

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Improving 9-1-1 Reliability)	PS Docket No. 13-75
)	
Reliability and Continuity of)	PS Docket No. 11-60
Communications Network,)	
Including Broadband)	
Technology)	

COMMENTS OF NTCA–THE RURAL BROADBAND ASSOCIATION

I. INTRODUCTION AND SUMMARY

NTCA–The Rural Broadband Association¹ (“NTCA”) hereby submits comments in response to the Federal Communications Commission’s (the “Commission’s”) Notice of Proposed Rulemaking (“NPRM”) that proposes approaches to ensure the reliability and resiliency of communications infrastructure necessary to support the continued availability of the Nation’s 9-1-1 (“911”) system.² All communications providers have a regulatory and a social interest obligation to ensure that Americans can access state-of-the-art public safety services, at all times, especially during disasters, attacks, or other emergencies. NTCA applauds the Commission’s efforts to re-examine existing regulations to determine if they reflect industry standards and meet subscribers’ needs and quality of service standards.

¹ NTCA represents nearly 900 rural rate-of-return regulated telecommunications providers. All of NTCA’s members are full service rural local exchange carriers (“RLECs”) and broadband providers, and many of its members provide wireless, cable, satellite, and long distance and other competitive services to their communities. Each member is a “rural telephone company” as defined in the Communications Act of 1934, as amended.

² See *In the Matter of Improving 9-1-1 Reliability, and Reliability and Continuity of Communications, Including Broadband Technologies Notice of Proposed Rulemaking*, PS Docket Nos. 13-75 and 11-60 (Mar. 20, 2013) (“NPRM”).

The communications industry long ago established numerous voluntary best practices to ensure the reliability and resiliency of our nation's communications infrastructure, and the industry continues to revise these best practices as the landscape evolves and new, unforeseen issues arise. These best practices are identified and regularly reviewed by the Communications Security, Reliability, and Interoperability Council ("CSRIC"). The Commission should build upon these efforts by installing a certification scheme to enable service providers to annually certify that their 911 network services and facilities comply with the applicable industry-defined best practices administered through CSRIC.

In regard to additional 911 reliability and resiliency requirements, NTCA urges the Commission to consider the unique circumstances of small rural operators and refrain from implementing new requirements for physical diversity, to the extent such requirements would be applicable at all to RLEC operations. In fact, RLECs have limited control and typically do not interconnect directly with Public Safety Answering Points ("PSAPs"), instead relying upon the limited transport options that may be available to the small towns and countryside they serve to connect to selective routers maintained by other carriers. Due to challenging terrain, geographic distances, and limited customer bases across which to spread costs, it can be both difficult and cost-prohibitive for RLECs to provide physical diversity as a matter of course in connection with such links and other monitoring and control links.

Also, rural service providers already maintain sufficient backup power to accommodate rural emergencies and comply with local regulations. Finally, outage requirements should be tailored to reflect "need-to-know" data points and useful information.

II. THE COMMISSION SHOULD INSTALL A CERTIFICATION SCHEME USING APPLICABLE INDUSTRY-DEFINED BEST PRACTICES AS ESTABLISHED THROUGH CSRIC

More than twenty years ago, the Commission chartered the Network Reliability Council (“NRC”) to establish best practices to ensure network resiliency and reliability.³ In 2001, NRC’s successor, the Network Reliability and Interoperability Council (“NRIC”), was directed to “assess vulnerabilities in the public telecommunications networks and the Internet and determine how best to address those vulnerabilities to prevent disruptions that would otherwise result from terrorist activities, natural disasters, or similar types of occurrences.”⁴ CSRIC – the successor to NRIC – continues to refine best practices to ensure the optimal security, reliability, and interoperability of communications systems, including telecommunications, media, and public safety.⁵

NTCA members have implemented network security and reliability best practices to the extent applicable to their businesses. Based largely in the communities they serve, America’s small rural communications providers have always displayed a strong commitment to responding effectively to the interests and needs of consumers, while simultaneously planning for, and appropriately reacting to, both potential and actual public safety emergencies and threats involving their infrastructure and services.

The adoption and imposition of new best practices by the Commission likely would create needless confusion and potentially conflict with existing industry best practices. Thus,

³ For a brief history of the NRC, see <http://www.nric.org/pubs>.

⁴ NRIC VI Charter available at http://transition.fcc.gov/hspc/NRIC_recharter.pdf.

⁵ See CSRIC III Charter available at <http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRIC%20Charter%20Renewal%202011%20FINAL.pdf> (CSRIC IV is currently being formed). NTCA has actively participated on this Council in the past.

rather than develop or adopt additional reliability and resiliency requirements, the Commission should rely upon guidelines that NRIC and CSRIC already have established.⁶

To ensure that communications service providers maintain networks capable of reliable and resilient public safety communications, the Commission should install a certification scheme to enable communications service providers to annually certify that their 911 network services and facilities comply with applicable industry best practices as administered by CSRIC. To be clear, both CSRIC and NRIC recognized that every best practice may not “be appropriate for every company in every circumstance.”⁷ Rather, the CSRIC best practices allow for smaller companies to benchmark their practices against industry leaders, with limited flexibility for geographic and network differences. Further, in comparison to federal regulations, CSRIC’s industry best practices can be updated more frequently, to reflect new technologies and applications and changing subscriber expectations and needs. Should the Commission find that this certification process, together with ongoing development of the underlying practices by CSRIC, is not satisfying the public interest and provides insufficient incentives for carriers to fulfill these best practices, it can then consider whether to impose additional mandates in terms of practices and/or revise the certification process to include additional monitoring and enforcement mechanisms.

⁶ Each of the relevant FCC advisory groups – NRC, NRIC, and CSRIC – included communications carriers, equipment manufacturers, and regulators who voluntarily served in order to establish best practices to ensure network reliability and to combat threats to homeland security.

⁷ See CSRIC Working Group 2A, Cyber Security Best Practices, Final Report at 3 (Mar. 2011).

III. SMALL RURAL CARRIERS SHOULD NOT BE SUBJECTED TO SPECIFIC PHYSICAL DIVERSITY REQUIREMENTS TO THE EXTENT THAT THEY APPLY AT ALL TO RLEC OPERATIONS

As noted above, NTCA urges the Commission to consider the unique circumstances of rural operators and refrain from implementing physical diversity requirements upon small rural carriers to the extent they might apply at all to RLEC operations. Although the processing of 911 calls varies from region-to-region, RLECs typically do not interconnect directly with PSAPs. Instead, a 911 call is transported from the caller to the RLEC's central office ("CO") via the service provider's last-mile network. In most cases, the call is then carried over the RLEC's dedicated trunk or fiber connection to the applicable 911 selective router that is typically located in a regional tandem location operated by a larger interconnecting carrier. It is at this access tandem location that the Automatic Number Identifier ("ANI") is sent to the Automatic Location Identifier ("ALI") database. The originating 911 call, the queried information, and the Master Street Address Guide are then forwarded to the PSAP over the interconnecting carrier's network. As such, the originating rural carrier does not have responsibility for ANI and ALI links, or transmitting the call from the selective router to the PSAP, and, therefore, should not be subject to physical diversity requirements for 911 circuits because it typically does not provide such circuits.

To the extent that physical diversity requirements may apply to an RLEC in certain circumstances, the RLEC should still be absolved of this obligation due to its size, its limited control over interconnecting agreements, and the limited availability of physically diverse transport routes in many rural areas. In most cases, due to challenging terrain, geographic distances, and limited customer bases across which to spread costs, deploying physically diverse facilities would be cost prohibitive for small rural providers and divert limited resources toward

expensive transport facilities for a narrow purpose and limited traffic. Indeed, on the transport side of the RLEC network, communications providers often face limited routing options and arrangements that are defined in significant part by the regional tandems with which they connect, including the terms and the cost of interconnection. Deploying additional fiber facilities or rings on the transport side of the network may not be possible, and, if so, it would result in significant unrecoverable cost at a time when RLECs generally are being asked to “do more with less.”

Similar to urban providers, many RLECs operate monitor and control links that remotely observe the network and report status information back to a network operations center (“NOC”). However, these monitoring systems use the same transmission paths that connect network elements together and facilitate two-way communication. Currently, there are no equipment options available for rural service providers to connect a second physical facility to transmit status data back to the NOC. As a result, when feasible and cost-effective, RLECs have deployed ring technology, so that if the clockwise path is interrupted by a failure, than the counter-clockwise path assumes the transmission load as well as the network control capabilities. However, once again, small carriers encounter difficulty in convincing larger interconnecting carriers to agree to ring connectivity, and, as a result, this topography is often limited to the access portion of the RLEC’s network. Creating additional physical diversity in networking monitoring capabilities would require RLECs to deploy redundant cabling in their last-mile and middle-mile networks, resulting in an exponential increase in capital and operating expenses, with RLECs subject to the interconnecting carrier’s restrictions, terms, and conditions.

IV. RLECS SHOULD NOT BE SUBJECT TO ADDITIONAL BACKUP POWER REQUIREMENTS AS THEY ALREADY MAINTAIN SUFFICIENT RESOURCES TO ACCOMMODATE RURAL EMERGENCES AND COMPLY WITH LOCAL REGULATIONS

Due to weather-related conditions such as tornados, floods, and ice storms, backup power is already a primary concern for rural service providers. RLECs typically have on-hand uninterruptible power supply systems, backup batteries, and portable and on-site generators. Periodic tests are performed such as auto-start functionality and load handle as well as verifying sufficient fuel reserves are available to meet current regulations. As the Commission has noted, CSRIC has documented existing industry guidelines in regard to backup power which are the cornerstone of quality telecommunications service. As such, at this point in time, there is no need for any additional requirements. In fact, were the FCC to increase the minimum standard for central office backup power, this would necessitate that the telco increase its fuel reserves. However, state and local regulations often dictate the amount of fuel that can be kept on hand, and any FCC regulation would need to ensure it does not conflict with the existing regulatory environment.

V. OUTAGE NOTIFICATION REQUIREMENTS SHOULD BE LIMITED TO NEED-TO-KNOW USEFUL INFORMATION

The Commission's current rules already require 911 service providers to notify PSAPs when communications outages affect 911 services. As the Commission noted in the NPRM, Section 4.9 requires 911 communications providers to notify the Commission within 120 minutes of discovering a reportable outage.⁸ Existing regulations also require specified communications providers to notify "9-1-1 special facilities" -- i.e. PSAPs -- affected by an

⁸ See 47 C.F.R. § 4.9.

outage with “all available information that may be useful” to mitigate the outage “as soon as possible via telephone or other means.”⁹ Based largely upon the failure of a few providers to comply fully with existing regulations during the derecho storms, the Commission has proposed revisions to its rules that would require service providers to relay specific additional information such as the nature of the outage, the estimated number of users affected, the location of the users, the actions being taken by the service provider to address the outage, the estimated time at which service will be restored, and recommended actions the impacted facility should take to minimize service disruption.¹⁰

The focus on specific additional information to be included in outage reports should be constrained to “need-to-know” data points. PSAPs would likely benefit from outage notifications that include the estimated number of uses affected, the location of the users, and the estimated time at which service should be restored; however, PSAPs do not need to know the specific actions being taken by the service provider to address the outage. In an emergency situation, the proposed service restoration action plan may very well change and become outdated quickly. Moreover, a provider may not have all actions defined sufficiently by the time it wants to notify the PSAP of an outage in the first instance. This auxiliary information also will not provide PSAPs with clear data that can be employed and used to improve the PSAP’s, or its would-be callers’ status. Finally, in regard to recommended actions that the impacted facility should take to minimize service disruption, while carriers should be encouraged to work with PSAPs to find the best possible resolution to outage situations, the PSAP would likely be better equipped than the service provider to make accommodations for emergency response when 911 calls are unable to be terminated from a subset of the served population.

⁹ NPRM ¶68. *See* 47 C.F.R. § 4.9.

¹⁰ NPRM ¶70, Appendix B.

When all service has been interrupted between the 911 caller and the PSAP, the Commission should recognize that RLECs' rely on the same facilities to notify PSAPs of service outages as those that carry voice communications. Service providers should therefore be allowed to utilize all available communications methods, including wireless and/or wired means, to contact a PSAP in regard to outage information to ensure the most timely and effective method of communication as possible.

VI. CONCLUSION

The Commission should install a certification scheme to enable service providers to annually certify that their 911 network services and facilities comply with applicable industry best practices as established by CSRIC. Given their limited interaction and interconnection with PSAPs, and expansive and challenging rural service areas, the Commission should refrain from instituting any new, additional requirements for physical diversity. Likewise, RLECs have sufficient on-site backup power and, therefore, should not be subject to additional backup power requirements. Finally, outage requirements should only include information that can be useful to PSAPs.

Respectfully submitted,



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