

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of:

911 Governance and Accountability;

Improving 911 Reliability.

PS Docket No. 14-193

PS Docket No. 13-75

**COMMENTS OF THE  
CALIFORNIA PUBLIC UTILITIES COMMISSION**

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The California Public Utilities Commission (CPUC) submits these Comments in the Federal Communications Commission’s (FCC or Commission) Notice of Proposed Rulemaking (*NPRM*)<sup>1</sup> concerning the adoption of a uniform national approach to Internet Protocol (IP) 911 service to ensure the quality and reliability of 911 service is not impaired by the introduction of new communications players and technologies.<sup>2</sup>

## **I. INTRODUCTION**

In the *NPRM*, the FCC notes that while state and local regulators play critical roles in ensuring 911 availability, technologies and commercial relationships that form the foundation of the 911 system are becoming increasingly interstate in nature.<sup>3</sup> Further, the Commission states that although innovative technologies have the potential to improve many aspects of 911 service and enhance the ability of first responders to do their jobs more effectively, recent outages have revealed that these technology changes may also introduce new vulnerabilities. The Commission concludes that new communications technologies pose technical and operational challenges to the 911 system, necessitating the adoption of a uniform national approach to ensure that the quality and reliability of 911 service is not damaged by the introduction of such communications technologies.<sup>4</sup>

In this *Policy Statement and NPRM*, the FCC:

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<sup>1</sup> *Policy Statement and Notice of Proposed Rulemaking*, In the Matter of 911 Governance Accountability, Improving 9-1-1 Reliability; PS Docket No. 14-193, PS Docket No. 13-75; rel. Nov. 21, 2014. (*NPRM*).

<sup>2</sup> *NPRM*, ¶ 3

<sup>3</sup> *Id.*, ¶ 2.

<sup>4</sup> *Id.* ¶ 3.

- 1) affirms the core principles that have guided and will continue to guide the Commission's approach to ensuring reliable and resilient 911 service and its continuing partnership with state and local authorities;
- 2) proposes specific rules designed to address failures leading to recent multi-state 911 outages, based on the October 2014 report of the Public Safety and Homeland Security Bureau; and
- 3) proposes additional mechanisms designed to ensure that the 911 governance structure keeps pace with evolving technologies and new reliability challenges so that all 911 service providers remain fully accountable to the public they serve.<sup>5</sup>

The FCC proposes “to take the same approach here as in its recent *911 Reliability Order*: the proposals in this *NPRM* are not intended to alter state jurisdiction over 911 or to limit state and local authorities' ability to take consistent action.”<sup>6</sup>

The CPUC agrees that reliable and resilient 911 service is an essential communications service that must be effectively maintained during the transition to Internet Protocol (IP) technologies and the entry of new 911 network providers. The CPUC further agrees that some federal rules may be necessary to ensure 911 reliability, especially when service involves interstate transport. The CPUC supports adoption of some national uniform standards and requirements as discussed below. However, the FCC must not usurp state and local governance over this vital service.

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<sup>5</sup> *Id.*, ¶ 4.

<sup>6</sup> *Id.*, ¶ 28, citing Reliability and Continuity of Communications Networks, Including Broadband Technologies, PS Docket Nos. 13-75, 11-60, *Report and Order*, 28 FCC Rcd 17476, 17487, ¶ 30 (2013) (*911 Reliability Order*).

## II. DISCUSSION

### A. Definition of “Covered 911 Service Provider”

FCC Rule 12.4 requires all covered 911 service providers to take reasonable measures to provide reliable 911 service with respect to circuit diversity, central-office backup power, and diverse network monitoring. The FCC now proposes to expand the scope of entities covered by Rule 12.4<sup>7</sup> to include all entities that provide 911, E911, or Next Generation (NG) 911 capabilities, such as call routing, automatic location information (ALI), automatic number identification (ANI), location information servers (LIS), text-to-911, or the functional equivalent of those capabilities, regardless of whether they provide such capabilities under a direct contractual relationship with a public safety answering point (PSAP) or emergency authority. This definition would include all entities that provide 911-specific network infrastructure, but only to the extent that they provide specified 911 capabilities.<sup>8</sup>

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<sup>7</sup> Currently under Rule 12.4 a “covered 911 service provider” is defined as:

(i) any entity that:

(A) Provides 911, E911, or NG911 capabilities such as call routing, automatic location information (ALI), automatic number identification (ANI), or the functional equivalent of those capabilities, directly to a public safety answering point (PSAP), statewide default answering point, or appropriate local emergency authority as defined in §§64.3000(b) and 20.3 of this chapter; and/or

(B) Operates one or more central offices that directly serve a PSAP. For purposes of this section, a central office directly serves a PSAP if it hosts a selective router or ALI/ANI database, provides equivalent NG911 capabilities, or is the last service-provider facility through which a 911 trunk or administrative line passes before connecting to a PSAP.

(ii) The term “covered 911 service provider” shall not include any entity that:

(A) Constitutes a PSAP or governmental authority to the extent that it provides 911 capabilities; or

(B) Offers the capability to originate 911 calls where another service provider delivers those calls and associated number or location information to the appropriate PSAP.

<sup>8</sup> *NPRM*, ¶ 42.

The CPUC supports this proposal. All parties provisioning any part of the 911 network should be responsible for ensuring the reliability of the function so provided. Expansion of Rule 12.4 to these entities will strengthen the reliability of 911 service. The addition of these other entities will ensure that each link in the chain will be treated equally under Rule 12.4.

### **B. Rule 12.4 as a “Reasonable” Standard and New Obligation**

To ensure that Rule 12.4 keeps pace with evolving network architectures and reliability risks, the FCC proposes to amend section 12.4(b) to provide that “all covered 911 service providers shall take reasonable measures to provide reliable 911 service.” This obligation would include – but not be limited to – the existing areas of circuit diversity, central-office backup power, and diverse network monitoring. While the current Rule 12.4 only addresses reliability with respect to these three specific areas, the FCC believes it would demonstrate better governance for this rule to require covered entities to take reasonable measures generally to ensure the reliability of 911 service, with specific behavior identified within this rule as necessary to add more detail.<sup>2</sup>

The FCC also seeks comment on additional network reliability practices that should be incorporated into Rule 12.4 and its associated certification requirements. Based on the findings with respect to the April 2014 multistate 911 outage and other large-scale disruptions in 911 service, the FCC anticipates that one area of particular importance will be the reliability and testing of software and databases used to process

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<sup>2</sup> *Id.*, ¶ 44. The FCC states in footnote 104 “If the Commission determines to make rule 12.4 a general reasonableness standard, we would intend that this rule supplement any other rules that already contain a requirement to use reasonable measures.”

911 calls, including planned maintenance and software upgrades. The FCC also proposes that the certification should indicate whether a service provider's IP-based 911 architecture is geographically distributed, load-balanced,<sup>10</sup> and capable of automatic reroutes to backup equipment in the event of a hardware, network, software or database failure. Finally, the FCC proposes that the network monitoring component of the existing rule should cover not just the physical diversity of monitoring facilities, but also the proper prioritization of critical network alarms.<sup>11</sup>

The CPUC supports these changes to Rule 12.4. A general requirement that all the covered entities must take reasonable measures to provide reliable 911 service establishes a basic standard to guide activities of covered 911 service providers not addressed by specific requirements. We also support the FCC proposal to now require a service provider to certify that its IP-based 911 architecture is geographically distributed, load-balanced, and capable of automatic reroutes to backup equipment in the event of a hardware, network, software or database failure, or otherwise demonstrate that it has taken appropriate measures to mitigate the risk of a hardware, network, software, database, or other failure. It is critical that new 911 system service providers that process 911 calls originating from multiple states, or multiple areas of a state, be capable of

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<sup>10</sup> See footnote 107 of *NPRM*, at p. 20. A 911 network is "load balanced" if call volume is dynamically distributed among all available databases or call processing facilities rather than concentrated in one location. Calls assigned to each database should be automatically rerouted to the other in the event of a fault with the primary route. Furthermore, if two or more PSAPs share the same 911 service provider and rely on each other as a backup PSAP for rerouting of 911 calls, the 911 service provider should consider assigning each PSAP to a different primary routing database.

<sup>11</sup> *Id.*, ¶ 45.

continuing to provide service in the event that part of its system is disabled. The more centralized the system, the greater the need for redundancy.

### **C. Outage Notification to PSAPS**

The FCC proposes that Rule 12.4 should reflect and require certification with respect to the duty to take reasonable measures to share information and situational awareness, as appropriate under the circumstances, during disruptions in 911 service. The FCC seeks comment on the scope of information and communications that should be reasonably expected from various entities in the 911 ecosystem, including those with direct contractual relationships with PSAPs and those that provide service on a vendor or subcontractor basis. At a minimum, it asserts that the certification should indicate whether a covered 911 service provider has a process in place to notify PSAPs of an outage within the timeframes specified in Part 4 of the FCC's rules. For example, to ensure that outage notifications are provided swiftly and accurately in the event of an emergency, the covered 911 service providers should confirm PSAP contact information and test notification plans periodically.<sup>12</sup>

The CPUC supports the FCC proposal that the annual certification required of covered 911 service providers at a minimum should include certification that the provider has a process in place to notify PSAPS of an outage within the timeframes specified in Part 4 of the FCC rules.<sup>13</sup> This notice is especially important where the 911 provider is located out of state. In those cases the local PSAP authorities and originating service

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<sup>12</sup> *Id.*, ¶ 46.

<sup>13</sup> 47 CFR §4.9(h) requires covered 911 service providers to notify PSAPs within 30 minutes of discovering an outage and follow up with more detailed information within two hours.

providers need to be made aware of the outage as soon as possible in order to take steps to ensure callers to 911 are aware of the outage and to provide alternative solutions to callers during the outage. We agree that covered 911 service providers periodically should confirm PSAP contact information and test notification plans.

#### **D. Notification of Changes in 911 Architecture**

The FCC notes that an increasing number of covered 911 service providers are not incumbent local exchange carriers (ILECs) and thus are not required to file notifications when changes to their networks may affect 911 connectivity. The FCC therefore proposes to require 911 service providers to notify the FCC and the public of major changes in any covered 911 service provider's network architecture or scope of 911 services that are not otherwise covered by existing network change notification requirements. The FCC further seeks comment on which 911 service providers should be subject to notification requirements. The *NPRM* asks whether originating service providers (OSPs), ILECs, system service providers (SSPs), and their sub-contractors should each be responsible for reporting major changes in their respective facilities and networks, or whether ILECs and/or SSPs providing 911 services directly to PSAPs should be responsible for notification of major changes by their subcontractors and other affiliated entities.<sup>14</sup>

The CPUC supports the proposal that OSPs, ILECs and/or SSPs providing 911 network services directly to PSAPs should be responsible for notification of major changes, including major changes by their subcontractors and other affiliated entities. The entity providing service directly to the PSAP is responsible for ensuring the 911

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<sup>14</sup> *NPRM*, ¶¶ 50-51.

network is functioning properly. This entity also should be aware of any major changes to the 911 network in question.

### **E. Requirements for New Entrants**

The FCC proposes to establish rules to ensure reliability and accountability of new IP-based 911 capabilities and services. Noting that “covered 911 service providers increasingly are building and operating regional and nationwide IP-based 911 networks that both extend across state boundaries and serve PSAPs in multiple states, using less well established technologies,” the FCC states that “these multi-state networks transcend the regulatory authority of any individual state.”<sup>15</sup> The FCC also notes “many states have elected not to exercise jurisdiction over IP-based communications, a determination that may operate to restrict their ability to ensure the reliability of 911 service that depends on IP-based technology.”<sup>16</sup> Therefore, the FCC believes that a federal-level process is needed to ensure that there are no regulatory gaps in oversight of providers of new 911 services. The FCC states that “this process is not intended to supplant state action; to the contrary, it would complement existing state oversight and could be used to empower state-level action.”<sup>17</sup>

The FCC proposes to require covered 911 service providers that seek to offer new services that affect 911 call completion to certify to the Commission that they have the technical and operational capability to provide reliable 911 service. In addition, to the

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<sup>15</sup> *NPRM*, ¶ 58.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

extent that the new services rely on IP-based networks, associated infrastructure such as servers and data centers, and/or associated software applications, it proposes that covered 911 service providers certify that they have conducted a reliability and security risk analysis of the network components, infrastructure, and/or software that they will use to support 911 call completion. This proposal would not require Commission approval of new entrants or delay the introduction of innovative new 911 technologies. It would, however, require entities that seek to provide new critical links in 911 call completion to publicly acknowledge their responsibilities and certify their preparedness to implement relevant best practices and comply with existing Commission rules applicable to the 911 capabilities they provide.<sup>18</sup>

The CPUC supports the FCC proposal to establish rules to ensure that new entrants can provide reliable and secure 911 network services and that they are aware of, and will comply with, FCC federal requirements. The rules should not, however, usurp state authority to determine whether to permit a service provider to operate in the state. Rather, compliance with the FCC's rules could be a factor for the state to consider when a covered 911 network provider seeks to operate in the state.

### **III. CONCLUSION**

We support the Commission's effort to establish national rules to guide the emergence of new providers of 911 networks and/or network components and to ensure that 911 networks that service multi-state jurisdictions provide reliable and redundant 911 service. Thank you for this opportunity to comment.

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<sup>18</sup> *Id.*, ¶ 59.

Respectfully submitted,

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