

Decision 20-07-011 July 16, 2020

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking
Regarding Emergency Disaster Relief
Program.

Rulemaking 18-03-011

**DECISION ADOPTING WIRELESS PROVIDER
RESILIENCY STRATEGIES**

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DECISION ADOPTING WIRELESS PROVIDER RESILIENCY STRATEGIES

Summary

This decision requires California's facilities-based wireless providers (wireless providers) to develop comprehensive resiliency strategies to prepare for catastrophic disasters and power outages. First, this decision defines resiliency, in the context of emergency services management by the wireless providers, as the ability to recover from or adjust to adversity or change through an array of strategies including, but not limited to: backup power, redundancy, network hardening, temporary facilities, communication and coordination with other utilities, emergency responders, the public and finally, preparedness planning.

Second, this decision adopts a 72-hour backup power requirement for the wireless providers' facilities, to ensure minimum service coverage is maintained during disasters or commercial grid outages, consistent with our mandates under the California Constitution and the California Public Utilities Code. The wireless providers have twelve (12) months from the effective date of this decision to implement this requirement.

Third, this decision requires the wireless providers to file Communications Resiliency Plans with the Commission that detail their ability to maintain a minimum level of service and coverage during a disaster or a commercial power grid outage.

Fourth, the decision permits the near-term use of diesel generation as a primary backup power resource. However, the decision directs the wireless

providers to explore ways to transition to renewable generation for backup power.

Finally, this decision directs the wireless providers to submit annual emergency operations plans. Generally, the emergency operations plan requires the wireless providers to demonstrate their procedures to collaborate with both the California Public Utilities Commission and the California Governor's Office of Emergency Services during a disaster or commercial grid outage.

This decision promulgates resiliency requirements for the facilities-based wireless providers for their facilities in Tier 2 and Tier 3 High Fire Threat Districts only. In a forthcoming decision, we will consider promulgating resiliency requirements for other telecommunications providers.

This proceeding remains open.

1. Background

1.1. Phase I Factual Background

The California Public Utilities Commission (Commission or CPUC) established Rulemaking (R.) 18-03-011 to adopt an emergency disaster relief program for customers of electric, natural gas, water and sewer, and communications service providers under this Commission's jurisdiction. With respect to the communications service providers, we adopted Decision (D.) 19-08-025 in Phase I of R.18-03-011.

Decision 19-08-025 adopted a series of customer protection requirements for California customers of communications service providers.¹ In D.19-08-025,

¹ D.19-08-025 at 33-35.

we found that the wildfires of 2017, 2018, and 2019 as well as the Public Safety Power Shutoffs (PSPS) initiated by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) revealed the failures in California's communications network. The failure of California's communications network during prior wildfire seasons and PSPS events resulted in a loss of service to customers and endangered the lives of customers and first responders. This is especially troubling for the public, given that, emphasized by officials from the Governor's Office of Emergency Services (CalOES), "when you are responding into an emergency, communications are your lifeline."²

At the November 1, 2018 joint CPUC and CalOES workshop, held in this proceeding, CalOES officials stated that 80 percent of calls to 9-1-1 came from wireless devices.³ This reflects the fact that consumers and first responders rely heavily on communication services – especially, data and wireless communications.⁴ First responders' and the public's dependence on data and wireless communications were highlighted when emergency communications were throttled in 2018, adversely impacting the Santa Clara County Fire

² R.18-03-011 November 1, 2018 Workshop Transcript at 12, Lines 25-27. Statement of Mark Ghilarducci, Director of the Governor's Office of Emergency Services.

³ *Id.* at 15, "In the October [2017] wildfires, approximately 80 percent of 9-1-1 calls came from cellular devices..." Statement of Mark Ghilarducci, Director of the Governor's Office of Emergency Services.

⁴ *Id.*

Department control and command unit deployed to support relief efforts during the Mendocino Complex Fire.⁵

Wireless service is transforming how people do business, communicate, and carry out essential services, such as health care. Californians rely on their phones and the internet, whether using wireline or wireless technologies, to receive emergency notifications, contact family and friends, and to reach first responders. California's communications customers have a reasonable expectation that these critical communications services will be operational, even during a power outage.

In addition to the November 1, 2018 CPUC-CalOES joint workshop, the Commission convened several forums to improve coordination between communications service providers and emergency response agencies. On April 8, 2019 in this proceeding, the Commission released for stakeholders guidance regarding safety principles for communication service providers that identified gaps in California's communications network that, if addressed, would significantly enhance public safety.⁶ Then on May 20, 2019, the Commission held an en banc public hearing titled, *The Future of California's Communications Grid*,

⁵ Public Advocates Office Motion for an Immediate Order Requiring California's Communications Service Providers to Complete Calls and Deliver Data Traffic and Provide Other Post-Disaster Consumer Protection Relief, May 21, 2019. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=292932622>; and Declaration of Anthony Bowden filed in the U.S. Court of Appeals, D.C. Circuit Case No. 18-1051, August 17, 2018. Available at: <https://assets.documentcloud.org/documents/4780226/VerizonFireDeclaration.pdf>

⁶ Joint ALJ Ruling Entering *Safety Principles for Communications Service Providers* into the records of R.18-03-011 and R.18-12-005.

where the discussion included the importance of communications services before, during, and after a wildfire.⁷

During disasters, when people are trying to escape from a threatened area or communicating with 9-1-1 centers, the communication link is critical for life-saving operations.⁸ We determined in D.19-08-025 that Phase II of this rulemaking, which is the subject of this decision, would focus on having a resilient and dependable communications network that aids first responders and communicates with the public in a timely manner.

1.2. Phase II Factual Background

The record before the Commission exposes the lack of a uniform and structured approach to ensuring that the communications providers are addressing their responsibility to provide safe and reliable service during emergency events. For example, on August 9, 2019, the assigned Commissioner to this proceeding issued a ruling asking communications service providers to describe actions taken to harden their networks.⁹ In this proceeding, the communications service providers responded to the assigned Commissioner's ruling, generally asserting they are sufficiently prepared to maintain service during upcoming emergency events.¹⁰

⁷ Communications Division En Banc, available at: <https://www.cpuc.ca.gov/CDenbanc/>

⁸ D.19-08-025 at 47.

⁹ Assigned Commissioner's Ruling requesting information on hardening communications infrastructure and to ensure customer access to 911 at all times, August 9, 2019. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=310226482>

¹⁰ See R.18-03-011 docket card, response of communications service providers to August 9, 2019 Assigned Commissioner's Ruling.

Yet, despite claims of preparedness, during the October and November 2019 wildfire and PSPS events, widespread reports of communications outages across all sectors were reported. Significant outages occurred on the networks supporting mobile, cable, Voice-over-Internet-Protocol (VoIP) communications, and internet traffic.¹¹ According to the Federal Communications Commission's (FCC) disaster report, 57 percent of cell sites in Marin County alone were out of service between October 26-27, 2019.¹² Without access to 911 and the ability to reach first responders, Californians cannot access needed services, be safe, or even function in an emergency.

In response, on November 13, 2019, Phase II of this proceeding was initiated through the assigned Commissioner and assigned Administrative Law Judge's Ruling Setting Prehearing Conference.¹³

1.3. Phase II Procedural Background

On November 20, 2019, a Phase II prehearing conference (PHC) was held to discuss the issues of law and fact, determine the need for hearing, and the schedule for resolving the matter. Specifically, communications service providers

¹¹ R. 18-03-011 November 20, 2019 Prehearing Conference Transcript at 130, lines 12-17. 18-03-011 Phase II Transcript, Page 4 at Lines 12-28; Page 5 Lines 1-28; Page 6 Lines 1-28; Page 7 Lines 1-19.

¹² Pursuant to Rule 13.9 of the Commission's Rule of Practice and Procedure, the Commission takes official notice of the FCC's Communications Status Report for Areas Impacted by California PSPS Events, October 27, 2019, available at: <https://docs.fcc.gov/public/attachments/DOC-360454A1.pdf>

¹³ Assigned Commissioner and Assigned Administrative Law Judge's Ruling Setting Prehearing Conference, November 13, 2019. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=319752877>

including Verizon Wireless Cellco Partnership, Sprint Communications and Sprint Spectrum, T-Mobile USA, AT&T Mobility, AT&T California/Pacific Bell and AT&T Corporation, Frontier Communications, Time Warner/Charter Fiberlink/Brighthouse Networks, Comcast Phone of California, Cox California Telecom, representatives of local officials, consumer advocates, and residents appeared to discuss and address failures in the communications network infrastructure during the 2019 wildfires and PSPS events.

Following the PHC, on December 18, 2019,¹⁴ the assigned Commissioner and the assigned Administrative Law Judge (ALJ) issued a ruling soliciting from parties' additional issues for consideration in Phase II.

On January 21, 2020, the assigned Commissioner's Scoping Memo and Ruling¹⁵ was issued, adopting a schedule for this proceeding, with the goal of adopting communications service provider resiliency and disaster response requirements in advance of the 2020 wildfire season.¹⁶

On March 6, 2020, the assigned Commissioner set forth an Assigned Commissioner's Proposal (Proposal)¹⁷ for maintaining resilient and dependable

¹⁴ Assigned Administrative Law Judge's Ruling, December 18, 2019. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=322133527>

¹⁵ Assigned Commissioner's Scoping Memo and Ruling, January 21, 2020. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=324941921>

¹⁶ R. 18-03-011 November 20, 2019 Prehearing Conference Transcript at 130, lines 12-17.

¹⁷ Assigned Commissioner's Ruling and Proposal, March 6, 2020. Available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=328685793>

communications networks that aid first responders and to allow the public to communicate reliably during catastrophes like wildfires or during PSPS events.

1.4. Historical Background

In the 1920s, the Commission found that a central battery system was deployed by telecommunications service providers to improve network operations, performance, and reliability. At that time, batteries and generators located in the provider's central office were able to power both the central office and the customer's telephone in the event of a power outage, assuming the telephone system was otherwise intact. As our telecommunications systems have evolved to the networks we rely on today, it has become a relatively new experience that communications services are not available during a power outage.¹⁸

In January 2006, the FCC established the Katrina Panel to review the impact of Hurricane Katrina on the telecommunications infrastructure to improve disaster preparedness, network reliability and communications among first responders. The Katrina Panel released its report on June 12, 2006, and among numerous other findings, found that power outages contributed heavily to the failure of wireless network operations. On June 19, 2006, the FCC issued a Notice of Proposed Rulemaking inviting comments on what actions it should take regarding the Katrina Panel's recommendations.

In light of the Hurricane Katrina telecommunications outages, on September 29, 2006, Governor Arnold Schwarzenegger signed into law

¹⁸ Decision 08-09-014 at 6.

Assembly Bill (AB) 2393, which directed the Commission to consider the need for backup power for facilities-based telecommunications services. On June 8, 2007, the FCC released the Panel Order, implementing several of the panel's recommendations. As a result, the FCC adopted a backup power rule in Order 07-177.¹⁹ The rule required both wireline and wireless service providers to have emergency backup power for all assets normally powered by the electric utilities.²⁰ Providers were required to have 24 hours of emergency backup power for central offices and eight hours for cell sites, remote switches and digital loop carrier system remote terminals.²¹ The wireless industry immediately challenged these rules in the D.C. Circuit Court of Appeal, and the Court held the appeal was not ripe and held it "in abeyance" because the Office of Management and Budget had not yet "approved the information collection provisions contained in the rule's extensive reporting mechanism."²²

On May 9, 2008, after holding three technical workshops and developing a thorough analysis, the Commission's Communications Division provided a detailed 300-page report to the Legislature on *Reliability Standards for Telecommunications Emergency Backup Power Systems and Emergency Notification*

¹⁹ See *In the Matter of Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, EB Docket No. 06-119, WC Docket No. 06-63, Order on Reconsideration, 22 FCC Rcd 18013, 18035, App. B (2007).

²⁰ *Id.*

²¹ *Id.*

²² *CTIA – the Wireless Assn. v FCC*, 530 F.3d 984, 986 (D.C. Cir., 2008.)

Systems.²³ On September 4, 2008, the Commission, in D.08-09-014, declined to adopt any standards, deferring instead to the FCC requirements.

On November 28, 2008, the White House Office of Management and Budget found that the Federal Communications Commission (FCC) failed to obtain sufficient public comment before passing the backup power regulations, did not prove that the information required from wireless carriers would be useful, and also did not prove that it would have enough staff to analyze all of the documentation the telecommunications providers said they would need to provide to comply with the regulation. With the rules stayed by the Court of Appeals, the FCC decided it would not override the Office of Management and Budget's decision, and instead abandoned the rules. The FCC stipulated to the dismissal of CTIA's appeal, and it was dismissed in 2009.²⁴ The FCC has taken no subsequent action on this issue

In late October 2012, Superstorm Sandy hit the East Coast, causing massive electric and communications infrastructure outages. The FCC found that roughly 25 percent of cell towers across 10 states were out of service at the peak of the storm.

On September 26, 2013, in the wake of Superstorm Sandy, the FCC announced a Notice of Proposed Rulemaking (NPRM) to consider measures to promote transparency to consumers as to how mobile wireless service providers

²³ *Reliability Standards for Telecommunications Emergency Backup Power Systems and Emergency Notification Systems*, May 9, 2008. <http://docs.cpuc.ca.gov/efile/PD/82464.pdf>

²⁴ *CTIA - The Wireless Assn. v FCC*, July 31, 2009 Order, at 2009 U.S. App. LEXIS 17031.

compare in keeping their networks operational in emergencies, which could in turn encourage competition to improve the resiliency of mobile wireless communications networks during emergencies. The purpose of the FCC's Rulemaking was to "consider[] measures to promote transparency to consumers as to how mobile wireless service providers compare in keeping their networks operational in emergencies, which could in turn encourage competition to improve the resiliency of mobile wireless communications networks during emergencies."²⁵ Thus, the FCC's intent was to give the public information about "how well mobile wireless networks maintain service during disasters."²⁶ Notably, in the *Improving the Resiliency of Mobile Wireless Communications Networks* rulemaking, the FCC was not attempting to or considering adoption of backup power rules as it had in its Katrina backup power order.

On December 14, 2016, the FCC adopted a voluntary framework put forward by CTIA, AT&T Wireless, Sprint, T-Mobile, U.S. Cellular, and Verizon to enhance coordination and communication to advance wireless service continuity and information sharing during and after emergencies and disasters. The FCC found that this was a reasonable initial path forward to improving wireless resiliency.²⁷

²⁵ Notice of Proposed Rulemaking, *In the Matter of Improving the Resiliency of Mobile Wireless Communications Networks; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Dockets Nos. 13-29, 11-60, Sept. 26, 2013, at 1.

²⁶ *Id.*

²⁷ Before the Federal Communications Commission, *In the Matter of Improving the Resiliency of Mobile Wireless Communications Networks*, PS Docket No. 13-239, etc., Order, Adopted December 14, 2016, at ¶ 11.

2. Jurisdiction

2.1. The Commission Has Jurisdiction Over Wireless Providers, And Authority to Ensure the Reliability of Communications Networks in Emergencies

California is in an unprecedented climate emergency that has produced increasingly deadly and destructive wildfires, and PSPS events. The State has a duty to ensure, as much as possible, the safety of all Californians. The CPUC has responded to this ongoing threat to essential utility infrastructure and services by acting across the breadth of its jurisdiction, addressing energy, water, and communications networks and their customers.²⁸ Parties to this proceeding have told us, repeatedly, that communications, particularly in areas prone to wildfires, are a matter of “life and death.”²⁹ The CPUC has both the jurisdiction and the authority to maintain service sites in Tier 2 and 3 high fire threat districts, so that service continues when power is cut off. Uninterrupted transport of communications is an essential precondition to the ability of public safety officials to communicate and coordinate with each other and with the public.

²⁸ On December 13, 2018, the Commission opened R.18-12-005, the Public Safety Power Shutoff (PSPS) programs proceeding. In that rulemaking, the CPUC is examining the utilities' de-energization processes and practices, the impacts on communities and vulnerable populations, efforts to reduce the need for de-energization, and mitigation measures to reduce the impacts when implemented. The rulemaking will also review and improve existing reporting requirements. The Record of R.18-12-005 has been incorporated into this proceeding. (*See also* R.15-06-009 Standards for Disaster and Emergency Preparedness; Investigation (I.) 14-05-012, Rural Call Completion.) The record of I.14-05-012 has also been incorporated into this proceeding.

²⁹ *See, e.g.*, March 26, 2020 Opening Comments of Rural County Representatives of California to the Assigned Commissioner's Proposal at 3; April 3, 2020 Comments of Communications Workers of America at 2 (“loss of communications service is often a matter of life and death”).

2.1.1. The Commission Has Jurisdiction Over Wireless Telephone Corporations and Other Communications Utilities

The Commission has broad jurisdiction over “public utilities,”³⁰ including “telephone corporations.”³¹ The Commission’s “broad regulatory power over public utilities” derives from Article XII of the State Constitution, which establishes the Commission, and gives it wide-ranging regulatory authority, including but not limited to “the power to ... establish rules, hold various types of hearings, award reparation, and establish its own procedures.”³²

A “public utility” includes every “telephone corporation” where service is performed, or a commodity is delivered to the public or any portion thereof.³³ A “telephone corporation” includes “every corporation or person owning, controlling, operating, or managing any telephone line for compensation in this state.”³⁴ A “telephone line” includes “all conduits, ducts, poles, wires, cables, instruments, and appliances, and all other real estate, fixtures, and personal property owned, or controlled, operated, or managed in connection with or to facilitate communication by telephone, *whether such communication is had with or without the use of transmission wires.*”³⁵ California’s Constitution specifically

³⁰ Pub. Util. Code § 216.

³¹ Pub. Util. Code § 234.

³² *Wise v. Pacific Gas & Electric Co.* (1991) 77 Cal.App.4th 287, 293 (citing California Constitution, Art.XII, §§ 2, 4, 6.);

³³ Pub. Util. Code § 216.

³⁴ Pub. Util. Code § 234.

³⁵ Pub. Util. Code § 233 (emphasis added).

extends the Commission's jurisdiction to companies engaged in "the transmission of telephone and telegraph messages."³⁶

The Commission's authority over public utilities includes oversight of both public utility services and facilities.³⁷ The Commission is required to ensure that utilities, including telephone corporations, "furnish and maintain such adequate, efficient, just and reasonable service, instrumentalities, equipment, and *facilities* ... as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public."³⁸ The Commission also has an ongoing responsibility to ensure the reasonableness and sufficiency of *utility facilities*³⁹ and may order "additions, extensions, repairs, or improvements to, or changes in" utility facilities that the Commission finds "ought reasonably to be made."⁴⁰

In addition, the Commission alone can grant operating authority to California utilities, *i.e.*, issue a certificate of public convenience and necessity (CPCN) to traditional utilities seeking to operate in California,⁴¹ or a "registration" license to companies the Commission has determined lack "monopoly power or market power in a relevant market or markets,"⁴² or to

³⁶ Cal. Const., Art. XII, § 3.

³⁷ See Cal. Const., Art. XII, §§ 1-6; Pub. Util. Code § 701.

³⁸ Pub. Util. Code § 451 (emphasis added).

³⁹ Pub. Util. Code § 761.

⁴⁰ Pub. Util. Code § 762.

⁴¹ See Pub. Util. Code § 1001.

⁴² Pub. Util. Code § 1013.

wireless telephone corporations.⁴³ In the case of both non-dominant and wireless registrations, however, the telephone corporations are required to comply with all sections of the Public Utilities Code other than the entrance regulation inherent in § 1001.⁴⁴

A CPCN or equivalent authority confers upon a public utility telephone corporation numerous benefits in addition to the obligations under the Public Utilities Code, CPUC decisions, and regulations. For instance, public utility telephone corporations have the right to interconnect with other service providers⁴⁵ and the ability to access the public rights-of-ways to build or install facilities to provide their services.⁴⁶

⁴³ In D.94-10-031, the Commission harmonized the 1993 Budget Act language preempting the State's authority to control market entry, with § 1001, which requires all telephone utilities to have a CPCN. The CPUC determined that wireless carriers, also known as Commercial Mobile Radio Service (CMRS) providers, a term later included in the California Public Utilities Code (section 216.8), would be required to obtain a Wireless Identification Registration with the Communications Division (then called Telecommunications Branch) in lieu of a § 1001 CPCN. Thus, although the Commission cannot bar a wireless service provider from entering the California market, it can require the wireless provider to adhere to certain "just and reasonable" standards to ensure customer health, welfare, and safety.

⁴⁴ See, e.g., Pub. Util. Code § 1013(h)(5) (a telephone corporation registered under Section 1013 can lose its operating authority if it "violates any order, decision, rule, regulation, direction, demand, or requirement established by the commission under this code"); D.94-10-031, *supra* (wireless providers to be "[i]n all respects except authorization for market entry and ... rates" subject to the Commission's jurisdiction, including "the requirement to file tariffs" other than rate tariffs). This structure was largely upheld on rehearing in D.94-12-042.

⁴⁵ State certification/registration entitles the telephone corporation to interconnect with other telephone corporations under 47 USC §§ 251 and 252 and analogous state law.

The Commission has long held that wireless service providers are public utilities.⁴⁷ As the wireless market developed, the Commission and the Courts continued to find and uphold Commission jurisdiction over wireless telecommunications utilities to protect consumers.⁴⁸ The Commission's jurisdiction extends to the facilities wireless carriers rely upon to provision service.⁴⁹

2.2. Police Power Authority over Matters Related to Public Health and Safety is Traditionally Reserved to the States

The "protection of the lives limbs, health, comfort and quiet of all persons ... within the State" has been considered part of the States' essential "police power" since the inception of our federal form of government.⁵⁰

The Tenth Amendment to the U.S. Constitution provides that "powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Police power, including authority to protect health and safety of its citizens, is unquestionably

⁴⁶ See e.g., Pub. Util. Code § 7901.

⁴⁷ See, e.g., *Commercial Communications, Inc. v. PUC*, 50 C.2d 512, 523 (1958). See also *Order Instituting Investigation of Cingular Wireless*, I.02-06-003 (citing e.g., D.01-07-030, Appendix A, *Interim Rules Governing Non-Communications-Related Charges on Telephone Bills*, at 1, 6; D.89-07-019, *Re Regulation of Cellular Radiotelephone Utilities*, 32 CPUC 2d 271, 281; D.01-07-030).

⁴⁸ See, e.g., D.04-09-062 (jurisdiction over AT&T Wireless' corporate predecessor, Cingular); D.12-02-032 (jurisdiction over a mobile reseller, TracFone).

⁴⁹ Pub. Util. Code §§ 233, 224.4.

⁵⁰ *Slaughter-House Cases* (1873) 83 US 36, 62, quoting *Thorpe v. Rutland & Burlington Railroad Co.* (1855) 27 Vermont 149.

an area of traditional State control.⁵¹ The U.S. Supreme Court has recognized this principle:

Throughout our history the several States have exercised their police powers to protect the health and safety of their citizens. Because these are "primarily, and historically, . . . matter[s] of local concern," *Hillsborough County v. Automated Medical Laboratories, Inc.*, 471 U.S. 707, 719, 85 L. Ed. 2d 714, 105 S. Ct. 2371 (1985), the "States traditionally have had great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort, and quiet of all persons," *Metropolitan Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 756, 85 L. Ed. 2d 728, 105 S. Ct. 2380 (1985).⁵²

The California Constitution and California statutory law designate the CPUC as the principal body through which the State exercises its police power in the case of essential utility network services. Public Utilities Code § 451 gives the Commission broad authority to regulate public utility services and infrastructure as necessary to ensure they are operated in a way that provides for the health and safety of Californians:

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, **as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.**⁵³

⁵¹ *Raich v. Gonzalez*, 500 F3d 850, 866-67 (9th Cir., 2006).

⁵² *Medtronic v. Lohr*, 518 U.S. 470, 475 (1996) (internal quotation marks omitted).

⁵³ Pub. Util. Code § 451 (emphasis added). See also, *PG&E Corp. v. Public Utilities Com'n*, 120 Cal.App.4th, 644 (2004).

The Commission has broad authority to implement this requirement.⁵⁴

Protections for Californians as consumers of telecommunication services are set forth in Public Utilities Code §§ 2890-2896. The Commission's public health and safety police powers are further reflected in the Commission's oversight of 9-1-1 service, referenced in several sections of the Public Utilities Code.⁵⁵

More recently, the Legislature has expressed the State's police power in the specific context of wireless telecommunications during wildfire events. On October 2, 2019, the Legislature enacted AB 1699, codified as Public Utilities Code § 2898, prohibiting mobile throttling of first responders, upon request, during emergencies. The Legislature passed AB 1699 in response to Verizon Wireless' data throttling of the Santa Clara Fire Department's mutual aid equipment while combatting the Mendocino Complex Fire, the largest wildfire in California history.⁵⁶

Further, the Legislature has expressed its intent to modernize the state's emergency communications systems. Recent legislation requires the Cal OES to

⁵⁴ Public Utilities Code § 701, for example, authorizes the CPUC to "do all things whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction."

⁵⁵ Pub. Util. Code § 742 (9-1-1 for public telephones); Pub. Util. Code § 2883 (9-1-1 service and "warm lines"); Pub. Util. Code § 2889.6 (information to customers regarding 9-1-1); and Pub. Util. Code § 2892 (requiring wireless carriers to provide access to 9-1-1 service).

⁵⁶ See AB 1699 Bill Analysis,

https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201920200AB1699

Santa Clara Fire paid Verizon for "unlimited" data but suffered from heavy throttling until the department paid Verizon more.

develop a Next Generation 911 emergency communication system throughout California⁵⁷, to develop guidelines for the use of traditional, internet-based, and wireless alert systems,⁵⁸ to implement a text to 911 service,⁵⁹ and to determine the feasibility of a statewide system that would enable all Californians to voluntarily provide vital health and safety information for first responders in an emergency if a "911" call is placed.⁶⁰ Each of these requirements deepens the state's reliance on advanced, IP-enabled services to maintain the public's safety. The state's ability to maintain the public's safety is inseparably intertwined with these services.

Pursuant to the police power authority vested in it by the California Constitution and the Public Utilities Code, and acting as the State's expert agency in matters of public utility infrastructure, the Commission has articulated health and safety requirements that apply in whole or in part to wireless networks, and to the wired networks on which wireless networks depend.⁶¹ The Commission's iterations of that authority include General Order (GO) 52 (Construction and operation of power and communication lines for the prevention or mitigation of inductive interference); GO 95 (Overhead electric [and communications] line

⁵⁷ SB 1211, Padilla, Chapter 926, Statutes of 2014.

⁵⁸ SB 833, McGuire, Chapter 617, Statutes of 2018.

⁵⁹ AB 1169, Mullin, Chapter 237, Statutes of 2019.

⁶⁰ AB 911, Rodriguez, Chapter 686, Statutes of 2019.

⁶¹ The phrase "wireless network" is something of a misnomer. Wireless networks are only wireless in the "last mile" between the cell tower or other base station and the consumer's handheld or other device. Upstream, the cell tower is typically connected to a Mobile Telephone Switching Office (MTSO) by copper or fiber, or by microwave link.

construction); GO 128 (Construction of underground electric supply and communication systems); and GO 159-A (Construction of cellular radiotelephone facilities in California); among other such Commission orders and guidelines.⁶² The Commission's authority, and that of other state agencies acting pursuant to the States' police power, has been upheld repeatedly by both state and federal courts.⁶³

The regulatory measures promulgated in this Decision are consumer safeguards intended to protect the health and safety of utility customers, particularly those encountering wildfires and related public emergencies triggered by historic climate change. A great benefit of owning a phone, and particularly a mobile phone, is to be able to receive warnings about possible dangerous situations. A wildfire growing uncontrollably nearby constitutes a

⁶² In D.96-05-035, the decision adopting GO 159-A, the Commission delegated its oversight authority to local jurisdictions better situated to understand the health and safety impacts of cell tower construction. Under GO 159-A, the Commission still requires wireless providers to report their cell siting activity, and may preempt local government determination on cell tower siting when there is a clear conflict with Commission goals or statewide interest. (GO 159-A at 3; *see also* D.95-05-035, which cited §§ 451, 701, 702, 761, 762, 762.5 and 1001 of the Public Utilities Code in enacting GO 159-A.) The Commission's authority, and that of other state agencies acting pursuant to the States' police power, has been upheld repeatedly by both state and federal courts.

⁶³ Consumer protection and safety statutes are sometimes referred to as public welfare or police power laws, as they involve protection of the public at large. (*Cf. Investigation on the Commission's own motion into ... Communication Telesystems [CTS]*, D.97-10-063 (1997) 1997 Cal. PUC LEXIS 912 at *10-11, *16, and Conclusion of Law 6 (slamming of long distance customers); *see also* D.97-05-089, 1997 Cal. PUC LEXIS 447 at *39-40; *see also Donald v. Cafe Royale, Inc.* (1990) 218 CA3d 168, 180 (failure to provide wheelchair access in restaurant); *Drewry v. Welch* (1965) 236 CA2d 159, 175-76 (trespass in removing timber), discussed in D.97-10-063, 1997 LEXIS 912 at *11).

potentially dangerous, indeed, life-threatening, situation. The proposed measures in the Assigned Commissioner's Proposal (Proposal) will also assist in giving the public notice about upcoming and ongoing PSPS events.

2.3. The Federal Communications Act Does Not Preempt the Commission from Exercising Public Safety Regulation of Wireless Facilities

2.3.1. The 1993 Amendments to the Federal Communications Act Ushered in an Era of Shared Jurisdiction

In 1993, Congress passed the Omnibus Budget Reconciliation Act of 1993 (Budget Act), which amended Section 332(c)(3)(A) of the Communications Act (§ 332) as follows:

no State or local government shall have any authority to regulate the entries of or the rates charged by any commercial mobile service or any private mobile service, except this paragraph *shall not prohibit a State from regulating the other terms and conditions of commercial mobile service*.⁶⁴

After Congress enacted the revised § 332, the CPUC issued multiple decisions implementing the change in federal law, and harmonizing those changes with existing Commission oversight of wireless telephony.⁶⁵ In so

⁶⁴ Codified at 47 USC § 332(c)(3)(A) (emphasis added). The Budget Act was part of a national redistribution of regulatory authority which continued with the 1996 Telecommunications Act, and resulted in what has been referred to as a system of "cooperative federalism." See, e.g., *Core Communications, Inc. v. Verizon Pennsylvania, Inc.* 493 F.3d 333, 335 (3d Cir. 2007) ("[T]he Act provides that various responsibilities are to be divided between the state and federal governments, making it 'an exercise in what has been termed cooperative federalism.' (Internal citation omitted) . . . The 'intended effect' of such regime was to 'leave[e] state commissions free, where warranted, to reflect the policy choices made by their states'").

⁶⁵ See, e.g., D.95-10-032, *Investigation on the Commission's Own Motion into Mobile Telephone Service and Wireless Communications*; see also D.94-10-031, *supra* (wireless providers subject to the Commission's jurisdiction, including "the requirement to file tariffs" other than rate tariffs);

doing, the Commission determined that wireless providers are “telephone corporations” and therefore, “public utilities” under Public Utilities Code §§ 216, 233, and 234. Accordingly, the Commission continues to exercise broad authority over wireless service.⁶⁶ As discussed above, the rules adopted in today’s decision fall under the Commission’s police powers pursuant to the Tenth Amendment of the U.S. Constitution and Public Utilities Code §§ 233, 451, 701, et al.⁶⁷ Further, The D.C. Circuit recently held that the FCC may preempt state law “only when and if it is acting within the scope of its congressionally delegated authority.”⁶⁸

upheld on rehearing in D.94-12-042. Shortly after passage of the Budget Act, the Commission instituted an investigation of the wireless industry in order "to develop a comprehensive regulatory framework consistent with the Federal Budget Act and our own statutory responsibilities." I.93-12-007, *Investigation on the Commission's Own Motion into Mobile Telephone Service and Wireless Communications*, 1993 Cal. PUC LEXIS 836.) A year later the Commission adopted "interim procedures" (including a registration requirement for wireless carriers) to ensure that the Commission retained “the ability to provide a forum for the resolution of consumer problems when they may arise and continued regulation of other terms and conditions for all CMRS carriers.” (D.94-10-031, 56 CPUC 2d 578, 579.)

⁶⁶ In D.94-10-031, the CPUC found that wireless providers remain fully subject to its authority in all respects aside from the requirements to obtain operating authority (entry regulation) or rate regulation. In D.96-12-070, the CPUC reiterated its intent to exercise its jurisdiction over “other terms and conditions” of cellular carriage. D.96-12-070 provided: “Given the dynamic and changing nature of the CMRS market, we cannot anticipate all possible consumer issues or industry concerns that may arise over time, and the resulting scope of ‘terms and conditions’ which we will actively supervise.” (70 CPUC 2d at 77 (Finding of Fact No. 21).)

⁶⁷ Preemption of state laws, including laws regulating information services, requires “a link to express delegated authority.” (*Comcast Corp. v. FCC*, 600 F.3d 642 at 658 DC Cir. 2010.)

⁶⁸ *Mozilla Corp., et al. v. Federal Communications Commission, et al.*, 940 F.3d 1 (D.C. Cir. 2019) (citing *Louisiana Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 374, 106 S. Ct. 1890, 90 L. Ed. 2d 369 (1986)).

2.3.2. In Providing a Role for States, Congress Explicitly Declined to Occupy the Field

The legislative history of § 332(c)(3)(A) of the Budget Act indicates what Congress meant by the language “other terms and conditions,” and reemphasizes the role Congress saw for the States:

It is the intent of the Committee that the State still will be able to regulate the terms and conditions of these services [CMRS]. By “terms and conditions” the Committee intends to include such matters as customer billing information and packaging and billing disputes and other such consumer protection matters; **facility siting issues (e.g. zoning); transfers of control; bundling of services and equipment; and the requirement that carriers make capacity available on a wholesale basis and such other matters as fall within the State’s lawful authority.** This list is intended to be illustrative only and not meant to preclude other matters generally understood to fall under “terms and conditions.”⁶⁹

The FCC has also confirmed the CPUC’s jurisdiction over “other terms and conditions” when it stated that it anticipated the CPUC would continue to conduct appropriate complaint proceedings and to monitor the structure, conduct, and performance of CMRS providers.⁷⁰

⁶⁹ H.R. Rep. No. 103-111, 103d Con. 1st Sess. (1993), at 251, reprinted in 1993 U.S.C.C.A.N. 378, 588 (emphasis added).

⁷⁰ The FCC stated that the “CPUC retains whatever authority it possesses under state law to monitor the structure, conduct, and performance of CMRS providers in that state.” (See May 19, 1995 Report and Order *In re Petition of the People of the State of California ... to Retain Regulatory Authority over Intrastate Cellular Service Rates*, 10 FCC Record 7486.) Moreover, the Federal Communications Act contains “savings clauses” which are “fundamentally incompatible with complete field preemption; if Congress intended to preempt the entire field .

2.3.3. Congress Did Not Expressly (or Otherwise) Preempt State Health & Safety Rules.

The wireless carriers make two different species of preemption arguments, express and implied. In its Comments, AT&T (along with CTIA) first argues that the Commission “is preempted by the *express* prohibition of state law regulating market entry found in 47 U.S.C. § 332 (c)(3)(A)” from imposing its backup power proposal.⁷¹

However, to support an express preemption argument, its proponents must cite an express Congressional intention to prohibit states from regulating wireless carriers where such regulation might be necessary to safeguard the health and safety of their populations.⁷² Nowhere has Congress expressly stated or clearly manifested any intention to prohibit all State public safety regulations that apply to wireless carriers.

Many carriers also argue that the Federal Communications Act grants the FCC exclusive control over wireless licensing, thus preempting the States from regulating rates or market entry by wireless service providers.⁷³ The licensing Congress delegated to the FCC pertains to the allocation of spectrum, where Congress foresaw the FCC administering a unitary national spectrum plan.

. . . there would be nothing . . . to 'save,' and the provision would be mere surplusage." (*Farina v. Nokia Inc.*, 625 F.3d 97, 117, 121-22 (3d Cir. 2010)).

⁷¹ AT&T April 3, 2020 Opening Comments, at 6 (emphasis added); CTIA April 3, 2020 Comments at 14 (“overt preemption”).

⁷² *Napier v Atlantic Coast Line*, 272 US 605, 611 (1926) (Justice Brandeis stating: “[t]he intention of Congress to exclude States from exerting their police power must be clearly manifested.”).

⁷³ AT&T Opposition to Motion by Public Advocates, June 19, 2019, at 52.

Nothing in the Proposal relates to spectrum, nor does it bar the door to market entry. Indeed, the now three large facilities-based wireless carriers all already offer service in California, all have a statewide footprint, and all have stated that they already have backup power at a substantial number of their cell sites.

Further, the presumption against preemption where the State is exercising traditional health and safety police powers is particularly strong.⁷⁴ It has been applied in cases involving state police power and the health and safety aspects of wireless telecommunications networks, where Courts have pointed out that Congress expressly did *not* occupy the field of wireless regulation.^{75 76} As the Third Circuit noted: "we start[] with the basic assumption that Congress did not intend to displace state law."⁷⁷ The U.S. Supreme Court has also asserted that "because the States are independent sovereigns in our federal system, we have long presumed that Congress does not cavalierly pre-empt state-law causes of action."⁷⁸

Nor is a backup power requirement tantamount to rate regulation. Although states may not regulate the entry of or rates charged by wireless providers, not all matters that may indirectly affect wireless providers' rates constitute the rate regulation contemplated by § 332. The scope of § 332's

⁷⁴ See, e.g., *Farina v. Nokia Inc, supra*, 625 F.3d at 121-22).

⁷⁵ See, e.g., *Farina v. Nokia Inc, supra*, 625 F.3d at 121-22.

⁷⁶ See, e.g., *Farina v. Nokia Inc, supra*, 625 F.3d at 121-22.

⁷⁷ *Maryland v. Louisiana*, 451 U.S. 725, 746, 101 S. Ct. 2114, 68 L. Ed. 2d 576 (1981).

⁷⁸ *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996).

preemptive language is limited to regulations that *directly and explicitly* control rates, prevent market entry, or require a determination of the reasonableness of rates.⁷⁹ The Commission still retains the unequivocal authority to regulate “other terms and conditions of service.”

Numerous cases recognize the consumer protection and other police power interests reserved to the States pursuant to § 332(c)(3)(A).⁸⁰ Further, the Commission has successfully asserted jurisdiction over “other terms and conditions” of wireless service. For example, the Commission has reviewed merger agreements between wireless carriers pursuant to Public Utilities Code §§ 851-857,⁸¹ enforced consumer protection measures against wireless carriers in the Consumer Protection Initiative Decision (D.06-08-030) and Cramming Reporting Decision (D.10-10-034), and applied outage reporting requirements to wireless carriers (D.16-08-021).⁸²

⁷⁹ *Spielholz v. Superior Court* (2001) 86 Cal. App. 4th 1366; *Fedor v. Cingular Wireless* (7th Cir. 2004) 355 F.3d 1069, 1074. (*Phillips*, 2004 U.S. Dist. LEXIS 14544 at *24-25; *see also*, *Brown v. Washington/Baltimore Cellular, Inc.* (D. Md. 2000) 109 F. Supp. 2d 421, 423; *Iowa v. US Cellular Corp.* (S.D. Iowa 2000) 2000 U.S. Dist. LEXIS 21656, *5 (*US Cellular*).)

⁸⁰ *See, e.g., Ting v. AT&T Corp.* (9th Cir. 2003) 319 F.3d 1126, *cert. denied*, *AT&T Corp. v. Ting* (2003) 124 S.Ct. 53.); *Spielholz v. Superior Court* (2001) 86 Cal.App.4th 1366; *Fedor v. Cingular Wireless*, (7th Cir. 2004) 35 F.3d 1069; *Phillips v. AT&T Wireless* (S.D. Iowa July 29, 2004) 2004 U.S. Dist. LEXIS 14544); *Brown v. Washington/Baltimore Cellular, Inc.* (D. Md. 2000) 109 F. Supp. 2d 421, 423; *Iowa v. US Cellular Corp.* (S.D. Iowa 2000) 2000 U.S. Dist. LEXIS 21656; *Communications Telesystems Int’l v. Calif. Pub. Util. Comm’n* (9th Cir. 1999) 196 F.3d 1011.

⁸¹ T-Mobile/AT&T proposed merger, I.11-06-009; T-Mobile/Sprint proposed merger, A.18-07-011, A.18-07-012.

⁸² The Commission also adopted D.18-08-004 and D.19-08-025 in this proceeding adopting rules addressing disaster relief emergency customer protections, which apply to wireless carriers.

In a case relying on the “other terms and conditions” language of § 332, the Commission has penalized a wireless carrier for providing “unjust and unreasonable service.” The Commission issued D.04-09-062, concluding an investigation into the sale of cellular telephone equipment and Early Termination Fee (ETF) practices of Cingular Wireless (Cingular). There, the CPUC determined that Cingular’s ETF policy “constituted an unjust and unreasonable rule and resulted in inadequate, unjust, and unreasonable service in violation of both Pub. Util. Code § 451” and a prior Commission decision, D.95-04-028 and ordered Cingular to pay customer reparations and a penalty.⁸³ Cingular filed with the California Court of Appeal a petition for writ of review of the Commission’s decisions, claiming that an ETF is part of its “rate structure” and that the Commission’s actions constituted rate regulation.⁸⁴ However, the Commission successfully argued that it properly focused on the specific conditions under which Cingular imposed its ETF in finding that Cingular provided unjust and unreasonable service consistent with the terms and conditions language of Section 332.⁸⁵ In 2006, the Court of Appeal upheld the

Service providers have filed applications for rehearing of both the Phase I and Phase II decisions. Those applications are pending.

⁸³ D.04-12-058 at 1.

⁸⁴ *Answer of Respondent (CPUC) to Petition for Writ of Review*, Court of Appeal of the State of California, 4th Appellate District, Case No. GO034991.

⁸⁵ *Id.* at 4-5.

Commission's assertion of jurisdiction over Cingular Wireless, and denied Cingular's Petition for Writ of Review.⁸⁶

2.3.4. There is No Conflict Preemption

Without express or field preemption, the carriers must rely on conflict preemption.⁸⁷ AT&T argues that a backup power regime runs afoul of § 332(c)(3)(A) because it would require the utilities "to do more than required by the FCC."⁸⁸ This is difficult to understand because the FCC has no backup power rules.⁸⁹ Consequently, the basis for the claim that California's emergency measures are preempted because they conflict with nonexistent federal regulations is elusive. To support their argument for conflict preemption, the wireless carriers also misconstrue one sentence of dicta in a 2000 decision of the

⁸⁶ *Pacific Bell Wireless (Cingular) v CPUC*, 140 CA4th 718 (2005) (upholding CPUC finding that Cingular had engaged in false or misleading advertising and a CPUC penalty of \$12.1 million and restitution of ~\$20 million). The California Supreme Court and U.S. Supreme Court summarily denied Cingular's ensuing petitions for review.

⁸⁷ With regard to field or conflict preemption, there remains "a strong presumption against preemption when the federal government regulates in areas traditionally left to the states." (*Pinney v Nokia, Inc.* (4th Cir 2005), 402 F3d 430, 457).

⁸⁸ AT&T Opposition to Motion by Public Advocates, June 19, 2019, 2019, p. 55 (citing *Bastien v. AT&T Wireless Servs., Inc.*, 205 F.3d 983 (7th Cir. 2000)).

⁸⁹ As noted previously, the backup power rules the FCC adopted in 2007 in the wake of Hurricane Katrina were challenged in court, held in abeyance, and never implemented. (See *In the Matter of Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, EB Docket No. 06-119, WC Docket No. 06-63, Order on Reconsideration, 22 FCC Rcd 18013, 18035, App. B (2007); *CTIA – the Wireless Assn. v FCC*, 530 F.3d 984, 987 (D.C. Cir., 2008.); *CTIA-The Wireless Assn. v FCC*, July 31, 2009 Order, at 2009 U.S. App. LEXIS 17031.) The FCC has subsequently taken no action on this issue. . The FCC also did not address backup power issues in its rulemaking re: *In the Matter of Improving the Resiliency of Mobile Wireless Communications Networks; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Dockets Nos. 13-29, 11-60, Sept. 26, 2013 and

Seventh Circuit Court of Appeals, *Bastien v. AT&T Wireless Servs., Inc.*; *Bastien* is inapposite here because the underlying facts are fundamentally different.⁹⁰ In *Bastien*, the Seventh Circuit rejected plaintiff's consumer class action because the plaintiff explicitly requested that AT&T build out more cell towers, which conflicted with a specific FCC market buildout plan for that area.⁹¹ Here, no such FCC approved plan for California is at issue.

CTIA's Comments similarly claim *Bastien* demonstrates that § 332 "preempts a state from 'substituting its judgement for the [FCC's] with respect to a market-entry decision.'"⁹² The FCC in its *Wireless Consumer Alliance* decision, apparently the only time it considered *Bastien*, stopped well short of concluding that *Bastien* demonstrated § 332 had such broad preemptive effect.⁹³ The FCC stated that "we read *Bastien* as standing for the more general proposition, with which we agree, that state law claims may, in specific cases, be preempted by Section 332. We also read *Bastien* as standing for the proposition that it is

subsequent Order in that docket issued on December 14, 2016.

⁹⁰ *Bastien v. AT&T Wireless Servs., Inc.*, 205 F.3d 983 (7th Cir. 2000).

⁹¹ The *Bastien* opinion states: "While [plaintiff's] charges appear more like traditional state law claims, they are all founded on the fact that AT&T Wireless had not built more towers and more fully developed its network at the time *Bastien* tried to use the system. The reason AT&T Wireless had not more fully developed its network was because it was in compliance with the FCC schedule for building towers and establishing service in the Chicago market. In this complaint, *Bastien* has repackaged challenges to the FCC-approved plan in a state law wrapper, but the contents of that package remain challenges to the FCC approved plan." (*Id.* at 989.)

⁹² CTIA Opening Comments at 14.

⁹³ *In re Wireless Consumers Alliance* (2000) 15 FCC Rcd 17021, 17035.

the substance, not merely the form of the state claim or remedy, that determines whether [the State claim] is preempted under Section 332.”⁹⁴

Two subsequent Ninth Circuit decisions did not closely examine what Congress’ intent was in preempting state market entry regulation, but they agree that the preemptive effect of § 332 is case dependent.⁹⁵ The Fourth Circuit, however, and other courts have construed the market entry prohibition, and concluded that “Congress enacted the entire § 332 to ensure the availability of a nationwide network of wireless service coverage.”⁹⁶

It is evident that the major wireless carriers operating in California *already* run nationwide networks, and *already* describe their service area in California as the entire state. Given that nationwide networks exist today, requiring carriers to outfit a small percentage of their cell sites – those located in Tier 2 and 3 high fire threat areas – with backup power in order to avert further loss of life would not impair the buildout of a nationwide network. In addition, the Proposal addresses requirements for the maintenance and safeguarding of service; it does not touch upon market entry regulation. Further, California courts have upheld

⁹⁴ *Id.*

⁹⁵ *Telesaurus VPC, LLC v Power* (9th Cir., 2010) 623 F.3d 998, 1007 (“the FCC rejected this per se approach, adopting instead a case-by-case analysis for preemption of state tort actions”); *Shroyer v AT&T* (“the FCC rejected this per se [preemption] argument in *In re Wireless Consumers Alliance*, and so do we”).

⁹⁶ *Pinney v Nokia, Inc.* (4th Cir 2005), 402 F3d 430, 455; *see also Murray v. Motorola* (D.C. Cir. 2009) 982 F. 2d 764, 775, (“We agree with the *Farina* court that ‘Congress’s intent in enacting [Section 332(c)(3)(A)] was to prevent the states from obstructing the creation of nationwide cellular service coverage, and not the preemption of health and safety and police powers” (citing *Farina*, 578 F.Supp.2d at 761; *see also Cippollone v. Liggett Group, Inc.*, 505 U.S. 504 (1992)).

the Commission's interpretation of Public Utilities Code § 451 as a delegation of police power to the CPUC that is not preempted by § 332 or the dicta from *Bastien*.⁹⁷

In upholding this Commission's *Cingular* decision, the California Court of Appeal addressed *Bastien*, finding that the technical network standards entrusted to the FCC were categorically different from the consumer welfare standards embodied in state law, including Public Utilities Code 451:

The statutes and the Commission order that Cingular was found to have violated are broadly written. The Commission's interpretation of the reach of Sections 451, 702, and 2896, as well as of its own earlier order, must be given presumptive value. (*Yamaha Corp. of America v. State Bd. of Equalization*, *supra*, 19 Cal.4th at 11.)⁹⁸

The Court in *Cingular* here dropped a footnote quoting Section 451 in its entirety, including the language cited above relating to the Commission's

⁹⁷ *Pacific Bell Wireless (Cingular), supra v CPUC*, 140 CA4th at 740-741, *cert. den.* 2006 Cal.LEXIS 12549 (Cal., Oct 11, 2006), U.S. Supreme Court *cert. dismissed sub nom AT&T Mobility LLC v Cal. PUC*, 127 S.Ct. 1931 (US April 10, 2007). In upholding this Commission's *Cingular* decision, the California Court of Appeal addressed the *Bastien* finding that the technical network standards entrusted to the FCC were categorically different from the consumer welfare standards embodied in state law, including Public Utilities Code § 451. The Court in *Cingular* wrote: "The statutes and the Commission order that Cingular was found to have violated are broadly written. The Commission's interpretation of the reach of Sections 451, 702, and 2896, as well as of its own earlier order, must be given presumptive value. (*Yamaha Corp. of America v. State Bd. of Equalization*, *supra*, 19 Cal.4th at 11.)" (*Pacific Bell Wireless (Cingular), v. CPUC*, 140 CA4th at 740 741, *cert. den.* 2006Cal.LEXIS 12549 (Cal., Oct 11, 2006), U.S. Supreme Court *cert. dismissed sub nom AT&T Mobility LLC v Cal. PUC*, 127 S.Ct. 1931 (US April 10, 2007)).

⁹⁸ *Pacific Bell Wireless (Cingular), supra v CPUC*, 140 CA 4th at 740-741, *cert.den.* 2006Cal.LEXIS 12549 (Cal., Oct 11, 2006), U.S. Supreme Court *cert. dismissed sub nom AT&T Mobility LLC v Cal. PUC*, 127 S.Ct. 1931 (US April 10, 2007).

jurisdiction over utility “instrumentalities, equipment, and facilities ... as are necessary for *to promote the safety, health, comfort, and convenience of [the utility’s] patrons, employees, and the public.*”⁹⁹

Finally, the wireless carriers argue that a recent FCC Order supports their claims for preemption. The FCC’s 2018 Order referenced by the wireless carriers focuses on adopting measures to aid deployment of infrastructure for 5G and other advanced wireless networks, including: a “materiality” standard for state or local laws with regard to small cell siting; fee requirements that can act as a barrier to the deployment of small cells; and new shot clock requirements regarding small cell siting for 5G networks.¹⁰⁰ None of these requirements conflicts with the Commission’s backup power Proposal. As The Utility Reform Network (TURN) points out, the carriers ignore other cases finding state and local authorities have jurisdiction to exercise police powers, including zoning and siting authority, which are much more analogous to the back up and resiliency requirements in the Proposal.¹⁰¹

⁹⁹ *Id.* (emphasis added).

¹⁰⁰ *In the Matter of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79, etc., Declaratory Ruling and Third Report and Order, Adopted September 26, 2018.

¹⁰¹ TURN Reply Comments at 7, *citing MetroPCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 735 (9th Cir. 2005) (local zoning ordinance does not interfere with federal policies of entry and competition); *Sprint Telephony, PCS, L.P. v. County of San Diego* (9th Cir. 2007) 497 F.3d 1061, *citing* H.R. Conf. Rep. No. 104-458, 208 (finding that a local ordinance regulating tower siting would be more likely to help would balance interests of wireless service availability and other valid public goals of safety and aesthetics than interfere with federal policy).

2.4. Requiring Backup Power at Cell Sites Is Entirely Consistent with State Law

AT&T argued in its opposition to the Public Advocates Office's Motion filed on June 19, 2019 that the relief requested in the Motion conflicts with the statutory scheme in California's Emergency Services Act (ESA).¹⁰² The ESA¹⁰³ establishes the state of California's Office of Emergency Services (CalOES) and confers authority upon the Governor and other state governing bodies certain emergency powers.¹⁰⁴ The ESA provides for emergency preparedness and response, and provides for coordination and collaboration with other state and local agencies, including requesting mutual relief. The ESA does not provide for consumer protection for utility customers before, during, or after an emergency. Nor does the ESA require utilities to provide a sufficient quality of service that permits emergency responders and the public to rely on these utility services during an emergency. If AT&T's argument were correct, many of the Commission's emergency management regulations – vegetation management, power line management, 911 services¹⁰⁵ - would also fail.

The Commission has long regulated the safety-related and reliability-related aspects of utility networks, extending to provisions relating to

¹⁰² AT&T Response to Motion, at 42.

¹⁰³ Gov. Code § 8550 et seq.

¹⁰⁴ ESA, Art. 1, § 8550(a).

¹⁰⁵ See, e.g., General Order 168, Rule 3.

backup power, support structures, and the requirements in GO 95 and GO 128, relating to overhead lines and underground facilities.¹⁰⁶

3. Proposal Summary

The Proposal makes recommendations addressing Phase II issues to enforce a resilient and dependable communications network that aids first responders and protects customer communications service in the State of California. The Proposal presents the following recommendations for actions to facilitate a resilient and dependable communications network:

- Applicability of Requirements: The Proposal recommends that any communications provider resiliency requirements should either be: (1) applicable to all companies owning, operating, or otherwise responsible for infrastructure that provides or otherwise carries 9-1-1, voice, text messages, or data; or (2) applicable to the categories we adopted in D.19-08-025 (1) facilities-based and non-facilities-based landline providers includ[ing] 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 includ[ing] those that provide access to E9-1-1 and/or LifeLine services; (2A) facilities-based wireless providers; and (2B) non-facilities-based wireless providers, includ[ing] resellers and mobile virtual network operators [MVNOs].¹⁰⁷
- Definition of Resiliency: The Proposal defines resiliency as the ability to recover from or adjust easily to adversity or

¹⁰⁶ AT&T Response to Motion, at 47. These exceptions are enumerated in Public Utilities Code §§ 710(c)(6) and (7).

¹⁰⁷ D.19-8-025 at 4.

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.¹⁰⁸

- Backup Power Requirement: 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 internet browsing for emergency notices.¹⁰⁹
- Backup Power Plans: 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 internet browsing for 100 percent of customers in the event of a commercial power outage.¹¹⁰
- Clean Energy Generation: The Proposal directs Providers to utilize clean energy backup power options as reasonable before using diesel generators to meet the backup power requirement, among other provisions.¹¹¹

¹⁰⁸ Proposal at 3.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 3-4.

¹¹¹ *Id.* at 4.

- Waivers: The Proposal directs Providers to submit waivers if they qualify for any of the exemptions enumerated in the Proposal.¹¹²
- Critical Facility Location Information Sharing: 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.¹¹³
- 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.¹¹⁴
- Emergency Operations Plans: The Proposal directs Providers to file emergency operations plans with the Commission, discussing how their operations are prepared to respond to emergencies.¹¹⁵ The Proposal itemizes required content that the Providers must submit to the Commission.

In addition, the Proposal requires all respondent communications service providers to prepare a report of what current mitigation efforts they are

¹¹² *Id.*

¹¹³ *Id.* at 5.

¹¹⁴ *Id.* at 5-6.

¹¹⁵ *Id.* at 6-7.

undertaking to ensure continuity of service in preparation and in advance of the upcoming 2020 wildfire and grid outage season.¹¹⁶

3.1. Parties' Response to Proposal

On April 3, 2020, the following parties filed comments in response to the Proposal: (1) Access Humboldt, The Utility Reform Network (TURN); (2) Assurance Wireless USA, L.P., Sprint Communications Company L.P. d/b/a Sprint, Sprint Spectrum L.P. (Sprint); (3) AT&T Mobility LLC (New Cingular Wireless PCS, LLC, Pacific Bell Telephone Company, AT&T Corp., Santa Barbara Cellular Systems, Ltd., Teleport Communications America, LLC, AT&T Mobility Wireless Operations Holdings, Inc. (AT&T Wireless); (4) Public Advocates Office (Cal Advocates); (5) California Cable and Telecommunications Association (CCTA); (6) California Water Association (CA Water Association); (7) Cellco Partnership, MCIMetro Access Transmission Service Corp. (Verizon); (8) Charter Communications, Inc. (Charter); (9) City of San Jose (San Jose); (10) Comcast Phone of California, LLC (Comcast Phone); (11) Communications Workers of America District 9 (Communications Workers); (12) Consolidated Communications of California Company (Consolidated); (13) County of Santa Clara (Santa Clara County); (14) Cox California Telcom, LLC (Cox); (15) CTIA; (16) ExteNet Systems (California) LLC (ExteNet); (17) Frontier California, Inc., Frontier Communications of California, Frontier Communications of the Southwest, Inc. (Frontier); (18) T-Mobile West LLC (T-Mobile); (19) Pinnacles Telephone Co., Calaveras Telephone Company, Foresthill Telephone Co.,

¹¹⁶ Assigned Commissioner's Ruling and Proposal, March 6, 2020.

Volcano Telephone Company, Happy Valley Telephone Company, Hornitos Telephone Company, Kerman Telephone Co., Ducor Telephone Company, The Siskiyou Telephone Company, Winterhaven Telephone Company, The Ponderosa Telephone Co., Cal-Ore Telephone Co., Sierra Telephone Company, Inc. (Small LECs); (20) U.S. Cellular; and (21) Wireless Infrastructure Association (WIA).

On April 17, 2020, the following parties filed reply comments in response to the Proposal: (1) AT&T Wireless; (2) Cal Advocates; (3) California Hydrogen Business Council (CHBC); (4) Center for Accessible Technology and National Consumer Law Center (CforAT & NCLC); (5) Charter; (6) Comcast; (7) Cox; (8) CTIA; (9) Greenlining Institute (Greenlining); (10) National Fuel Cell Research Center (NFCRC); (11) Small LECs; (12) T-Mobile; (13) TURN; (14) UCAN; and (15) Verizon.

4. Issues Before the Commission

Phase II of this proceeding addresses the Commission's goal of establishing resiliency planning for communications service providers in areas prone to outage events and wildfires, with the goal of establishing rules for resiliency by in advance of the 2020 wildfire season. With this timeline in mind, the issues within scope are:¹¹⁷

¹¹⁷ In each of the above issues, the Commission considers the following elements for key sites and locations: (1) customers with access and functional needs; (2) medical baseline customers; (3) police stations and public safety answering points (PSAPs); (4) fire stations; (5) schools (*e.g.*, educational facilities); (6) water and waste water facilities; (7) community centers; (8) senior centers; and (9) disadvantaged and hard to reach communities.

1. Components of Resiliency: communication service providers¹¹⁸ resiliency and preparedness efforts before, during, and after wildfires, public safety power shutoffs, wildfires, and other disasters to keep communications services available;
 - a. How should resiliency be defined?
 - b. What are the different network configurations that need to be considered?
 - c. What are the components of resiliency and how do they operate together? For example, how do redundancy, temporary facilities and back power work to keep communications operational.
 - d. What are the priorities for operation of communication facilities in a disaster or outage event?
 - e. What is the minimum baseline/objective for potential rules for communication carriers?

¹¹⁸ Communications service providers subject to this topic include landline, cable, and wireless.

2. Responsiveness to Event-Oriented Information

Requests: Engagement and timely responsiveness to requests from first responders across government, including the California Governor's Office of Emergency Services and the California Department of Forestry and Fire Protection;¹¹⁹

- a. What critical information is not being provided to first responders across government, including the California Governor's Office of Emergency Services and California Department of Forestry and Fire Protection upon their request?

5. COVID 19 and Compliance with Executive Orders

After the Scoping Memo and Ruling and the Proposal mailed, on March 19, 2020, Governor Gavin Newsom signed Executive Order N-33-20¹²⁰ requiring Californians to comply with the orders of the California State Public Health Officer and the Director of the California Department of Public Health that all individuals living in the State of California stay home or at their place of residence (Stay-At-Home Order), except as needed to maintain continuity of operation of the federal critical infrastructure sectors, in order to address the public health emergency presented by the COVID-19 disease. The Stay-At-Home order is indefinite, and as of the date of the issuance of this decision, it remains in effect.

¹¹⁹ This includes disclosing specific outage information during disasters.

¹²⁰ Executive Order N-33-20 (March 19, 2020) available at:
<https://www.gov.ca.gov/2020/03/19/governor-gavin-newsom-issues-stay-at-home-order/>

5.1. Parties' Positions

Cal Advocates, CforAT and NCLC assert that the COVID-19 pandemic illuminates how deeply reliant California communities and households are on reliable communications services as millions of Californians shelter-in-place under the Stay-At-Home Order.¹²¹ These parties assert that in the face of wildfires, commercial grid outages, and shelter-in-place orders, people deeply depend on access to communications.¹²²

CTIA asserts that in the face of the COVID-19 pandemic, the wireless providers have waived overage charges, extended payment dates, expanded data plans at no charge, expanded network capacity, and work to reduce the “homework gap” as many schools move their classes online.¹²³ Verizon points out that the wireless providers have seen increased demands on network capacity and data usage, as large percentages of people shift to working and schooling from home during the COVID-19 pandemic.¹²⁴ U.S. Cellular states that it is managing its network to minimize network impacts and service disruptions as it works through the COVID-19 pandemic, and in preparation for the 2020 wildfire season.¹²⁵

WIA argues that the COVID-19 pandemic will likely cause delays to the wireless providers ability to deploy resiliency and backup power and for this

¹²¹ CforAT and NCLC at 2-3; Cal Advocates at 1-2 and 13.

¹²² *Id.*

¹²³ CTIA at 3.

¹²⁴ Verizon at 4; and 22-23.

¹²⁵ U.S. Cellular at 2.

reason, urges us to adopt a flexible effective date and deadline that allows the wireless industry to remain in compliance.¹²⁶ WIA asserts that the pandemic will likely affect the issuance of permits, supply chain challenges, private arms-length transactions with landowners, and impair the already existing workforce shortage.¹²⁷

5.2. Should a Statewide Shelter-in-Place Order Remain in Effect, the Wireless Providers Shall Give Notice If Service Coverage Cannot Be Maintained

In furtherance of Executive Order N-33-20 to protect the public health and safety, we direct the wireless service providers subject to this decision (discussed below) to take every reasonable effort to fully comply with the direction from public health officials regarding shelter-in-place, social distancing, or other measures that need to be taken in response to the COVID-19 pandemic when implementing the requirements of this decision.

The world does not look the same as it did just several months ago. The modifications to our daily lives from this pandemic place further pressure on our already strained critical infrastructure – which forces us to rethink resiliency not only in the face of natural and man-made disasters, but also in the wake of health pandemics. Unquestionably, the COVID-19 pandemic has increased the reliance California consumers have on their wireless service. Many Californians are using their wireless service to comply with shelter-in-place orders by staying in

¹²⁶ WIA at 11

¹²⁷ *Id.* at 11-12.

their homes for telework, access to distance learning, seeking medical care through telehealth, enrolling in government programs, and maintaining contact with family and friends. COVID-19 presents new operational and emergency response challenges for California. Our response to this new challenge and the complexity it brings, shows us how to take effective action to improve our resiliency and adaptability in advance of the upcoming wildfire and PSPS season.

Wireless service providers must take proactive measures to maintain service coverage as shelter-in-place orders could still be in effect during the upcoming commercial power grid outages and wildfires.

Furthermore, it is critical – especially during the COVID-19 pandemic – that wireless service providers maintain service coverage so that Californians have 9-1-1 access and receive emergency alerts and notifications. We instruct the wireless service providers to comply and implement our resiliency requirements, discussed below.

Next, in light of the COVID-19 pandemic, we reiterate that the wireless service providers to notify customers – including the public, local governments, emergency responders from across the government, our regulated electric corporations, and our regulated water corporations – in the event they are unable to maintain minimum service coverage in the pre-PSPS window, in advance of severe weather, or in wildfire conditions. The wireless service providers shall notify customers about their inability to maintain service coverage upon receiving notification from the electric corporations that a PSPS outage will occur.

Raising awareness about the potential for a lack of service coverage before a PSPS event or wildfire event is essential so that the public is prepared. We agree with CforAT and NCLC as well as Cal Advocates that the wireless providers must provide more specificity and alertness about their outages or inability to maintain service coverage.¹²⁸ We direct the wireless providers to communicate any anticipated disruption in service coverage through the customer outreach best practices adopted in D.19-08-025.

6. Discussion

California customers need access to 9-1-1 and emergency services, to function in their daily lives and receive vital safety or emergency information. During the 2017, 2018, and 2019 wildfires and 2019 PSPS events, widespread communications outages occurred across all sectors: in the facilities used to provide wireless telephone service, traditional landline telephone service, cable video service, VOIP service, and broadband Internet access service. These outages expose a lack of resiliency, a failure to prepare for disasters, and a failure to actively communicate service outages to the public and emergency responders. In November 2019, during his testimony before the California Senate's Energy, Utilities, and Communications Committee, CalOES Director Mark Ghilarducci said:

We have to have assurances that when we utilize this [cellphone], this life-saving critical communications device, it has resiliency built into the system. In California, which I would also argue exists in hurricane-prone states and

¹²⁸ CforAT and NCLC at 10.

flooding-prone states, but here in California we have all sorts and kinds of disasters. It's just the way it is. It's been that way since we made it a state... [We] need to have assurance that the system is resilient. That means that those cell sites are hardened, that they have defensible space around wildfire, that they have battery or fuel backup beyond a four hour timeframe that we know that they can withstand. Particularly now with a PSPS event, they could go for multiple days. We have to know that the system is resilient.”¹²⁹

As discussed in detail below, these failures had real consequences for the public in the affected areas.

Over the last three years, California experienced several major wildfires and PSPS events. During this same time period, covering wildfires and PSPS events, the Commission's Communications Division received a substantial increase of Major Service Interruption (MSI) reports and Disaster Incident Recovery System (DIRs). The Communications Division received a 16 percent increase in MSI reports from 2017 to 2018, and a 123 percent increase from 2018 to 2019.¹³⁰ The wildfires and the power outages from the PSPS events contributed to a significant delay in the restoral of communications service.

¹²⁹ Pursuant to Rule 13.9 of the Commission's Rules of Practice & Procedure, we take official notice of CalOES Director Ghilarducci's statements before the California Senate's Energy, Utilities, and Communications Committee from November 18, 2019, available at: <https://www.senate.ca.gov/media/senate-energy-utilities-communications-committee-20191118/video>

¹³⁰ MSI reports – Pursuant to GO 133-D, Section 4, Major Service Interruption (MSIs), all carriers must submit outage reports according to prescribed thresholds. The CPUC adopted the FCC's Network Outage Reporting System (NORS) reporting requirements with the G.O. 133-D. The CPUC only has data beginning in 2017, when GO 133-D took effect. Based on Final reports only.

Most critically, wireless communications failed at critical times during wildfire and PSPS events which resulted in many wireless customers being unable to make calls during times of emergency or disaster. Many Californians have no alternative means of communications than their wireless network; without that wireless network they simply cannot communicate.

Importantly, we note that as of December 31, 2018, there were 45,335,804 wireless subscribers in California and 13,418,711 wireline subscribers.¹³¹ The number of wireline customers has steadily decreased as consumers rely more on wireless service.¹³² In 2019, approximately 27.4 million 9-1-1 calls were placed via wireless service as compared to approximately 3.6 million placed via wireline service.¹³³

In 2017, 9,270 wildfires burned 1,548,429 acres, damaging or destroying 10,280 structures, and killing 47 people. The largest fires burned in Northern California during the month of October. One of those fires was the Tubbs Fire, in Napa, Sonoma, and Lake counties, which was one of the most destructive fires in California history burning 36,807 acres, resulting in 22 deaths. The Thomas Fire

¹³¹ Data source: FCC form 477 data. The total wireline subscriber counts include both POTS and VoIP, at 5,117,816 and 8,300,895, respectively.

¹³² See FCC Form 477 data.

¹³³ See <https://www.caloes.ca.gov/>

burned 281,893 acres in Santa Barbara and Ventura counties and resulted in 23 direct and indirect deaths.

In 2018, 7,639 wildfires burned 1,963,101 acres, damaging or destroying 24,226 structures, and killing 100 people. The Camp Fire in Butte County became the most destructive wildfire, damaging or destroying 18,804 structures and resulting in 85 deaths. During the same month in 2018, the Woolsey Fire in Southern California burned 96,949 acres and damaged or destroyed 1,643 structures in Ventura County. The Mendocino Complex fires burned 459,123 acres.

In 2019, 7,860 wildfires burned 259,823 acres, damaging or destroying 732 structures, and killing 3 people. The Kincade and Tick Fires burned 77,758 acres in Sonoma County, and 4,615 acres in Los Angeles County, respectively.¹³⁴ During the same period, the investor owned utilities (IOUs) or electric corporations), such as PG&E implemented public safety power shutoff (PSPS or de-energization). Customers of communications services, such as traditional wireline telephone (POTS), wireless service, and VoIP service were unable to send or receive calls due to lack of commercial power that resulted from the power shut offs. Many individual PSPS events have impacted tens of thousands of customers with the largest PSPS events taking place on October 9-11, and 26-31, 2019.

¹³⁴ *Ibid.*

Communications Division staff measured the impact of the 2017-2019 wildfires and PSPS events by analyzing the wireless service providers' MSI and DIRS¹³⁵ reports and calculated the number of potentially affected wireless users, macro cell sites, and blocked calls. Their findings are illustrated in the table below:

**Estimated Impact from 2017-2019 Wildfires and PSPS Events
on Wireless Service in California**

Year	Events	Number of Potentially Impacted Wireless Customers ¹³⁶	Approximate Number of Impacted Cell Sites	Approximate Number of Blocked Calls ¹³⁷
2017	Napa and Sonoma County Wildfires ¹³⁸	96,097	248	814,041
2017	Mendocino and Humboldt County Wildfires	104,441	46	8,271,992
2017	Southern California Wildfires ¹³⁹	97,811	457	434,086
2018	Camp Fire Butte County	48,414	51	2,165,308
2018	Hill and Woolsey Fires Southern CA	512,231	492	4,228,585
2019 ¹⁴⁰	Kincade Fire and Statewide PSPS	1,122,645	224	n/a ¹⁴¹

¹³⁵ DIRS is activated by the FCC during large-scale emergencies and is used by providers to submit reports on the status of their network infrastructure. DIRS participation however, is voluntary. <https://www.fcc.gov/general/disaster-support-broadcasters>

¹³⁶ 47 C.F.R. § 4.9(e)(2) - In determining the number of users potentially affected by a failure of a switch, a wireless provider must multiply the number of macro cell sites disabled in the outage by the average number of users served per site, which is calculated as the total number of users for the provider divided by the total number of the provider's macro cell sites.

The most severe impacts of these fires were in high fire-threat areas, where there were repeated reports of cell site failures, particularly in the 2018 Camp Fire in Butte County (town of Paradise). Then in 2019, substantial numbers of wireless sites in Butte County were inoperative because of the PSPS events. Additionally, the FCC reported that up to 57% of Marin County cell towers went down at the peak of the October PSPS events, where it appeared the only operative factor was the lack of power.¹⁴²

The catastrophic wildfires of 2017, 2018, and 2019 garnered significant public attention. Press coverage detailed numerous firsthand accounts of the wireless provider network failures during the three consecutive wildfire seasons

¹³⁷ The number of blocked calls is an approximation based on a ratio of a provider's number of impacted cell sites compared to the average number of calls handled by those cell sites.

¹³⁸ Napa and Sonoma County wildfires include but are not limited to: Adobe, Atlas Peak, Norborn, Nuns, Oakmont, Partrick, Pocket, Pressley, and Tubbs.

¹³⁹ Southern California wildfires include but are not limited to: Rye (LA County), Creek (LA County), and Thomas (Santa Barbara and Ventura Counties).

¹⁴⁰ DIRS was activated in California from October 24 – November 1 2019. However, multiple providers did not submit MSI reports during this time because the FCC does not require NORS reporting for areas covered by DIRS activations. This led Staff to derive the 2019 Kincade Fire and PSPS impact data primarily from the providers' voluntary DIRS reports. The numbers of potentially impacted wireless customers and cell sites are only approximate and both likely higher due to the information gap caused by having relatively few MSI reports. Going forward, Staff will use the CPUC's state-based authority to require that providers submit MSI reports even when DIRS is active.

¹⁴¹ The approximate number of blocked calls is not available because the wireless providers did not submit NORS reports while DIRS was activated during this event, and the DIRS reports do not require information on the number of blocked calls.

¹⁴² See FCC Communications Status Report for Areas Impacted by California Public Safety Power Shutoffs, dated October 28, 2019, at <https://docs.fcc.gov/public/attachments/DOC-360482A1.pdf>

and the 2019 PSPS events. The public's attention to this press coverage is featured in the following news accounts:

- *As desperate calls poured in, an emergency alert system failed many* – Los Angeles Times, October 11, 2017;
- *Alarming failures left many in path of California wildfires vulnerable and without warning* – Los Angeles Times, December 29, 2017;
- *California Wildfires Reveal Alert System Shortcomings* – Government Technology, August 7, 2018;
- *Verizon, under fire for throttling firefighters' data speed, lifts caps for first responders* – San Francisco Chronicle, August 24, 2018;
- *A Frantic Call, A neighbor's knock, but few official alerts as wildfires closed in . . . Only a fraction of residents received emergency alerts or evacuation orders from local authorities* – New York Times, November 21, 2018;
- *Camp Fire created a black hole of communication/In disasters, our high-tech communities are reduced to 1940s-era responses* – The Mercury News, December 16, 2018;
- *'Extremely dangerous': Cell outages during PG&E shut-offs point to problems* – San Francisco Chronicle, October 20, 2019;
- *PG&E outages: Why you can't always count on a cell phone or landline* – San Francisco Chronicle, October 23, 2019;
- *Thousands of Californians without communication services during PG&E outages* – San Francisco Chronicle, October 25, 2019;
- *Kincade Fire: Why your cell phone is silent* – The Mercury News, October 28, 2019;
- *California Blackouts Hit Cellphone Service, Fraying a Lifeline* – New York Times, October 28, 2019;

- *California blackouts: Cell service improving, but frustration mounts – San Francisco Chronicle, October 30, 2019; and*
- *Widespread cellphone, power outages during fires show what could happen after major quake – Los Angeles Times, November 5, 2019.*

We do not rely on the press coverage of these events; rather, we highlight the significant public interest the outage events generated.

Wireless network resiliency must be improved so that vital communications services are not interrupted and remain available for Californians during emergencies. To effectively manage these catastrophes, emergency responders must have reliable clear communication regarding network outages, resiliency, and backup power.

As stated at the prehearing conference in this proceeding¹⁴³ and in the Scoping Memo and Ruling,¹⁴⁴ the Commission shall promulgate resiliency rules for wireless service providers in advance of the upcoming wildfire season and any PSPS events by the Summer of 2020, if not sooner. Below, we establish requirements necessary to ensure dependable communications networks that aid first responders and allow the public to communicate in a reliable manner during disasters or PSPS events. The rules below are narrowly tailored only to the

¹⁴³ Order Instituting Rulemaking Regarding Emergency Disaster Relief Program to Support California Residents (R.18-03-011) November 20, 2019 Prehearing Conference Transcript at 130, lines 12-17.

¹⁴⁴ Assigned Commissioner's Phase II Scoping Memo and Ruling, January 2020, available at: <http://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=324941921>.

wireless provider's facilities based in California's Tier 2 and Tier 3 High Fire Threat Districts.

**6.1. Application of Requirements:
Covered Services**

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment to identify the most essential communications services that a customer would need during a disaster or a power outage. To determine which service should be covered to ensure sufficient backup power for essential communications service, particularly 9-1-1 receipt of emergency alerts and warnings, and to access evacuation and de-energization websites, we asked the parties whether the Proposal's definition of the applicability of requirements was reasonably tailored to ensure regulatory compliance or in the alternative, whether D.19-08-025's definition should be applied instead.

6.1.1. Parties' Positions

Generally, Cal Advocates,¹⁴⁵ T-Mobile¹⁴⁶ and CTIA¹⁴⁷ support using the definition from D.19-08-025, with CTIA and Cal Advocates asserting that D.19-08-025 recognizes key distinctions between providers. On the other hand, TURN¹⁴⁸ and Santa Clara County¹⁴⁹ support the Proposal's definition.

¹⁴⁵ Cal Advocates at 4.

¹⁴⁶ T-Mobile at 10.

¹⁴⁷ CTIA at 6.

¹⁴⁸ TURN at 1-2.

¹⁴⁹ Santa Clara County at 5.

Verizon argues that we should ensure that proposed definitions are properly calibrated to apply only to those entities that have the ability to implement them.¹⁵⁰ Sprint argues that we should exclude non-facilities based providers and exclude responsibility for network facilities that are not owned or controlled by a carrier.¹⁵¹

ExteNet provides context on the nature of the relationship between the wireless providers and their infrastructure partners. ExteNet states that:

[I]n many cases the **infrastructure providers (emphasis added)** do not own the actual radio, or in some cases do not control the radio card that is located in a small wireless facility, as that term is defined by the Federal Communications Commission (FCC) at 47 C.F.R. § 1.6002(l). In those cases, while the small wireless facility is owned by an infrastructure provider, such as ExteNet, the actual infrastructure that provides or otherwise carries 9-1-1, voice, text messages, or data – namely the radio control card – is owned by the wireless provider licensed to use the spectrum.¹⁵²

6.1.2. Facilities-Based Wireless Providers Are Subject to this Decision's Applicability Requirements

In D.19-08-025, we defined wireless providers as: 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

¹⁵⁰ Verizon at 8.

¹⁵¹ Sprint at 4-5.

¹⁵² ExteNet at 2.

providers, include resellers and mobile virtual network operators [MVNOs]. We depart from the Proposal's definition of "applicability" and adopt the definition of "carriers" from D.19-08-025, with modification,¹⁵³ as discussed below.

We agree with the above parties that the definition in D.19-08-025 is precise, in that it distinguishes between facilities-based and non-facilities-based providers. While resellers provide essential services, their service is provided through the infrastructure of the facilities-based providers. As such, it is reasonable to apply our requirements to the facilities-based wireless providers.

As UCAN makes clear, these resiliency efforts will mean little if other companies they rely upon to support their infrastructure do not adhere to the same requirements. We also agree with ExteNet and WIA that even this definition benefits from more clarity to recognize the distinct roles the wireless infrastructure providers have apart from the infrastructure providers, backhaul providers, contractors, and other agents. ExteNet's comments make clear that, while these entities provide critical components of the overall network, their quality and level of service is managed and directed by the facilities-based wireless providers.

Therefore, we adopt a modified version of the definition from D.19-08-025 for purposes of this decision's requirements and apply this decision's requirements only to facilities-based wireless providers. This definition and

¹⁵³ D.19-08-025 defined wireless providers as: 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].

categorization of provider is narrowly tailored to achieve our statutory duty to ensure safe and reliable service through the continuity of 9-1-1 access, emergency alerts, and notifications. We shall refer to the facilities-based wireless providers as “wireless providers” in this decision.

Finally, as discussed further below, we limit the scope of this decision’s rules to portions of the wireless provider’s service territories in Tier 2 and Tier 3 High Fire Threat Districts throughout California.

6.2. Resiliency Definition

In the Scoping Memo and Ruling, and the Assigned Commissioner’s Ruling, we sought comment to assist us in crafting a clear definition for the term “resiliency” in the context of this proceeding. The Proposal defined resiliency as the ability to recover from or adjust easily to adversity or change; Providers would achieve resiliency through a variety of strategies. We discuss parties’ position on the proposed definition of resiliency below.

6.2.1. Parties’ Positions

Parties had various positions on the Proposal’s definition of resiliency. For example, AT&T,¹⁵⁴ CTIA,¹⁵⁵ T-Mobile,¹⁵⁶ and Sprint¹⁵⁷ argue that the Proposal’s definition is problematic and recommend that we adopt their definition, which aligns with the definitions of resiliency from the Commission’s Climate Change Adaptation proceeding (R.18-04-019): resiliency is the ability to prepare for

¹⁵⁴ AT&T at 10-15.

¹⁵⁵ *Id.*

¹⁵⁶ T-Mobile at 9-10.

¹⁵⁷ Sprint at 6.

anticipated hazards, adapt to changing conditions, and recover rapidly from disruptions in order to provide fundamental services to consumers and first responders before, during, and after emergency situations (*e.g.*, fires, earthquakes, floods, PSPS events, etc.) where it is reasonably possible in consideration of, among other things, strategic use of resources, safety and technological consideration, and the performance of third party vendors, interdependent infrastructures, and partners.

CTIA points out that some disasters will harm even the most carefully protected network, for example, there is no way to prevent damage to a cell tower that is engulfed in a firestorm or swept away in a landslide. As such, CTIA emphasizes that recoverability must be recognized as the most important feature of resiliency, and that the Proposal's definition creates an expectation that, irrespective of the circumstances, communications networks will withstand disasters and easily maintain service during times of crises. CTIA asserts there should be no expectation that resiliency can be "easily" achieved.¹⁵⁸

San Jose argues that the definition of resiliency should be expanded to clarify that Providers should be able to provide essential services without interruption during power outages and other emergency events.¹⁵⁹ San Jose suggests that the Proposal's term "resiliency" should be defined as *the ability to recover from or adjust easily to adversity or change*. Provider would achieve this recoverability through various strategies intended to ensure that essential

¹⁵⁸ *Id.*

¹⁵⁹ San Jose at 2.

services are provided without interruption during power outages and other emergency events.¹⁶⁰

CA Water Association suggests that we should use the term “public safety partners”¹⁶¹ from D.19-05-042 to ensure that these covered entities receive information and are part of the coordinated response during disasters or de-energization events.¹⁶² Santa Clara County argues that we should define resiliency as “the ability to continue providing essential services without interruption during disasters and power outages, including PSPS events.”¹⁶³

TURN contends that we should incorporate components from the Department of Homeland Security’s concept of resiliency. TURN recommends we consider: (1) route diversity; (2) redundancy additional or duplicate of communications assets to provide redundancy and/or load sharing in the event of failures) and (3) protective (hardening) and restorative measures.¹⁶⁴

Cal Advocates proposes modification to the Proposal’s definition, similar to TURN’s recommendation.¹⁶⁵ Cal Advocates asks that we clarify that any definition of resiliency should require a communications network to immediately

¹⁶⁰ *Id.*

¹⁶¹ D.19-05-024 defines public safety partner as first/emergency responders at the local, state, and federal level, water, wastewater and communications service providers, community choice aggregators, affected publicly-owned utilities/electrical cooperatives, the Commission, CalOES and Cal FIRE.

¹⁶² CA Water Association at 3.

¹⁶³ Santa Clara at 5.

¹⁶⁴ TURN at 3.

¹⁶⁵ Cal Advocates at 3.

recover from any disruption or change, withstand emergencies and damages and minimize the likelihood of outages to end users, and require providers to conduct regular assessments of their network to ensure continuity of service.¹⁶⁶

RCRC finds the proposed definition to be adequate, but suggests that all providers should develop comprehensive resiliency plans that outline how they will implement these various strategies and what steps must be taken to reach those resilience goals. RCRC further relays that during the 2019 PSPS events, there were reports of generators at cell towers not being started because of fear the generator might start a fire. Accordingly, RCRC supports requiring facility operators to take whatever steps are necessary to ensure that backup generators can be safely powered up during an emergency, including a PSPS event, without creating additional wildfire risk.¹⁶⁷

**6.2.2. Resiliency is the Ability to Recover from
or Adjust to Adversity or Change Through
an Array of Strategies**

We adopt the Proposal's definition of resiliency with modification. Resiliency shall be defined as the ability to recover from or to adjust to adversity or change through an array of strategies including, but not limited to, backup power, redundancy, network hardening, temporary facilities, communication and coordination with other utilities, emergency responders, the public and finally, preparedness planning.

¹⁶⁶ *Id.* at 3-4.

¹⁶⁷ RCRC at 5-6

Furthermore, we adopt the Proposal's resiliency strategies definitions, with slight modification. The Proposal's definition provides the necessary level of specificity that clearly identifies the specific strategies wireless providers must employ to ensure resiliency. These definitions also lay a foundation for the other components of the Proposal that is the subject of this decision. We provide the following modified definition of resiliency and resiliency strategies:

- "Resiliency" – the ability to recover from or adjust to adversity or change – is achieved by Providers through various strategies intended to ensure that essential services are provided without interruption during power outages and other emergency events, including but not limited to the following:
 - Backup Power: network operators that design their networks with batteries and generators, as well as maintain mobile generators and refueling plans, make necessary preparations and precautions to safely operate generators, are able to maintain service during the loss of power;
 - Redundancy: networks that are designed with redundancy – both wired (*e.g.*, logical and physical route diversity) or wireless (*e.g.*, dense and overlapping cell sites) – are able to mitigate impacts caused by disasters and power outages;
 - Hardening: networks that are hardened can withstand damage from disasters. For example, ensuring that backhaul and critical sites have defensible space and are built to withstand natural disasters, including earthquakes;

- Temporary Facilities: network operators that own and maintain temporary facilities (*e.g., mobile cell sites, mobile satellite and microwave backhaul, etc.*) are able to restore service to their networks when facilities are damaged or destroyed;
- Communication and Coordination: network operators that establish clear channels of communication and coordinate with *emergency responders at the local, state and federal level, CalOES, CAL FIRE, the Commission, other utilities (including electric utilities, community choice aggregators, water, wastewater and other communications service providers)* and the public are best positioned to maintain and restore service after a power outage or disaster; and
- Preparedness Planning: Network operators that maintain comprehensive preparedness plans and qualified staff are able to maintain and restore service to their networks quickly and effectively.

The above resiliency strategies do not comprise an exhaustive list. The wireless providers have the discretion to deploy more approaches as both the public and private sectors evolve and develop new measures for emergency preparedness.

When implementing these requirements, we remind the wireless providers that when they are collaborating with the electric corporations and other stakeholders, like local government or emergency services personnel, they must adhere to the direction from public health officials regarding shelter-in-place, social distancing, or other measures that may need to be taken in response to the

COVID-19 pandemic, consistent with Executive Order N-33-20, and our rules.

Next, we discuss our reasoning for setting these rules below.

First, we reject CTIA's assertion that these definitions create an expectation that, irrespective of the circumstances, communications networks will withstand disasters and easily maintain service during times of crises. We acknowledge, by adopting these definitions, that resiliency strategies must not only prevent, avoid, or stop a threat or actual harm from a potential disaster but also account for an array of recoverability measures that focus on timely restoration, strengthening, and revitalizing wireless network infrastructure to preserve the fabric of communities affected by an incident. We also acknowledge that these measures are not fool proof – that no matter how many strategies are employed, sometimes, because of their scale, disasters will cause severe service disruption.

Nevertheless, the wireless providers - in coordination with emergency responders and each level of government - have a responsibility to prepare and leverage technologies to mitigate and prevent the disruption of service. We agree with Cal Advocates that even though it will take time, the wireless providers should strive toward immediate recovery from disruption of their network and minimize the likelihood of outages to end users. The infrastructure investments for wireless network resiliency cannot be made overnight.

In adopting the above resiliency definitions, we establish core strategies that serve as both preparedness tools and a means of structured implementation for future wildfire and PSPS events. The preparedness of the wireless providers is fundamental to ensuring the State's mitigation and recovery success in future disasters.

We agree with Verizon that we should not adopt a rigid definition of resiliency that could result in hand-cuffing providers in how they achieve and maintain their network's resiliency. Rather, these definitions reflect the strategies that various wireless providers already utilize and have led to the successful preservation or restoral of service during times of crisis, such that they can be used and adopted by all carriers. We encourage the wireless providers to adopt additional resiliency strategies, to enhance their use of these strategies, and enhance their ability to prepare for and be responsive to the needs of network enhancement.

Indeed, we all must continue to make progress in building and sustaining our State disaster and emergency preparedness. The rules we adopt here build on our goals to achieve preparedness and resiliency in the face of future disasters; but our aspirations must be even higher to match the greater risks that the future presents with an increasingly severe climate, expected to result in harsher wildfire events and more frequent PSPS events. We must continue to evolve to meet these challenges while at the same time, come to an understanding that the execution of baseline resiliency strategies must begin now.

Verizon's resiliency efforts are illustrative of this point. Verizon utilized the resiliency strategies identified in our definition during last year's 2019 PSPS events.¹⁶⁸ Verizon successfully kept much of its network operational and

¹⁶⁸ Verizon at 8-9.

running on backup power.¹⁶⁹ This demonstrates that using these resiliency strategies, including backup power, can and do result in the ability to preserve network service. The strategies contained within our resiliency definition are not exhaustive or exclusive to any single organization but rather, highlight the critical need of network resiliency to ensure continuity of essential service, including access to 9-1-1. That Verizon was able to achieve these results during these crises demonstrates this is achievable.

We agree with RCRC that generator providers must make the necessary preparations and precautions to safely operate generators. We are also persuaded by RCRC and other parties that the Commission must ensure that the wireless providers demonstrate to the Commission that they have developed plans more for more resiliency than just providing for backup power. We address these enhanced plans in subsequent sections of this decision. As discussed above, we defined resiliency and listed the variety of strategies the wireless providers shall utilize as a baseline set of tactics to prepare for or recover from adversity or change following a disaster. In response to CA Water Association, we believe we have aligned the Proposal's definitions with the definition of "public safety partners" in D.19-05-042 through our adopted definitions.

6.3. Outage Definition

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment to craft a clear definition for the term outage in the

¹⁶⁹ *Id.*

context of this proceeding. We discuss parties' position to the proposed definition of outage below.

6.3.1. Parties' Positions

Parties provided an array of suggestions to define outage. Cal Advocates suggests "outage" should align with the FCC's definition of "outage"¹⁷⁰ while RCRC,¹⁷¹ CTIA,¹⁷² and AT&T¹⁷³ recommend that we should adopt the same definition for an outage as CalOES to better assure consistency, reduce costs, and reduce confusion of adhering to inconsistent regulatory mandates.

6.3.2. Outage Shall Be Defined as a Period That a Generating Unit, Transmission Line, or Other Facility is Out of Service

We agree with parties that is appropriate to adopt CalOES' definition of outage, as developed pursuant to Section 53122 of the California Government Code, to better assure consistency across regulation, and to reduce both costs and confusion in adhering to inconsistent regulatory mandates. We adopt the following definition of outage, in the context of this proceeding: a power outage is the period during which a generating unit, transmission line, or other facility is out of service. Furthermore, we determine that a power outage may have various causes including, but not limited to, de-energization events, unanticipated problems rendering a facility dysfunctional or posing a risk to

¹⁷⁰Cal Advocates at 7-8.

¹⁷¹ RCRC at 8-9.

¹⁷² CTIA at 14.

¹⁷³ AT&T at 25-26.

personnel or to the system, or scheduled downtime for maintenance, repairs, or upgrades.

6.4. Backup Power Requirement

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment to help identify the most reasonable approach for ensuring that Californians and first responders have continuity of service and access to 9-1-1, emergency alerts, and notifications during disasters or commercial power outages. We asked parties to assess the reasonableness of requiring wireless providers to have 72-hours of on-site battery backup power, to provide coverage at minimum service levels.

6.4.1. Parties' Positions

Generally, parties were split over whether the Commission should adopt a backup power requirement for wireless providers.

Consumer advocacy groups support such a requirement. Cal Advocates,¹⁷⁴ CforAT and NCLC,¹⁷⁵ Greenlining,¹⁷⁶ TURN and Access Humboldt,¹⁷⁷ and UCAN¹⁷⁸ support the proposed backup power requirement, finding that it is appropriate in light of previous, recent, and recurring widespread communications outages that have compromised the public health and safety of customers, their families, their communities, and first responders.

¹⁷⁴ Cal Advocates at 3.

¹⁷⁵ *Id.* at 5

¹⁷⁶ Greenlining at 3.

¹⁷⁷ TURN at 6

¹⁷⁸ UCAN at 2-3.

Water utilities, as represented by CA Water Association, support the requirement, finding that ensuring that communications network operators have reliable backup power will help water utilities maintain efficient and reliable service during an emergency.¹⁷⁹

The Communications Workers¹⁸⁰ support the requirement, noting that the U.S. Department of Homeland Security, in a July 2017 Public Safety Communications Resiliency Report, found that adding battery backups, uninterruptible power systems and backup power generators “greatly increases the resiliency of the communication functions and supports critical operations.”¹⁸¹

Local governments generally support the requirement. San Jose argues that all facilities-based wireless providers should have on-site emergency backup power to support essential communications equipment including those necessary to maintain service for a minimum of 72 hours immediately following a power outage.¹⁸² Santa Clara County also supports a 72-hour backup requirement, requesting that service be sufficient to “maintain access for all customers to 9-1-1 service; to receive emergency notifications; to access web

¹⁷⁹ CA Water Association at 3-4.

¹⁸⁰ Communications Workers at 2-3.

¹⁸¹ The United States Department of Homeland Security, Public Safety Communications Resiliency: 10 Keys to Obtaining a Resilient Local Access Network, July 2017, https://www.dhs.gov/sites/default/files/publications/07202017_10_keys_to_public_safety_net_work_resiliency_010418_final508c.pdf.

¹⁸² San Jose at 4.

browsing for emergency notices; and allow continuity of communication and data sharing among emergency responders, public safety partners, and critical facilities and infrastructure operators.”¹⁸³

The wireless providers generally – AT&T,¹⁸⁴ CTIA,¹⁸⁵ T-Mobile,¹⁸⁶ Sprint,¹⁸⁷ and US Cellular¹⁸⁸ – opposed such a requirement. CTIA’s arguments best capture their collective positions, asserting that a backup power requirement is overly prescriptive, without basis, and impossible to achieve.¹⁸⁹ CTIA further argues that providing service for 100 percent of customers is unworkable in wireless networks under the best of circumstances.¹⁹⁰ CTIA asserts that this requirement is beyond the Commission’s jurisdiction, and ignores the many factors that carriers weigh regarding the construction of their networks and the location of their sites.¹⁹¹

Verizon departs from the rest of the wireless industry, explaining that it has already made substantial investments to its network, reflected in statistics it provided: “on average, 97% of our macro cell sites remained in service during

¹⁸³ Santa Clara County at 5-6.

¹⁸⁴ AT&T at 15-25.

¹⁸⁵ CTIA at 10-13.

¹⁸⁶ T-Mobile at 11-14.

¹⁸⁷ Sprint at 9-10.

¹⁸⁸ US Cellular at 1.

¹⁸⁹ CTIA at 10-11.

¹⁹⁰ CTIA at 12.

¹⁹¹ *Id.*

the major wildfires and PSPS events in 2019.”¹⁹² Verizon explicitly supports a requirement that communications companies deploy backup power to their facilities and key network coverage components where needed and feasible.

6.4.2. There is a Public Need to Adopt a Narrowly Tailored and Reasonable Backup Power Requirement

Section 451 requires us to exercise our authority so that customers receive safe and reliable service at just and reasonable rates. Through today’s decision, we initiate a period of transition, based on a record developed following numerous catastrophes, moving from public frustration and anxiety to measurable, prophylactic action. This action fulfills our statutory duty and responsibility to protect customers and first responders during times of crisis by promoting their health, safety, and welfare.

With these considerations in mind, we recognize that both customers and first responders have a reasonable expectation they will hear a dial tone, receive emergency alerts and notifications, and can access critical information during an emergency – even when the power is out. Because of climate change, wildfires and PSPS events increasingly will be part of our future, with PSPS events possibly continuing through the next 10 years.¹⁹³

¹⁹² Verizon at 12-26.

¹⁹³ Pacific Gas and Electric Company 2020 Wildfire Mitigation Plan Report Updated Rulemaking 18-10-007, at 4-27 (Feb. 28, 2020), https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan/2020-Wildfire-Safety-Plan.pdf.]

To contextualize the need for backup power, the 2017, 2018, and 2019 wildfires and the 2019 PSPS events had some of the greatest impact on Californians in our history. Their scale and scope disrupted our personal lives, civic responsibilities, and California's economy. During these outages, calls, internet communications, and emergency notifications failed. Energy and water utilities, customers, and first responders across all levels of government expressed public safety concern regarding the failure of wireless providers to adequately provide service, including access to 9-1-1, during both disasters and de-energization events.

Further, in the past three years, California has suffered several major wildfires and PSPS events, resulting in an increased number of communications outages. Again, MSI reports from our Communications Division¹⁹⁴ show a 16% increase in major service interruption from 2017 to 2018, and a 123% increase in major service interruption from 2018 to 2019.¹⁹⁵ The most severe impacts of these fires were in high fire-threat areas, where there were repeated reports of cell site failures, particularly in the 2018 Camp Fire in Butte County (town of Paradise). Then in 2019, the PSPS events rendered many wireless sites in Butte County inoperative.

¹⁹⁴ The Commission takes official notice of the Communications Division MSI reports pursuant to Rule 13.9 of the Commission's Rules of Practice and Procedural –

¹⁹⁵ MSI reports – Pursuant to GO 133-D, Section 4, Major Service Interruption (MSIs), all carriers must submit outage reports according to prescribed thresholds. The CPUC adopted the FCC's Network Outage Reporting System (NORS) reporting requirements with the GO 133-D. Based on Final reports only.

The FCC produced similar data in its public reports of which we take official notice pursuant to Rule 13.9 of the Commission's Rules of Practice and Procedure. A review of the FCC's documents reveal that up to 57% of Marin County cell towers went down at the peak of the October PSPS events, apparently for lack of power.¹⁹⁶ The wildfires and the power outages from the PSPS events contributed to a significant delay in restoring communications services. Wireless communications failed at critical times during the wildfire and PSPS events, resulting in many wireless users being unable to make calls during times of emergency or disaster. The only means of communication available to many Californians is the wireless communications network; when it fails, these customers have no alternative.

T-Mobile suggests that the outage data from the FCC NORS and DIRS are not a meaningful source of information.¹⁹⁷ T-Mobile argues this data only provides the national average of subscribers per macro cell site.¹⁹⁸ T-Mobile further asserts that these numbers do not reflect the actual number of subscribers per macro cell site at any given time, nor does it show whether customers in a given area are receiving service from neighboring cell sites or through other adjustments to the network.¹⁹⁹ We disagree.

¹⁹⁶ See FCC Communications Status Report for Areas Impacted by California Public Safety Power Shutoffs, dated October 28, 2019, at <https://docs.fcc.gov/public/attachments/DOC-360482A1.pdf>

¹⁹⁷ T-Mobile at 3-5.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

We find that the FCC’s metric of “potentially affected wireless users” from 47 C.F.R. § 4.9(e)(2) is generous, and in fact, it is just as likely to *understate* the impact of the outages reported. An “average” means it is just as likely that *many more* people, rather than fewer people, may have been relying on each of these macro cell sites. By not accounting for the other smaller cell facilities, the likely impact to cell networks and the *actual* level of service provided – not just coverage area – was likely significantly worse than reported. Further, the number of macro cell sites out of service in many instances was overwhelming, with some counties experiencing massive outages during the 2019 PSPS events and other wildfire events. Despite its assertions, T-Mobile failed to provide data on the “actual number of subscribers” affected and the level of service they experienced.

Consumer advocates, such as CforAT and NCLC, assert that wireless network reliability during disasters and outages is critical for customers. The consumer advocates allege the wireless providers are trying to rewrite history²⁰⁰ and continue to disregard the significant failures that accompanied not only the 2017, 2018, and 2019 wildfires but also, the extended de-energization events of 2019. Illustrative of this point is CTIA. CTIA states that a backup power requirement is not necessary and the Proposal’s requirement is “overly prescriptive, unmoored from the record, impossible to achieve, and places the burden on wireless carriers to maintain power to their networks regardless of the

²⁰⁰ CforAT and NCLC at 5.

severity of adverse conditions, such as those that prevent electric utilities from maintaining commercial power.” We disagree – the numerous examples discussed above and below, expose the wireless provider’s lack of preparedness to maintain minimum service coverage during a wildfire or PSPS event.

Likewise, Cal Advocates reminds us that communications outages occurred long before the recent years of devastating wildfires and de-energization events.²⁰¹ Cal Advocates argues that storms fires, and mudslides cut off communities from service in the recent past.²⁰² Such events caused the Commission’s Communications Division, in April 2018, to issue a report analyzing major communications outages during the 2017 winter storms. Communications Division found that power outages contributed to a significant number of service outages, with a total of 964,003 subscribers, or 2.5% of Californians, losing the capability to dial 9-1-1 for some period of time.²⁰³ This Communications Division report emphasized that “many of [the] outages could have been prevented with better availability of backup power for wireless providers and improved reliability of cable facilities for wireline providers.”²⁰⁴

²⁰¹ Cal Advocates at 4 (citing to Communications Division Staff Report: Analysis of Major Communication Outages in California during the 2017 January-February Storms, April 2018 (available at: https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Communications))

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.* Communications Division Staff Report: Analysis of Major Communication Outages in California during the 2017 January-February Storms, April 2018 (available at:

Like Cal Advocates, CforAT and NCLC highlight past Commission investigations of massive service outages to remind us of the wireless providers' historical failure to prepare for adversity. CforAT and NCLC point to the service disruptions caused by the winter storms of December 2010 and January 2011, as well as 2014 network outages in Mendocino County caused by single points of failure.²⁰⁵ CforAT and NCLC argue that the providers have consistently claimed their networks are resilient, but in reality, their networks were not, nor have they improved over time.²⁰⁶ We agree.

Cal Advocates also contends that during the 2018 Camp Fire in Paradise, California, residents were severely impacted by communications failures.²⁰⁷ Cal Advocates asserts that of the four providers serving Paradise, two had macro cell sites with only batteries for backup capacity, and the other two providers had at least one macro cell site with additional on-site backup capacity in the form of generators.²⁰⁸ Cal Advocates also indicates that of the 15 macro cell sites near Paradise, which is in a Tier 3 High-Fire Threat District, only three (20 percent) of the macro cell sites had on-site backup generators.²⁰⁹

https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Communications

²⁰⁵ CforAT and NCLC at page 3, footnote 6.

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 6-7

²⁰⁹ *Id.*

Cal Advocates further claims that outages were widespread for certain providers during the 2019 PSPS events, with outages occurring in nearly half of the counties in the state. The highest number of macro cell sites, 567, went out of service during the 2019 PSPS events, on October 27, 2019. Cal Advocates notes that Verizon experienced significantly fewer outages than other wireless providers because it installed fixed generators at a significantly higher percentage of its macro cell sites. The data Cal Advocates presents demonstrate that the consistent lack of adequate backup power in networks has adversely affected resiliency and recovery.²¹⁰

Communications Workers support Cal Advocates, CforAT and NCLC's arguments. Communications Workers indicates that over half of California's counties were impacted by network outages during the 2019 PSPS events,²¹¹ with Marin County experiencing 57 percent of its 280 cell phone tower sites out of service and Sonoma, Lake, Santa Cruz, Humboldt, and Calaveras counties all facing service delays when over 20 percent of cellphone towers were without power.²¹² Communications Workers argue that these outages prohibit citizens from accessing 9-1-1 and receiving emergency notifications.²¹³

California's electric corporations and water corporations also express concern over the wireless providers' ability to maintain reliability and resiliency

²¹⁰ Cal Advocates at 6.

²¹¹ Communications Workers at 2.

²¹² *Id.* at 2-3.

²¹³ *Id.*

during disasters and electric outages. Both our electric and water corporations emphasize the critical nature of communications during power outages.

For example, CA Water Association asserts that California's water utilities rely on communications networks to monitor facilities, maintain contact with field personnel, communicate with personnel and customers, and receive emergency notifications and critical information.²¹⁴ CA Water Association explains that a disruption in water service can lead to unsanitary conditions and health risks.²¹⁵ CA Water Association states during a 2019 PSPS event, failures in the cellular network prevented water utilities from remotely monitoring tanks and treatment facilities, which assess water quality and supply issues.²¹⁶ Due to this wireless network failure, water utilities dispatched field personnel into areas under mandatory evacuation orders to obtain critical information necessary to provide uninterrupted water service.²¹⁷ CA Water Association, like Communications Workers, Cal Advocates, and CforAT and NCLC, argue that ensuring that communications network operators have reliable backup power will help water utilities maintain safe and reliable service during an emergency.²¹⁸

²¹⁴ CA Water Association at 3.

²¹⁵ CA Water Association at 2.

²¹⁶ *Id.*

²¹⁷ *Id.* at 2.

²¹⁸ *Id.*

California's electric corporations express similar concerns. At the November 5, 2018 CPUC energy workshop in this proceeding, the electric corporations reported that they had participated in three-day workshops with the wireless providers to discuss de-energization preparedness.²¹⁹ Southern California Edison (SCE) stated that its customers who live and work in its high-fire threat areas voiced concern about losing wireless service during disasters or outages:

The one thing that we have heard when we went out and did - - we did 22 community meetings in the last eight months for customers throughout all our territory that are in high-fire areas and the common thing that we are hearing from our customers at these is this fear that the communication networks are not going to be up when power goes out. For us as a utility, you can imagine, you know, we don't want to hear that, but it's also not -- that is not our company. Their company needs to have a robust plan in place so that their network when outages do occur, because they're going to happen, whether we proactively shut it down or emergency situation or weather down or emergency situation or weather conditions to make sure that their customers have an accessibility to calling 911 or other communications.²²⁰

San Diego Gas & Electric (SDG&E) expressed similar concerns as SCE over the wireless providers' reliability and resiliency. SDG&E stated, "So we, too, have worked with telecom providers in the Fire Safety Rulemaking for close to a

²¹⁹ R.18-03-011 November 5, 2018 Workshop Transcript at 326, Lines 5-24.

²²⁰ *Id.* at 327, Lines 8-26.

decade. And it's true as the Commission heard last week that their telecom systems could be more resilient. Let's just put it that way.”²²¹

During the November 1, 2018 joint CalOES-CPUC workshop, California's first responders voiced their frustration with the wireless providers. CalOES officials state:

[M]aintaining our telecommunications capability in disasters is an absolute necessity for effective response in recovery operations. You, know, we saw in the October [2018] wildfire a total of 341 cell sites go offline. 9-1-1- calls require survivable cellular networks.²²²

CalOES also states that approximately 72,000 people had difficulty reaching 9-1-1 during the October 2018 fires.²²³ CalOES concludes that California's wireless network is “just not built to survive the disasters and many of the cell sites do not have that resiliency, whether it's power backup or they're built to a standard at which they can withstand these events.”²²⁴

RCRC, agreeing with CalOES, California's electric corporations and water corporations, states, “local emergency managers and the electric utilities themselves depend upon a working communications network to notify the public and customers about PSPS events, service restoration, and other

²²¹ *Id.* at 329, Lines 3-9.

²²² Order Instituting Rulemaking Regarding Emergency Disaster Relief Program to Support California Residents ((R.18-03-011) November 20, 2019 Prehearing Conference Transcript at 14-15, lines 24—28 and 1-2.

²²³ *Id.* at lines 12-22.

²²⁴ *Id.* at 23-28.

emergencies or evacuation orders that may occur concurrently with a PSPS event.”²²⁵ RCRC adds that in 2019, Sonoma County, “already subject to a PSPS event, made the difficult decision to evacuate early in response to the Kincade Fire because they feared what evacuation would be like without reliable access to communications to disseminate warnings and alerts. Because of the widespread outages, many fire departments in Sonoma County were forced to operate by radio alone and had limited ability to receive data or maps.”²²⁶

After carefully reviewing the information and considering our duty under our California constitutional authority and statutory authority codified under the Public Utilities Code, it is reasonable to adopt a backup power requirement for the wireless providers operating in California.

We must be prepared to meet the adversity of future disasters with emergency management preparedness across government but also, in partnership, with California’s wireless service providers. Throughout this proceeding, we gained knowledge, discussed arguments, data, facts, and witnessed in real-time millions of Californians lose service during mass wildfires and PSPS events. We would not fulfill our statutory duty if we did not address the failure in wireless network and service during wildfires and PSPS events. These failures are recurring themes and conditions that merit our attention to adopt a backup power requirement.

²²⁵ RCRC at 3.

²²⁶ RCRC at 4.

6.4.3. Parties' Positions: Backup Power Time Duration

Here we discuss the parties' positions on the appropriate length of time for which backup power should be required.

CTIA expresses concern that there is no basis in the record to show that a 72-hour backup power requirement is feasible, or would provide any benefit above a lower standard, or no standard in some instances.²²⁷

WIA suggests the proposed 72- hour backup power requirement should be shortened to help increase the deployment of generators and certain facilities should be exempt from the requirement without triggering the need to seek a waiver.²²⁸ WIA explains that most currently deployed generators at cell sites are designed to hold the fuel necessary to operate for 48 hours and can continue to run uninterrupted for longer periods provided there are no impediments to gaining access to tower compounds to re-fuel.²²⁹

Verizon suggests that the 72 hours of backup power requirement is reasonable, so long as it provides sufficient flexibility to permit the refueling of generators that do not have tanks with a 72-hour capacity and other best practices.²³⁰ Verizon explains that a 72-hour minimum requirement on a single tank is not necessary if the generator may be refueled, as refueling would allow a

²²⁷ CTIA at 11-13.

²²⁸ WIA at 6-7.

²²⁹ *Id.*

²³⁰ Verizon at 17-19.

generator to run indefinitely.²³¹ Verizon additionally expresses concern about the cost to replace potentially thousands of generators it has already deployed with smaller tanks, as well as about the barrier that siting larger fuel tanks would present.²³² Verizon also suggests that any requirement must exclude microcells, small cells and other locations where it is not feasible to deploy backup power.²³³

AT&T asserts that its wireless network currently provides 72 hours of backup power for 97% of the population in its service area, and that providing 72 hours on-site backup for 100% of the population in its service area would require the extensive installation of new backup power equipment in AT&T's network. The need for additional deployment, AT&T claims, would be subject to significant siting, permitting, and other barriers.²³⁴ AT&T states its current capabilities and additional preparation for this year's fire season are more than adequate to ensure AT&T's ability to continue providing service, stating fixed generators and batteries are not necessary to provide continued service.²³⁵

TURN asserts that the 72-hour period should enable providers to implement additional steps to ensure that service continues to function,²³⁶ such as refueling generators, utilizing alternative sources of local and regional power,

²³¹ *Id.*

²³² *Id.* at 24.

²³³ AT&T. at 32.

²³⁴ *Id.* at 22.

²³⁵ *Id.* at 57.

²³⁶ TURN at 7.

installing supplemental equipment such as Cell on Wheels (COWs) and Cell on Light Trucks (COLTS) or utilizing satellite uplinks to ensure service continuity.²³⁷

Cal Advocates supports the 72-hour requirement, arguing that this requirement aligns with the FCC standard for backup power at Central Offices that route calls to 9-1-1 call centers.²³⁸

Cal Advocates notes that most wireless providers, with the exception of Verizon, heavily rely on deployable mobile assets during PSPS events, including portable backup generators, Cells on Wheels (COWs) and Cells on Light Trucks (COLTs).²³⁹ Cal Advocates' analysis indicates that nearly 77 percent of macro cell sites – 20,555 of 26,716 macro cell sites – do not have backup generators in California, and that a significant majority, 72 percent, of macro cell sites with fixed backup generators in the state belong to Verizon.²⁴⁰ Cal Advocates provides further analysis on the number of macro cell sites that lost power each day during the 2019 PSPS events. Even when 567 macro cell sites went out of service on October 27, 2019, Verizon experienced significantly fewer outages than the other wireless providers.²⁴¹

Cal Advocates asserts that providers' reliance on deployable mobile assets does not ensure continuity of communications services for customers during

²³⁷ *Id.*

²³⁸ *Id.*

²³⁹ Cal Advocates 7-8.

²⁴⁰ *Id.*

²⁴¹ *Id.* at 8.

emergencies, puts the public at risk, and is an inadequate strategy for preventing widespread communication outages.²⁴² Cal Advocates provides further analysis demonstrating that outages were widespread for certain providers during the 2019 PSPS events, with outages occurring in nearly half of the counties in the state, which Cal Advocates suggests may be due to the difficulty in rapidly deploying hundreds of mobile backup power sources during a widespread outage, especially in rural areas and hard-to-reach locations. AT&T notes that its backup strategy includes “a fleet of mobile generators with a dedicated team that deploys these as needed,” but also points out that its employees frequently cannot access areas where these generators are needed.²⁴³ Cal Advocates encourages the Commission to “not accept the premise that deployable mobile assets are a replacement for on-site backup power, especially in high fire threat areas. Most Providers have presented insufficient plans for placing on-site back-up power in these critical locations.”²⁴⁴

6.4.4. 72-Hours of Backup Power, with Flexible Procurement and Deployment, is a Reasonable Duration of Time to Fulfill the Backup Power Requirement

Section 451 requires us to exercise our authority so that customers receive safe and reliable service at just and reasonable rates. As we have seen, wireless

²⁴² *Id.* at 10

²⁴³ AT&T at 11.

²⁴⁴ Cal Advocates at 12.

service plays an essential role in the delivery of public safety services, particularly access to 9-1-1.

Duration of Backup Power Requirement: The Proposal recommends that all wireless providers have on-site, emergency backup power to support all essential communications equipment to maintain minimum service of 72 hours immediately following a grid outage event.

Generally, the wireless providers oppose this requirement while consumer groups and local governments support such a requirement. We discuss their positions below, but we first note that, we believe it is reasonable to adopt a 72-hour backup requirement for the wireless providers' facilities located in Tier 2 and Tier 3 High Fire Threat Districts. We must ensure that California's wireless customers have access to communications services during disasters or power outages, can receive emergency alerts and notifications, and access the internet for critical information during times of crises.

Ensuring the ability to maintain service is central to of our statutory duty to ensure safe and reliable service.²⁴⁵ We direct the wireless providers to have emergency backup power for a minimum of 72-hours in Tier 2 and Tier 3 High Fire Threat Districts – as discussed below - immediately following a commercial grid outage to support all essential communications equipment and minimum service levels for the public.

²⁴⁵ See Pub. Util. Code § 451.

CTIA argues that the record does not support a backup power requirement for the duration of 72-hours.²⁴⁶ We disagree. As CforAT and NCLC²⁴⁷ argue, the wireless network failures, which we discussed extensively above, cannot continue and the voluntary actions previously taken by the providers have not been adequate to meet the needs of Californians in emergencies ranging from highly local to world-wide. Absent promulgation of a rule, these concerns would not be adequately addressed.

Cal Advocates asserts that 72-hours is a reasonable duration of time for a backup power requirement. Cal Advocates presents data from the Commission's Safety and Enforcement Division that illustrates the electric corporations de-energized 2,290 circuits during the 2019 PSPS events,²⁴⁸ and that the average outage duration was just under 46 hours while over 16 percent of outages lasted longer than 72 hours.²⁴⁹ Cal Advocates' analysis indicates that only 8 percent of power outages at macro cell sites during the 2019 PSPS events lasted longer than 72 hours.²⁵⁰ We can conclude that a 72-hour backup standard would have more likely than not, provided uninterrupted power to 92 percent of the macro cell sites in California that lost commercial power during the PSPS events in 2019.²⁵¹

²⁴⁶ CTIA at 5.

²⁴⁷ CforAT and NCLC at 4.

²⁴⁸ Cal Advocates at 4.

²⁴⁹ *Id.* at 4 (citing to Safety and Enforcement Division's *Utility De-Energization Reports*, available at <https://www.cpuc.ca.gov/deenergization/>)

²⁵⁰ Cal Advocates at 4-6.

²⁵¹ *Id.*

Cal Advocates also offers that a 72-hour backup requirement aligns with federal standards at the FCC, where the FCC requires 72-hour backup power at Central Offices that route calls to 9-1-1 call centers.²⁵²

72-hours of backup power immediately following a de-energization event for the wireless providers' networks is sufficient to meet public need. The public has an expectation that they will hear a dial tone on their wireless device, receive emergency alerts and notifications on their wireless device, and access critical information during an emergency on their wireless device – especially when the power is out. This resiliency measure will support those who are disproportionately affected most by disasters: emergency responders, frontline personnel, medical personnel, individuals with access and functional needs, and hard to reach customers. In adopting this requirement, we allow the wireless providers flexibility over procurement and management of the power resource. We turn our discussion next to whether we should adopt specific requirements for how such backup power should be deployed.

Deployment of Backup Power: The Proposal recommends that the wireless providers have on-site emergency backup power to support all essential communications equipment. Many wireless providers expressed concern with this language in the Proposal. They argue that the backup power requirement can, and should be, flexible giving providers complete discretion to manage their networks.

²⁵² *Id.*

Wireless providers assert that if our requirement is limited to the use of “on-site” resources only, we would constrain them from using the other resiliency strategies for maintaining service. They suggest the proposed “on-site” requirement may limit them from using: (1) deployable mobile generators on an as-needed basis to sites that lose power and do not have permanent fixed generators; (2) deployable temporary facilities like cells on light trucks (COLTs), cells on wheels (COWs), satellite picocells on truck (SPOTs) which support locations where service cannot otherwise be maintained due to damage or loss of power; and (3) deploying refueling trucks to refill generators as needed, as opposed to deploying sufficient batteries or fuel tanks at all sites to withstand a 72-hour outage.

For example, WIA suggests the proposed 72- hour requirement should be shortened to 48 hours, since most currently deployed generators at cell sites are designed to hold the fuel necessary to operate for 48 hours, but indicates that they could continue to run uninterrupted for longer periods with refueling.²⁵³ Verizon suggests that the 72-hour backup power requirement is reasonable, so long as it provides sufficient flexibility to permit the refueling of generators that do not have tanks with a 72-hour capacity and other best practices.²⁵⁴ For its part, AT&T Wireless asserts that its backup strategy includes “a fleet of mobile generators with a dedicated team that deploys these as needed,” though, we note

²⁵³ WIA at 7.

²⁵⁴ Verizon at 17; Verizon explains further that a 72-hour minimum requirement on a single tank is not necessary so long as the generator may be refueled, as refueling would allow a generator to run indefinitely.

AT&T also points out that its employees frequently cannot access areas where these generators are needed.²⁵⁵

On the other hand, consumer advocates, like Cal Advocates encourage us to “not accept the premise that deployable mobile assets are a replacement for on-site backup power, especially in high fire threat areas. Most Providers have presented insufficient plans for placing on-site back-up power in these critical locations.”²⁵⁶ Cal Advocates argues further that rapidly deploying hundreds of mobile backup power sources during a widespread outage will likely be difficult, and that on-site backup power is necessary to ensure that communication networks are resilient during widespread commercial grid outages.²⁵⁷

We are mindful that the timing, siting, permitting, and cost constraints the wireless providers assert are real barriers to ensure customers have the backup power necessary to withstand a disaster or de-energization event. We acknowledge Verizon’s concern that the cost to replace potentially thousands of generators it has already deployed with smaller tanks is prohibitive, as well as that siting larger fuel tanks presents an additional barrier.²⁵⁸

Ideally, every location would have an on-site generator with a zero-emission backup power supply, but that is not reasonably available or feasible given the rapidly approaching wildfire season and potentially,

²⁵⁵ AT&T Wireless at 11-12.

²⁵⁶ Cal Advocates at 12.

²⁵⁷ *Id.* at 10.

²⁵⁸ Verizon at 24.

de-energization events. While we strongly encourage providers to make these investments over time, we decline to adopt such a requirement today. We direct the wireless providers to maintain service through various technological means to ensure that customers in Tier 2 and Tier 3 High Fire Threat Districts have access to 72-hour backup power during the upcoming wildfires and de-energization events. The wireless providers have twelve (12) months from the effective date of this decision to implement this requirement. Further, we direct the wireless providers to demonstrate how they will fulfill this obligation by providing a discussion through supporting documentation and data in their Resiliency Plans.

6.4.5. Parties' Positions: Level of Service for Backup Power Requirement

Consumer advocacy groups generally supported the Proposal's recommendation to ensure 9-1-1 access, the ability to receive emergency notifications, and access web browsing for 100 percent of customers in the event of a commercial power outage. For example, CforAT and NCLC contend that Verizon argues against any emergency standards requiring web access, but at the same time, intends to communicate with its own customers on the web concerning emergency information.²⁵⁹

TURN and Access Humboldt suggest the minimum level of service should also require access to 2-1-1 and streaming of video at low definition to provide customers with access to emergency information, such as video announcements

²⁵⁹ CforAT at 8.

from public health officers, but recognize that including streaming video may be a burden on a network. And TURN encouraged the Commission to ensure that providers do not engage in network throttling that interferes with the ability of emergency officials and customers to use services.

CforAT and NCLC assert that the wireless providers' emphasis on service restoral over minimizing service outages is not appropriate, as any gap in service puts people at increased risk during an emergency. Further, CforAT and NCLC suggest that the goal of constant service for 100 percent of customers, including during extended power outages, is aspirational, and agree with wireless providers that in certain disasters, maintaining service will be impossible.

Local governments additionally support a requirement that guarantees 9-1-1 access, ability to receive emergency notifications, and access to internet browsing for 100 percent of customers in the event of a commercial power outage. RCRC states the loss of internet service during a de-energization event can have devastating results, since many notifications sent via text message contain links to websites where consumers can access more information about the outage or emergency. Santa Clara County also supports a 72-hour backup requirement, requesting that service be sufficient to "maintain access for all customers to 9-1-1 service; to receive emergency notifications; to access internet browsing for emergency notices; and allow continuity of communication and data sharing among emergency responders, public safety partners, and critical facilities and infrastructure operators."

Verizon, T-Mobile, and CTIA each assert that the requirement to maintain service for 100% of customers is not possible, even in non-emergency conditions.

T-Mobile explains that different geographic areas have different coverage levels and even with those areas that have coverage, a customer's experience can vary by season, location within a building, whether they are hiking in a canyon, and a variety of other factors. Verizon suggests that the 100% internet access requirement unrealistically contemplates that the network will operate perfectly during disasters and PSPS events, as this improperly prioritizes services that may congest the network and detract from delivery of critical 911 and voice calls. Verizon (and other carriers) have focused their resiliency plans on prioritizing the ability to make voice calls during disasters.

Cal Advocates, Verizon, and UCAN suggest the requirement should be narrowed to Tier 2 and 3 High Fire Threat Districts to focus investments on the communities that are most at risk.

6.4.6. Maintaining a Minimum Level of Service is Critical for the Public and Emergency Personnel During Disasters and PSPS Events

The Proposal suggests that providers should be able to access 9-1-1, to receive emergency notifications and to access the internet for 100 percent of customers in the event of a power failure. This position is supported by consumer advocates and local governments. We agree with RCRC, that the loss of internet service during a de-energization can have devastating results and cascading effects, since many notifications sent via text message contain links to websites where consumers can access more information about the outage or emergency.

Customers and first responders have a reasonable expectation that they will have communication services, receive emergency alerts and notifications, and can access the internet for critical information during an emergency, disaster, or when the power is out. The record in this proceeding shows that 88 percent of 9-1-1 calls are made from wireless phones and customers expect that communication services should be available when they need them. The record in this proceeding exposes the failure of the wireless providers to ensure resiliency that has led to a persistent public safety problem.

We find it reasonable to adopt a rule that requires the wireless providers to ensure customers and first responders have access to minimum service levels and coverage. Minimum service levels and coverage include the following: (1) 9-1-1 service; (2) 2-1-1; (3) the ability to receive emergency alerts and notification; and (4) basic internet browsing during a disaster or commercial power outage. We agree with Cal Advocates, Verizon, and UCAN that this rule should be narrowed to Tier 2 and Tier 3 High Fire Threat Districts to focus efforts and investments on the communities that are most at risk. While these districts are being prioritized in today's decision, the Commission may review whether this narrow requirement provides sufficient protection to all Californians impacted by wildfires, disasters and PSPS events at a later date in this proceeding.

We decline to adopt TURN and Access Humboldt's recommendation that the minimum level of service also should require the ability to stream video at low definition. While this type of service may provide value to the public with access to public service announcement videos, we are mindful that video

streaming is an issue of available bandwidth which is likely to be constrained in emergency situations.

We acknowledge Verizon's, T-Mobile's, and CTIA's assertions that a requirement to maintain service for 100 percent of customers 100 percent of the time, is not always possible, even in non-emergency conditions. T-Mobile explains that different geographic areas have different coverage levels and even with those areas that have coverage, a customer's experience can vary by season, location within a building, whether they are hiking in a canyon, and a variety of other factors. Similarly, CforAT and NCLC agree, stating that the goal of constant service for 100 percent of customers at all times, including during extended power outages, is aspirational. We agree with parties that the "100 percent language" creates an inappropriate expectation, however, we restate the obligation is to maintain a minimum level of service and coverage to provide access to 9-1-1, 2-1-1, to receive emergency notifications, and access web browsing for emergency notices.

Indeed, there are certain disasters where it will be impossible to maintain service, including during extended power outages. We recognize that networks will likely be degraded, especially as providers determine that some sites that are used for capacity will not be maintained during an outage. Nonetheless, it is appropriate to require providers to maintain a minimum level of service and coverage to keep customers connected during critical times of peril. Ensuring continuity of communications service is of vital importance to the consistency and reliability of 9-1-1 communications and our action here, favors preservation of security, life, reliability, and safety.

6.5. Communications Resiliency Plans

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment to on the Proposal's requirement to file backup power plans (Resiliency Plans) with the Commission six months from the effective date of a decision in this proceeding. The Proposal recommends that in this filing, the wireless providers will demonstrate their preparedness to the Commission to ensure 9-1-1, ability to receive emergency notifications, and internet access for 100 percent of customers in the event of a commercial power outage. We discuss the parties' positions below.

6.5.1. Parties' Positions

Generally, the wireless providers are split. For example, Verizon argues that we should not micromanage²⁶⁰ or prescribe specific elements of the resiliency plan and not require such a plan to include elements unrelated to backup power.²⁶¹ CTIA, on the other hand, does not oppose a general requirement for wireless providers to submit resiliency plans but argues the Commission should not dictate prescriptive requirements.²⁶² AT&T contends its Business Continuity Preparedness Handbook takes a "proactive and dynamic approach" to business continuity planning to help minimize the impact of disaster or grid outage.²⁶³

²⁶⁰ Verizon at 26.

²⁶¹ *Id.* at 28.

²⁶² CTIA at 15.

²⁶³ AT&T at 26-34.

However, local governments and the consumer groups support the Proposal's requirement for submission of a resiliency plan, with modifications or recommendations. Cal Advocates recommends that we require providers to submit their resiliency plans to the Commission within three months from the adoption of this decision as well as provide annual updates to their plans, including detail on any changes and certification of compliance of new facilities that are built.²⁶⁴

RCRC supports the Proposal's requirement for providers to provide resiliency plans annually.²⁶⁵ Santa Clara County supports the Proposal's requirement and requests the wireless carriers coordinate with local government entities while they develop their resiliency plans.²⁶⁶ Likewise, San Jose recommends that the wireless providers share their resiliency plans with state and local emergency responders, as well as local government agencies (including city emergency managers).²⁶⁷

TURN supports the Proposal's resiliency plan requirement, and recommends that we require the wireless providers to indicate quarterly what modifications are made in their ongoing efforts from the previous quarter's submittal, and require an updated plan each year.²⁶⁸ TURN also recommends

²⁶⁴ Cal Advocates at 10.

²⁶⁵ RCRC at 7.

²⁶⁶ Santa Clara County at 6.

²⁶⁷ San Jose at 3-4.

²⁶⁸ TURN at 8.

additional information requirements for inclusion of the wireless service providers resiliency plans.²⁶⁹

CA Water Association supports the resiliency plan and recommends that the wireless providers share network outage information with the water utilities.²⁷⁰

6.5.2. The Wireless Providers Shall File a Communications Resiliency Plan That Describes Their Ability to Maintain Minimum Service Coverage During a Disaster or Power Outage

The Proposal recommends that the wireless providers file a plan with the Commission six months from the effective date of a decision in this proceeding that describes their ability to maintain minimum service coverage for 100 percent of customers, in the event of a commercial power outage. The Proposal also recommends that the plans include, but not be limited to, the following informational elements:

- Detailed PSPS and grid outage response plans;
- Facilities with and without battery backup, fixed generation, and mobile generator hookups;
- The number of mobile generators and refueling trucks and specify which are stationed in California;
- Identify the ability to replace damaged facilities, including logical and physical network route diversity and temporary facilities (*e.g.*, mobile cell sites and

²⁶⁹ *Id.* at 9.

²⁷⁰ CA Water Association at 4.

temporary microwave backhaul);

- Identify employees dedicated to refueling and vendors including company and contract agreement;
- Identify to the ability to support near real time reporting on system outages as required by CPUC rules, Cal OES regulations and California Government Code;
- Provide copies of refueling schedules;
- Provide copies of roaming agreement; and.
- Provide copies of cooperative agreements to pool resources with other providers.

The question presented to the Commission is whether to adopt such a requirement, and whether the elements for such a requirement, listed above, are reasonable.

While the wireless providers generally oppose the adoption of this requirement, we believe the backup power plan is critical for future resiliency planning and foresight. We adopt the Proposal's recommendation to mandate such a requirement, but we are convinced that achieving resiliency requires more than a plan for backup power alone. Consequently, the wireless providers shall submit to the Commission a Communications Resiliency Plan (Resiliency Plan). Below, we discuss our reasoning for this requirement and then, we turn to the elements the wireless providers shall include in their Resiliency Plans.

Foundationally, we seek two outcomes from wireless providers' Resiliency Plans: (1) collaboration between the Commission and the wireless providers to meet future challenges; and (2) demonstration of each wireless provider's ability to maintain service during disasters and outages. The Resiliency Plan will help

prepare the Commission and California's wireless providers to face emerging challenges and implement key learnings as conditions change, and as we observe response efficacy and effectiveness in real time.

The Resiliency Plans should advance strategic planning about risks of disasters and outages of the future. The Resiliency Plans will help us evolve our approaches to plan for uncertainty, avoid surprises, promote information sharing between the wireless providers and the Commission, and operate more effectively with increasingly severe wildfires and electrical grid outages.

Next, we address the wireless providers' arguments against the proposed elements of the Resiliency Plan. Verizon argues that the proposed elements reflect "an effort to micromanage each provider's continuity plans"²⁷¹ and the collection of information for the Resiliency Plans is "unnecessary, and any future effort to use the information to micromanage operational matters would be misplaced."²⁷² We disagree.

The above proposed elements, which we adopt here, are not an effort by the Commission to micromanage the wireless providers' operations. To the contrary: the Resiliency Plan's elements shall serve as a guidepost to understand the wireless providers' networks as they are impacted by future disasters plausible future operating conditions, challenges, and opportunities, and will identify what resiliency and preparedness management strategies are necessary

²⁷¹ Verizon at 26.

²⁷² *Id.* at 27.

to maintain a minimum level of service and coverage during disasters and outages in the future.

For its part, T-Mobile asserts that the impetus for these requirements is based on a fundamental and critical misunderstanding of the current state of wireless network resiliency. We disagree. The Proposal, as we adopt it, sets forth a flexible structure for the wireless providers to determine how best to maintain service. To repeat, the Proposal, and consequently, the Resiliency Plan, does not suggest imposing specific requirements on *how* providers maintain service. In fact, we agree with T-Mobile,²⁷³ that communications networks are complex, diverse, and there may not be a "one size fits all" approach to ensuring resiliency. But, by applying the elements of the Proposal, it is possible to achieve overall resiliency: Verizon demonstrates that principle, with its backup power investments and superior performance during past wildfire and grid outage events.

CTIA does not object to the Resiliency Plan as a general requirement but opposes any mandate of specific elements.²⁷⁴ CTIA contends that the wireless providers should be allowed to develop their plans in a way that is tailored to their networks, markets, and capabilities.²⁷⁵ Similarly, AT&T Wireless offers to submit its business continuity preparedness handbook²⁷⁶ instead of a Resiliency

²⁷³ T-Mobile at 2.

²⁷⁴ CTIA at 15.

²⁷⁵ *Id.* at 15-16.

²⁷⁶ AT&T at 2.

Plan. While we appreciate CTIA's general support to submit a Resiliency Plan and AT&T's offer to submit its business continuity plan in place of Resiliency Plan, we reject the assertion that our requirements are prescriptive.²⁷⁷ To the contrary: they are a flexible set of rules to help ensure the past does not repeat itself. Indeed, the course of inaction from the past is unsustainable. What some of the wireless providers propose to submit in lieu of the elements required by the Resiliency Plan is neither expansive nor creative enough to meet this moment.

The Resiliency Plan and its required elements, specified below, establish a minimum standard, with appropriate specificity. This will assure the Commission that the wireless providers transparently and thoughtfully plan for wildfire and de-energization adversity in advance to protect the public health, safety, and welfare of California.

We note though, that Verizon argues against the submittal of the following elements of the Resiliency Plan: (1) identification of employees who are dedicated to refueling or their vendors, including company and contract agreement; and (2) copies of roaming agreements.²⁷⁸ Generally, Verizon asserts that submittal of this information is unnecessary.

At this time, we find that the identification of employees who are dedicated to refueling may be unnecessary. Instead, we direct the wireless

²⁷⁷ CTIA at 15-16.

²⁷⁸ Verizon at 27.

providers to state the title of the manager in charge and the number of employees responsible for refueling.

We disagree that copies of roaming agreements and the names of the vendors responsible for refueling is unnecessary. This information will provide the Commission with an understanding of the wireless providers' preparedness as they face increasing complexity and decreasing predictability in their operating environments during wildfires and grid outages, and whether they have sufficient resources necessary to meet these requirements. We have significant concern with the wireless providers' alleged non-compliance with California Air Resources Board (CARB) standards.²⁷⁹ Communications Workers assert that the temporary generators being brought in from out-of-state were not in compliance with CARB standards.²⁸⁰ Communications Workers claim this caused unnecessary delay and is a significant cause for concern during a disaster.²⁸¹ We agree. We direct the wireless providers to comply with CARB's rules going forward.

Finally, we highlight a key public policy point: the public's expectations are becoming exceedingly higher and less tolerant of losing wireless service during disasters and outages. The informational elements required in the Resiliency Plans are by design, aimed to establish a set of minimum standards to preserve minimum continuity of service as wildfires and commercial grid

²⁷⁹ Communications Workers at 3-4

²⁸⁰ *Id.*

²⁸¹ *Id.*

outages continue, at least for the foreseeable future. It is critical that the wireless providers collaborate with the Commission as wildfires and outages strain both public and private sector resources while at the same time, public pressure for optimal service performance grows.

In summary, within six (6) months upon the effective date of this decision, the wireless providers shall submit a Communications Resiliency Plan to the Commissions' Communications Division via a Tier 2 advice letter. These Resiliency Plans shall describe how the wireless provider shall maintain a minimum level of service and coverage to preserve access to 9-1-1 and 2-1-1, maintain the ability to receive emergency notifications, and access to internet browsing for emergency notices for their customers in the event of a power failure. Additionally, the wireless providers' Resiliency Plans shall include, but shall not be limited to, the following:

- --Detailed PSPS and grid outage response plans;
- Detailed Clean Generation and Diesel Generation Near and Long-Term Approaches, consistent with Section 6.7.2 of this Decision;
- Facilities with and without battery backup, fixed generation, and mobile generator hookups, their location, and the estimated length of time the facilities will operate during a grid outage with and without refueling at each site;
- The number of mobile generators and refueling trucks and specify which are stationed in California;
- Identify the ability to replace damaged facilities, including logical and physical network route diversity and temporary facilities (*e.g.*, mobile cell sites and temporary microwave backhaul);

- Identify titles of management and number of personnel dedicated to refueling and vendors including company and contract agreement;
- Identify the ability to support reporting on system outages as required by CPUC rules, Cal OES regulations and California Government Code;
- Detail how backup generators comply with CARB standards;
- Provide refueling schedules;
- Provide roaming agreements;
- Provide cooperative agreements which are used to pool resources with other providers;
- Identify facilities that do not need backup power, are unable to support backup power due to a safety risk, or that are objectively impossible or infeasible to deploy backup power and identify the basis for that determination as well as discuss actions being taken by the wireless provider to mitigate service loss resulting from the lack of backup power at those locations pursuant to Section 6.6.2; and
- Identify investment plans to improve network resiliency pursuant to Section 6.6.2 (*e.g.*, deployment of redundant backhaul and deployment of fixed generators).

We direct the Communications Division to develop and adopt standardized reporting templates as well as a submittal schedule for the Communications Resiliency Plans within 60 days from the adoption of this decision. Each wireless provider shall submit an updated Communications Resiliency Plan annually via a Tier 2 Advice Letter that shall include, but not be limited to, all of the information included in the initial Communications Resiliency Plan.

Finally, when implementing these requirements, we remind the wireless providers – when collaborating with the electric corporations and other stakeholders, like local government or emergency services personnel - to adhere to the direction from public health officials regarding shelter-in-place, social distancing, or other measures that may need to be taken in response to the COVID-19 pandemic, consistent with Executive Order N-33-20, and our rules.

6.6. Waivers

In the Scoping Memo and Ruling, and the Assigned Commissioner’s Ruling, we sought comment on the Proposal’s waiver requirement, which would allow wireless providers to submit waivers if they qualify for any of the exemptions enumerated in the Proposal. We discuss the parties’ positions below.

6.6.1. Parties’ Positions

Parties were divided on the Proposal’s waiver process. For example, Verizon asserts that the Proposal should affirmatively exempt small wireless facilities, capacity-focused facilities, and facilities where it is infeasible to deploy backup power or otherwise impossible to deploy backup power due to either space or technological restrictions.²⁸² CTIA suggests that the Commission should define “essential facilities”²⁸³ and also argues that the Proposal should allow for waivers where the backup power is impossible or infeasible to implement.²⁸⁴

²⁸² Verizon at 31-32.

²⁸³ CTIA at 12.

²⁸⁴ CTIA at 18.

T-Mobile argues that the Proposal's waiver provision is inconsistent and unclear.²⁸⁵ AT&T contends that waivers are not a viable means of tailoring applicability of the Proposal's backup power requirement.²⁸⁶

Cal Advocates supports the Proposal's waiver process for redundant facilities and waiver for non-compliant facilities but suggests advice letters as mechanisms to ensure proper oversight of the backup power.²⁸⁷

Finally, wireless providers indicate plans for investing in their networks to improve network resiliency. For example, T-Mobile indicates it is in the process of acquiring hundreds of portable generators and intends to install permanent generators on numerous additional sites throughout the state and installing quick connectors on hundreds of sites for quicker connection to a portable generator as well as power failure detection devices.²⁸⁸

6.6.2. Wireless Providers Must Identify Facilities that Do Not Need Backup Power, are Unable to Support Backup Power Due to A Safety Risk, or are Objectively Impossible or Infeasible to Deploy Backup Power

We decline to adopt the Proposal's waiver process as stated. Instead, we direct the wireless providers to identify, in their Resiliency Plan, facilities that do not need backup power, are unable to support backup power due to a safety risk, or that are objectively impossible or infeasible to deploy backup power, and to

²⁸⁵ T-Mobile at 20.

²⁸⁶ AT&T at 39.

²⁸⁷ Cal Advocates at 14-15.

²⁸⁸ T-Mobile at 29-30.

require a discussion of actions being taken by the wireless providers to mitigate service loss resulting from the lack of backup power at those locations pursuant to this section of today's decision.

CTIA and WIA caution that any backup power requirement should also exclude wireless facilities where it is not possible to deploy backup power. CTIA and WIA both suggest that the Proposal should include an exemption for impossibility or infeasibility.²⁸⁹ We agree. Despite best efforts, there may be factors that come into play over which the wireless provider has very little control. Therefore, we adopt the following components that shall be included in the wireless provider's Resiliency Plans:

- As a component of their Resiliency Plans, a wireless provider may identify specific facilities or classes of facilities that do not require 72-hours of backup power to maintain overall coverage and level of service to ensure access to 9-1-1 and 2-1-1, as well as the ability to receive notifications and access basic internet browsing for emergency notices for their customers. In identifying these facilities, the provider must include information on the location of the facilities, the type of facility, detail how service will otherwise be maintained for a minimum of 72 hours immediately following the loss of power and why these facilities are unnecessary to do so; or
- As a component of their Resiliency Plan, a wireless provider may identify specific facilities or classes of facilities that are unable to comply with the 72-hour backup power requirement because of significant risk to safety of life or health; or specific existing federal, state,

²⁸⁹ CTIA at 18; *see also* WIA at 9-10.

tribal or local law. In identifying these facilities, the wireless provider must include information on the location of the facilities, the type of facility, and a detailed description of facts supporting the basis of the wireless provider's claim of preclusion from compliance, including legal citations. In identifying these facilities, the wireless provider must detail the impact to service; or

- As a component of their Resiliency Plan, a wireless provider may identify specific facilities where 72-hours of backup power is objectively impossible or objectively infeasible to achieve. In identifying these facilities, the wireless provider must include information on the location of the facilities, the type of facility, and a detailed description of facts supporting the basis of the wireless provider's claim of preclusion from compliance. In identifying these facilities, the wireless provider must detail the impact to service.

Identification of circumstances described above serve as an indication that the requirement to build additional resiliency into wireless communications networks will take time. We must assess and identify the weaknesses in our communities so that we may develop solutions that will increase safety.

For illustrative purposes, we highlight examples of steps the wireless companies are taking to overcome barriers in deploying backup power. Verizon states that it has microcells in the restrictive topography of the Oakland Hills, which makes the installation of backup power impossible for topographical and technical reasons.²⁹⁰ Verizon contends that in the event of a PSPS in the area, its customers lose service in the Oakland Hills and deployable assets like cells on

²⁹⁰ Verizon at 20.

wheels (COWs), cells on light trucks (COLTs) or satellite picocells on trailers (SPOTs) are not viable resiliency solutions because the roads are too narrow and the deployable assets would block traffic.²⁹¹ Verizon asserts it is working with the City of Oakland to find a feasible solution.²⁹² Verizon's efforts in the Oakland Hills are illustrative of the good faith efforts we expect of our wireless providers.

Similarly, San Jose asserts that cooperative relationships between government and the wireless providers benefit customers, as its residents were able to maintain service and internet access during the 2019 PSPS events.²⁹³ San Jose states that AT&T contacted San Jose to discuss its energy needs, and ability to provide service during the PSPS event.²⁹⁴ San Jose also states that T-Mobile asked San Jose for help locating 50 backup-generators.²⁹⁵ Through collaborative partnerships between government and the wireless providers, solutions can be developed to protect vulnerable facilities and overcome complex infrastructure and permitting challenges.

Wireless providers suggest that it is necessary to broadly exempt small wireless facilities from any consideration to maintain backup power, suggesting that these facilities are not essential and that they only provide additional

²⁹¹ *Id.*

²⁹² *Id.*

²⁹³ San Jose at 1-2.

²⁹⁴ *Id.*

²⁹⁵ *Id.*

capacity to meet growing needs for data.²⁹⁶ However, this is not always the case. As ExteNet explains, small wireless facilities may also be used to improve coverage and fill in “dead spots” in certain geographic areas.²⁹⁷ As such, providing such a broad exemption may leave many individuals without access to critical communications services during an emergency.

The wireless providers also provide examples of investing in their networks to improve network resiliency. For example, T-Mobile states it is in the process of acquiring hundreds of portable generators, and intends to install permanent generators on numerous additional sites throughout the state.²⁹⁸ T-Mobile also states that it is installing quick connectors on hundreds of sites for quicker connection to a portable generator as well as power failure detection devices.²⁹⁹

The examples above from the wireless providers are informative. We direct the wireless providers to discuss these types of investments in the Resiliency Plan so that over time, the wireless providers reduce the proportion of facilities that are not resilient. Identifying such investments in their Resiliency Plans, as well as the specific locations and barriers that prevent wireless providers from deploying resiliency in their networks, will guide a data-driven

²⁹⁶ Verizon at 21-24.

²⁹⁷ ExteNet at 3.

²⁹⁸ T-Mobile at 29-30

²⁹⁹ *Id.* at 29-30.

conversation between the State, the wireless providers, and local governments to resolve resiliency issues and support overall, enhanced community resiliency.

6.7. Clean Generation

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment on the Proposal's clean generation directive, which require wireless providers to strive to utilize clean energy backup power options as reasonable before using diesel generators to meet the backup power requirement.

6.7.1. Parties' Positions

Generally, the wireless providers all argued that clean generation procurement for backup power is not feasible, economically viable, or available. Parties say that diesel remains the primary and most reliable backup power resource. For example, Verizon argues that clean energy, such as renewables, is infeasible as a primary backup power source but notes it has a corporate goal of becoming carbon neutral by 2035.³⁰⁰ Similarly, CTIA asserts that California's wireless carriers are committed to exploring clean energy for their backup power needs, and will consider implementing such when it is economically feasible and will not negatively impact resiliency.³⁰¹

WIA points out diesel remains the primary fuel source because there currently are no existing clean energy solutions that can be deployed at the scale

³⁰⁰ Verizon at 29.

³⁰¹ CTIA at 16.

needed.³⁰² WIA states that the industry will continue monitoring the development of alternative fuels; however, in the near future, diesel generators will continue to be the only viable choice for the scale.³⁰³

Cal Advocates supports the use of clean generation before using diesel generators to meet the backup power requirement, noting that the 72 hour backup requirement “presents a challenge” for clean energy generators in certain situations.³⁰⁴ RCRC too, highlights limitations of clean generation in the backup power context.³⁰⁵

6.7.2. Near-Term Use of Diesel Generation as a Primary Backup Power Resource is Reasonable, but the Wireless Providers Shall Transition to a Future of Renewable Backup Generation

The Proposal recommends that the wireless providers use clean energy backup power (*i.e.*, solar, wind, fuel cell, etc.) as reasonably practicable, before using diesel generators to meet the backup power and resiliency needs. The Proposal also requires the wireless providers to identify the number and specific types of generators they will use, develop cooperative agreements with other utilities, make clean generation feasible, and identify annual targets for the reduction of fossil fuel generation.

³⁰² WIA at 12-13.

³⁰³ *Id.*

³⁰⁴ Cal Advocates at 10.

³⁰⁵ RCRC at 7.

Many of the wireless providers argue against the Proposal's renewable procurement requirement for backup power generation. Generally, the wireless providers contend that: (1) renewable generation as a primary backup power source is infeasible because the technology requires more space and is not a reliable backup power resource; and (2) diesel remains the primary fuel resource because there are no existing clean energy solutions that can be deployed at large scale, for backup power purposes.

We allow the wireless providers to use fossil fuel generators for backup power in the short-term however, we adopt some of the Proposal's recommendations with modification. We direct the wireless providers to discuss the following elements of their backup power generation plan in their Resiliency Plans: (1) the types of generators they will use in the near-term; (2) their efforts to develop cooperative agreements with the electric corporations, other utilities, and the renewables market developers to make clean generation feasible and scalable; (3) identify the number, location, and specific types of generators the wireless providers will use; (4) provide an estimate of the emissions by greenhouse gas (GHG) emitted from prior use, on an annual basis; (5) detail the criteria air pollutant emissions factors; (6) discuss lessons learned from past use of both clean and fossil fuel generation as a widespread backup power resiliency strategy; and (7) include an approximate timeline of when and how the wireless providers anticipate a transition to renewable generation from fossil fuel generation for backup power resiliency. We note that the electric corporations

are undertaking such an effort in existing Commission proceedings³⁰⁶ and that experience may be beneficial for the wireless providers to learn from. We discuss our reasoning for this approach, below.

In adopting the above requirements, we acknowledge and we appreciate the commitments of Verizon,³⁰⁷ AT&T Wireless³⁰⁸ and CTIA³⁰⁹ to explore clean energy as a resource to meet backup power needs and to test the use of renewable generation when it will not impact resiliency. Verizon, AT&T Wireless, and CTIA's commitments could help spur innovation in this emerging market and bring renewable backup generation to wide scale use.

As we previously stated, fossil fuel generation cannot be a long-term resiliency strategy. Large diesel generators – even when localized in select areas – present potential health risks for individuals who live or work near a temporary generation site. In the context of near-term deployment of fossil fuel generation, we are cognizant of this risk and so, we weigh it against the near-term need for resiliency during the upcoming wildfire season and potential, de-energization events.

We calibrate this balanced near-and long-term approach to ensure minimum continuity of service necessary for public health, safety, welfare, and societal steadiness in times of crises. In this way, we meet a short-term need

³⁰⁶ See R.19-09-009.

³⁰⁷ Verizon at 29.

³⁰⁸ AT&T Wireless, Declaration of Daniel De Leo at 1.

³⁰⁹ CTIA at 16.

while taking the necessary step toward a sustainable, future strategy that transitions away from fossil fuel to cleaner and safer, renewable backup power generation across our regulated industries.

6.8. Emergency Operations Plans

In the Scoping Memo and Ruling, and the Assigned Commissioner's Ruling, we sought comment on the Proposal's directive for wireless providers to file emergency operations plans with the Commission, discussing how their operations are prepared to respond to emergencies. We discuss the parties' positions on this topic, below.

6.8.1. Parties' Positions

Generally, the wireless providers state they support the Proposal's directive for wireless providers to file emergency operations plans with the Commission. However, the wireless providers caution against adopting uniform or prescriptive standards³¹⁰ and instead, point to the need for flexibility to maintain emergency operations plans that are tailored to their operations.³¹¹

For example, AT&T Wireless states its business continuity and emergency management plan outlines its strategies and procedures for emergency response that impact its network,³¹² and adds that it will share this plan with the Commission and relevant emergency responders.³¹³ Likewise T-Mobile states it also maintains a business continuity plan and can provide it to the Commission,

³¹⁰ T-Mobile at 25.

³¹¹ Verizon at 37.

³¹² AT&T at 47.

³¹³ *Id.* at 48.

but argues against adopting any rules beyond what was otherwise created by the carriers in their normal course of maintaining their networks.³¹⁴

Consumer advocates support the Proposal's requirement that providers submit emergency operations plans. Cal Advocates supports this requirement, also recommending that we include a timeframe for which providers must implement the emergency preparedness exercises, increase specificity for the timeframe the wireless providers must share their information about outages, and require the wireless providers to follow the customer outreach best practices we adopted in D.19-08-025.³¹⁵ TURN and UCAN³¹⁶ support the Proposal's requirement too, with TURN asserting that the wireless providers need to inform current subscribers of the likelihood that their service will not continue operating during an outage and also include warning information on their websites and other sales material.³¹⁷ CforAT and NCLC support Cal Advocates' position that we should adopt a requirement that increases specificity by which the wireless providers share information about outages on their website and require providers to follow the customer outreach best practices from D.19-08-025.³¹⁸

RCRC observes that the lines of communication and coordination with electric utilities, local emergency responders, and other stakeholders about

³¹⁴ T-Mobile at 24-27.

³¹⁵ Cal Advocates at 16.

³¹⁶ UCAN at 3.

³¹⁷ TURN at 11.

³¹⁸ CforAT and NCLC at 10.

communications capabilities during a projected energy outage must be shared in accordance with Senate Bill (SB) 560 (McGuire, Chapter 410, Statutes of 2019).³¹⁹

Verizon and other wireless providers indicate that it would not be feasible to provide temporary access to real-time network monitoring tools to emergency responders, and that many of the reporting requirements may be duplicative of Cal OES requirements, or be burdensome to key staff managing a disaster.³²⁰

6.8.2. The Wireless Providers Shall Submit Annual Emergency Operations Plans that Among Other Things, Provide Implementation Procedures to Ensure Substantive Engagement with the Commission and CalOES During Emergencies

As we have discussed, California has and will continue to face, unprecedented wildfires and power outages as fire weather conditions become increasingly more prevalent and severe due to climate change. As we have also stated, access to reliable communications is essential to the health and safety all Californians. In consideration of adopting the Proposal's Emergency Operations Plan requirements, we find it crucial that both the Commission and CalOES have access to real-time information regarding the wireless companies infrastructure during PSPS events, especially its resiliency planning and backup power deployment preparedness.

³¹⁹ RCRC at 6.

³²⁰ Verizon at 38-40.

We adopt the Proposal's requirements. We direct the wireless providers to submit the following information to the Commission's Communications Division Director, CalOEs, and local emergency response managers within their service territory within 60 days of the effective day of this decision, in an information only filing, that contains the wireless provider's: (1) emergency operations plan; (2) emergency contact information; (3) emergency preparedness exercise attestation; and (4) public communications plans. In adopting this requirement, discussed in detail below, we highlight the need for good-faith and collective engagement between the wireless providers, the Commission, CalOES, emergency responders from across the government, and the public. These partnerships are critical to the future of our wildfire and PSPS emergency management.

Emergency Operations Plan: With this mind, we direct the wireless providers to annually submit a copy of its emergency operations plan to the Commissions' Communications Division Director, CalOES, and local emergency response managers within their service territory. By submitting the emergency operations plan, the wireless provider agrees that all relevant operating personnel are familiar with the contents of the emergency operations plan and that operating personnel are committed to carrying out the plans and the provisions contained therein in the event of a system-wide or local emergency that arises from natural or manmade disasters, except to the extent deviations are appropriate under the circumstances during the course of an emergency. To the extent the Provider makes substantive changes to its emergency operations and, the wireless provider shall submit a revised plan within 14 days.

Emergency Contact Information: Furthermore, we direct each wireless provider to submit emergency contact information in a form prescribed by the Communications Division Director and updated at least annually. We direct the wireless providers to notify the Communications Division Director when any changes are made to the emergency contact list. We direct the wireless providers to provide a list emergency contact information and provide personnel that includes individuals who will be able to serve as the State Operations Center (SOC) liaison and can be present twenty-four (24) hours a day, seven (7) days per week in the SOC, when requested by CalOES, during emergency response events.

We direct the wireless providers to ensure that the SOC liaisons are trained in emergency response, in accordance with Standardized Emergency Management System (SEMS), have working knowledge of wireless provider operations and business processes, and informed of the impacts of PSPS events and disasters on the wireless provider's network. We direct the wireless providers to annually provide their emergency operations plans and emergency contact information to state emergency response organizations and local emergency response organizations within their service territories.

Emergency Preparedness Exercise: We also direct each wireless provider to train its operating personnel in the proper procedures for implementing its emergency plan. Each wireless provider shall conduct or participate in an annual emergency preparedness exercise to test its emergency procedures unless it has implemented its emergency procedures in response to an actual event within the last twelve (12) months. Following the annual emergency

preparedness exercise, the wireless provider shall assess the effectiveness of the exercise and modify its emergency operations plan as needed.

Public Communications Plans: Next, as soon as reasonably possible, at the onset of a disaster or PSPS event, each wireless provider shall post, and update at least daily, on its website a map of outages and service impacts, a description of any outage impacts in the specified areas, and the expected restoration time. This information shall be distributed to impacted customers and the general public by posting relevant information on the wireless provider's website and social media accounts, by sharing information with local media, and by providing updates to local and state elected officials and public safety stakeholders. We additionally agree with consumer advocates, and further require that providers must follow customer outreach best practices we adopted in D.19-08-025.³²¹

We agree with TURN that it is necessary to provide customers advanced notification about potential impacts. Therefore, we require providers to provide a general notification to customers in Tier 2 and Tier 3 High Fire Threat Districts in advance of fire season each year about potential impacts to their service that may be caused as result of wildfire and PSPS events. In addition, upon receiving notice from an electric utility that a PSPS event will occur, wireless providers must alert the subscribers in the impacted community of service impacts.³²² For

³²¹ Cal Advocates at 16.

³²² TURN at 11.

notifications to emergency responders, we defer to Cal OES's implementation of SB 670.

COVID 19 Compliance: Finally, when implementing these requirements, we remind the wireless providers – when collaborating with the electrical corporations and other stakeholders, like local government or emergency services personnel - to adhere to the direction from public health officials regarding shelter-in-place, social distancing, or other measures that may need to be taken in response to the COVID-19 pandemic, consistent with Executive Order N-33-20, and our rules.

7. Conclusion

This decision adopts comprehensive resiliency requirements for California's wireless providers. First, this decision defines resiliency, in the context of emergency services management by the wireless providers, as the ability to recover from or adjust to adversity or change through a range of strategies including, but not limited to: backup power, redundancy, network hardening, temporary facilities, communication and coordination with other utilities, emergency responders, the public and finally, preparedness planning.

Second, this decision adopts a 72-hour backup power requirement for the wireless providers' facilities, to ensure minimum service coverage is maintained during disasters or commercial grid outages, consistent with our mandates under the California Constitution, the California Public Utilities Code, and the Tenth Amendment to the U.S. Constitution, and other applicable law. The wireless providers have twelve (12) months from the effective date of this decision to implement this requirement.

Third, this decision requires the wireless providers to file Communications Resiliency Plans with the Commission that details their ability to maintain minimum service coverage in a disaster or a commercial grid outage

Fourth, the decision permits the near-term use of fossil fuel generation as a primary backup power resource. However, the decision directs the wireless providers to explore ways to transition to renewable generation for backup power.

Finally, this decision directs the wireless providers to submit annual emergency operations plans. Generally, the emergency operations plans demonstrate the wireless providers procedures for responding to a disaster.

This decision promulgates resiliency requirements for the wireless providers only. In a forthcoming decision, we will consider promulgating resiliency requirements for other providers.

8. Comments on Proposed Decision

The proposed decision in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on July 1, 2020 by the following parties: (1) AT&T; (2) California Fire Chiefs Association; (3) California Hydrogen Business Council; (4) California State Association of Counties; (5) CTIA; (6) ExteNet Systems, Inc.; (7) National Fuel Cell Research Center; (8) Public Advocates Office; (9) Rural County Representatives of California; (10) The Utility Reform Network, Access Humboldt, Center for Accessible Technology, National Consumer Law Center,

and Communications Workers of America (jointly); (11) T-Mobile/Sprint; (12) Verizon; and (13) Wireless Infrastructure Association.

Reply comments were filed on July 6, 2020, by the following parties: Access Humboldt; AT&T; California Cable & Telecommunications Association; California State Association of Counties; Center for Accessible Technology; CTIA; ExteNet Systems; National Consumer Law Center; National Fuel Cell Research Center; Public Advocates Office; The Utility Reform Network and Communications Workers of America; and Verizon.

We have carefully considered the suggested changes proposed by the parties in their comments and their reply comments to this decision. The suggested changes that we have accepted are reflected in the revised version of this decision.

9. Assignment of Proceeding

Marybel Batjer is the assigned Commissioner and Colin Rizzo is the assigned ALJ in this proceeding.

Findings of Fact

1. The Commission initiated Phase I of R.18-03-011 to adopt an emergency disaster relief program for electrical, natural gas, water and sewer, and communications service providers.

2. As part of Phase I of R.18-03-011, the Commission adopted D.19-08-025 requiring communications providers to implement an array of customer protections when the governor of California or the president of the United States declares a state of emergency.

3. D.19-08-025 found that during declared states of emergencies, such as in the 2017, 2018, and 2019 wildfires and 2019 PSPS, California's facilities-based wireless providers' networks failed, endangering the lives of customers and first responders.

4. The CalOES states that 80 percent of all calls to 9-1-1 during the 2017 and 2018 wildfires came from wireless devices and that this high percentage represents first responder and the public's dependence on data and wireless service.

5. In 2018, wireless service was throttled, adversely affecting the Santa Clara County Fire Department's control and command unit deployed to support relief efforts during the Mendocino Complex Fire.

6. Among other modes of communication, Californians rely on their wireless devices to receive emergency notifications, contact family and friends, and reach first responders during emergencies.

7. In October and November 2019, widespread reports of communications outages across all communications sectors were reported.

8. According to the FCC Disaster Information Reporting System reports, which the Commission takes official notice of pursuant to Rule 13.9 of the Rules of Practice & Procedure, 57 percent of cell sites in Marin County alone were out of service between October 26-27, 2019.

9. Without access to 911 and the ability to reach first responders, Californians cannot access needed services, be safe, or even function in an emergency.

10. The Commission's Communications Division experienced an increase in Major Service Interruption reports from the wireless providers in 2017, 2018, and 2019.

11. Communications Division received a 16 percent increase in Major Service Interruption reports from 2017 to 2018, and a 123 percent increase from 2018 to 2019.

12. The wildfires and the power outages from the PSPS events contributed to a significant delay in the restoration of communications service as compared to non-fire threat circumstances and wireless communications failed at critical times during wildfire and PSPS events and, as a result, many wireless customers were unable to make calls during times of emergency or disaster.

13. As of December 31, 2018, there were 45,335,804 wireless subscribers in California compared to 13,418,711 wireline subscribers.

14. The number of wireline customers has steadily decreased as consumers begin to rely solely on wireless service – nevertheless, wireline service continues to be a necessary and essential service to many Californians.

15. In 2019, approximately 27.4 million 9-1-1 calls were placed via wireless service as compared to approximately 3.6 million placed via wireline service.

16. Many individual PSPS events have impacted tens of thousands of customers, with the largest PSPS events taking place on October 9-11 and 26-31, 2019.

17. Communications Division staff measured the impact of the 2017-2019 wildfires and PSPS events by analyzing the wireless service providers' major service interruption and disaster information reporting system reports and

calculated the number of potentially affected wireless users, macro cell sites, and blocked calls.

18. Communications Division findings are illustrated in this table below, depicting the estimated impact from 2017-2019 wildfires and PSPS events on wireless service in California:

Year	Events	Number of Potentially Impacted Wireless Customers	Approximate Number of Impacted Cell Sites	Approximate Number of Blocked Calls
2017	Napa and Sonoma County Wildfires	96,097	248	814,041
2017	Mendocino and Humboldt County Wildfires	104,441	46	8,271,992
2017	Southern California Wildfires	97,811	457	434,086
2018	Camp Fire Butte County	48,414	51	2,165,308
2018	Hill and Woolsey Fires Southern CA	512,231	492	4,228,585
2019	Kincade Fire and Statewide PSPS	1,122,645	224	n/a

19. The most severe impacts of these fires were in high fire-threat areas, where there were repeated reports of cell site failures, particularly in the 2018 Camp Fire in Butte County, town of Paradise.

20. In 2019, substantial numbers of wireless sites in Butte County were inoperative due to PSPS events.

21. “Facilities-based wireless providers” serve, directly and indirectly, approximately 45,335,804 wireless subscribers in California.

22. Resiliency, for purposes of this decision, is the ability to recover from or adjust to adversity or change through an array of strategies including, but not limited to: backup power, redundancy, network hardening, temporary facilities, communication and coordination with other utilities, emergency responders, the public and finally, preparedness planning.

23. Wireless providers that diligently and adeptly utilize resiliency, and its related strategies, demonstrate that they can maintain and restore service for a portion of their customers during a disaster.

24. Mitigating wireless network disruption through resiliency measures minimizes the likelihood that large numbers of wireless customers will be adversely impacted.

25. In 2019, Verizon utilized an array of resiliency strategies, including onsite backup power that kept much of its network operational and running on backup power.

26. Verizon demonstrates that using resiliency strategies and backup power results in network preservation.

27. Wireless providers that have not made these investments suffer more severe impacts and struggle to maintain service.

28. A power outage is the period during which a generating unit, transmission line, or other facility is out of service.

29. There is a public need to adopt a narrowly tailored and reasonable backup power requirement for wireless providers during disasters or commercial power outages.

30. Customers and first responders have a reasonable expectation that they will be able to call 9-1-1 and 2-1-1,, receive emergency alerts and notifications, and can access critical information during an emergency, especially when the power is out.

31. Because of climate change, wildfires and PSPS events will be part of the future with an expected increase in both frequency and severity.

32. Energy and water utilities, customers, and first responders across all levels of government have expressed public safety concern with the failure of wireless providers to adequately provide service continuity, including 9-1-1, during disasters and during de-energization events.

33. In April 2018, the Commission's Communication Division issued a report analyzing major communication outages during the 2017 winter storms.

34. The April 2018 Communications Division report found that that a total of 964,003 subscribers, or 2.5% of Californians, did not have the capability to dial 9-1-1 for some period of time during the 2017 winter storms.

35. Communications Division's April 2018 report emphasized that many wireless outages could have been prevented with better availability of backup power for wireless providers and improved reliability of cable facilities for wireline providers.

36. Of the four providers serving the Town of Paradise, two had no macro cell sites with backup capacity beyond batteries and the other two providers had at

least one macro cell site, with additional on-site backup capacity in the form of generators, as of 2019.

37. Of the 15 macro cell sites near the Town of Paradise, in the Tier 3 High-Fire Threat District, only three (20 percent) of the macro cell sites have onsite backup generators.

38. Outages were widespread for most wireless providers during the 2019 PSPS events, with outages occurring in over half of the counties in the State.

39. Most macro cell sites out of service in a single day during the 2019 PSPS events occurred on October 27, 2019, with 567 macro cell sites out of service.

40. In 2019, over half of California's counties were impacted by network outages, with Marin County experiencing 57 percent of its 280 cell phone tower sites out of service and Sonoma, Lake, Santa Cruz, Humboldt, and Calaveras counties all facing impacts when over 20 percent of cellphone towers were without power.

41. In the October 2018 wildfires, CalOES saw a total of 341 cell sites go offline, prohibiting 9-1-1 calls.

42. In the October 2018 wildfires, approximately 72,000 people had difficulty reaching 9-1-1, some due to the inability of the wireless system to provide service.

43. Some of California's water utilities rely on communications networks to monitor facilities, maintain contact with field personnel, communicate with personnel and customers, and receive emergency notifications and critical information.

44. California's electrical corporations rely on wireless networks to ensure reliability and resiliency.

45. California's electrical corporations will benefit from a wireless communications network that is more resilient.

46. Ensuring that wireless provider network operators have reliable backup power will help water utilities maintain safe and reliable service during an emergency.

47. State emergency services personnel state that California's wireless network is not built to survive disasters, and many cell sites do not have resiliency, whether through backup power or ability to survive disruption.

48. In 2019, Sonoma County made the difficult decision to evacuate early in response to the Kincade Fire because they feared what evacuation would be like without reliable access to wireless service to disseminate warnings and alerts.

49. Because of the widespread outages, many fire departments in Sonoma County were forced to operate by radio alone, and had limited ability to receive data or maps.

50. There are certain disasters where it will be impossible to maintain wireless service, including during extended commercial power outages.

51. Without a clear backup power requirement for wireless providers operating in the State of California, the public will be harmed during disasters and commercial grid outage events.

52. Seventy-two hours of required backup power ensures wireless customers have access to communication services, receive emergency alerts and

notifications, and access the internet for critical information during an emergency, disaster, or when the power is out.

53. Electrical corporations de-energized 2,290 circuits during the 2019 PSPS events, and the average outage duration was just under 46 hours while over 16 percent of outages lasted longer than 72-hours.

54. 8 percent of power outages at macro cell sites during the 2019 PSPS events lasted longer than 72 hours.

55. A 72-hour backup requirement would have, more likely than not, provided uninterrupted power to 92 percent of the macro cell sites in California that lost commercial power during the 2019 PSPS events.

56. Requiring seventy-two hours of required backup power aligns with FCC standards.

57. Deployable generators, including mobile generators, that have capacity to provide 72-hours of backup power present less siting, permitting, and cost difficulties than requiring 72-hours of on-site backup power.

58. Minimum service levels and coverage include the following: (1) 9-1-1 service; (2) 2-1-1; (3) the ability to receive emergency alerts and notification; and (4) basic internet browsing during a disaster or commercial power outage.

59. A required Communications Resiliency Plan will ensure the wireless providers transparently describe to the Commission, their ability to maintain: (a) sufficient level of service and coverage to maintain access to 9-1-1 and 2-1-1; (b) the ability to receive emergency notifications; and (c) access to internet browsing for emergency notices in the event of a disaster or power outage.

60. The Communications Resiliency Plan will ensure collaboration between the Commission and the wireless providers to meet future challenges.

61. The Communications Resiliency Plan will demonstrate that the wireless providers can maintain and restore service during disasters and outages.

62. The Communications Resiliency Plan will help prepare both the Commission and the wireless providers to face emerging challenges and implement key learnings as conditions change and we observe response efficacy and effectiveness.

63. Using fossil fuel generators for backup power reliability and resiliency in the near term is necessary to ensure minimum continuity of service.

64. Fossil fuel generation as a backup power resource cannot be a long-term resiliency strategy.

65. Large fossil fuel generators – even when localized in select areas – present potential health risks for individuals who live or work near a temporary generation site.

66. Minimum continuity of service must be available for the public given the dangers associated with widespread, commercial grid outages, including the potential loss of, or damage to, life, health, property, and essential services.

67. Wireless providers must attest to the Commission that their organizations have an emergency operation plan in place for disaster and PSPS preparedness.

68. Wireless Emergency Operation Plans must be submitted to the Commission by each wireless provider, as well as, emergency contact information, emergency preparedness exercise attestations, and public communications plans.

69. On March 19, 2020 Governor Gavin Newsom signed Executive Order N-33-20 in response to COVID 19.

70. Executive Order N-33-20 requires all individuals living in the State of California to stay home or stay at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure sectors, in order to address the public health emergency presented by COVID-19.

71. The stay-at-home order is indefinite, and as of the date of the issuance of this decision it remains in effect.

Conclusions of Law

1. The Commission has jurisdiction over facilities-based wireless providers, and authority to ensure the reliability of communications networks in emergencies.

2. California is in an unprecedented climate emergency that has produced increasingly deadly and destructive wildfires, and PSPS events.

3. The State has a duty to ensure, as much as possible, the safety of all Californians.

4. The Commission has responded to this ongoing threat to essential utility infrastructure and services by acting across the breadth of its jurisdiction, addressing energy, water, and communications networks and their customers.

5. The Commission has both the jurisdiction and the authority to require wireless telecommunications carriers to maintain service in Tier 2 and 3 high fire threat districts, so that service continues when commercial power sources are cut off.

6. Uninterrupted transport of communications is an essential precondition to the ability of public safety officials to communicate and coordinate with each other and with the public.

7. The Commission has jurisdiction over wireless telephone corporations and other communications utilities.

8. Public Utilities Code § 216 gives the Commission broad jurisdiction over public utilities, including telephone corporations as defined by Public Utilities Code § 234.

9. The Commission's "broad regulatory power over public utilities" derives from Article XII of the State Constitution, which establishes the Commission, and gives it wide-ranging regulatory authority, including but not limited to "the power to ... establish rules, hold various types of hearings, award reparation, and establish its own procedures."

10. Public Utilities Code § 216 definition of a "public utility" includes every "telephone corporation" where service is performed, or a commodity is delivered to the public or any portion thereof.

11. Public Utilities Code § 234 definition of a "telephone corporation" includes "every corporation or person owning, controlling, operating, or managing any telephone line for compensation in this state."

12. Public Utilities Code § 233 definition of a "telephone line" includes "all conduits, ducts, poles, wires, cables, instruments, and appliances, and all other real estate, fixtures, and personal property owned, or controlled, operated, or managed in connection with or to facilitate communication by telephone,

whether such communication is had with or without the use of transmission wires.”

13. California’s Constitution, Art. XII, § 3, specifically extends the Commission’s jurisdiction to companies engaged in “the transmission of telephone and telegraph messages.”

14. The Commission’s authority over public utilities includes oversight over both public utility services and facilities pursuant to California Constitution, Art. XII §§ 1-6 and Public Utilities Code § 701.

15. Public Utilities Code § 451 requires the Commission to ensure that utilities, including telephone corporations, “furnish and maintain such adequate, efficient, just and reasonable service, instrumentalities, equipment, and *facilities* ... as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.” [emphasis added]

16. Public Utilities Code § 761 requires the Commission to ensure the reasonableness and sufficiency of *utility facilities*³²³ and may order “additions, extensions, repairs, or improvements to, or changes in” utility facilities that the Commission finds “ought reasonably to be made.”[emphasis added]

17. Public Utilities Code § 1001 gives the Commission the sole power to grant operating authority to California utilities, *i.e.*, issue a certificate of public convenience and necessity (CPCN) to traditional utilities seeking to operate in California.

³²³ Pub. Util. Code § 761.

18. Public Utilities Code §§ 1001 and 1013 gives the Commission the lone power to grant a “registration” license to companies the Commission has determined lack “monopoly power or market power in a relevant market or markets or to wireless telephone corporations.”

19. In the case of both non-dominant carrier and wireless registrations, the telephone corporations are required to comply with all sections of the Public Utilities Code other than the entrance regulation inherent in Public Utilities Code § 1001.

20. A CPCN or equivalent authority confers upon a public utility telephone corporation numerous benefits in addition to the obligations under the Public Utilities Code, CPUC decisions, and regulations.

21. Public Utilities Code § 7901 states that public utility telephone corporations have the right to interconnect with other service providers³²⁴ and the ability to access the public rights-of-ways to build or install facilities to provide their services.

22. Public Utilities Code §§ 233, 224.4 extends the Commission’s jurisdiction to the facilities wireless carriers rely upon to provision service.

23. Police power authority over matters related to public health and safety is traditionally reserved to the states.

³²⁴ State certification/registration entitles the telephone corporation to interconnect with other telephone corporations under 47 USC §§ 251 and 252 and analogous state law.

24. States traditionally have had great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort, and quiet of all persons.

25. The California Constitution and California statutory law designate the CPUC as the principal body through which the State exercises its police power in the case of essential utility network services.

26. Public Utilities Code § 451 gives the Commission broad authority to regulate public utility services and infrastructure as necessary to ensure they are operated in a way that provides for the health and safety of Californians: “Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”

27. Protections for Californians as consumers of telecommunication services are set forth in Public Utilities Code §§ 2890-2896.

28. The regulatory measures promulgated in this Decision are consumer safeguards intended to protect the health and safety of utility customers, particularly those impacted by wildfires, loss of power, and related public emergencies historic climate change.

29. The Federal Communications Act does not preempt the Commission from exercising public safety regulation of wireless facilities.

30. The 1993 amendments to the Federal Communications Act ushered in an era of shared jurisdiction.

31. In 1993, Congress passed the Omnibus Budget Reconciliation Act of 1993 (Budget Act), which amended Section 332(c)(3)(A) of the Communication Act § 332) as follows: no State or local government shall have any authority to regulate the entries of or the rates charged by any commercial mobile service or any private mobile service, except this paragraph *shall not prohibit a State from regulating the other terms and conditions of commercial mobile service*.

32. After Congress enacted the revised § 332, the CPUC issued multiple decisions implementing the change in federal law, and harmonizing those changes with existing Commission oversight of wireless telephony.

33. Accordingly, the Commission continues to exercise broad authority over wireless service.

34. In providing a role for states, Congress explicitly declined to occupy the field.

35. Congress did not expressly or otherwise, preempt state health and safety rules.

36. A 72-hour backup power requirement is not tantamount to rate regulation.

37. The scope of § 332's preemptive language is limited to regulations that *directly and explicitly* control rates, prevent market entry, or require a determination of the reasonableness of rates.

38. The Commission retains the unequivocal authority to regulate "other terms and conditions of service."

39. The emergency measures rules adopted herein do not conflict with federal law or regulations, and therefore, are not subject to conflict preemption.

40. A backup power regime does not run afoul of § 332(c)(3)(A) because the FCC has no current backup power rules.

41. The underlying facts of the Seventh Circuit Court of Appeals, *Bastien v. AT&T Wireless Servs., Inc.* are fundamentally different, and therefore not applicable here.

42. None of the requirements in this Decision conflict with the FCC's 2018 Order for 5G and advanced wireless network deployment.

43. The Commission has long regulated the safety-related aspects of utility networks, extending to provisions relating to backup power, support structures, and the requirements in General Orders 95 and 128, relating to overhead lines and underground facilities

44. Governor Gavin Newsom signed Executive Order N-33-20 requiring Californians to comply with the orders of the California State Public Health Officer and the Director of the California Department of Public Health that all individuals living in the State of California stay home or at their place of residence (Stay-At-Home Order). The Stay-At-Home order is indefinite, and as of the date of the issuance of this Decision, it remains in effect.

45. It is reasonable to require the wireless providers to collaborate with California's electrical corporations in advance of a de-energization event or wildfire and give notice to their customers if service coverage cannot be maintained.

46. It is reasonable to define resiliency, for purposes of this decision, as the ability to recover from or to adjust to adversity or change through an array of strategies, consistent with Section 6.2.2, including, but not limited to: (a) backup

power; (b) redundancy; (c) network hardening; (d) temporary facilities; (e) communication and coordination with other utilities emergency responders, the public; and (f) preparedness planning.

47. It is reasonable to define an outage, consistent with Section 6.3.2 of this decision.

48. It is reasonable for the wireless providers to maintain service through various technological means to ensure customers in Tier 2 and Tier 3 High Fire Threat Districts have access to 72-hour backup power during the upcoming wildfire season and de-energization events.

49. It is reasonable to require the wireless providers to ensure customers and first responders in Tier 2 and Tier 3 High Fire Threat Districts have access to minimum service levels and coverage through 72-hours of backup power.

50. It is reasonable for the Commission to review whether this narrow requirement provides sufficient protection to all Californians impacted by wildfires, disasters and PSPS events at a later date in this proceeding.

51. It is reasonable for the wireless providers to have twelve (12) months from the effective date of this decision to implement the 72-hour backup power requirement.

52. It is reasonable to define minimum service levels and coverage as including: (1) 9-1-1 service; (2) 2-1-1; (3) the ability to receive emergency alerts and notification; and (4) basic internet browsing during a disaster or commercial power outage.

53. It is reasonable to require each wireless provider to submit a Communications Resiliency Plan via a Tier 2 Advice Letter within 6 months from the effective date of this decision.

54. It is reasonable to require the Communications Resiliency Plan to include, but not be limited to, the following information:

- Facilities-based wireless providers shall submit a Communications Resiliency Plan pursuant to section 6.5.2 of this decision, within six (6) months of the effective date of this decision, to the Communications Division via Tier 2 Advice Letter that describes how the wireless provider shall maintain a minimum level of service and coverage to preserve access to 9-1-1 and 2-1-1, maintain the ability to receive emergency notifications, and provide access to internet browsing for emergency notices for their customers in the event of a power failure. Each resiliency plan shall include, but is not limited to, the following information:
 - Discussion of their ability to maintain a sufficient level of service and coverage to maintain access to 9-1-1 and 2-1-1, maintain the ability to receive emergency notifications, and access Internet browsing for emergency notices in the event of a disaster or power outage, including identifying how they maintain the resiliency of their networks, as defined in Section 6.2 of this decision
 - Detailed PSPS and grid outage response plans;
 - Detailed Clean Generation and Diesel Generation Near and Long-Term Approaches, consistent with Section 6.7.2 of this Decision;
 - Facilities with and without battery backup, fixed generation, and mobile generator hookups, their location, and the estimated length of time the facilities

will operate during a grid outage with and without refueling at each site;

- The number of mobile generators and refueling trucks and specify which are stationed in California;
- Identify the ability to replace damaged facilities, including logical and physical network route diversity and temporary facilities (*e.g.*, mobile cell sites and temporary microwave backhaul);
- Identify titles of management and number of personnel dedicated to refueling and vendors including company and contract agreement;
- Identify the ability to support reporting on system outages as required by CPUC rules, Cal OES regulations and California Government Code;
- Detail how backup generators comply with CARB standards;
- Provide refueling schedules;
- Provide roaming agreements;
- Provide cooperative agreements which are used to pool resources with other providers;
- Identify facilities that do not need backup power, are unable to support backup power due to a safety risk, or that are objectively impossible or infeasible to deploy backup power and identify the basis for that determination as well as discuss actions being taken by the wireless provider to mitigate service loss resulting from the lack of backup power at those locations pursuant to Section 6.6.2.; and
- Identify investment plans to improve network resiliency pursuant to Section 6.6.2. (*e.g.*, deployment of redundant backhaul and deployment of fixed generators).

55. It is reasonable to allow the wireless providers to identify, in their Communications Resiliency Plans, facilities that do not need backup power, are unable to support backup power due to a safety risk, or are unable to support backup power because the conditions make it objectively impossible or infeasible to deploy backup power, and to identify the basis for that determination as well as require a discussion of actions being taken by the wireless provider to mitigate service loss resulting from the lack of backup power at those locations.

56. It is reasonable to require each wireless provider to submit an updated Communications Resiliency Plan annually via a Tier 2 Advice Letter that shall include, but not be limited to, all of the information included in the initial Communications Resiliency Plan.

57. It is reasonable to allow the wireless providers to use fossil fuel generation as a primary backup power resource, in the near-term, but require the wireless providers to transition to a future of renewable backup generation.

58. It is reasonable to require the wireless providers to submit annual emergency operations plans, pursuant to the requirements of Section 6.8.2 of this decision, that discuss emergency response procedures and ensure substantive engagement with the Commission and CalOES during emergencies.

59. It is reasonable to require the wireless providers to submit updated annual emergency operations plans within 14 days of the updates taking effect.

60. The actions directed in this decision require the wireless providers to comply with the Governor's Executive Order N-33-20, the orders of the California State Public Health Officer and the Director of the California Department of Public Health that all individuals living in the State of California

stay home or at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure sectors, in order to address the public health emergency presented by the COVID-19 disease.

61. It is reasonable to require the wireless providers, when implementing the requirements of this decision, to comply with the direction from public health officials regarding shelter-in-place, social distancing, or other measures that may need to be taken in response to the COVID-19 pandemic, consistent with Executive Order N-33-20.

O R D E R

IT IS ORDERED that:

1. Facilities-based wireless providers shall file a Communications Resiliency Plan pursuant to Section 6.5.2 of this decision, within six (6) months of the effective date of this decision, to the Communications Division via Tier 2 Advice Letter that describes how the wireless provider shall maintain a minimum level of service and coverage to preserve access to 9-1-1 and 2-1-1, maintain the ability to receive emergency notifications, and maintain access to internet browsing for emergency notices for their customers in the event of a power outage. Communications Resiliency Plans shall be updated and submitted to the Communications Division via Tier 2 Advice Letters annually. The Communications Resiliency Plan shall include, but is not limited to, the following information:

- Discussion of their ability to maintain a sufficient level of service and coverage to maintain access to 9-1-1 and 2-1-1, maintain the ability to receive emergency notifications, and maintain access to Internet browsing for emergency notices

immediately following the event of a disaster or power outage, including identifying how they maintain the resiliency of their networks, as defined in Section 6.2 of this decision

- Detailed PSPS and grid outage response plans;
- Detailed Clean Generation and Diesel Generation Near and Long-Term Approaches, consistent with Section 6.7.2 of this Decision;
- Facilities with and without battery backup, fixed generation, and mobile generator hookups, their location, and the estimated length of time the facilities will operate during a grid outage with and without refueling at each site;
- The number of mobile generators and refueling trucks and specify which are stationed in California;
- Identify the ability to replace damaged facilities, including logical and physical network route diversity and temporary facilities (*e.g.*, mobile cell sites and temporary microwave backhaul);
- Identify titles of management and number of personnel dedicated to refueling and vendors including company and contract agreement;
- Identify the ability to support reporting on system outages as required by CPUC rules, Cal OES regulations and California Government Code;
- Detail how backup generators comply with CARB standards;
- Provide refueling schedules;
- Provide roaming agreements;
- Provide cooperative agreements which are used to pool resources with other providers;

- Identify facilities that do not need backup power, are unable to support backup power due to a safety risk, or that are objectively impossible or infeasible to deploy backup power pursuant to Section 6.6.2., and identify the basis for that determination as well as discuss actions being taken by the wireless provider to mitigate service loss resulting from the lack of backup power at those locations; and
- Identify investment plans to improve network resiliency pursuant to Section 6.6.2. (e.g., deployment of redundant backhaul and deployment of fixed generators).

We direct the Communications Division to develop and adopt standardized reporting templates as well as a submittal schedule for the Communications Resiliency Plans within 60 days from the adoption of this decision.

2. Facilities-based wireless providers shall, in their Communications Resiliency Plan pursuant to Section 6.5.2 of this decision, demonstrate their ability to meet the 72-hour backup power requirement, in Tier 2 and Tier 3 High Fire Threat Districts, consistent with Sections 6.4.2, which adopts the 72-hour backup power requirement in Tier 2 and Tier 3 High Fire Threat Districts for the wireless providers operating in California, 6.4.4, which establishes that the 72-hours of backup power can be met with flexible procurement and deployment, and is a reasonable duration of time to fulfill the backup power requirement, and 6.4.6, which requires the wireless providers to ensure customers and first responders have access to minimum service levels and coverage including 9-1-1 service, 2-1-1, ability to receive alerts and notifications, and basic internet browsing during a disaster or commercial power outage of this decision, as well as describe their ability to maintain a minimum level of service

and their long-term investment plan to comply with the 72-hour backup power requirement of this decision.

3. Facilities-based wireless providers shall file emergency operations plans pursuant to Section 6.8.2 of this decision, on an annual basis, with the first due within 60 days of the effective date of this decision to the Director of the Communications Division, the California Governor's Office of Emergency Services, and local emergency response agencies, as an information only filing that contains the wireless provider's: (1) emergency operations plan; (2) emergency contact information; (3) emergency preparedness exercise attestation; and (4) public communications plans.

4. Upon the effective date of this decision, the wireless providers, when implementing the requirements of this decision, shall comply with the orders of the Governor's Executive Order N-33-20, the California State Public Health Officer, and the Director of the California Department of Public Health shelter-in-place directives, social distancing directives, and/or other measures that may need to be taken in response to the COVID-19 pandemic.

5. Rulemaking 18-03-011 remains open.

This order is effective today.

Dated July 16, 2020, at San Francisco, California

MARYBEL BATJER

President

LIANE M. RANDOLPH

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

Commissioners