BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking Proceeding to Consider Changes to the Commission's Carrier of Last Resort Rules.	Rulemaking 24-06-012

PUBLIC ADVOCATES OFFICE OPENING COMMENTS ON THE ADMINISTRATIVE LAW JUDGE'S RULING ISSUING STAFF PROPOSAL FOR COMMENT

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I. INTRODUCTION

Pursuant to the *Administrative Law Judge's Ruling Issuing Staff Proposal for Comment* (ALJ Ruling), issued on December 15, 2025 and the *Email Ruling of Assigned Administrative Law Judge on Rural County Representatives of California Extension Request*,[1] issued on January 6, 2026, the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) submits these opening comments on the Carrier of Last Resort and Network Modernization Staff Proposal (Staff Proposal) and to address questions for parties set forth in the ALJ Ruling.

II. DISCUSSION

A. The Commission should include standalone broadband as a requirement of Modernized Essential Communications Services.

Chapter II, Question 2 of the ALJ Ruling asks: "Should the Commission include standalone broadband as a requirement of 'Modernized Essential Communications Services?'"[2]

[1] *Email Ruling of Assigned Administrative Law Judge on Rural County Representatives of California Extension Request*, January 1, 2026. Extends the deadline for Opening Comments to January 30, 2026. Therefore, these comments are timely filed.

[2] *Administrative Law Judge's Ruling Issuing Staff Proposal for Comment*, December 15, 2025 at 4.

Yes, the Commission should require standalone broadband as part of Modernized Communications Services. Standalone broadband plans promote consumer choice, and some Carriers of Last Resort (COLRs) may not adopt them voluntarily. The Staff Proposal endorses this approach, as well, in its recommendation that the billing provisions related to basic service be part of the definition of Modernized Essential Communications Services.[3] Cal Advocates supports this aspect of the Staff Proposal, including the recommendation that early termination fees be prohibited. The Commission should closely monitor compliance, given past evidence of providers evading similar requirements.

Requiring COLR to provide a standalone broadband plan is appropriate. Consumers should not be forced to purchase services that they may not need nor want. COLRs providing internet service may offer bundled service packages, but consumers should be free to choose what makes the most sense for their budget and household needs. Additionally, standalone plans are typically more straightforward and transparent for consumers to analyze, whereas bundled plans contain complexities that make price comparisons difficult even for researchers.[4] The simplicity of standalone plans can help consumers better understand and predict their service costs and avoid surprise or hidden fees that are commonplace in telecommunications billing.[5]

Importantly, the Commission should ensure compliance with any standalone broadband requirement. Previously, as a condition of its 2011 acquisition of NBC Universal, Comcast entered into a consent decree with the Federal Communications Commission (FCC) that required it to offer a standalone broadband plan.[6] Even in the

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[3] *Carrier of Last Resort and Network Modernization Staff Proposal,* December 15, 2025 (Staff Proposal) at 60.

[4] See, e.g. *The Cost of Connectivity 2020*, New America's Open Technology Institute, July 15, 2020, available at https://d1y8sb8igg2f8e.cloudfront.net/documents/The_Cost_of_Connectivity 2020.pdf, at 13.

[5] See "The Hidden Cost of Bundling Phone and Internet," Ezee Fiber, Nov. 7, 2025, available at https://ezeefiber.com/blog/hidden-cost-of-bundling-phone-and-internet/

[6] Federal Communications Commission, *Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees*, MB Docket No. 10-56, Memorandum Opinion and Order (Jan. 11, 2011), at 125.

face of this clear government mandate, Comcast still attempted to evade the rule by hiding the existence of the standalone plan on its marketing materials, on its website, and with customer service agents.[7] The FCC had to take unprecedented steps, including an investigation, an $800,000 fine, and a new consent decree to compel Comcast to finally offer a standalone plan in a "clear and visible" manner advertised to the public.[8] Given the extraordinary measures necessary for the FCC to elicit compliance from Comcast, it would be prudent for the Commission to adopt a robust standalone broadband mandate that also requires COLRs to clearly and visibly market the plan to consumers. This recommendation is consistent with the Staff Proposal's recommendation that the Commission "remain vigilant regarding the terms and conditions and pricing practices of providers of Modernized Essential Service."[9]

B. The Commission should require customer transition plans for every COLR withdrawal.

Question 2 under Chapter IV of the ALJ Ruling asks: "If a replacement COLR is not designated, is a customer transition plan necessary? If so, what elements should the transition include?"[10]

The Commission should create a customer transition plan requirement regardless of whether the Commission approves a replacement COLR. In its Initial Proposal, Cal Advocates recommended a COLR Withdrawal Customer Transition Plan (Customer Transition Plan) containing three sub-plans to ensure a transparent and accessible customer transition. The plans, detailed in Appendix A, are:

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[7] "FCC Resolves Investigation of Comcast-NBCU Broadband-Related Merger Conditions; Ensures Consumer Access to Reasonably Priced Broadband Internet Service," News Release, Federal Communications Commission, June 27, 2012.

[8] Federal Communications Commission, *Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees*, MB Docket No. 10-56, Memorandum Opinion and Order (Jan. 11, 2011), at 125.

[9] Staff Proposal at 60.

[10] *Administrative Law Judge's Ruling Issuing Staff Proposal for Comment*, December 15, 2025 at 4.

- **Customer Transition Plan:**[11] The Customer Transition Plan is the overarching plan recommended by Cal Advocates, and the Commission should require its inclusion in the COLR's pre-application phase, which the Commission reviews as a necessary component of approving the application to withdraw.
- **Copper Retirement Customer Migration Plan:**[12] If part of the COLR withdrawal includes migration from copper networks or potential copper discontinuance, the COLR should submit the Copper Retirement Customer Migration Plan as a Tier 2 advice letter as part of the Customer Transition Plan. This plan is essential to mitigate the risk of abandoned customers and provide transparency to customers.
- **Copper Retirement Notice Plan:**[13] The Copper Retirement Notice Plan should be implemented upon approval of the Copper Retirement Customer Migration Plan Tier 2 advice letter. This plan would promote customer awareness of when potential copper retirement may occur, and whether customers will need to select new services.
- **COLR Withdrawal Customer Notice Plan**:[14] The COLR Withdrawal Customer Notice Plan should be implemented after the Commission approves the COLR withdrawal application. This plan would promote customer awareness of any transitions of services and provide customers with information on whether the COLR intends to retire any copper networks in the affected service area within six months following the withdrawal from the COLR obligation.

The core principles in Cal Advocates' plans are that customer migrations must be transparent, accessible, meet the customer's communication needs, and not leave any customer disconnected.[15] A customer transition plan is necessary to ensure customers are

[11] Appendix A at A-1 - A-3. *See also* Initial Proposal at 68-71.

[12] Appendix A at A-4 – A-6. *See also* Initial Proposal at 60-62.

[13] Appendix A at A-7 – A-9. *See also* Initial Proposal at 62-64.

[14] Appendix A at A-9- A-12. *See also* Initial Proposal at 71-73.

[15] Initial Proposal at 7.

aware of any changes in legal obligations that exist for their benefit and protection.[16] While a COLR withdrawal does not mean a COLR will stop providing service or discontinue service, it is important to facilitate customer awareness of any potential service changes for transparency and to ensure no customer is left without service in a transition.

C. The Commission should create an expedited pathway for COLR relief for areas where the COLR commits to deploy fiber infrastructure.

COLR relief should be granted only in defined geographic areas where advanced telecommunications infrastructure and customer protections are sufficient to allow reliable emergency communications.[17] An expedited pathway for COLR Relief should be available for areas where fiber infrastructure is deployed as an incentive for COLRs to quickly modernize their networks and maximize social and economic benefits to Californians.

1. The social benefits of fiber infrastructure support an expedited pathway for COLR relief if the COLR commits to deploy fiber infrastructure.

Fiber infrastructure enables scalable service, supporting multi-gig upgrades with minimal changes to network architecture to meet demand for increasing speeds. Fiber delivers ultra-low latency, symmetric throughput, and noise immunity — all essential for modern applications like telehealth and for currently unimagined use cases.[18] In short, fiber offers "future-proof" benefits that exceed the current broadband standard of 100/20 Mbps.

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[16] Initial Proposal at 68.

[17] *Revised Proposal of the Public Advocates Office on the Order Instituting Rulemaking Proceeding to Consider Changes to the Commission's Carrier of Last Resort Rules*, December 6, 2025 (Revised Proposal) at 1-7.

[18] For example, see publications by the Fiber Broadband Association: "Fiber Broadband Unlocks Capacity Required to Fuel AI and Quantum Innovation." Available at: https://fiberbroadband.org/2026/01/22/fiber-broadband-unlocks-capacity-required-to-fuel-ai-and-quantum-innovation/ [accessed January 26, 2026].

Access to broadband services is tied to improved social outcomes, and fiber speeds will eventually be necessary to participate in the economy of the next three quarters of the 21st century.[19] The Commission must foster fiber infrastructure deployment today to close the current digital divide before it widens into a digital chasm.[20] Today's COLR obligations are designed to ensure all Californians have access to essential, reliable, and affordable telecommunications services.[21] The Commission should require the COLRs to deploy the technology that will deliver on tomorrow's needs as a transition from the legacy of COLR.

Deployment of fiber in exchange for expedited COLR relief is not only sensible to ensure that Californians have sufficient access to telecommunications infrastructure, but also makes practical economic sense for Internet Service Providers (ISPs). The Fiber Broadband Association asserts that it is reasonable to deploy fiber to 90% of US homes by 2030.[22] Indeed, the United States (US) could have achieved that fiber deployment mark much sooner with regulatory intervention. US fiber deployment lags behind that of other developed economies because deployment of broadband networks has largely been left to companies and inadequate market forces.[23] For example, Iceland, Korea, Spain,

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[19] For example, fiber infrastructure has positive impacts on employment, housing value, household income, and rates of remote work. See "Economic Benefits of Fiber Deployment," the Brattle Group for Fiber Broadband Association and Frontier Communications, at 8-13. Available at: https://fiberbroadband.org/wp-content/uploads/2024/11/2024.11.20-Benefits-of-Fiber-Deployment-Brattle-FINAL.pdf [accessed January 26, 2026].

[20] This action is necessary to enact the CPUC's ESJ Action Plan Goal 3.4: Ensure implementation of new investments that offer ESJ communities' access to essential communications services at affordable rates. Only fiber can ensure affordable rates well into the future. See CPUC ESJ Action Plan at 24. Available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf

[21] See for instance the Commission's COLR webpage: https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/carrier-of-last-resort-rulemaking.

[22] "2024 Fiber Deployment Cost Annual Report" Fiber Broadband Association, January 1, 2025, at 5. Available at: https://fiberbroadband.org/wp-content/uploads/2025/01/FBA_Cartesian_Fiber-Deployment-Cost-Annual-Report-2024.pdf.

[23] This is a central thesis of Susan Crawford's "Fiber: the Coming Tech Revolution – and Why America Might Miss It (2019). Available at: https://hls.harvard.edu/bibliography/fiber-the-coming-tech-revolution-and-why-america-might-miss-it/

and Lithuania have 91%, 90%, 88%, and 80% fiber coverage.[24] California has made progress with fiber deployment and now has 38% fiber coverage, but the Commission must act incisively to facilitate further deployment given the current complex, litigious regulatory environment.[25] The Commission should act wherever it can to incentivize existing providers to expand fiber availability.

According to the Fiber Broadband Association, it is already economically feasible to deploy fiber broadband infrastructure to households at or below the 80th percentile of least dense locations (1st percentile most dense, 99th percentile least dense).[26] In other words, Incumbent Local Exchange Carriers (ILECs) should be able to deploy fiber in high-density areas and expect a reasonable return within a reasonable timeframe. While low-density rural areas sometimes require subsidized network design (to ensure profits outweigh costs over the long term)[27] high-density areas can be served more quickly and therefore require less oversight.

Analysis of the AT&T copper broadband network indicates a significant portion of AT&T's copper locations in California are in areas where economically feasible fiber deployment is possible.[28] Figure 1 below shows the number of locations served by copper and fiber in each density percentile of the state. Again, zero to the 80th percentile

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[24] *See* OECD.org: Fibre and 5G continue to expand their footprint, while fixed wireless access gains ground in OECD countries (May 2025). Available at: https://www.oecd.org/en/data/insights/statistical-releases/2025/05/fibre-and-5g-continue-to-expand-their-footprint-while-fixed-wireless-access-gains-ground-in-oecd-countries.html

[25] Lenninghan, Mary for telecoms.com: "Trump administration overturns BEAD rules to let in satellite," (Jun. 9, 2025). Available at: https://www.telecoms.com/satellite/trump-administration-overturns-bead-rules-to-let-in-satellite.

[26] All-Fiber Deployment Cost Study 2019, prepared for Fiber Broadband Association by Cartesian (Sep. 10, 2019), at 56. Available at: https://www.ntia.doc.gov/sites/default/files/publications/fba-06252020_0.pdf ; see "Deployment Types" A, B, and C.

[27] See "Economic Benefits of Fiber Deployment," the Brattle Group for Fiber Broadband Association and Frontier Communications, at 28-31. Available at: https://fiberbroadband.org/wp-content/uploads/2024/11/2024.11.20-Benefits-of-Fiber-Deployment-Brattle-FINAL.pdf.

[28] Data in Figures 1 and 2 below pulled from the FCC National Broadband Map, California Fiber and Copper Deployment: https://broadbandmap.fcc.gov/data-download/nationwide-data

are the most-dense locations in the state, where fiber deployment is possible using commercial financing only.

Figure 1:
Distribution of Copper and Fiber Locations in AT&T's Service Territory[29]

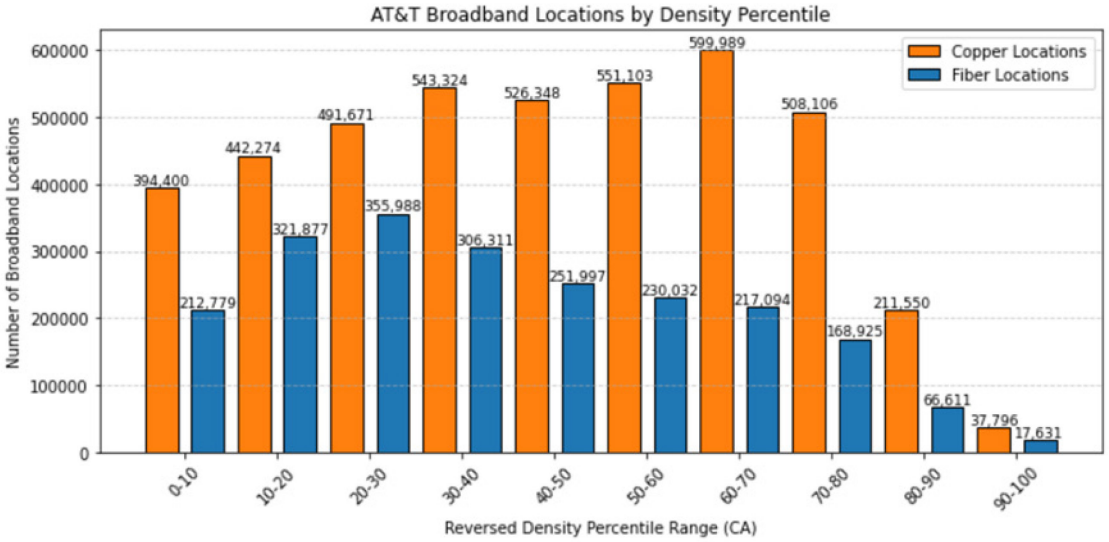

Figure 2 below shows the difference between copper and fiber locations. Specifically, Figure 2 shows that in all density percentiles, there are a greater number of copper locations than fiber locations. Subtracting the fiber locations from the copper locations yields the minimum number of locations in AT&T's service territory that have access to only copper infrastructure in each density percentile.

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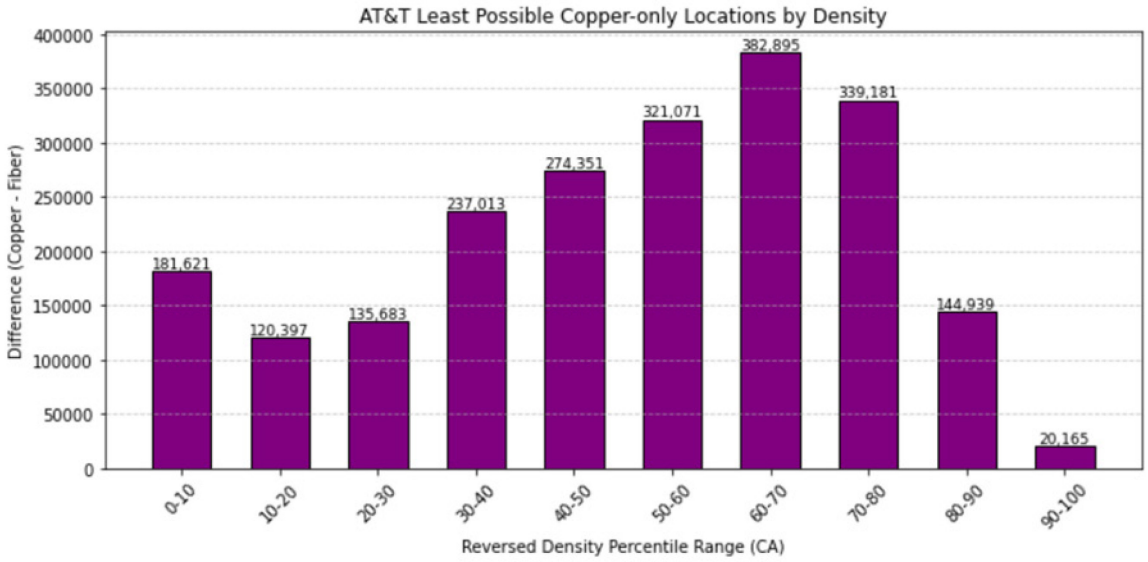
[29] Data in Figures 1 pulled from the FCC National Broadband Map, California Fiber Deployment: https://broadbandmap.fcc.gov/data-download/nationwide-data

Figure 2:
Distribution of AT&T Copper Broadband Locations by Density Percentile[30]



As shown in Figure 2, there are at least 2 million copper-only locations in commercially feasible areas in California. This means it would be reasonable for AT&T to gain economic benefit from deploying fiber in these areas. This presents the Commission with an opportunity to increase fiber access in the state in exchange for an expedited pathway to COLR relief.

D. Proposed Expedited Pathway for COLR Relief Program Design for COLRs that commit to deploy fiber infrastructure

An expedited pathway for COLR relief for those COLRs that commit to deploy fiber infrastructure should be through a Tier 2 advice letter process rather than an application. Given that high-density deployments are (1) more straightforward to serve with fiber due to faster profit generation and (2) more likely to have other reliable telecommunications services (for example, better wireless coverage), more expeditious COLR relief is appropriate and subject to fewer concerns.

[30] Data in Figures 2 pulled from the FCC National Broadband Map, California Copper Deployment: https://broadbandmap.fcc.gov/data-download/nationwide-data

To guarantee that a COLR seeking relief uses the expedited pathway to deploy broadband *equitably* to all Californians, the Commission should require the entity seeking relief to deploy fiber to batches of households within semi-contiguous[31] geographic areas, such as single or multiple census tracts. This would prevent COLR relief applicants from prioritizing certain households for fiber deployment and would not require COLR relief applicants to submit tens of thousands of requests for smaller geographic areas (like census blocks or even individual locations). Additionally, for a single expedited request for COLR relief, the geographic areas involved should have an average income of 90% or less of the area median income.[32]

Fiber infrastructure alone is not sufficient to ensure customers' full protection against COLR withdrawals. For low-income or vulnerable Californians, availability of any replacement service means very little if they cannot afford that service. Therefore, any COLR seeking relief on the basis of its currently deployed fiber should provide access to LifeLine or a successor program.

To enhance procedural efficiency for ILECs and Commission staff, the minimum number of locations in contiguous geographic areas to qualify for expedited COLR relief should be at least 25,000. The entity seeking relief must do so at the census tract level. To be granted relief in a particular census tract, the entity seeking relief must provide fiber infrastructure to all locations where it offers copper service in that census tract.

Entities could qualify for expedited relief in two ways: (1) the entity provides proof it has already deployed fiber infrastructure to 25,000 locations in a contiguous geographic area via a Tier 1 advice letter or (2) the entity posts a bond payable to the California general fund guaranteeing deployment to all households in that geographic area within five years, at a minimum of $2,000 per location via a Tier 2 advice letter process, similar

[31] Current fiber deployments in regions such as Los Angeles are scattered throughout the county and do not currently have cohesive coverage. The Commission should grant flexibility to address these on the ground realities as part of the expeditated relief process.

[32] This condition guarantees that the entity seeking relief does not prioritize only high-income households. The Commission adopted this protocol in D.26-01-023.

to the enforcement bond adopted by the Commission in the Verizon-Frontier Acquisition Proceeding (A.24-10-006).[33] If the COLR seeking expedited relief fails to deploy fiber where it has committed or is found to have not deployed fiber anywhere it claims to have already deployed fiber, its COLR obligations would be reinstated.

In summary, the pathway for expedited COLR relief should be:

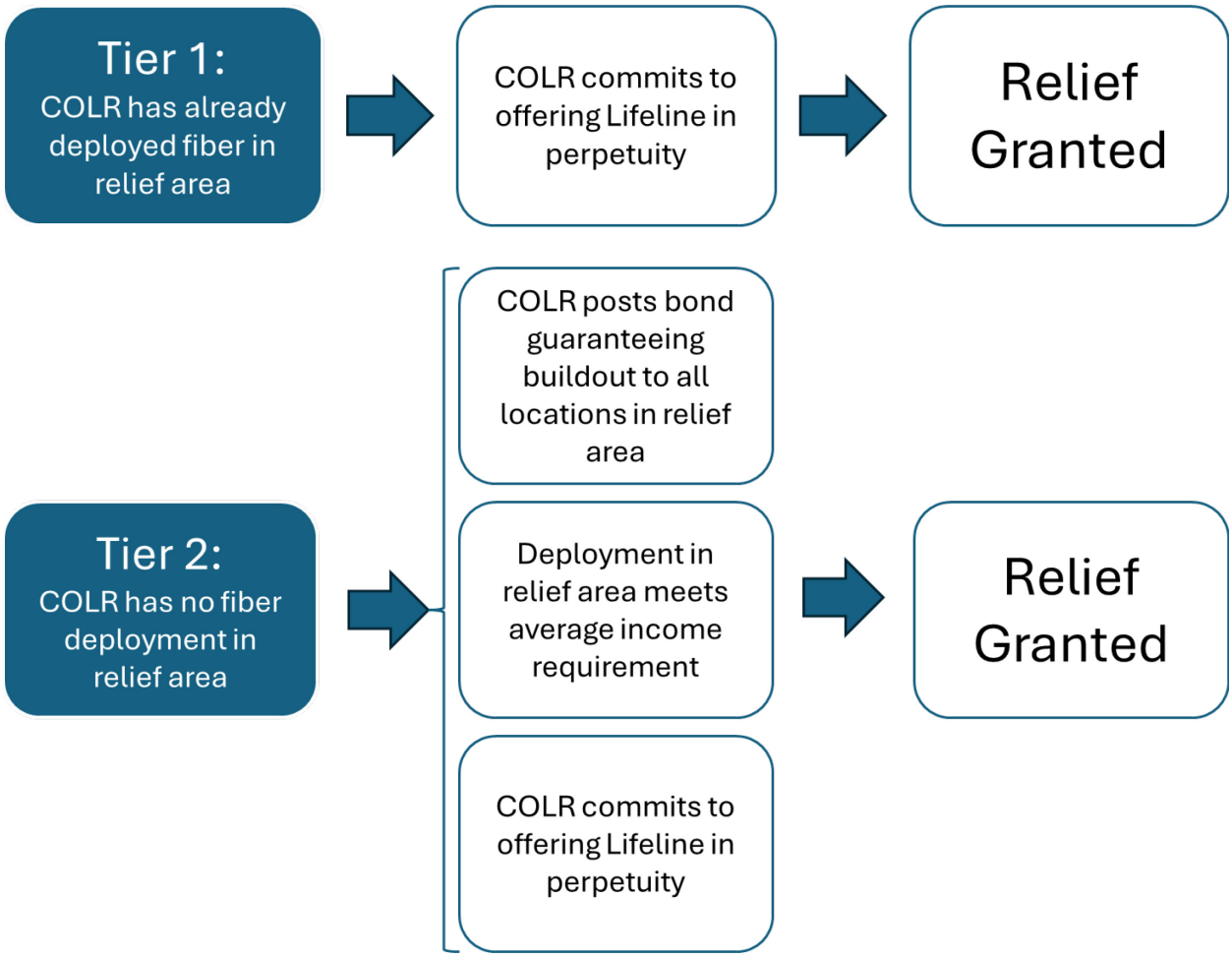
- Requests for expedited COLR relief should be submitted via the advice letter process.
- Requests for expedited COLR relief will only be granted via current deployment (Tier 1 advice letter) or five-year bond-backed commitment of fiber infrastructure upgrades to all existing copper broadband lines (Tier 2 advice letter) within a census tract.
    - "All locations" is defined as all Broadband Serviceable Locations[34] in the census tract.
    - The bond necessary to obtain relief should be at minimum $2,000 per location to be upgraded, payable to the California General Fund.
    - If an entity fails to deploy to all locations in the census tract, it will forfeit the bond and its COLR obligations shall be reinstated.
    - The entity seeking relief may be exempted from deploying fiber to locations within the census tract that already have two or more fiber providers.
- The entity must agree to provide access to LifeLine or a successor affordability program to be granted expedited COLR relief.
- The average income for the households to be served as part of the request for expedited COLR relief must be 90% or less of the area median income, as defined by the California Department of Housing and Community Development.

[33] In A.24-10-006, see Paragraph 3 of Cal Advocates Settlement adopted by the Commission. Available at: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M595/K504/595504845.pdf.

[34] See the FCC's definition of Broadband Serviceable Locations: https://help.bdc.fcc.gov/hc/en-us/articles/16842264428059-About-the-Fabric-What-a-Broadband-Serviceable-Location-BSL-Is-and-Is-Not.

- Requests for expedited COLR relief should contain a minimum of 25,000 locations, whether current deployment or bond-backed commitment.

This information is further summarized in the flow chart below:



1. The Commission can accelerate the process of competition from fiber expansion, thereby facilitating lower broadband prices.

An examination of four urban cities (markets) in California reveals that the presence of overlapping gigabit-capable networks, not simply the number of available broadband providers, results in significant downward pressure on broadband prices at the

gigabit speed level.[35], [36] By contrast, providers maintain higher prices in areas with a single gigabit provider, likely due to less competition.[37] On average, consumers in non-competitive areas spend $15 to $40 more per month compared to consumers in competitive areas for gigabit service.[38] Cal Advocates' analysis found that if gigabit competition (areas served by overlapping gigabit-capable networks of at least one cable provider and one wireline provider) was ubiquitous in California, consumers could save $1 billion annually.[39] Consequently, where a COLR seeks relief from its obligations, an expedited review process by the Commission in exchange for targeted fiber deployment by the COLR would also facilitate significant economic benefit to Californians.[40]

The presence of multiple providers alone does not guarantee lower prices. Providers that offer sub-gigabit speeds, such as fixed wireless providers, do not have the same competitive effect on the market as gigabit-capable providers.[41] Thus, an expedited relief process should not be used for deploying fixed wireless or other sub-gigabit technologies.

E. ILECs should be given flexibility to negotiate transition agreements for a replacement fiber entity.

The Commission should establish a pathway for census blocks and wire centers where fiber deployment is not economically feasible with only private investment or where a traditional COLR-to-COLR transfer model is unworkable.

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[35] The Public Advocates Office, *Broadband Competition and Pricing Strategies in California's Urban Markets,* January 14, 2026, (Broadband Competition Report). Available at: https://www.publicadvocates.cpuc.ca.gov/-/media/cal-advocates-website/files/press-room/reports-and-analyses/260114-public-advocates-broadband-competition-and-pricing-strategies-in-california-urban-markets.pdf

[36] The providers examined in this analysis were AT&T, Charter, Comcast, and Cox. Together, these providers account for 97% of California's residential gigabit locations.

[37] Broadband Competition Report at 4.

[38] Broadband Competition Report at 4.

[39] Broadband Competition Report at 18.

[40] *See* Broadband Competition Report at 18.

[41] Broadband Competition Report at 15-16.

Under the Staff Proposal, the only transition pathway is a direct replacement, in which one COLR relinquishes its obligation and another certified COLR assumes it. However, in many rural areas there is effectively no carrier positioned to step into AT&T's or Frontier's service territory, especially where new market entrants cannot easily replicate the historical copper investment, and only locally held private entities have sustained long-term operations. The number of historical advantages existing COLRs have received from past government subsidies and rate regulation creates an insurmountable barrier for an alternative COLR to emerge, absent both public and private subsidies. As a result, the current COLR-to-COLR structure is not a viable mechanism to facilitate orderly transitions, particularly in wire centers where ILECs have stated they will not deploy fiber even over long timeframes.

The Commission should establish a model in which an ILEC seeking relief may negotiate a transition agreement with a willing fiber entity that is not required to be a COLR but to universally deploy broadband infrastructure primarily over fiber. This enables a local solution that meets community needs and aligns with modern broadband infrastructure. Under this model, a COLR may negotiate directly with a replacement fiber deployer. The obligation of the replacement entity would be to deploy and operate fiber infrastructure that serves all households in the relinquished territory. The replacement entity would have an obligation to deploy, but would not assume the traditional COLR designation. The COLR would submit the negotiated agreement to the Commission as part of the ILEC's COLR exit application. In its review, the Commission would confirm that the transition protects consumers, ensures continuity, and results in a fiber-based successor infrastructure that meets those community needs. In high-cost service areas, COLRs may need to facilitate the transition by providing upfront support, such as an ILEC-financed or partially-financed transition.

The Commission should explore how existing public purpose programs, including the California High Cost Funds (CHCF) and related broadband deployment programs, can be structured to support financially viable transitions, support the successor fiber entity, create clear obligations to deploy fiber in the transition area, and promote long-

term service affordability and infrastructure sustainability. The Commission should also examine whether the CHCF can be adapted to explicitly mandate fiber deployment in relinquished COLR territories and support multi-year transition plans.

F. Better Validation of Performance is Needed to Ensure Substitute Technologies are Adequate for Modernized Essential Service.

Each of the different technologies over which COLR obligations can be provided is considered functionally identical.[42] However, each of the technologies accomplishes the functional result in different ways and faces different challenges that must be overcome. The Staff Proposal recognizes this in the first requirement of Modernized Essential Services by stating the ability to make two-way calls must be provided over a "voice-grade" and "reliable" connection.[43] In further support of that Cal Advocates provides the following detailed recommendations.

1. Minimum Speed Verification

To provide a broadband service, the connection must be capable of 100 Megabits per second (Mbps) download speed and 20 Mbps upload speed.[44] The download speed of a DSL connection can range from 5 Mbps to 120 Mbps.[45] The upload speed of a DSL connection can range from one Mbps to 20 Mbps.[46] While a DSL connection over a legacy wireline network connection is capable of reaching the required download and upload speeds that meet the broadband definition, the reality is that connection at those minimum speeds is not guaranteed.

The Commission should require that each COLR provide information on how the customer can verify that their connection meets minimum speed requirements. The

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[42] Staff Proposal at 23.

[43] Staff Proposal at 13.

[44] FCC GN 22-270 - FCC INCREASES BROADBAND SPEED BENCHMARK, March 14, 2024. Available at: https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf [accessed 1/29/2026]

[45] Kat Fann, *DSL vs. Cable vs. Fiber: What's the Best Wired Internet?* Last Updated August 1, 2025 Available at: https://broadbandnow.com/guides/dsl-vs-cable-vs-fiber

[46] Kat Fann, *DSL vs. Cable vs. Fiber: What's the Best Wired Internet?* Last Updated August 1, 2025. Available at: https://broadbandnow.com/guides/dsl-vs-cable-vs-fiber

Commission should require COLRs include instructions on how to access CalSPEED[47] and perform a network speed test. CalSPEED is an appropriate platform to check network performance as the test results are already transmitted to the Communications Division of the Commission.[48] The test results will give the Communications Division the necessary information to be used for enforcement.

2. Ensuring a "Voice Grade" and "Reliable" Connection

The Staff Proposal references the Service Quality standards of GO 133-D and its successors.[49] However, the most recent iteration of GO 133-D does not establish what makes a VoIP call voice-grade or reliable. In fact, the latest standard, approved by the Commission in 2025, simply sets the requirements for installation of service at a customer's home, restoration of that same service, and customer service standards.[50] In this proceeding, the Commission must also establish the performance metrics by which "voice-grade" and "reliable" will be defined.

Modern wireline communications networks are packet-switched, and call quality is subject to network bandwidth availability, packet loss,[51] and latency.[52] [53] At a minimum, the Commission should adopt the standard set by the FCC. For latency this

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[47] CalSPEED was established to measure the reliability, quality, and availability of network services throughout the State of California. Available at: www.calspeed.org.

[48] CalSPEED Privacy Policy. Available at: https://calspeed.org/privacy-policy. Last visited January 14, 2026.

[49] Staff Proposal at 14.

[50] D.25-09-031, General Order 133-E.

[51] Packet loss measures the fraction of data packets sent that fail to be delivered to the intended destination. https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-thirteenth-report.

[52] Latency measures the amount of time it takes for data to travel from one endpoint to another across the internet, in milliseconds. https://www.fcc.gov/broadbandlabels-glossary.

[53] R.22-03-016, Order Instituting Rulemaking Proceeding to Consider Amendments to General Order 133, *Public Opening Comments of the Public Advocates Office on the Proposed Decision Adopting General Order 133-E*, May 12, 2025 at 7-11.

means at or below 100 milliseconds[54] and packet loss no greater than 1% for VoIP transmissions.[55] These standards will help ensure customers receive the bandwidth for voice communication[56] without the packet loss and latency[57] that might make the communications incomprehensible.

In addition to these quality standards, the Commission should adopt a fourth metric and standard. Under the COLR obligations, the Commission can establish a measurement of "uptime" - or the percentage of time that the communications network must be functional.[58] Cal Advocates recommends a network uptime of 99.999%, meaning that 99.999% of the time, the network must be operational and available for the customers to use for its intended purpose. In adopting this "uptime" metric, the Commission establishes a clear definition for reliability setting a new performance standard for California consumers, promoting public safety, and protecting access to emergency services through 911 calling.[59]

3. Ensuring the Adequacy of Wireless Networks

Services over wireless communication networks includes fixed wireless access, mobile wireless service, or a combination of the two. Both fixed wireless and mobile

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[54] FCC WC Docket No. 10-90.

[55] Measuring Fixed Broadband - Thirteenth Report, August 9 2024, available at https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-thirteenth-report

[56] The amount of bandwidth required can vary depending on the audio codec that the carrier is using to digitize the voice signal. Bandwidth requirements would likely be measured in Kilobits per second.

[57] Infrastructure Act, div. F, tit. I, § 60102(a)(1)(C)(ii), 135 Stat. at 1182-83. See also National Telecommunications and Information Administration, Broadband Equity, Access, and Deployment Program Notice of Funding Opportunity 16 (2022), https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf (specifying that locations are "underserved" if they do not meet download/upload speeds of at least 100/20 Mbps and have a latency above 100 milliseconds, and that locations are "unserved" if they do not meet download/upload speeds of at least 25/3 Mbps).

[58] Defined as the percentage of time that the communications network must be functional.

[59] The rule of 9s uptime requirement can be converted into the number of hours of unplanned service downtime by multiplying the 99% by the total number of hours in a year (8,760). If the Commission set a 99.999% uptime performance requirement, there could be less than 1 hour of unplanned downtime. By contrast, if the Commission required only 99% uptime, there could be 87.6 hours of unplanned downtime per year. That's more than two business weeks of consumers not having phone service.

wireless have a device inside the home of the customer – for fixed wireless, it is a wireless modem, and for mobile wireless, it is the customer's cellular telephone. Each of these devices then use the same wireless network to communicate with a local cellular transceiver antenna. That antenna connects over physical cabling to the cellular network and, subsequently, the switch fabric of the communications network to allow for voice communications. This means that, regardless of the device used in the home, the initial link to the wireless network is determined by the radio frequency signal strength between the in-home device and the local cellular base station.[60]

The Staff Proposal does not consider mobile service as a full substitute for a COLR.[61] However, the Commission can incorporate wireless into COLR (and maintain its technology-neutral policy)[62] relief by requiring performance metrics to augment the Staff Proposal. The Staff Proposal is correct that wireless maps present significant challenges. For example, the FCC Broadband Map cannot be relied upon because its purpose is to show where outdoor broadband service is available.[63] Further, the FCC Broadband map is not granular enough to show proper signal strength coverage. Nor can service provider maps be used as a reliable measure of broadband performance. Service

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[60] 47 CFR 1.6100(b)(1) *Base station.* A structure or equipment at a fixed location that enables Commission-licensed or authorized wireless communications between user equipment and a communications network.

[61] Staff Proposal at 22.

[62] Any carrier may use any technology to satisfy any obligation to provide basic service as detailed below. D.12-12-038, Appendix A, at A-1.

[63] Staff Proposal at 24.

provider maps are marketing tools that wireless service providers use to claim wireless coverage in certain areas[64] or to claim which generation of wireless technology will service a given area.[65]

However, each wireless service provider employs engineers and network planners to monitor the provider's wireless networks and identify coverage gaps and areas where new or modified cellular infrastructure may be needed to close such gaps. These teams develop propagation maps, modeling the strength of wireless signal coverage based on the equipment they plan to install, or have already installed, the frequency that equipment may emit, or is already emitting, the parameters of how that equipment will be installed (height, tilt, azimuth), the transmission power that will be allocated, and the environmental conditions that may impact service. These network design parameters are entered into industry-standard software[66] to generate a propagation map that shows the anticipated or existing wireless coverage from that base station. These maps could lay the foundation for the Commission to assess available wireless signal strength and determine whether it meets a minimum performance threshold.

To establish the minimum performance threshold, the Commission can look to the documents the carriers submit to local governments as part of the permitting process. When building new cellular tower locations, carriers are often required to submit signal propagation maps to demonstrate how the new cellular base station will improve service

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[64] Staff Proposal at 24.

[65] *See* AT&T Coverage Map key showing 5G+ venues, 5G+, 5G, 4G LTE, and Partner coverage. https://www.att.com/maps/wireless-coverage.html. Verizon Coverage Map key showing 5G Ultra Wideband, 5G, 4G LTE, Satellite SMS, and International. https://www.verizon.com/coverage-map/?msockid=0ba4337e9ebd6d37211a25a09f306cfd. See T-Mobile Coverage Map key showing 5G Ultra Capacity, 5G Extended Range, 4G LTE, 3G/2G, Satellite, and Partner: Canada and Mexico. https://www.t-mobile.com/coverage/coverage-map?cmpid=MGPO_PB_P_EVGRNPSTPD_346050394490_184406727779_&gclid=dc46e227c64012687ea58b4149322258&gclsrc=3p.ds&msclkid=dc46e227c64012687ea58b4149322258.

[66] Atoll Software Overview, available at: https://www.forsk.com/atoll-overview [accessed January 13, 2026].

in the given area.[67] Included with these documents is often a letter from an engineer who worked on the network planning, discussing their findings. One of the best examples of this is from AT&T where the engineer wrote the following:

> "The green shaded areas of the map depict acceptable in-building coverage. In-building coverage means customers are able to place or receive a call on the ground floor of a building. The yellow shaded areas depict areas within a signal strength range that provide acceptable in-vehicle s ervice coverage. In these areas, an AT&T customer should be able to successfully place or receive a call within a vehicle The blue and white shading depicts areas within a signal strength range in which a customer might have difficulty receiving a consistently acceptable level of service. The quality of service experienced by any individual customer can differ greatly depending on whether that customer is indoors, outdoors, stationary, or in transit. Any area in the yellow, blue, or white category is considered inadequate service coverage and constitutes a service coverage gap."[68]

When paired with a propagation map, this AT&T Engineer calculated that service would be acceptable indoors provided the Reference Signal Received Power (RSRP) was

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[67] *See* AT&T Mobility Proposed Base Station (Site No. CCL05741) 186 Upper Summit Drive Santa Cruz, California https://www2.santacruzcountyca.gov/planning/plnmeetings/PLNSupMaterial/PC/agendas/2024/20240327/007a.pdf, Appeal by Verizon Wireless/David Downs of the decision of the East County Board of Zoning Adjustments (EBZA) denying Conditional Use Permit, PLN2014-00125 to allow construction and operation of a telecommunications facility in an A (Agricultural) District located at 2012 Manning Road, north side, northeast comer of one mile south of Morgan Territory Road in the unincorporated Livermore Area of Alameda County, bearing Assessor's Parcel Number 99A-2400-006-04 (a 62.22 acre parcel). https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=http://www.acgov.org/board/bos_calendar/documents/DocsAgendaPlan_12_08_15/5%2520Verizon.pdf&ved=2ahUKEwjRpZjz3ouSAxXGLTQIHWKxJdsQFnoECC4QAQ&usg=AOvVaw0zM6tm4JMKf86MawnPtFvQ, AT&T Mobility Radio Frequency Statement 15350 Roy Rogers Drive, Victorville, CA 92394

[68] AT&T Mobility Proposed Base Station (Site No. CCL05741) 186 Upper Summit Drive, Santa Cruz, California at 30. AT&T Mobility Radio Frequency Statement from James Temple.https://www2.santacruzcountyca.gov/planning/plnmeetings/PLNSupMaterial/PC/agendas/2024/20240327/007a.pdf.

greater than -90 decibel-milliwatts (dBm).[69] [70] Using the AT&T engineer's determination of "acceptable" coverage for indoor calling so long as the RSRP is greater than -90 dBm means only that there is that level of signal strength outdoors. Next, it is necessary to determine a reasonable value of expected signal deterioration as the wireless frequency passes through the exterior walls of a home in order to calculate the signal strength required to ensure a call can be reliably placed in-doors.

Cal Advocates proposes a minimum RSRP threshold of -84 dBm as a requisite signal strength outside a home to ensure sufficient signal quality inside a home.[71] The carriers would provide supporting evidence for this coverage requirement by creating propagation models using the industry-standard software and submitting those maps to be verified by a Commission-chosen third-party, paid for by the COLR. This minimum threshold is a 6 dBm increase over what AT&T designates as "acceptable" coverage. The 6 dBm increase should be capable of accounting for the signal loss expected from the need to penetrate exterior walls made from standard glass and wood.[72]

To further ensure adequate service, the Commission should implement a customer challenge process. The Commission can use the above metrics to demonstrate a likelihood of reliable mobile service coverage to the entirety of a defined area. However, a challenge process is necessary for times when mobile service may be inadequate in

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[69] AT&T Mobility Proposed Base Station (Site No. CCL05741) 186 Upper Summit Drive, Santa Cruz, California at 34. CTI Tower CL @ 140' LTE 700 Coverage Exhibit 3. https://www2.santacruzcountyca.gov/planning/plnmeetings/PLNSupMaterial/PC/agendas/2024/20240327/007a.pdf.

[70] *See* LTE RSRP calculator https://arimas.com/2017/11/06/lte-rsrp-rsrq-rssi-calculator/. Last visited January 13, 2026.

[71] The signal strength requirements are based on 4G/5G technology transmissions. Whether these signal strength requirements will be appropriate for the next generation of mobile technology such as 6G or satellite calling will have to be revisited.

[72] The decibel is a logarithmic value, not a linear one. This means that as the decibel value increases, it is not a one-to-one ratio of increased power to increased signal strength. To increase signal strength by 6 decibels requires increasing the power output by 10x. The -84 dBm value would be 10x stronger than the -90 dBm threshold for acceptable indoor calling.

specific locations for unforeseen circumstances.[73] COLR obligations fulfilled via mobile services should require the COLR to provide the customer with the information on how to validate the RSRP signal strength from their mobile device.[74] If the customer documents that the service does not meet the minimum performance threshold of -84 dBm in any room with at least one exterior wall, they can notify their COLR. At that point, similar to the Staff Proposal's proposed requirements, the carrier would be required to send out a representative to validate the RSRP on site. If, at that point, the signal strength is confirmed to not meet the minimum threshold, the carrier must resolve the issue either with additional equipment[75] or by providing COLR services via a different technology. It must be up to the carrier to prove that they are meeting the minimum performance metrics, not the customer to prove that the provider is not.

Additionally, to obtain equivalent performance between wireless service and legacy or modern wireline services, the Commission should establish a metric for the maximum call failure rate. With modern wireline networks, the uptime requirement fulfills need, but with wireless networks the variables that can result in call failures increase. For this reason, the Commission should adopt a maximum percentage of call failures for wireless calls.

With adequate performance metrics and verification, wireless can provide a voice-grade, reliable connection that meets the requirements of Modernized Essential Services.

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[73] K.C. Allen, N. DeMinco, J.R. Hoffman, Y. Lo, P.B. Papazian, *Building Penetration Loss Measurements at 900 MHz, 11.4 GHz, and 28.8 GHz*, NTIA Report 94-306, May 1994 at 5-7 and 25-32.

[74] In Android devices the RSRP measurement can be found in the Settings menu. For Apple iOS devices, the customer must dial *3001#12345# and will be shown the field service menu.

[75] Additional equipment can include carrier provided equipment to boost signal at the customer location, additional base stations to improve coverage, or additional equipment at an existing base station location to improve coverage.

III. CONCLUSION

Cal Advocates appreciates this opportunity to respond to the Staff Proposal and the questions posed in the ALJ Ruling. The Commission should adopt the recommendations stated above.

Respectfully submitted,

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January 30, 2026

Appendix A

COLR Withdrawal Customer Transition Plan[1]

1) A proposed date by which the withdrawing COLR requests to be relieved of its COLR obligation.

2) A list of census block groups located wholly or partially within the affected service area, including a clear indication of whether each census block is wholly or partially within the affected service area.

3) A list of zip codes located wholly or partially within the affected service area, including a clear indication of whether each zip code is wholly or partially within the affected service area.

4) A count of the population residing in the service area from which the withdrawing COLR intends to withdraw from its COLR obligation.

5) A count of current COLR landline customers residing in the affected service area.

6) A list of current COLR landline customers residing in the affected service area.

7) Contact names and telephone numbers for an identified COLR transition coordinator, COLR-withdrawal specific designated customer service line, a regulatory contact, and any other pertinent contacts. This is similar to the customer service representative role provided in the staff proposal for consumer information.[14]

[1] *Initial Proposal of the Public Advocates Office on the Order Instituting Rulemaking Proceeding to Consider Changes to the Commission's Carrier of Last Resort Rule*s, September 30, 2024 (Initial Proposal) at 69-71.

8) A COLR Withdrawal Notice Plan which satisfies the COLR Withdrawal Notice Plan requirements noted in the Initial Proposal.

9) A statement declaring whether the withdrawing COLR intends to retire any/all of its copper network in the affected service area within six months following approval of its application to withdraw from its COLR obligation; if yes, the withdrawing COLR must comply with the Copper Retirement Customer Migration Plan[15] requirements discussed in the Initial Proposal.

10) A statement declaring whether the withdrawing COLR intends to discontinue its landline voice service in the affected service area within six months following approval of its application to withdraw from its COLR obligation.

11) A statement declaring whether the withdrawing COLR intends to discontinue its broadband service in the affected service area within six months following approval of its application to withdraw from its COLR obligation.

12) A list of all qualified providers offering voice service in the affected service area, including indication of whether each alternative voice service provider offers landline voice, wireless voice, or both.

13) A list of all qualified providers offering broadband service in the affected service area, including indication of the technology over which alternative providers offer broadband in the affected service area.

14) A list of landline voice service plans and wireless voice service plans that the withdrawing COLR will offer for six months following approval of its application to withdraw from its COLR obligation, and that all alternative providers in the affected service area offer at the time the withdrawing COLR is preparing its application to withdraw, including:

a. Plan specifications

b. Plan prices

c. Indication of whether each plan is a landline voice plan or wireless voice plan.

15) A list of broadband service plans that the withdrawing COLR will offer for six months following approval of its application to withdraw from its COLR obligation, and that all alternative providers in the affected service area offer at the time the withdrawing COLR is preparing its application to withdraw, including:

a. Plan specifications

b. Plan prices

c. Indication of the technologies over which each of the plans noted are available (i.e., Digital Subscriber Line (DSL), fiber, coaxial cable, terrestrial fixed wireless, etc.).

16) A map of the areas affected by the COLR withdrawal which, if printed, should be no smaller than 8.5" X 11" in size. The delineation of affected areas on the map should be at the ZIP Code level. The map should delineate between zip codes that would be partially impacted by the proposed withdrawal and zip codes that would be wholly impacted (i.e., every served location within the zip code would be subject to loss of or change in COLR). The map should include the major county roads and county and state highways, so that the average customer and relevant public representatives may clearly understand which addresses are subject to an application for COLR withdrawal.

17) A link or web address to an interactive map of the areas affected, housed on the withdrawing COLR's website that allows the average customer

and relevant public representatives to clearly understand which addresses are subject to an application for COLR withdrawal.

Copper Retirement Customer Migration Plan Requirements[2]

1) A timeline of critical events in the copper retirement and customer migration processes, including a proposed date by which customers must elect a new service plan, and a cutoff date by which the ILEC intends to retire the portions of its copper network subject to its Section 251 Copper Retirement Network Change Notice.

2) A list of census blocks located wholly or partially within the affected service area,[3] including a clear indication of whether each census block is wholly or partially within the affected service area.

3) A list of zip codes located wholly or partially within the affected service area, including a clear indication of whether each zip code is wholly or partially within the affected service area.

4) A count of the homes passed by the copper network the ILEC intends to retire.

5) A count of current ILEC landline customers[4] connected to the copper network the ILEC intends to retire.

6) A list of current ILEC landline customers connected to the copper network the ILEC intends to retire.

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[2] Initial Proposal at 60-62.

[3] Here "affected service area" means the area served by to the copper retirement identified in the ILEC's Section 251 Copper Retirement Network Change Notice.

[4] "Landline" here means a copper loop voice service connection.

7) Contact names and telephone numbers for an identified copper retirement customer migration coordinator, an appropriate customer service line, the regulatory contact, and any other pertinent contacts.

8) A Copper Retirement Notice Plan which satisfies requirements listed below.

9) A statement declaring whether the ILEC intends to discontinue any voice services in the affected service area within six months following retirement of its copper network.

10) A statement declaring whether the ILEC intends to discontinue any broadband services in the affected service area within six months following retirement of its copper network.

11) A list of all alternative providers offering voice service in the affected service area, including an indication of whether each alternative voice service provider offers landline voice, VoIP, or wireless voice.

12) A list of all alternative providers offering broadband service in the affected service area, including an indication of whether each alternative broadband service provider offers landline voice, VoIP, or wireless voice.

13) A list of landline voice service plans, VoIP service plans, and wireless voice service plans that the ILEC will offer for six months following retirement of its copper network and that all alternative providers in the affected service area offer at the time the ILEC is preparing its Section 251 Copper Retirement Network Change Notice, including:

    a. Plan specifications

    b. Plan prices

c. An indication of whether each plan is a landline voice plan or wireless voice plan

14) A list of broadband service plans that the ILEC will offer for six months following retirement of its copper network and that all alternative providers in the affected service area offer at the time the ILEC is preparing its Section 251 Copper Retirement Network Change Notice, including:

1. Plan specifications
2. Plan prices
3. An indication of the technologies over which each of the plans noted are available (i.e., Digital Subscriber Line (DSL), fiber, coaxial cable, terrestrial fixed wireless, etc.).

15) A map of the service area subject to the copper retirement which, if printed, should be no smaller than 8.5" X 11" in size. The delineation of affected areas on the map should be at the ZIP Code level. Census blocks layers should be overlayed on the map. The map should delineate between zip codes that would be partially impacted by the proposed withdrawal and zip codes that would be wholly impacted (i.e., every served location within the zip code would be subject to a copper retirement). The map should include the major county roads and county and state highways, so that the average customer and relevant public representatives can clearly understand which addresses will be affected by the copper retirement.

16) A link or web address to an interactive map of the affected service area that satisfies the above conditions, housed on the ILEC's website, that allows customers and public representatives to determine, at the address level, which addresses the copper retirement will impact.

Copper Retirement Notice Plan[5]

1) Contains a list of languages in which the ILEC intends to produce all required notices. If the language will vary based on the specific notice (i.e., direct or general, as defined below), the location to which the ILEC will send the notice, or the public forum in which the ILEC will post the notice, the ILEC should articulate this in the Copper Retirement Notice Plan.

2) Contains a list of relevant public officials, including their titles and geographic jurisdictions, serving the area affected by the copper retirement.

3) Describes the modes by which the ILEC will directly send the proposed Notice of Copper Retirement to all affected customers (i.e., bill insert, separate letter, email, etc.).

4) Contains the date by which the ILEC intends to send an initial Notice of Copper Retirement, which should be no later than 60 days prior to the date by which customers must select a new service, and the dates or ranges of dates for any other intended contacts with affected customers (e.g., phone calls to customers, second notices, etc.).

5) Contains a proposed sample Notice of Copper Retirement that the ILEC will send to all affected customers and relevant public officials noted above, and that the ILEC will post in a prominent position on the ILEC's public website and on the ILEC's social media platforms, that satisfies the following criteria:

   a. Contains neutral, factual language explaining copper retirements, including a statement indicating whether the ILEC retiring its copper

[5] Initial Proposal at 62-64.

network intends to replace that copper network with another wired network.

b. Contains important dates for affected customers to be aware of, including the date by which they must select a new service plan or provider.

c. Contains a clear statement indicating that customers in the affected service area will experience network changes that will de-power customers' phones lines on the successor fiber network, such that customers will require battery backup for their phones connected to that successor network to work during a blackout.

d. Contains a clear statement indicating whether the ILEC offers such battery backup and at what cost.

e. Contains a statement indicating whether customers may lose access to California LifeLine or DDTP, including California Relay Service, by virtue of the copper retirement.

f. Contains information regarding the anticipated interoperability of devices like fire alarms, fire panels, elevators,[6] fax machines and health monitors[7] that copper retirement may impact.

g. Contains a count of the homes passed by the copper network the ILEC intends to retire.

h. Contains the customer service line number identified in subsection (V)(C)(3)(a)(7), above.

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[6] James Anderson, *As Copper Retirement Accelerates, Customers Feel the Pain of POTS Transformation* (May 16, 2024), Channel Futures, available at https://www.channelfutures.com/ethernet/copper-retirement-pain-pots-transformation-mettel.

[7] Jenna Levantoff, *As AT&T Retires Copper, the Biden FCC Must Bring Back Ground Rules* (May 26, 2021), Public Knowledge, available at https://publicknowledge.org/as-att-retires-copper-the-biden-fcc-must-bring-back-ground-rules/.

i. Contains the ILEC's website address.

j. Contains the website address on the ILEC's website where the ILEC will post its approved Copper Migration Customer Migration Plan.

k. Contains information regarding the potential need for impacted customers to port their phone numbers, if applicable.

l. Contains the mapping resources identified by subsections (V)(C)(3)(a)(16) and (V)(C)(3)(a)(17) above.

COLR Withdrawal Notice Plan[8]

1) A list of languages in which the withdrawing COLR intends to produce all required notices. If the language will vary based on specific notice (i.e., direct or general, as defined below), the location to which the COLR will send the notices, or the public forum in which the COLR will post the notices, the COLR should articulate this in the COLR Withdrawal Notice Plan.

2) A list of relevant public officials, including their titles and geographic jurisdictions, serving the area subject to the application to withdraw from its COLR obligation.

3) A description of the modes by which the COLR will send the proposed Notice of COLR Withdrawal directly to all affected customers (i.e., bill insert, separate letter, email, etc.).

4) A timeline containing proposed milestones, relative to the date the Commission approves the withdrawal application ("Day 1"), for sending Notices of COLR Withdrawal.

[8] Initial Proposal at 71-73.

5) A proposed sample Notice of COLR Withdrawal that the COLR will send to all affected customers and relevant public officials noted above, and will post on the COLR's public website and social media platforms, within 30 days of Commission approval of the request to withdraw, that satisfies the following criteria:

   a. Contains neutral, factual language explaining the COLR obligation, including a statement that the withdrawing COLR will no longer be obligated to satisfy the obligation as of the effective date of Commission approval of the withdrawal application.

   b. Contains important dates for customers to be aware of, including placeholders for the date the application is approved and the date on which the 36-month Provisional Withdrawal Period will end.

   c. Contains a clear statement indicating whether the COLR intends to retire any copper networks in the affected service area within 6 months following the withdrawal from the COLR obligation, and a clear statement indicating whether customers in the affected service area will experience network changes that will de-power customers' phones lines on a successor fiber network, such that customers will require battery backup for their phones connected to that successor network to work during a blackout.

   d. Contains a statement indicating whether customers may lose access to California LifeLine or DDTP, including California Relay Services.

   e. Contains a count of the population residing in the service area from which the withdrawing COLR intends to withdraw from the COLR obligation.

f. Contains the designated customer service line identified in the COLR Withdrawal Customer Transition Plan.

g. Contains the withdrawing COLR's website address.

h. Contains the website address of the approved COLR Withdrawal Customer Transition Plan, hosted on the withdrawing COLR's website.

i. Contains a map of the areas affected by the COLR withdrawal which, if printed, should be no smaller than 8.5" X 11" in size. The delineation of affected areas on the map should be at the ZIP Code level. The map should delineate between zip codes that would be partially impacted by the proposed withdrawal and zip codes that would be wholly impacted (i.e., every served location within the zip code would be subject to loss of or change in the COLR). The map should include the major county roads and county and state highways, so that the average customer and relevant public representative may clearly understand which addresses are subject to COLR withdrawal.

j. Contains a link or web address to an interactive map of the areas affected, housed on the withdrawing COLR's website that allows customers and relevant public representatives to understand which addresses the COLR withdrawal will impact.

6) The withdrawing COLRs may ultimately tailor the Notices of COLR Withdrawal's geographic components (i.e., lists of affected zip codes, maps) to subareas of the affected service area if such tailoring would ease customer understanding of information.

7) The COLR Withdrawal Notice Plan should also include any plans for follow-up notification arrangements, such as a second direct Notice of COLR Withdrawal, phone calls, bill inserts, emails, etc.