



P.O. Box 7443
Menlo Park, CA 94026

Executive Director
Cindy L. Russell, MD

To: California Public Utilities Commission (CPUC) Commissioners

From: Physicians for Safe Technology

Regarding: Notice of AT&T Pending Regulatory Application removing AT&T's obligation to provide Carrier of Last Resort (COLR) landline service and to stop providing federally subsidized, low-income phone services.

Date: March 4, 2024.

Dear CPUC Commissioners:

There are many reasons why AT&T should not be allowed to remove their obligation to provide Carrier of Last Resort (COLR) service for copper landlines in California, listed below. They should also continue to provide federally subsidized, low-income phone services.

Landlines remain the most robust, reliable and affordable system for communication in this country. Landlines are an essential safety net. Thousands to Millions of people will be stranded without emergency services communications if this proposal is approved. All cities should keep landlines as a backup for emergency communication, considering power outages, as well as, increasing issues with wireless privacy and cybersecurity threats. The CPUC has a fundamental duty to provide safe and reliable utility service embodied in PU Code § 451. AT&T is obligated to provide this service. Landlines remain essential for emergency communication, especially in rural, mountainous or sparsely populated areas.

Traditional copper lines called Plain Old Telephone Service (POTS) are not an outdated technology or a "historical curiosity" as AT&T has stated, it is a sophisticated system to provide universal access to telephone service in a fair and equitable manner. It has provided that for decades until wireless technologies were commercially developed and marketed by Telecom companies.

- Many older people in California still use a landline to connect with an affordable medical alert system for personal emergency response
- Landlines are directly routed to a central office where the exact location of the caller is known to first responders when 9-1-1 is called. This is in contrast to cell phones where cell towers triangulate signals providing only an approximate location
- Landlines are the last to go down in fires and are functioning if the power goes out due a complex battery backup system thus are critical in this increasing fire prone state
- Many older people find that stable fixed wired landlines are easier to use to communicate with family and friends, finding cell phones too cumbersome, confusing and requiring more expensive Wi Fi systems and apps.

- The voice quality greatly surpasses that of VOIP or even cell phones, especially where bad weather or buildings interfere with signals.
- Landlines are cheaper as they have only one function, telephone calls, although DSL still works to provide faxing and slower but reliable internet as it did initially for all of us.
- Landlines should be part of a climate change emergency preparedness mitigation plan. They use much less energy than wireless systems which spray the area with RFR for data transmission and use extensive energy for data storage.
- The CPUC has the authority to regulate landlines for access and affordability, in order to ensure public safety. The public is fully involved in this decision. The CPUC, however, has limited regulatory power over wireless carrier services.
- Alternative wireless and VOIP communication services, have no obligation to serve a customer or to provide equivalent services to AT&T landline customers. This would include no obligation to provide reliable access to 9-1-1.
- Those with a medical illness called electrosensitivity cannot use wireless devices, such as cell phones or cordless DECT phones. They can use only copper landlines as these do not emit electromagnetic radiation.
- Cell towers are electrical structures and can have faulty electrical or mechanical issues thus posing a fire risk (Chula Vista, Hanover, Seattle, Sacramento). Firefighters are forced to wait until the power to the cell tower is shut off prior to using a hose due to the risk of electrocution. This is the same strategy for most other electrical structural fires. If the cell tower is disabled in a fire and power shut off landlines are still functioning. Landlines carry no such fire risk as well and thus are more future proof, along with other wired options such as fiberoptic cables.
- With Public Safety Power Shutoffs (PSPS) becoming more common in California to prevent catastrophic fires we have seen during severe weather conditions, with high fire risk, thus landlines are an essential backup in emergencies. Although in certain areas of California cell towers are required to have a 72 hour back up power, there are exceptions for safety risks and infeasibility. In addition, the electricity may be shut off for longer periods of time (6-7 days).
- As we face increased cybersecurity threats from wireless systems and AI, landlines will be an essential method of communication (see U.S. GAO report below). Wireless services can be jammed and leave people stranded

Emergencies

In a medical emergency, fire or storm 911 calls to a landline give the exact address. For most cell phone calls triangulation is required with large nearby cell towers. A lack of accuracy increases the critical time from call to response. Landlines continue to be superior in identifying the location in an emergency. In February 21, 2024 there was a national power outage of the AT&T network and a CNN article noted, “. *It was suggested people call from a landline or find someone with a rival’s service to dial 911.*”

[<https://www.cnn.com/2024/02/22/tech/att-cell-service-outage/index.html>]

“Cellular Service Outage - Update #1 - AT&T and AT&T affiliated carriers are still experiencing sporadic outages. Additionally, Text to 911 and WiFi calling may not be working. If you need to contact 911 for emergency services, you may need to utilize a landline or an alternative carrier.”



CPUC Network Exam Report of Telecom Carriers in 2019 Notes Deficiencies

The CPUP report found that copper lines have been neglected resulting in poor service. AT&T in particular was found to have neglected low-income communities with longer outages reported and also implemented significant price increases of up to 152.6 percent over a decade.

The CPUC Report of 2019 Network Exam of AT&T, and Frontier/ Verizon : Phase I and II Study

[<https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/service-quality-and-etc/network-exam-of-att-and-frontier-verizon>] notes:

1. Ongoing deterioration of ILEC service quality – Service quality deterioration continue for both carriers; the frequency of service outages and duration has been increasing.
2. Persistent disinvestment – Payment of dividends in excess of earnings, and annual depreciation accruals that exceeded gross additions have continued into Phase II; moreover, the infrastructure investments appeared aimed primarily at nonregulated broadband service upgrades instead of improving legacy service plants.
3. Further decline in the number of POTS customers – Both companies have stopped marketing legacy circuit-switched POTS, focusing instead on broadband service as their strategy for maintaining and growing their revenue stream while allowing POTS service to continue to degrade.
4. A focus upon broadband not POTS – Investments made in 2018-2019 continue to be primarily directed toward broadband services that bundle high-speed Internet access, Voice over Internet Protocol (“VoIP”), and Video.
10. Financial capability – AT&T Inc. has the financial resources to maintain and upgrade its wireline network in California but has been pulling capital out of the state rather than putting new capital into its network here. Frontier has a strong interest in pursuing such upgrades but lacks the financial capacity to make the necessary investments.
11. “VoIP service quality – AT&T VoIP service experiences a slightly higher rate of service outages than AT&T legacy services. VoIP is dependent upon locally-provided power, battery backup, and customer premises equipment that is not generally required with POTS.”

Telecom and The Lack of Choice for Californians

The PUC regulates telephone service with landlines. The CPUC has much less input into the business practices of wireless carriers. It is convenient for the telecom industry, which is now heavily consolidated, to remove regulated landlines in favor of wireless systems, with much less regulation, especially regarding fees charged to customers. When industry consolidation happens companies can charge what they wish and raise prices as there is no competition. Consolidation leads to lack of consumer choices as well as lower quality service. The telecom industry is in a Wild West phase with rapid unfettered expansion of wireless technologies with the removal of more and more regulatory oversight which they state is a “regulatory barrier”.



Health Harms for Some: Landlines Versus Wireless Infrastructure

Those with Electrosensitivity (ES or EHS) cannot use regular cell phones or DECT phones as they emit radiofrequency radiation that causes neurologic and cardiac symptoms such as headaches, dizziness, nausea, heart palpitations, fatigue, poor concentration, memory loss, insomnia and depression. They also cannot use Smart Meters. People with this condition need a means of communication for everyday life, as well as emergencies. A landline phone does not emit wireless radiofrequency radiation, it is a wired lifeline for them. Landlines are critical for this population which severely disables about 0.65 % of the population and 5% of the population have moderate symptoms thus avoid wireless devices altogether for health reasons. For California's population of 39 million that means about 250,000 people are severely disabled and 1.25 million are moderately affected. Bevington (2018)

Increased Cybersecurity Risks

In addition, as we face increased cybersecurity threats from wireless systems and AI, landlines will be an essential method of communication (see U.S. GAO report below). Wireless services can be jammed by hackers and leave people stranded. All wireless systems are much more vulnerable to hacking. Cordless phones, iPhones, smart meters Wi Fi routers, appliances and a host of other wireless devices face hacking risks. For 5G telecommunications there is an unsolvable risk of cybersecurity according to international insurance agency such as Swiss Re. In a 2019 updated Insurance Industry report, **New Emerging Risk Insights by Swiss RE** Insurance Company, the second largest reinsurance company in the world, included in the high risk trends, are artificial intelligence and the existential threats of climate change. *"The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector."* <https://www.swissre.com/institute/research/sonar/sonar2019.html>

"5G Wireless: Capabilities and Challenges for an Evolving Network"

A 2020 Government Accountability Office (GAO) Report titled "5G Wireless: Capabilities and Challenges for an Evolving Network (GAO) 2020" highlights the various features of cybersecurity risk for upcoming 5G networks with beam forming and Massive MIMO. These areas of concern include 5G Supply Chain Risks where components from suppliers whose quality and security cannot be fully guaranteed may be used in 5G networks; *"5G Architecture Risks with Network Function Virtualization, where routers and firewalls will be superseded by cloud-based servers using specialized software. Expansion of the Internet of Things (IoT) with the use and storage of vast amounts of data without consent, including location data, which could compromise user privacy and lead to issues including identity theft, discrimination, and other harm."*

Thank you so much for your thoughtful consideration of this matter. It is of great concern to all Californians that they have affordable, equitable and safe emergency communications.

Cindy Russell, M.D.
Executive Director Physicians for Safe Technology

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