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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Emergency Disaster Relief Program.	R. 18-03-011 (March 22, 2018)

COMMENTS

OF
CALAVERAS TELEPHONE COMPANY (U 1004 C)
CAL-ORE TELEPHONE CO. (U 1006 C)
DUCOR TELEPHONE COMPANY (U 1007 C)
FORESTHILL TELEPHONE CO. (U 1009 C)
HAPPY VALLEY TELEPHONE COMPANY (U 1010 C)
HORNITOS TELEPHONE COMPANY (U 1011 C)
KERMAN TELEPHONE CO. (U 1012 C)
PINNACLES TELEPHONE CO. (U 1013 C)
THE PONDEROSA TELEPHONE CO. (U 1014 C)
SIERRA TELEPHONE COMPANY, INC. (U 1016 C)
THE SISKIYOU TELEPHONE COMPANY (U 1017 C)
VOLCANO TELEPHONE COMPANY (U 1019 C)
WINTERHAVEN TELEPHONE COMPANY (U 1021 C)
(the "SMALL LECs")

ON
ASSIGNED COMMISSIONER'S RULING AND PROPOSAL FOR MAINTAINING RESILIENT AND DEPENDABLE COMMUNICATIONS NETWORKS

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I. INTRODUCTION.

Calaveras Telephone Company (U 1004 C), Cal-Ore Telephone Co. (U 1006 C), Ducor Telephone Company (U 1007 C), Foresthill Telephone Co. (U 1009 C), Happy Valley Telephone Company (U 1010 C), Hornitos Telephone Company (U 1011 C), Kerman Telephone Co. (U 1012 C), Pinnacles Telephone Co. (U 1013 C), The Ponderosa Telephone Co. (U 1014 C), Sierra Telephone Company, Inc. (U 1016 C), The Siskiyou Telephone Company (U 1017 C), Volcano Telephone Company (U 1019 C) and Winterhaven Telephone Company (U 1021 C) (the "Small LECs"), hereby submit their comments on the Assigned Commissioner's Ruling and Proposal For Maintaining Resilient and Dependable Communications Networks, issued March 6, 2020 (the "Ruling"). The Ruling solicits responses from communications service providers to a series of questions relating to the resiliency and dependability of communications networks during emergency events such as wildfires and public safety power shutoffs ("PSPS") initiated by electric utilities and includes a Proposal for addressing the issues raised in the Ruling.

II. RESPONSES TO TOPICS REGARDING COMMUNICATIONS NETWORK RESILIENCY DURING CATASTROPHIC EVENTS.

The Small LECs hereby respond to the specific questions raised in the Ruling on pages 3 through 7.

1. <u>Applicability of Requirements</u>: The Proposal states that the requirements shall be applicable to all companies owning, operating, or otherwise responsible for infrastructure that provides or otherwise carries 9-1-1, voice, text messages, or data.

(a) Is this definition of applicability reasonably tailored to ensure regulatory compliance over all communications service providers? Why or why not?

(b) Which types of providers, if any, should be excluded from these requirements because their services are not essential to reliable access to 9-1-1 and the distribution of essential emergency information?

2. Alternatively, D.19-08-025 defined communications service providers into the following categories: (1) facilities-based and non-facilities-based landline providers include 9-1-1/E 9-1-1 providers, LifeLine providers, providers of Voice Over Internet Protocol [VoIP], Carriers of Last Resort [COLRs], and other landline providers that do not fall into the aforementioned groups; (2) wireless providers include those that provide access to E 9-1-1 and/or LifeLine services; (2A) facilities-based wireless providers; and (2B) non-facilities-based wireless providers, include resellers and mobile virtual network operators [MVNOs].

(a) For purposes of Phase II, should the Commission apply the definition from D.19-08-025, instead of the proposed definition in the Proposal?

The Small LECs generally support the definition set forth in the Proposal as described in question 1 above, with the understanding that there will need to be exemptions from specific requirements in the case of smaller providers. For example, real-time web-based access to outage information may be feasible for and have been implemented by large electric utilities who have the economies of scale and scope to be able to efficiently provide such a service. However, these services are not presently practicable for companies such as the Small LECs who would need to make significant capital investments to be able to provide such a service. This is not to say that the Small LECs should be exempted from the general definition of applicability being proposed, but rather that the Commission should evaluate the reasonableness and feasibility of the requirements it establishes based on the circumstances specific to each communications provider.

The definition of applicability must also necessarily align with the jurisdiction of the Commission over intrastate public utilities, the regulated services they provide, and the infrastructure used for those services. The applicability statement would, therefore, necessarily not include matters beyond the Commission's jurisdiction such as interstate non-regulated services, as designated by the Federal Communications Commission,[1] such as broadband data. Consequently, the Small LECs' internet affiliates would not fall under the "applicability" of these requirements.

3. <u>Definition of Resiliency</u>: The Proposal defines resiliency as the ability to recover from or adjust easily to adversity or change and is achieved by Providers through utilizing a variety of strategies. The proposal lists an array of strategies and provides definitions for each one.

(a) Please provide comments on the definition of resiliency in the context of communications service resiliency strategies and their definitions.

(b) Please comment on any recommendations or modifications that should be considered to the proposed resiliency definition and the resiliency strategies. Please provide a complete discussion for any proposed recommendations or modifications.

[1] *See In the Matter of Restoring Internet Freedom*, WC Docket No. 17-108, *Declaratory Ruling, Report and Order, and Order ("Restoring Internet Freedom Order")*, FCC 17-166 (rel. Jan. 4, 2018) at ¶ 20 (classifying "broadband Internet access service" as an "information service"), *petition for review granted in part on other grounds and denied in part by Mozilla Corp. v. FCC*, 940 F.3d 1, 3535 (D.C. Cir. 2019) (upholding the FCC's classification of broadband Internet access as an "information service").

The Small LECs find the definition of resiliency set forth in the Proposal to be reasonable and agree that resiliency is enhanced through the use of a variety of strategies. Indeed, the Small LECs have been continuously improving the resiliency of their networks to facilitate the provision of service when a portion of their network is damaged, through various means, such as the deployment of redundant and geographically diverse routes, deploying optical fiber ring topologies, and employing multiple technologies in some cases to increase network redundancy, such as copper and microwave facilities. It is important to note, however, that any definition of resiliency needs to be flexible, because not all resiliency strategies will be available in all areas. For example, due to the unique geography in many of the Small LEC service territories network redundancy is not always possible in these areas.

4. <u>Backup Power Requirement</u>: The Proposal recommends that all Providers have: on-site emergency backup power to support all essential communications equipment including but not limited to, switching centers, central offices, wire centers, head ends, network nodes, field cabinets, remote terminals, and cellular sites (or their functional equivalents) necessary to maintain service for a minimum of 72 hours immediately following a power outage. Service must be sufficient to maintain access for all customers to 9-1-1 service, to receive emergency notifications, and to access web browsing for emergency notices.

(a) Please provide comments on the proposed backup power requirement.

(b) How should "outage" be defined?

(c) Should the length of the 72 hour backup power requirement be shorter, longer or indefinite? Please provide an analysis to support your recommendation.

(d) What other backup power requirements or components should the Commission consider? Please provide an analysis to support your discussion of any additional requirements or components.

The Small LECs agree with the need for backup power as part of their networks and have implemented it to maintain service during interruptions in commercial power; however, they do not find that it is yet technologically or economically feasible to have a 72-hour requirement for all essential communications equipment throughout the network, especially at certain remote facilities. This is particularly relevant to the Small LECs given the rural, sparsely populated, and geographically challenging terrain that comprises many of the Small LECs' service territories. Additionally, the terms of existing rights-of-way and easements may limit a provider's ability to augment their backup power capabilities in some cases. The Small LECs are hopeful that, as

battery backup power technologies evolve, it will be possible to extend the availability of longer-term backup power capabilities throughout their networks, particularly in the difficult-to-serve remote areas of their territories. To the extent it becomes feasible to deploy 72-hour backup power solutions in all parts of rural networks, the cost of doing so based on available technologies should be evaluated before such a requirement is mandated.

Today, the Small LECs employ multiple power sources to maintain the functionality of their networks including commercial power where available, supplemented by battery backup equipment, and generators employing a variety of fuel sources depending on where they are located and whether they are the primary or backup power source. These alternatives to commercial power employ gas, propane, and/or diesel generators during emergency power situations. Additionally, some Small LECs employ solar backup power and hydrogen fuel cell technologies when appropriate. All of these backup power sources are tested regularly to ensure functionality. However, none of these technologies can assure the availability of 72-hour backup power throughout the network depending on the specific locations and practical limitations of the facilities involved.

5. <u>Backup Power Plans</u>: The Proposal recommends that Providers file a Backup Power Plan with the Commission six months from the effective date of an adopted Commission decision with an array of requirements that illustrate the Provider's preparedness to ensure 9-1-1 access, ability to receive emergency notifications, and access web browsing for 100 percent of customers in the event of a commercial power outage. Please provide comments and analysis on this compliance requirement.

(a) <u>Clean Energy Generation</u>: The Proposal directs Providers to utilize clean energy backup power options (e.g., solar, etc.) as reasonable before using diesel generators to meet the backup power requirement, among other provisions. Please provide comments and analysis on this issue, and specifically address the following:

i. How should "clean energy backup" be defined?

ii. Provide specific information on barriers to procuring specific types of clean energy backup power (e.g., cost, permitting, etc.).

(b) <u>Waivers</u>: The Proposal directs Providers to submit waivers if they qualify for any of the exemptions enumerated in the Proposal. Please provide comments and analysis on this issue.

(c) <u>Critical Facility Location Information Sharing</u>: The Proposal directs Providers to share critical facility location information to emergency responders to enhance the ability to defend vital facilities against wildfire damage and ensure facility redundancy. Please provide comments and analysis on this issue.

(d) <u>Critical Infrastructure Resiliency, Hardening and Location Information Sharing</u>: The Proposal directs Providers to annually submit geographic information system (GIS) information with the specific location of network facilities and backhaul routes to the Commission. The Proposal directs Commission staff to analyze and process this information, so it is accessible to state and local emergency responders, subject to confidentiality requirements. Please provide comments and analysis on these proposed directives.

The Small LECs do not object to informing the Commission about their emergency preparedness plans. In addition to informing the Commission of specific carrier backup power plans and capabilities, such plans could be helpful in developing innovative strategies for future backup power deployments using new technologies, such as microgrid technologies, as they evolve. As it evaluates these issues, the Commission should be mindful of the fact that it is impossible to build a communications network that will be able to function 100% of the time under any and all circumstances. Even with highly resilient facilities, their functionality will depend on the nature and duration of the natural disaster or catastrophic event. There are numerous reasons why a disaster could affect a communications provider's network that go beyond the need for backup power, such as damage to the networks of interconnecting carriers that does not otherwise impact the communications provider's network or an event so extreme that the communications providers' network is unable to withstand obliteration despite all reasonable efforts at hardening. Further, even routine problems can cause short interruptions in service at times. Accordingly, a standard requiring network functionality 100% of the time seems simply not possible. As noted above, the Commission should also recognize the interconnected nature of the communications network. Multiple carriers are almost always involved in the transmission of every 9-1-1 call and damage to one carrier may impact the ability to complete 9-1-1 calls even when there is no damage to the originating carrier's network. Backup power capabilities will not solve these problems. In addition, the capacity of each carrier's 9-1-1 trunks is governed by standards administered for each route by the E-9-1-1 Branch of the California Office of Emergency Services ("Cal OES") and these capacity limitations, which are outside the carrier's control, may in some cases prevent all 9-1-1 calls

from being completed in the event of an unusually large call volume, regardless of whether the network is functioning. In addition, there may be limitations related to considerations such as environmental issues, permitting issues, unique geography, and cost.

The Small LECs support the Commission in its goals to use clean energy and several of the Small LECs have some limited deployments of solar and hydrogen fuel cells as backup power sources. However, these solutions are not suitable in all locations. Solar may not work well in shaded areas (e.g., shaded by trees), and permitting in some areas may be problematic, due to environmental or other regulations. Additionally, the Small LECs believe it would be premature to require clean energy requirements for backup power at this time given the short window of time and potential severity of the upcoming fire season, and the need to focus resources on network resiliency in high-risk areas rather than on the carbon footprint of areas that already have high-levels of resiliency. There are also some practical considerations to take into account regarding whether to implement clean energy sources for backup power such as: (1) solar energy is likely not a good choice for backup power during wildfire events since the smoke and ash from the wildfires interferes with the solar panel's ability to produce energy; (2) hydrogen cell fuel tanks store both hydrogen and oxygen and could pose an even greater fire danger during wildfires than diesel; and (3) methanol is not readily available, burns at 800 degrees, is more dangerous to transport and refuel, and ages faster than diesel requiring more frequent refueling.

Finally, the Small LECs emphasize the importance of protecting all critical infrastructure information submitted to the Commission from public disclosure because of its ability to be weaponized if it fell into the wrong hands.

6. <u>Emergency Operations Plans</u>: The Proposal directs Providers to file emergency operations plans with the Commission, discussing how their operations are prepared to respond to emergencies. Please provide comments and analysis on this issue.

(a) Additionally, the Proposal itemizes required content that the Providers must submit to the Commission. Please provide comments and analysis on this issue.

(b) Should the proposed rule for Emergency Operations Plans include any other information that the Proposal does not address? Please explain why any additional information is legitimate and necessary for adoption.

The Small LECs do not object to the Commission's proposal for providers to file emergency operations plans with the Commission. However, the Small LECs would again like to emphasize that a one-size fits all approach, while convenient, is not viable in all circumstances. For example, requiring the Small LECs to post real-time outage maps on their websites, as suggested in this proposal, is not economically feasible for companies of their size and resources. That being said, a number of the Small LECs have already implemented emergency operations plans reflecting proactive work with state and local authorities throughout the emergency response processes. Most of the Small LECs are also members of the California Utilities Emergency Association ("CUEA"), an organization that serves as a point-of-contact for critical infrastructure utilities and responding government agencies, including Cal OES. CUEA and its team work collaboratively during emergencies to provide emergency response support and coordination with government agencies and other disaster relief organizations. CUEA also provides support with emergency planning, mitigation, training, and exercises. Similarly, the Small LECs participate in internal meetings with Incident Management Teams to determine what additional facilities may be needed to address disaster situations and to coordinate access to disaster areas so that damage to utility facilities can be assessed. Additionally, the Small LECs coordinate to the extent they are able with the electric utilities during power outages to arrange for additional backup power if it is anticipated to be needed. The Small LECs would also like to again emphasize the necessity of protecting all confidential critical infrastructure information, the importance of which has been recognized under federal law and regulation as critical to national security.

7. Current Mitigation Efforts: in response to this ruling, all respondent communications service providers shall provide a discussion of what current mitigation efforts they are undertaking to ensure continuity of service in preparation and in advance of the upcoming 2020 wildfire and grid outage season. This should include, but is not limited to, the following topics:

(a) Number of additional generators acquired (both fixed and mobile);

(b) Number of additional temporary facilities acquired (e.g., COWs, COLTs, etc.);

(c) Additional network redundancy built into network (e.g., logical and physical);

(d) Provide details on plans in the near, intermediate and long term to further harden facilities;

(e) Identify barriers to building resiliency into your networks;
(f) Identify any other investments or cooperative agreements that will be made to build in more backup generation or minimize the need for backup generation; and
(g) Identify if communications service outages as a result of future public safety power shutoff events are expected. Identify specific locations and reasons where network outages are expected.

To the extent practicable, communication service providers are directed to submit as much of this information as possible without assertion of confidentiality.

The Commission temporarily suspended all confidential filings in light of the COVID-19 pandemic.[2] Therefore, the Small LECs will respond to this question to the best of their abilities,[3] in the limited time provided for responses, without revealing confidential infrastructure information.

The Small LECs continue to invest in their networks to install new and upgraded telecommunications plant to increase reliability during emergency situations. The specific amounts of these investments, and the specific information about the projects undertaken, are set forth in each of the Small LECs annual Eligible Telecommunications Carrier ("ETC") filings submitted to the Commission each September. When possible, new outside plant is located underground for additional protection from fire and wind. Additionally, copper facilities and fiber optic trunks are also placed in underground conduit where possible to provide additional protection against water damage, earthquake, and physical intrusion. Central office facilities are typically located in reinforced concrete or similarly sturdy buildings. All facilities are regularly inspected to identify potential future problems and thereby enhance reliability.

As described above, the Small LECs have deployed backup power solutions throughout their networks, through the use of batteries, emergency generators, solar, and hydrogen fuel cells. All of these backup power sources are consistently tested for performance. Where possible, the Small LECs have also created redundant and geographically diverse routes capable of connecting their networks to 9-1-1 systems, in accordance with guidelines from Bellcore, industry standards,

[2] https://www.cpuc.ca.gov/COVID19practitioneralert/

[3] The Small LECs have committed significant resources to network reliability, customer protection, and employee safety as a result of the COVID-19 pandemic. The Small LECs reserve the right to supplement this submission after this crisis has passed.

and Cal OES requirements. The Small LECs have deployed fiber-optic ring topologies and redundant routes for copper and microwave facilities to provide uninterrupted service when a network is damaged. These redundant network topologies improve the reliability of all services, particularly at points where fiber and copper facilities are connected, such as central offices and remote switching facilities. However, in some cases, geographic limitations presented by some of the areas served by the Small LECs do not permit the deployment of redundant network topologies, such as deep box canyons or similar geographic features which do not provide more than one route over which communications services can be provided.

Further the Small LECs also assist wireless providers during emergencies by providing the necessary backhaul facilities to help create temporary cell sites. Additionally, the Small LECs provide voice and data services to CalFire and other first responders in disaster areas to assist their work. The Small LECs also coordinate donations to disaster victims in their areas by working with various community organizations.

8. Other Topics for Commission Consideration: Parties may identify issues in addition to the proposed rules and discussion in the Proposal.

The Small LECs have no additional issues to identify at this time.

III. CONCLUSION

The Small LECs are committed to the Commission's vision for emergency preparation and preparedness and ensuring that the State of California is better prepared for this coming fire season than those of the last few years. The Small LECs support all reasonable infrastructure improvements to strengthen network resiliency during catastrophic circumstances, while being mindful of the resources necessary to accomplish these goals.

Dated this 3rd day of April, 2020, at San Francisco, California.

Respectfully submitted,

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