Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Facilitating Implementation of Next Generation	)	
911 Services (NG911)	)	PS Docket No. 21-479
	)	
Improving 911 Reliability	)	PS Docket No. 13-75

COMMENTS OF APCO INTERNATIONAL

I. INTRODUCTION

The Association of Public-Safety Communications Officials, International ("APCO")[1] provides these comments on the Commission's Further Notice of Proposed Rulemaking to ensure the resiliency, reliability, interoperability, and accessibility of Next Generation 9-1-1 ("NG9-1-1") networks ("*NG9-1-1 Further Notice*").[2] APCO appreciates the Commission's efforts in this vital area and agrees with the Commission's goal to "keep pace with the ongoing transition to NG911, improve NG911 network reliability and resilience, reduce the risk of outages, and ensure accessibility to the life-saving improvements that NG911 is uniquely capable of delivering."[3] In this regard, APCO provides these comments to inform the adoption of a regulatory framework that ensures the interoperability and reliability of NG9-1-1 networks – so these systems can fully realize their tremendous potential to enhance public safety.

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[1] Founded in 1935, APCO is the nation's oldest and largest organization of public safety communications professionals. APCO is a non-profit association with over 40,000 members, primarily consisting of state and local government employees who manage and operate public safety communications systems – including 9-1-1 emergency communications centers (ECCs), emergency operations centers, radio networks, and information technology – for law enforcement, fire, emergency medical, and other public safety agencies.

[2] *Facilitating Implementation of Next Generation 911 Services (NG911)*; *Improving 911 Reliability*, PS Docket Nos. 21-479 and 13-75, Further Notice of Proposed Rulemaking, FCC 25-21, 2025 WL 985736 (Mar. 28, 2025) ("*NG9-1-1 Further Notice*").

[3] *Id*. at para. 2.

II. DISCUSSION

A. NG9-1-1 Rules Should Take a Comprehensive, Technology-Neutral Approach

At the outset, it is important to clarify a few overarching points with respect to the Commission's approach in the *NG9-1-1 Further Notice*. Last year, the Commission took an important step in facilitating the transition to NG9-1-1 by defining NG9-1-1 in a comprehensive and technology-neutral manner.[4] This definition is consistent with the needs of the public safety community.[5] APCO urges the Commission to maintain this approach and ensure that any rules adopted preserve flexibility for emergency communications centers (ECCs) in how they deploy NG9-1-1 technologies. In the *NG9-1-1 Further Notice*, the Commission notes that "most states have invested in NG911 technology, and many states and local jurisdictions have operating ESInets."[6] While some jurisdictions may have implemented emergency services IP networks (ESInets), APCO cautions that the deployment of ESInets should not be considered the equivalent of the deployment of NG9-1-1.[7]

Indeed, NG9-1-1 networks are (and will be) comprised of more than just ESInets. As a result, the Commission should take care that its interoperability and reliability rules for NG9-1-1 networks reflect this reality and remain consistent with the comprehensive concept of NG9-1-1 previously adopted and supported by the public safety community. Doing so will ensure that,

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[4] *See* 47 CFR § 9.28. *See also Facilitating the Implementation of Next Generation 911 Services (NG911), Location-Based Routing for Wireless 911 Calls*, PS Docket Nos. 21-479 and 18-64, Report and Order, 38 FCC Rcd 6204, 6224, para. 39 (2024) (*NG9-1-1 Transition Order*)("[T]he definition adopted today will advance our goal of a technology-neutral approach to implementation of NG911…")).

[5] *See* Public Safet Next Generation 9-1-1 Coalition, *Next Generation 9-1-1 Fact Sheet* (last visited July 17, 2025), https://ng911coalitionorg.wordpress.com/next-generation-9-1-1-fact-or-fiction/ ("*Next Generation 9-1-1 Fact Sheet*") (describing principles to be incorporated as part of NG9-1-1 legislation, including support for the NG9-1-1 definition the Commission adopted).

[6] *NG9-1-1 Further Notice* at para. 3.

from the start, the Commission's rules address the myriad technologies that comprise NG9-1-1 networks and will preserve and promote innovation and flexibility as NG9-1-1 networks reach maturity and continue to evolve.

B. Both Conformance and Interoperability Testing Are Essential to Ensuring True Interoperability and a Successful NG9-1-1 Transition

As APCO has previously emphasized, addressing interoperability is the most important step the Commission can take to facilitate the transition to NG9-1-1.[8] The Commission has rightly recognized the real-life significance of these issues: "[a]s the NG911 transition progresses, these interoperability issues are likely to manifest into incompatibilities detrimental to the processing and receipt of 911 traffic and related information by 911 Authorities across state lines."[9] We must act now to ensure this does not happen.

The first step is to establish a clear definition of the term "interoperability," to ensure all stakeholders have a shared understanding of what this term means. Too often, NG9-1-1 interoperability challenges result from the implementation of proprietary NG9-1-1 solutions that can only interoperate by bolting on prohibitively costly, after-the-fact upgrades. This is not true interoperability. The public safety community has developed a definition of interoperability that reflects its operational needs and that has been incorporated into legislative proposals.[10] APCO urges the Commission to adopt this definition as well.

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[8] Comments of APCO International, PS Docket 21-479 at 5 (Aug. 9, 2023) ("The greatest impact the Commission can have on facilitating the transition to NG9-1-1 would be to require interoperability between OSPs and 9-1-1 service providers, and among 9-1-1 service providers.").

[9] *NG9-1-1 Further Notice* at para. 71.

[10] *See Next Generation 9-1-1 Fact Sheet* (defining interoperability to mean "the capability of emergency communications centers to receive 9–1–1 requests for emergency assistance and information and data related to such requests, such as location information and call back numbers from a person initiating the request, then process and share the 9–1–1 requests for emergency assistance and information and data related to such requests with other emergency communications centers and emergency response providers without the need for proprietary interfaces and regardless of jurisdiction, equipment, device, software, service provider, or other relevant factors"); *see also* Next Generation 9-1-1 Act of 2023, H.R. 1784, 118th Cong. § 2 (d)(10) (2023).

Additionally, while interstate interoperability poses the greatest challenges – and is the focus of the *NG9-1-1 Further Notice* – intrastate interoperability issues persist. Further, the majority of transfers of 9-1-1 traffic occur between intrastate ECCs. The Commission's requirements should therefore encompass both interstate and intrastate interoperability, particularly as the distinction between interstate and intrastate interoperability is of far less importance in the NG9-1-1 ecosystem. Accordingly, APCO encourages the Commission to focus on ensuring interoperability between networks and devices, regardless of whether it is on an interstate or intrastate basis.

APCO supports both conformance and interoperability testing to ensure ECCs can reliably transfer lifesaving 9-1-1 voice, data, and multimedia across networks in real-world conditions. With respect to conformance testing, APCO agrees with the Commission that it "could be used to ensure that devices and network equipment that are deployed are compliant with commonly accepted standards."[11] Conformance testing requirements should reflect the reality of the standardization process: because standards are continually updated, conformance testing must be technology-neutral and preserve flexibility as technologies evolve. The Commission should also encourage conformance testing across multiple commonly accepted standards and vendor solutions to promote interoperability between diverse networks and devices.

While conformance testing can ensure that a NG9-1-1 product or solution complies with established standards, it does not guarantee effective performance in real-world, integrated environments. For this reason, conformance testing also must be accompanied by end-to-end interoperability testing. Interoperability testing ensures that solutions not only meet standards but

[11] *NG9-1-1 Further Notice* at para. 73.

also support the operational needs of ECCs. Robust interoperability testing should also encourage vendors to design solutions that are forward-compatible with future NG9-1-1 capabilities and architectures, while remaining interoperable with legacy systems.

Importantly, the Commission should establish criteria for interoperability testing that ensure transparency and effectiveness, and prevent bias. Testing parameters should reflect real-world scenarios and operational needs. In this regard, interoperability requirements should apply to whatever types of NG9-1-1 traffic an ECC could receive, including photos, videos, telematics, and other forms of broadband-enabled communications. Such interoperability testing should follow the "rule of three" by demonstrating that a product or solution is interoperable with at least three ECCs, utilizing three different ESInets (including at least one that is intra- and interstate). One sample test scenario could involve a child abduction, where the child may be taken across jurisdictional lines within the same state as well as out of state. The caller shares a photo of a missing child, and the original ECC must transfer the voice call, computer-aided dispatch data, and multimedia content to appropriate intrastate and interstate ECCs, which operate on different ESInets and use different vendors. Interoperability testing also should extend beyond lab environments and include live testing in the field.

The results of conformance and interoperability testing should be available upon request to the relevant ECCs within the covered 9-1-1 service providers' (CSPs') applicable service areas, as well as to APCO and other public safety stakeholders.[12] ECCs need clear,

[12] The Project 25 Compliance Assessment Program may provide a useful point of reference for how vendors already share standardized testing results today. Vendors must test their products against the Project 25 standard and publish and post Standard Declaration of Compliance documents outlining the interoperability inherent in their products. They use conformance, interoperability, and performance testing in their process. While NG9-1-1 presents different technical and operational challenges, this approach illustrates one way that transparency and accountability can be built into a standards-based environment. Elements of this model may offer helpful insights as the Commission considers how to structure conformance and interoperability testing for NG9-1-1 systems. *See* Department of

straightforward information. Networks should be clearly identified as either interoperable or not, with specific test outcomes reported in a simple pass/fail format.

Finally, APCO supports the Commission's proposal to permit service providers to demonstrate conformance testing and interoperability through a certification process.[13] APCO urges the Commission to establish clear, robust standards and objective benchmarks to serve as the foundation for self-certification.

C. The Commission's Proposed Reliability Requirements Should Reflect Broad Scenarios

APCO supports the Commission's proposal that CSPs implement reliability practices that address physical diversity, network monitoring, and operational integrity.[14] These practices are essential to ensuring that 9-1-1 systems remain resilient, secure, and capable of functioning during emergencies when they are needed most.

APCO supports the Commission's proposed changes to the definition of physical diversity to "add geographic diversity as a necessary part of this updated definition for IP paths, to ensure service providers can automatically reroute 911 traffic to travel over a different path that is both physically diverse and geographically separated."[15] The benefits of ensuring that data is "transmitted over diverse routes that do not share any common physical segments"[16] would be obviated if those diverse routes were geographically co-located and therefore subject to the same

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Homeland Security, Science and Technology Directorate, *Project 25 Compliance Assessment Program* https://www.dhs.gov/science-and-technology/p25-cap (last visited July 18, 2025).

[13] *NG9-1-1 Further Notice* at para. 74.

[14] *Id.* at para. 56 (internal citations omitted).

[15] *Id.* at para. 63.

[16] *Id.*

physical vulnerabilities, such as natural disasters. Implementing geographic diversity will ensure that the benefits of physical diversity are actually realized in practice.

APCO also generally supports the Commission's proposal to expand network monitoring requirements to include "appropriate NG911 monitoring technologies identified in prior Commission orders as methods of compliance,"[17] as well as proposals to establish operational integrity best practices for CSPs.[18] These requirements would help enable CSPs to quickly identify and address service disruptions, reducing the risk of outages that could impact the delivery of 9-1-1 calls.[19] At the same time, however, APCO encourages the Commission to adopt requirements that provide sufficient flexibility to allow for variances in CSP networks and implementation.

Finally, the *NG9-1-1 Further Notice* would also clarify that "CSPs directly serving PSAPs are responsible for ensuring the reliability of all of the NG911 capabilities they provide to the PSAP, whether through contractors of any tier, vendors, or via leased facilities."[20] APCO supports this proposal, which, as the Commission notes, "largely would be a codification of…longstanding principle."[21]

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[17] *NG9-1-1 Further Notice* at para. 67.

[18] *See id.* at para. 70.

[19] APCO notes that the Commission inquires about amending the outage reporting threshold outlined in section 4.5(e) of the Commission's rules. APCO strongly supports revisiting these thresholds to more accurately meet the needs of ECCs, however, these inquiries are better suited to a separate further notice in the outage notifications docket where the Commission may develop a more thorough record on the issue. Additionally, APCO encourages the Public Safety and Homeland Security Bureau to move forward with its investigation into the number of 9-1-1 outages that go unreported under the existing outage notification thresholds. *See Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications, Improving 911 Reliability, New Part 4 of Commission's Rules Concerning Disruptions to Communications*, PS Docket Nos. 15-80 and 13-75, ET Docket No. 04-35, Second Report and Order, 37 FCC Rcd 13847,13860, para. 23 n.86 ("We direct the Public Safety and Homeland Security Bureau to gather for future consideration information on the volume of 911 outages that may go unreported under the Commission's existing outage notification thresholds and seek additional comment on possible alternative outage reporting thresholds.").

[20] *NG9-1-1 Further Notice* at para. 39.

[21] *Id.*

D. The Commission's NG9-1-1 Rules Should Be Flexible and Forward-Looking, and Should Not Be Tied to Legacy Equivalents

APCO urges the Commission to look beyond "functional equivalents" to legacy networks in assessing reliability and interoperability requirements for NG9-1-1. As NG9-1-1 matures, its services and capabilities may expand well beyond existing conventions. Forcing NG9-1-1 services to fit in a one-to-one framework with legacy 9-1-1 functionalities limits flexibility for innovation and risks rapid obsolescence as technology evolves. Under existing rules, CSPs include entities that provide the "functional equivalent" of the capabilities specified in the rule.[22] While APCO generally supports expansion of the term "functional equivalent" to encompass the numerous critical components that comprise NG9-1-1 networks, focusing on functional equivalents is underinclusive. By design, NG9-1-1 networks may incorporate new technologies and services that lack direct functional equivalents to those used in legacy systems. And because new technologies continue to emerge, it may not be possible to accurately identify these technologies now. For NG9-1-1 networks to function properly, the Commission's requirements should strive to be forward-looking and allow for the evolution of technologies and services, regardless of whether they have existing "functional equivalents."

III. CONCLUSION

APCO appreciates the Commission's proposals to promote interoperability and reliability in NG9-1-1 networks. As the Commission moves forward, it should maintain a comprehensive, technology-neutral approach that fosters innovation and helps fulfill the lifesaving promise of NG9-1-1. The development and implementation of robust, clearly defined interoperability and reliability requirements are essential in this regard. APCO looks forward to continuing to work

[22] 47 C.F.R. § 9.19(a)(4).

with the Commission and public safety and industry stakeholders to help ensure future-ready and resilient NG9-1-1 networks and services.

Respectfully submitted,

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