

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

7 Order Instituting Rulemaking Regarding Emergency Disaster Relief Program.

R. 18-03-011 (March 22, 2018)

OPENING COMMENTS OF

FRONTIER CALIFORNIA, INC. (U 1002 C) FRONTIER COMMUNICATIONS OF CALIFORNIA (U 1024 C) FRONTIER COMMUNICATIONS OF THE SOUTHWEST, INC. (U 1026 C) ("FRONTIER")

ON MARCH 6, 2020 ASSIGNED COMMISSIONER'S RULING AND PROPOSAL

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I. INTRODUCTION.

Frontier California, Inc. (U 1002 C), Frontier Communications of California (U 1024 C), and Frontier Communications of the Southwest (U 1026 C) (collectively, "Frontier") hereby respond to the March 6, 2020 Assigned Commissioner's Ruling of President Batjer ("Ruling") according to the schedule outlined in the Ruling. The Ruling attaches an Assigned Commissioner's Proposal ("Proposal") that presents "Communications Service Provider Resiliency and Disaster Response Requirements." The Ruling seeks comments on this Proposal and asks parties to respond to eight separate sets of questions related to network resiliency and protocols for responding to emergencies like wildfires and Public Safety Power Shutoff ("PSPS") events.

Frontier strongly supports the goals of network resiliency and network restoration that animate the Proposal. Frontier designs its networks to incorporate as much redundancy as reasonably possible and Frontier has devoted significant effort to developing its plans to maintain and restore networks when they are impacted by disasters. Frontier agrees that safety considerations should be paramount. Likewise, in setting public policy, the Commission should also be mindful of the costs of its regulations and the impact that they will have on the price of telecommunications services in California. The Commission should strive for a balanced set of regulations that are targeted to mitigate the specific problems associated with wildfires and PSPS events without imposing impracticable requirements or unduly costly solutions.

In the following comments, Frontier responds to each of the questions posed in the Ruling. Frontier has addressed the issues to the best of its ability given the information that is currently available and the constraints surrounding the context and timing of these comments. The ongoing COVID-19 health crisis has necessarily diverted significant resources to customer protection, employee safety, and operational concerns during this time. In addition, the Commission's docket office has suspended the ability to file confidential information until at

least May 1st.¹ Therefore, Frontier provides these comments using only public information. Frontier reserves the right to augment this submission with additional materials that may be responsive to the questions at a time that is less impacted than the present.

II. FRONTIER'S RESPONSES TO THE TOPICS IDENTIFIED IN THE RULING.

The Ruling seeks comments on the requirements and principles included in the Proposal, including input on the scope of the requirements, the definitional terms to be used in describing carriers' obligations, specific backup power requirement, clean energy alternatives, emergency response planning, and current efforts to mitigate threats to service continuity. Each of the eight issue areas are reprinted below in advance of Frontier's responses for ease of reference.

- 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?

The applicability statement in the Proposal is generally reasonable insofar as it focuses on ownership or operation of infrastructure rather than on specific services.² The scope of any additional rules in this proceeding must align with the extent of the Commission's jurisdiction, which encompasses regulation of intrastate jurisdictional public utilities, their regulated services, and the infrastructure used to provide regulated services.³ However, the Commission's authority does not extend to interstate services or services that the Federal Communications Commission has designated as non-regulated, such as broadband data services. To avoid misunderstandings

¹ This limitation is reflected in the "Temporary Filing and Service Protocol for Formal Proceedings" at the following link: https://www.cpuc.ca.gov/COVID19practitioneralert/

² Proposal, Appendix A, at p. 2.

³ See Pub. Util. Code §§ 216 (public utilities include "telephone corporations"); 234 (defining "telephone corporation" based on whether an entity "own[s], control[s], operat[es], or manag[es] a telephone line for compensation within this state"); 233 (defining "telephone line" with reference to "conduits, ducts, poles, wires, cables, instruments, and appliances . . . to facilitate communication by telephone"); 202 (Commission jurisdiction does not extend to interstate commerce).

or conflicts about the scope of the rules relative to federal restrictions on regulation of broadband services, the reference to "data" should be removed from the applicability statement.⁴

- 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/E9-1-1 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 E9-1-1 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?

As explained above, Frontier supports the applicability statement in the Proposal with a minor edit to remove the reference to "data." The "alternative" definition in D.19-08-025 relies on a concept of "communications service providers" that lacks any link to statutory authority and which could create confusion in its application. The taxonomy of "communications service providers" proffered in this definition relies on overlapping and duplicative categorizations such as "LifeLine providers," "landline providers," and Carriers of Last Resort." The alternative definition could also create confusion by suggesting that the proposed rules would apply to providers who do not own or manage any facilities, such as VoIP providers or resellers. The applicability statement in the Proposal properly focuses on companies who manage or operate public utility facilities rather than attempting to classify all types of service providers. The Commission should strive for simple definitions that focus on how to apply rules that implicate facilities resiliency and restoration. The Commission should also ensure that its definitions are competitively neutral and do not inadvertently create disparities in regulatory obligations for similarly-situated competitors. With the modification proposed to the "Application of Requirements" section of the Proposal, Frontier supports the use of that scoping statement.

⁴ 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") 199 (confirming that Internet access is a "jurisdictionally interstate service"); see also Mozilla Corp. v. FCC (D.C. Cir.), Case No. 18-1051 (partially vacating other aspects of Restoring Internet Freedom Order). For the same reasons, the reference to "text messages" appears to be misplaced.

- 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.

Resiliency is critical to quality customer service and Frontier prioritizes the ability to recover in the event of a network outage or network issue leading to a loss of customer service. Inter-office facilities are one of the most important determinants of resiliency and Frontier's facilities are typically built to survive single route or single node failure by having both a working facility and protected facility. The central offices equipment is likewise networked so that the equipment will have multiple feeds running back to power panels that also have diverse feeds to the power source. Frontier's offices generally have three power sources: commercial power, a backup generator, and battery backup to withstand typical outages. For Frontier's critical distribution hubs and major long-haul routes, Frontier has built diversity into the network to create further resiliency.

With these perspectives in mind, Frontier generally supports the definition of resiliency provided in Question 3 and Section 1 of the Proposal. Frontier further agrees that employing multiple strategies to maintain communications networks during emergencies increases network resiliency. These strategies should include the following, as appropriate given each carrier's specific operational platform, facilities architecture, and regional dynamics: (1) backup power; (2) network redundancy; (3) network hardening; (4) communication and coordination with other providers, utilities, emergency responders, and the public; and (5) preparedness planning. Frontier agrees with the observation in the Proposal that a "one size fits all" approach to

"ensuring resiliency" would not be appropriate.⁵

As Frontier adjusts to the "new normal" of more frequent wildfires and periodic PSPS events, Frontier is working on "hardening" its network and to increasing its response time when outages occur or facilities are unavoidably compromised by natural disasters. The Commission should not assume that networks will be impervious to these impacts even if network enhancements are made. The proposed rules should give carriers the flexibility to establish the mix of resiliency and restoration strategies that best suits the carriers' operations and their customers.

- 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 proposed 72-hour backup power requirement is reasonable as applied to central offices and remote switches, but would not be reasonable as to all "field cabinets." Frontier currently has backup power of at least 72 hours at its remotes and central offices, where the most critical routing equipment and electronics reside, but Frontier has many smaller cabinets that are deeper into the network toward the customer premise. Frontier has approximately 1,500 of these

⁵ *Proposal*, Appendix A, at p. 2. For example, physical route diversity is an important tool for achieving resiliency, but physical diversity is not feasible or prudent in all cases. Logical diversity, achieved through signal re-routing where certain aspects of a network are disabled, is also an effective means of maintaining resiliency.

smaller network components, and it would require an extraordinary investment to equip all of these smaller equipment sites with 72 hours of power. Likewise, there are certain locations where this simply may not be possible due to specific geographical features, environmental issues or prohibitions, permitting issues, and overall cost. Frontier currently uses portable generators to ensure that these sites are appropriately powered during PSPS events and other commercial power outages, but Frontier could not feasibly operate a portable generator at every one of these locations. Similarly, installing 72 hours of battery backup at these locations would require an enormous expense and would be impossible or infeasible in many situations. In some cases, installing battery backup at smaller cabinet would greatly increase the size of the space needed at the location. In light of these concerns, the Proposal should be refined to exclude "field cabinets" and the broad reference to "all essential communications equipment" should be removed because it is not precise enough to be operationalized.

Regarding the definition of "outage," Frontier understands that backup power proposal refers to a "power outage." In that context, an "outage" should refer to a material loss of commercial power that would require the use of backup power sources by communications carriers. Beyond that straightforward definition, the concept of an "outage" would be dependent on various contextual factors.

- 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) Critical Infrastructure Resiliency, Hardening and Location Information Sharing: 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.

Frontier supports the use of clean energy sources to provide backup power where reasonable, and Frontier is exploring those options. Indeed, Frontier has installed solar panels and accompanying generators in some locations to provide backup power. However, Frontier does not support any sort of quota or minimum requirement for backup power clean energy sources at this time. This is particularly true given that California experienced significantly lower than average rain and snowfall this past winter, increasing the likelihood of a severe fire season. Thus, Frontier believes that efforts and resources in this area should be focused on improving network resiliency and redundancy in areas that are most at risk, rather than on pursuing alternative energy sources in areas that already have sufficient backup power.

Waivers for redundant or non-compliant facilities will be necessary because rigid requirements are not appropriate and carriers should not be penalized for circumstances beyond their control. In particular, the unique climatological and geographic terrain of California will likely make compliance impossible in some locations. In addition, the waiver process should take into account environmental delays and prohibitions, permitting issues, total population served by specific equipment, and general cost.

Frontier also endorses the use of critical infrastructure location information sharing with emergency responders to defend these facilities against wildfire damage. Frontier similarly

supports the confidential sharing of information related to critical infrastructure resiliency and hardening with the Commission to assist state and local emergency responders.

Correspondingly, Frontier has created a robust infrastructure information sharing program for government officials and emergency responders, which is outlined below.

- 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.

Frontier supports the proposal directing all providers to develop and file an emergency operations plan with the Commission. Frontier currently has an Emergency Operations Center Team located in California that is available 24 hours a day, 7 days a week, which has undergone training with Cal OES and the California Utilities Emergency Association. This team continuously monitors potential and current emergency situations and retains subject matter experts as needed to provide advice and assistance.

Additionally, Frontier has a toll-free emergency number that is also staffed 24 hours a day, 7 days a week by employees trained to handle emergency response. This special phone number is provided to the appropriate government and tribal emergency contacts for their use during crises. Frontier regularly reviews its list of official emergency contacts, including local contacts, to ensure a current and immediate line of communication exists for catastrophic events. Frontier also participates in local government meetings involving emergency response as well as in emergency preparedness exercises. Furthermore, Frontier has created appropriate redundancy in its method of communicating with customers during disaster situations through the use of press releases, customer emails, text messages, and dedicated, situational webpages.

Similarly, Frontier has created a Business Continuity Plan ("BCP") team based in

California that leads cross-functional efforts to allow Frontier to continue to maintain its operations, serve its customers, and protect its employees in the event of an emergency. To maintain awareness of and prepare for potential events, the BCP team is in regular contact with the appropriate federal and state agencies. When emergencies arise, such as wildfires, hurricanes, floods, and most recently, a pandemic, the BCP team will convene "Emergency Response Center" calls, which are forums to analyze and neutralize the emergency impact on local Frontier groups. This approach allows Frontier to preserve efficiency and flexibility in business operations and public service during emergencies.

- 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.

Frontier strongly supports the overall policy objectives of network resiliency and promoting mitigation efforts to avoid losses of service. To that effect, Frontier has invested millions of dollars throughout the State of California, including \$720 million in the years 2017 and 2018, to improve the quality and reliability of its network, which is of direct benefit to

customers in emergency situations. In particular, Frontier has invested in route diversity,⁶ undergrounding, enhanced backup power,⁷ increased deployment of fiber,⁸ seismic retrofitting, ring technology, among other things. Frontier is particularly interested in improving service and reliability in remote areas and continues to commit investment toward these goals.

Frontier has over 600 network hubs in California, including central offices, remote switching units, controlled environmental vaults, and remote hut locations. Most of the locations have fixed generators and Frontier also has a significant number of portable generators that can be deployed throughout its territory as needed. Additionally, the facilities with fixed generators have an auto-start emergency generator that can supply 72 hours of continuous power during an outage, as well as on-site batteries that can provide an additional three to four hours of power. The locations which do not have fixed generator are presently equipped with battery backup that can supply eight hours of additional power and have designated portable generators that can be delivered to meet the 72-hour standard. All of Frontier's locations, generators, and batteries are subject to consistent maintenance and testing to verify operational performance.

Frontier has also created a detailed Emergency Management Plan and a Business Continuity Plan to ensure continuity of service in emergency situations. As described above, Frontier has a trained Emergency Operations Center Team in California that is available all day, every day to monitor and respond to emergency situations. Additionally, Frontier created a 24/7 emergency contact number for government and tribal officials to use as necessary. Frontier frequently evaluates its list of official emergency contacts, to ensure it is current. Frontier also participates in local government meetings involving emergency response and is a member of the California Utilities Emergency Association which is a collection of utilities that work

⁶ Wherever possible, Frontier's network is built with logical diversity and facilities protections. In many cases, Frontier deploys link aggregation groups that build capacity to cover diverse routes so that, upon failure, the network will continue to be able to pass traffic and continue to function.

⁷ Frontier continues to increase resiliency throughout its network to achieve at least 72 hour backup capability at all central offices and eight hours of backup power at all remote switching sites. Again, it is not feasible to equip every smaller cabinet with this level of backup power.

⁸ Fiber is less vulnerable to natural disasters and weather events such as fires and electrical storms. Fiber also allows for re-routing of signals during catastrophic events to maintain functionality.

collaboratively to maintain or restore service during emergency situations.

Frontier has strategically distributed equipment and materials throughout its service territory to expedite any necessary repairs during emergencies, with particular emphasis on items that are difficult items to procure such as fiber-optic cable and large gauge telecom cables. Similarly, Frontier has created a network of construction teams geographically spread throughout its territory to rapidly respond when called upon.

Frontier has also provided credits and waivers to assist those impacted by wildfires including, among other benefits: waiver of the one-time activation fee for establishing remote call forwarding, remote access to call forwarding, call forwarding features and messaging services, waiver of the monthly rate for one month for remote call forwarding, remote access to call forwarding, call forwarding features, and messaging services; and waiver of the service charge for installation of service at the temporary or new permanent location of the customer and again when the customer moves back to the premises.

Frontier is committed to improving the service and reliability of its network. In this effort, Frontier encounters certain engineering and logistical challenges. These include local permitting and zoning opposition, inadequate easements, environmental regulatory issues, logistical difficulties in installing, maintaining, and testing the equipment in remote areas, inadequate spatial requirements, and extremely high per user cost in remote areas.

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

Frontier does not have any additional issues to raise at this time.

III. CONCLUSION

Frontier supports the overall objectives of this proceeding to pursue reasonable ways to improve network resiliency and response efforts in the face of emergencies that may threaten the functionality of critical networks. Frontier has offered comments on the Ruling and the Proposal to the extent possible given its current limitations and the important focus that must be given to consumer protections and employee safety concerns surrounding the COVID-19 crisis. Frontier

1	looks forward to further opportunities to provide input on these subjects as the proceeding
2	evolves and proposals are further refined.
3	Dated this 3rd day of April, 2020, at San Francisco, California.
4	Respectfully submitted,
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