to resources and training as other radio broadcasters, and insist that they be included in local and regional planning and coordination.

G. Coordination with other expert federal and local utilities is essential.

Finally, Public Knowledge reiterates its call for the Commission to connect with other expert federal agencies to develop best practices. CTIA notes that there is broad recognition within the wireless industry that “coordination with other providers, partners in government, public safety stakeholders, and the energy sector further advances preparedness and restoration.”⁵⁴ However, existing practices are often a jumble of private entities with their own interests competing with or having to work around municipalities for access to the energy grid. As a result, the Commission should engage the Federal Energy Regulatory Commission, which has direct jurisdiction over power utilities and which often reports on the same storms as the FCC’s Public Safety Bureau, but with a focus on the storm’s impact on the electric grid.⁵⁵ In addition, pre-existing federal cooperation and collaboration exercises, such as the National

⁵⁴ CTIA Comments at 8-9.

⁵⁵ *Compare The February 2021 Cold Weather Outages in Texas and the South Central United States*, FERC (Nov. 2021), <https://bit.ly/3A50Mm8> with *Winter Storm Uri*, FCC <https://bit.ly/3nogHXy> (last visited Jan. 13, 2022).

Coordinating Center for Communications' Emergency Support Function-2 program, and engagement at state Emergency Operations Centers⁵⁶ must continue to be a vital component of any resiliency strategy.

Public Knowledge also appreciates the contributions from the utilities that participated in the proceeding. Utilities Technology Council is correct that greater pre-storm preparations and backup power contribute to wireless reliability,⁵⁷ and Public Knowledge echoes APCO's conclusion that "Any service provider who plays a role in the delivery of 9-1-1 or emergency alerts should be subject to stringent resiliency requirements."⁵⁸

Public Knowledge therefore encourages the Commission to engage with other federal agencies and other stakeholders, such as utility companies and frontline workers⁵⁹ to design and coordinate a more holistic and resilient communications infrastructure.

V. CONCLUSION

Improving network resiliency requires commonsense minimum standards that, despite several years, innumerable industry-led task forces and forums, and new technologies, the wireless industry has been unable to manifest on its own. If the few nationwide carriers, much less the scores of regional carriers, cannot even come to agreement on the fundamentals of roaming agreements – the Framework's first prong – then it is far overdue for the Commission to step in and lay out basic binding measures on which consumers, communities, first responders, and other federal and local agencies can finally rely.

⁵⁶ CTIA Comments, at 8-9.

⁵⁷ Comments of Utilities Technology Council, PS Docket No. 21-346 et al., at 13 (filed Dec. 16, 2021).

⁵⁸ Comments of Association of Public Safety Communications Officials International, Inc., PS Docket No. 21-346 et al., at 2 (filed Dec. 16, 2021).

⁵⁹ See CWA Comments at 2.

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