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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Proceeding to Consider Amendments to General Order 133.	Rulemaking 22-03-016

OPENING COMMENTS OF THE SMALL BUSINESS UTILITY ADVOCATES ON CALIFORNIA PUBLIC UTILITIES COMMISSION'S COMMUNICATIONS DIVISION STAFF REPORT ON OUTAGES

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SBUA
Small Business Utility Advocates

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Small Business Utilities Advocates (SBUA) files these opening comments in response to the California Public Utilities Commission (Commission or CPUC) Administrative Law Judge's Ruling Requesting Comment dated April 17, 2023 (ALJ Ruling).

I. INTRODUCTION

In General Order (GO) 133-D, Rules Governing Telecommunications Services, the Commission established uniform minimum service standards for carriers to achieve in their operations as public utility telephone corporations serving California customers. On April 17, 2023, the Commission issued the ALJ Ruling which served a report on outages prepared by the Commission's Communications Division Staff entitled *Service Quality Outage Analysis* (Staff Report). The report examines data from 2018 through 2021, and is intended to inform the above-captioned rulemaking instituted to determine whether existing GO 133-D service quality standards and measures remain relevant to the current regulatory environment and market, and whether additional measures are required, including application of GO 133 standards to Voice over Internet Protocol (VoIP), wireless, and broadband services.

II. SUMMARY OF RECOMMENDATIONS

In these Opening Comments, SBUA respectfully recommends that the Commission:

- Use all four proposed data sets for outage information;

- Revise GO 133-D so that service quality rules apply to VoIP, wireless, and broadband service;

- Update the GO 133-D definition of "out of service" to include outages and disruptions for VoIP, wireless, and broadband services and to include new service quality standards (*e.g.*, call completion rate, call setup time, call quality, network availability, packet loss rate, network jitter, and/or latency);

- Implement alternative penalties and measures, in addition to fines, to ensure service quality for small businesses and residential ratepayers, including:

    - Requiring corrective action plans, service credits or refunds, performance improvement bonds, outage reimbursement funds, and enhanced reporting and transparency;

    - Imposing harsher penalties or greater regulatory oversight for failure to perform in unserved or underserved areas;

    - Implementing incentives for quality of service based on metrics of quality of service and Key Performance Indicators;

    - Establishing a working group to analyze and recommend new penalties and incentive mechanisms (as above); and

- Further revise GO 133-D to:

    - Increase the reporting requirements for carriers;

    - Establish a dedicated complaint resolution process for small businesses and residential ratepayers in ESJ communities;

    - Provide additional resources and support to ESJ communities to help them prepare for and respond to service outages;

    - Establish a process to request temporary emergency service credits or other forms of compensation in the event of an outage that causes significant financial harm; and

- Increase the transparency of the penalty process by providing regular updates on penalties assessed and collected, as well as the use of penalty funds to support small business development and education.

III. ARGUMENT

In the ALJ Ruling, the Commission posed several questions in connection with the information presented in the Staff Report. SBUA offers its responses to these questions below.

A. The Commission Should Consider All Four Data Sets Together for Outage Information

The Staff Report includes four data sets, each of which contain data on the Out of Service Repair Interval (OOS). The four data sets are:

- Out of Service Repair Interval, one of five metrics included in the Commission's GO 133-D;[1]
- The Federal Communications Commission's (FCC) Network Outage Reporting System (NORS);[2]
- The California Governor's Office of Emergency Services outage data;[3] and

[1] GO 133-D requires that 90 percent of customer repair tickets indicating a service disruption be restored within 24 hours.

[2] The FCC requires wireline, cable, satellite, wireless, and Signaling System 7 voice providers to report network outages to NORS. These providers also must submit this data concurrently to the Commission.

[3] Title 19 California Code of Regulations, Division 2, Chapter 1.5 defines a community isolation outage is an outage that meets the below threshold criteria for each service type:

- TDM (wireline) voice service — for telecommunications service provided by facilities-based carriers, other than mobile telephony service or VoIP service, herein referred to as wireline, an outage that lasts at least 30 minutes and potentially affects (A) at least 100 end users in a single zip code, or (B) at least 50% of end users in a ZIP code with fewer than 100 end users.
- Voice over Internet Protocol (VoIP) service — for telecommunications service provided by VoIP or Internet Protocol enabled service, an outage that lasts at least 30 minutes

- The Commission’s Consumer Affairs Branch case records.

With respect to these data sets, ALJ Ruling asks interested parties to provide a detailed explanation of their position on the following:

> What conclusions do parties reach about each data source? Do all of the data sources support a similar conclusion? Is there one data source that the CPUC should rely on over others?

The issue of service outages is important to SBUA because small businesses rely heavily on reliable and uninterrupted communication services to conduct their business operations. Communication services are essential for small businesses to connect with their customers, vendors, and employees, as well as to conduct financial transactions, process orders, and manage inventories. Any disruption in communication services due to outages can result in lost productivity, lost revenue, and damaged reputation, which can be particularly detrimental for small businesses with limited resources and a narrow profit margin.

Based on the staff report's analysis, it is SBUA’s position that the Commission should consider the data sources together to gain a comprehensive understanding of service outages, rather than rely solely on one over the others. Individually, each data source has its own limitations. But, taken together, they all provide valuable information on communication service outages. The data from the Commission’s GO 133-D report and Cal OES's community isolation outage notifications provide detailed information on outage thresholds and community impacts, respectively, but are focused on California

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> and potentially affects (A) at least 100 end users in a single zip code, or (B) at least 50% of end users in a zip code with fewer than 100 end users.

- Wireless voice service — for telecommunications service provided by mobile telephony service, an outage that lasts at least 30 minutes and affects at least 25% of a carrier's coverage area in a single zip code.

and provide detailed information on outages and their impacts only within the state. The NORS data from the FCC provides a national overview of outages, but is limited in granularity and only covers certain types of providers. The CAB data from the Commission provides insight into customer complaints and issues related to outages, but is focused on individual customer experiences rather than larger community impacts and may not capture all outage incidents.

When it comes to community impact, the Cal OES's community isolation outage notifications may provide the most comprehensive and focused view, as they require reporting of outages that limit the ability to make 911 calls or receive emergency notifications. However, to gain a comprehensive understanding of the issue, it is important that the Commission not rely solely on a single data source or favor one data source over the others. Each data source contributes valuable information on communication service outages from a unique perspective. Considering the multiple data sources together allows for a more well-rounded assessment of the situation at hand.

B. GO 133-D Service Quality Rules Should Apply to VoIP, Wireless, and Broadband Services

The ALJ Ruling asks interested parties to provide a detailed explanation of their position on whether the trends indicated in the Staff Report merit revising GO 133-D so that service quality rules apply to VoIP, wireless, and broadband service. It is SBUA's position that they do.

First, the data shows an increase in voice service outages across both wireline and wireless industries since 2018. These outages can significantly impact small businesses, especially those that rely heavily on voice communication for day-to-day

operations. When businesses experience VoIP, wireless, and/or broadband service disruptions, they can face irreparable harm in the form of lost productivity, revenue, and even reputational damage.

The issues that impact the quality of wireless services differ from those that impact wireline services, including interference from radio frequencies, weak signals, line-of-sight restrictions, and distance limitations. For example, VoIP calls are fully dependent upon an Internet connection, which can be particularly problematic in rural, remote areas and disadvantaged communities which have been historically underserved by Internet providers. These are important considerations when discussing service quality and reliability, supporting the revision of GO 133-D to ensure that these services are also held accountable for maintaining high-quality standards.

Also, although VoIP is frequently unable to make emergency calls, such as 911 calls, there are often alternative solutions or workarounds in place to address this issue. And so for those ratepayers who use VoIP, VoIP may be the only way they can make emergency calls. Revising GO 133-D to ensure that emergency calls are reliable and accessible for all users, regardless of the type of service they rely on, is a critical aspect of public safety and consumer protection.

Furthermore, Table 8 and Figure 10 of the Staff Report indicates that VoIP and wireless services account for over 90% of the voice lines in California since 2018 and increasing every year through 2021. This highlights the growing importance of these services in the modern business landscape, with many relying on these services, along with broadband, as their primary means of communication. With more businesses

relying on these services, it is crucial to ensure that they meet the same service quality standards as traditional wireline services.

Finally, by revising GO 133-D to include VoIP, wireless, and broadband services, small businesses can benefit from increased accountability and transparency from service providers. The inclusion of these services under service quality rules can encourage providers to invest in their networks, infrastructure, and customer service to provide more reliable and efficient services to small businesses and other customers.

In short, revising GO 133-D to include VoIP, wireless, and broadband services under service quality rules can help address the growing importance of these services in the modern business landscape.

C. New Definitions and Metrics Needed for Service Quality Standards for VoIP and Wireless Voice Services

GO 133-D defines “out of service” as a telephone line without dial tone. The ALJ Ruling asks interested parties to provide a detailed explanation of their position on the following:

> Is this definition applicable to VoIP voice services? Is it applicable to wireless voice service? Are there other definitions or metrics the CPUC would need to use if it were to adopt service quality standards for VoIP and wireless voice services? If yes, what should the standards for those metrics be to indicate an acceptable level of service quality?

For a small business that uses VoIP or wireless voice services, for example, loss of a VoIP line or wireless service has the same negative impact on the small business’s operations as not having a dial tone for a small business that uses a traditional wireline telephone line. In other words, any outage or disruption in voice service can have a significant impact on a small business’s ability to operate effectively regardless of the technology used.

Therefore, the same OOS standards should apply to VoIP and wireless services, just as it does to traditional wireline telephone services. This will help to ensure that all voice service providers are held to the same standard of service quality, and that small businesses are not forced to choose a technology solely based on its reliability and can instead make the decision based on which technology best serves the interests of the business. In other words, small businesses should be able to rely on all of these services to operate effectively.

However, in the case of services such as VoIP and wireless that do not have a dial tone in the same way as traditional landline telephone services, defining “out of service” based on whether or not there is a continuous audible signal indicating that the line is ready for dialing would be inappropriate. Instead, the Commission would need to use other definitions or metrics if it were to adopt service quality standards for VoIP and wireless voice services.

Some potential definitions or metrics the Commission could use if it were to adopt service quality standards for VoIP and wireless voice services include:

Call completion rate: This metric measures the percentage of calls that are successfully completed without being dropped or disconnected. The standard for this metric should be a minimum of 95% for both VoIP and wireless voice services.

Call setup time: This metric measures the time it takes for a call to be established from the moment the call is initiated. A shorter call setup time is preferred, as it reduces the time customers and clients spend waiting on the phone. The standard for this metric should be a maximum of 5 seconds for both VoIP and wireless voice services.

Call quality: This metric measures the clarity and consistency of the voice during a call, with a range of scores from 1 to 5, with 5 being the highest quality. The standard for this metric should be a minimum Mean Opinion Score (MOS) of 3.5 for both VoIP and wireless voice services.

Network availability: This metric measures the percentage of time that the network is available for use by customers. The standard for this metric should be a minimum of 99.9% for both VoIP and wireless voice services.

Packet loss rate: Packet loss can result in intermittent and dropped VoIP calls and is often utilized as a metric for VoIP service quality. Cisco, a VoIP industry leader, has commonly targeted a 1% maximum packet loss to ensure quality voice calls using VoIP.[4] This would be an appropriate standard for this metric for all VoIP services.

Network jitter: Real time applications such as voice and video are very sensitive to network jitter, which measures the variation in time delay between when a signal is transmitted and when it's received over a network connection. For voice services, the metric for an acceptable jitter should stay below 20 milliseconds.[5]

Latency: Latency (also known as delay) refers to the time it takes a voice packet to reach its destination. Latency of 150 milliseconds or less is generally deemed acceptable for one-way transmission and is an appropriate metric.[6]

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[4] PC & Network Downloads, “Packet Loss–What is it, How to Diagnose and Fix it in your Network,”, https://www.pcwdld.com/packet-loss#wbounce-modal, 2/2/23.

[5] wirelessLAN Professionals, “TOP KPIS TO MEASURE FOR OPTIMAL WIRELESS NETWORK PERFORMANCE“, https://wlanprofessionals.com/top-kpis-to-measure-for-optimal-wireless-network-performance/.

[6] RingCentral, “What are some of the factors affecting Call Quality or VoIP Quality of Service (QoS)?”, https://support.ringcentral.com/article-v2/What-some-factors-affecting-Call-Quality-VoIP-Quality-

These metrics would provide a more comprehensive view of service quality for VoIP and wireless voice services. They would help ensure that businesses that use VoIP and wireless voice services are able to communicate effectively with customers and clients without experiencing frequent dropped calls, poor call quality, or long call setup times. By setting standards for these metrics, the Commission would be able to hold service providers accountable for providing high-quality voice services to small businesses and residential ratepayers.

D. The Penalties Allowed Under GO 133-D Have Not Been Effective and the Commission Should Implement Alternative Penalties

The ALJ Ruling asks interested parties to provide a detailed explanation of their position on the following:

> Does the current GO 133-D penalty mechanism comply with the CPUC's enforcement policy outlined in Resolution M-4846? Do parties believe these penalties have been effective in improving the overall service quality of voice service in California? Do parties propose alternative penalties that may be more effective? Should the CPUC adjust the current penalty mechanism in GO 133-D? If yes, how should penalties be calculated going forward? What factors or extenuating circumstances should be considered in calculating penalties? Should the current exceptions be revised? Should the CPUC penalize differently for outages of different durations or a history of not meeting service restoration standards?

The analysis in the Staff Report suggests that the current GO 133-D penalty mechanism does not comply with the Commission's enforcement policy outlined in Resolution M-4846. For example, Resolution M-4846 states that enforcement should be "firm" and a "meaningful deterrence." However, the data on the penalties assessed on carriers in Table 4 of the Staff Report, particularly on the out of service repair intervals, have totaled in the millions every year from 2018 to 2021, with AT&T CA and Frontier

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Service-QoS.html?brand=RC_US&product=RingCentral_MVP&language=en_US#:~:text=Latency%20, 12/28/22.

CA accounting for 98% of the $17,160,826 in fines assessed during the four-year period from 2018 to 2021 according to the data in Table 5 of the Staff Report. In other words, from 2018 to 2021, these carriers consistently failed to meet the service quality standards set forth in GO 133-D, yet they continue to operate in the state without significant additional consequences. Given the significant fines levied against these two carriers, it seems clear that the current penalty mechanism has not been sufficiently firm and has not been a sufficiently meaningful deterrent to inadequate voice service quality.

Resolution M-4846 also states that the Commission shall tailor enforcement responses to address the needs of vulnerable and disadvantaged communities, including those communities described as Environmental and Social Justice (ESJ) Communities in the Commission's Environmental and Social Justice Action Plan or subsequent documents. As the Commission knows, service providers have already been disinvesting, providing deteriorating service quality, and offering fewer alternatives to lower-income communities and Black, Indigenous, and other communities of color with respect to voice services.[7] However, although it is much needed, the current GO 133-D penalty mechanism does not adequately address the needs of vulnerable and disadvantaged communities as outlined in Resolution M-4846.

There are also questions as to whether the current GO 133-D penalty mechanism adequately share the priorities of the Resolution's guiding principles that enforcement

[7] *See, e.g.*, the findings of the Network Exam, ordered in Decisions (D.) 13-02-023 and D.15-08-041 and referenced in the assigned Commissioner's Scoping Memo and Ruling issued in this proceeding (Network Exam Report, Phase I, Chapter 1 at 1-2 states "The Network Exam found that both AT&T and Frontier have focused investments over the past ten years in… higher-income communities, resulting in poorer service quality and fewer alternatives for lower-income communities and communities of color;" Network Exam Report, Phase 2, states that AT&T and Frontier continue to focus on investments in higher-income communities [see Administrative Law Judge's Ruling Requesting Comments on Network Examination and ARMIS Reporting, August 31, 2022, at 3].)

actions encouraging compliance with the order are timely, progressive, and transparent. In short, the current GO 133-D penalty mechanism does not adequately comply with the Commission's enforcement policy outlined in Resolution M-4846.

In addition to fines, the Commission should implement alternative penalties that may be more effective in ensuring service quality for small businesses, as well as small business and residential ratepayers in unserved and underserved communities. The Commission should penalize differently for outages of different durations or a history of not meeting service restoration standards. Some other enforcement mechanisms could include:

Corrective Action Plans: Instead of solely relying on fines, the Commission could require carriers to develop and implement comprehensive Corrective Action Plans aimed at addressing service quality issues, particularly in unserved and underserved communities. These plans would outline specific steps and timelines for improving service quality, ensuring that carriers take tangible actions to rectify the problems identified. Additional fines could be levied against carriers who do not timely meet the benchmarks included in their Corrective Action Plans.

Service Credits or Refunds: In addition to fines, the Commission could require carriers to also provide service credits or refunds to affected customers in cases where service quality falls below acceptable standards. This would provide a direct incentive for carriers to prioritize service reliability and prompt resolution of issues.

Performance Improvement Bonds: The Commission could require carriers to post performance improvement bonds, which would serve as a financial guarantee that they will meet the required service quality standards. If a carrier consistently fails to meet the

standards, the bond could be forfeited, providing a significant financial consequence and motivation for improved performance. In California it is common practice for a performance bond to be approximately equal to one percent of the contract.[8]

Outage Reimbursement Fund: The Commission could establish a fund that reimburses individuals or small businesses negatively impacted by poor service quality. This fund could be funded by carriers who fail to meet the minimum standard for three consecutive months, reaching a chronic failure status. The purpose of the fund would be to compensate customers for the inconvenience, losses, or damages caused by extended poor service quality. Establishing such a fund would provide a mechanism for customers, particularly small businesses and individuals in unserved and underserved communities, to receive financial relief when they experience prolonged or frequent service disruptions.

Enhanced Reporting and Transparency: The Commission could require carriers to provide more detailed reports on their service quality performance, including outage durations, resolution times, customer complaint data, and demographic data of the areas in which service quality is poor. By increasing transparency, both small businesses and ratepayers can make more informed decisions when choosing a service provider, and carriers would face reputational risks for poor performance (including when the poor performance disproportionately impacts unserved and underserved communities).

[8] Contractor Bond, California Performance Bonds, https://www.contractorbond.org/california-performance-bonds/.

Further Environmental and Social Justice: Carriers found to consistently or disproportionately underperform in unserved or underserved areas could be subject to harsher penalties or additional regulatory oversight.

Incentives: The Commission has a history of preferring incentives over penalties wherever feasible and quality of service might be more cost-effectively achieved with an incentive-based system. Incentives can be applied to service providers with Key Performance Indicators (KPI), based upon metrics of quality of service, such as those SBUA proposes above in Section II.C (New Definitions and Metrics Needed for Service Quality Standards for VoIP and Wireless Voice Services). Incentives can also be applied to customers with a QoS scheme that provides appropriate incentives for users to adjust their traffic patterns in a manner that is beneficial for both the network operator and the users.[9] Incentives could ultimately provide a more cost effective solution to VoIP, wireless, and broadband quality of service challenges.[10]

Longer term, SBUA respectfully recommends that the Commission establish a working group to consider the alternatives to regulations that institute requirements and penalties for not meeting those requirements, with consideration of an incentive-based approach to achieving the desired quality of service.

E. Other Necessary Revisions to GO 133-D

Finally, the ALJ Ruling asks interested parties to provide a detailed explanation of their position on the following:

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[9] VoIP Future, "Next Generation KPIs for Next-Generation VoIP Services", https://www.voipfuture.com/wp-content/uploads/2022/02/WP-ETSI-Media-KPI-System.pdf, 2021.

[10] Kalevi Kilkki & Benjamin Finley, "In Search of Lost QoS", https://www.iab.org/wp-content/IAB-uploads/2021/09/Kilkki-In-Search-of-Lost-QoS.pdf.

Do parties suggest other revisions to GO 133-D that have not already been discussed? For example, should the CPUC still adjust the out of service repair interval standard in GO 133-D based on the number of lines a carrier services? Should all standards use only the unadjusted results (absent of any exclusions like Sundays, federal holidays, and other special circumstances) to simplify outage reporting? Should enforcement of GO 133-D be based on the number of tickets completed or the number of impacted lines restored? Are there certain requirements of GO 133-D that require revisions or are no longer necessary?

The Commission should make more revisions to GO 133-D. These revisions may include:

- Increasing the reporting requirements for carriers subject to GO 133-D to include more detailed information on the root causes of outages, the steps being taken to prevent future outages, and the measures being implemented to improve service quality.
- Establishing a dedicated complaint resolution team to handle complaints from small businesses and ratepayers in ESJ communities, and to provide them with timely updates on the status of their complaints.
- Providing additional resources and support to small businesses and ratepayers in ESJ communities to help them prepare for and respond to service outages, including education and training on backup communication options.
- Updating the definition of "out of service" to include other types of disruptions that can impact small businesses and ratepayers in ESJ communities, such as degraded service quality, dropped calls, and slow data speeds.
- Establishing a process for small businesses and ratepayers in ESJ communities to request temporary emergency service credits or other forms of compensation in the event of an outage that causes significant financial harm.

- Increase the transparency of the penalty process by providing regular updates on penalties assessed and collected, as well as the use of penalty funds to support small business development and education.

Regarding requirements that may no longer be necessary, SBUA believes that GO 133-D should be periodically reviewed and updated to ensure that it reflects changes in technology, customer needs, and industry best practices. For example, with respect to the provisions regarding making all reports submitted to this Commission in compliance with these rules available to the public, GO 133-D orders the company to "identify the location and telephone number of its main office in California in its White Pages directory and/or on its Internet website and shall provide information on how to contact it." This should be changed to require the information being included on the company's website and that the contact information include an email address and/or the ability to contact an agent for live chat. Also, since many small businesses have limited Internet access, and during an electrical outage may have no Internet access at all, the company should also provide their main office location and phone number in paper form at least annually, as well as on their monthly bills.

GO 133-D also states,"A copy of these reports will also be maintained and be available for public inspection at the Commission's San Francisco and Los Angeles offices. Copies shall also be made available to interested parties for a nominal fee to cover the cost of processing and reproduction." However, in today's digital age, it is easy to make digital copies of the reports available for free on the company's website. This would enhance accessibility and convenience for the public, eliminating the need for the payment of a fee and enabling ease of the dissemination of information. By

implementing these updates, GO 133-D can better align with modern communication practices and improve transparency between service providers and the public.

IV. CONCLUSION

SBUA appreciates this opportunity to offer comments on the information presented in the Staff Report and urges the Commission to adopt these and other measures to ensure that GO 133-D service quality standards and measures remain relevant to the current regulatory environment and market, which includes applying GO 133's standards to other technologies that provide telecommunications services such as VoIP, wireless, and broadband.

Respectfully submitted,

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