BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Proceeding to Consider Rules to Implement the Broadband Equity, Access, and Deployment Program.	R. 23-02-016 (Filed February 23, 2023)

OPENING COMMENTS OF THE GREENLINING INSTITUTE ON ADMINISTRATIVE LAW JUDGE'S RULING ISSUING STAFF PROPOSAL TO PROCEEDING TO CONSIDER RULES TO IMPLEMENT THE BROADBAND EQUITY, ACCESS, AND DEPLOYMENT PROGRAM

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I. Introduction

In accordance with the November 7th, 2023, Administrative Law Judge's Ruling Issuing Staff Proposal[1] to the BEAD program, The Greenlining Institute (GLI), and #OaklandUndivided (OU) submit these opening comments in response to both Volume 1 and Volume 2 of the California BEAD Initial Proposal released on November 7th, 2023.

The Greenlining Institute ("GLI") works toward a future when communities of color can build wealth, live in healthy places filled with economic opportunity, and are ready to meet the challenges posed by climate change. As an organization, we see closing the digital divide as a necessary step in equipping communities of color with the tools and connectivity that is necessary to survive and thrive in today's society. The Greenlining Institute has worked on digital inclusion programs through its partnership with the city of Oakland on the Town Link program and also serves on multiple broadband advisory committees before the California Public Utilities Commission.

#OaklandUndivided (#OU) is an equity-based, collective impact initiative launched in May 2020 to harness the people's power to solve one of modern society's most persistent structural inequities - the digital divide. #OaklandUndivided consists of a coalition of our founding partners, including the City of Oakland and Oakland Unified School District, trusted anchor institutions, over 20 community-based organizations, as well as elected and appointed officials and community leaders throughout Oakland. At #OaklandUndivided, we believe in

[1] Assigned Commissioner's Ruling Requesting Comments on the the Order Instituting Rulemaking to Consider Rules to Implement the Broadband Equity, Access, and Deployment Program (R.23-02-016), dated February 23rd, 2023. All citations to the record are to the record of the current proceeding, R.23-02-016, unless otherwise stated.

taking a comprehensive approach to digital equity that addresses the structural inequities that undergird the divide. We believe digital equity impacts virtually every sector and intersection of society: Education, Healthcare, Workforce (employment), and Economic Development.

If wisely invested, forthcoming federal BEAD funds (coupled with additional state-level investments) should make meaningful advancements in all three major components of broadband internet access; broadband adoption, affordability, and availability. In our Opening Comments in response to the Order Instituting Rulemaking, GLI and #OU highlighted the need for the Commission to create final rules for forthcoming BEAD Program funds that prioritize consumer affordability measures for the built life of funded infrastructure, better address the needs of low and middle-income consumers who often reside in MDU housing, and which maintains an acute focus on ensuring broadband access for disadvantaged communities throughout the state without regard to geographic type. In addition to the fortification of the existing challenge process for MDU-type housing, the Commission should provide California consumers with meaningful affordability guarantees for publicly funded broadband infrastructure and should modify the proposed project selection criteria to be increasingly mindful of the ways in which the digital divide continues to exacerbate both social and economic inequities in Californians urban and rural communities. Our hope is that the final rules for this program do not include provisions that allow for the complete privatization of publicly financed broadband infrastructure.

A. Affordability Provisions are Needed

Affordability for both low and middle-income households is necessary to guarantee universal broadband service access for California residents. In rural and urban communities alike, investments in infrastructure that increase market competition will effectively drive down consumer costs while simultaneously increasing service quality and broadband access within

regions of the state. As was previously stated in our Opening Comments[2] GLI and #OU jointly encourage the further development of a process that allows for additional competition to be introduced into low-income urban communities in California to increase service quality and affordability for consumers. A December 2018 Staff Report highlighted the unusually high industry concentration in broadband markets throughout the state, with a particular focus on the high levels of concentration in urban areas such as Los Angeles, Oakland, Sacramento, San Diego, San Francisco, and San Jose.[3] The same staff report also notes that industry concentration across the telecommunications industry in California is most acute in lower-income areas where a majority of residents fall below median income thresholds. A subsequent 2023 report published by the Commission's own Public Advocate's Office states that California has the highest broadband internet prices in the country in part due to broadband pricing strategies that maximize profit for private companies without increasing service quality or internet speeds for consumers. This is most acutely felt in low and middle-income communities, which often pay equivalent prices for inferior services.

We urge the Commission to amend the proposed rules to better facilitate the allocation of BEAD funds to subgrantees who will provide meaningful affordability provisions for the built life of federally funded broadband infrastructure. At a minimum, in order to ensure universal service is provided by BEAD Program-funded projects, ACP-eligible households in California should be eligible to receive low-cost service for the entire built-life of BEAD-financed infrastructure in order to ease the transition on low-income consumers when these federal

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[2] See Opening Comments of The Greenlining Institute, #OaklandUndivided, and California Community Foundation on Order Instituting Rulemaking, available at https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M507/K805/507805123.PDF

[3] See "*Report of the Communications Divisions Pursuant to Ordering Paragraph 3 of Decision 16-12-025 Analyzing the California Telecommunications Market"*, available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-infrastructure-and-market-analysis/competition/competitionreportfinal-jan2019.pdf

subsidy funds inevitably run out. In order to allow for the success of subgrantee applications that prioritize affordability and access for low-income Californians, we are supportive of open access requirements being included in the scoring matrix for funds, alongside both middle and low-income affordability requirements for the entire built life of the infrastructure projects. As is the case with the CASF program, we would be supportive of the Commission requiring that any and all middle-mile infrastructure projects utilizing BEAD Program funds comply with open-access requirements as a precursor to receiving funding. While we appreciate the Commission's efforts to include openness as a guiding principle within the BEAD proposal, it should additionally be reflected in the scoring rubric for the program, with points being awarded to projects which are aligned with the vision for open-access infrastructure. As with any government program, grant, or other type of application, if a provider or potential subgrantee does not wish to comply with the aforementioned provisions, they are free to submit applications without those agreements. They are not, however, guaranteed the ability to design their own application process and scoring metrics, which does not wholeheartedly serve the public interest.

B. The Final Challenge Process Should be More Transparent and Equitable

Inadequate broadband internet access is not merely a limiting factor for individual consumers and/or households; regional economic development and the success of local small businesses are dependent on having access to high-quality and high-speed broadband internet service. In the City of Oakland, small businesses in lower-income areas often receive inadequate internet access provided to locations falsely marked as served with high-speed service, which can result in thwarted business expansion efforts and lost revenue. In order to ensure that final BEAD program rules are in line with the public interest, and with Governor Newsom’s 2020 Executive Order, the Commission needs to modify the proposed rules to be transparent and accountable to

local partners.[4] As the CPUC was explicitly requested to provide regional partners with the "information to support the development of local broadband infrastructure deployment," the CPUC must ensure a transparent challenge process.[5]

With the current state of both federal and state-level maps greatly overestimating the actualized service speeds and quality in households across California, a robust challenge process and increasingly granular mapping combined with transparency surrounding data sources and quality is needed to ensure a fair and equitable Challenge Process can be conducted for the purpose of allocating BEAD funds.

II. Requested Modifications to Proposal

The responses provided below are intended to serve as answers to question #3 "*Are there some proposed rules that comply with federal requirements but should be modified? If yes, how would parties modify the proposal? Are there specific portions of the proposal the Commission should not adopt?*" and have been grouped by domain for ease of reference.

A. Requested Modifications to Project Selection

It is a well-understood observation of fact that large providers in California prioritize channeling their private investments into the construction and improvement of broadband infrastructure (such as fiber) within wealthier communities.[6] This is commonly understood to be a practice to maximize profits and ensure rapid repayment of the capital expenditures required to finance such projects.

While we applaud the Commission's efforts to design a robust project selection process

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[4] Governor Newsoms Executive Order N-73-20 explicitly states that as part of the state's Broadband for All goals, "*All Californians [shall] have high-performance broadband available at home, schools, libraries, and businesses.*" https://www.gov.ca.gov/wp-content/uploads/2020/08/8.14.20-EO-N-73-20.pdf

[5] Pg. 3 of Executive Order N-73-20

[6] See, "*AT&T's Digital Divide in California*" a 2017 UC Berkeley report which highlights the investment decisions of AT&T which show a clear preference for private investment in wealthier California communities available at https://belonging.berkeley.edu/atts-digital-divide-california

for BEAD, we additionally aim to focus on the desire to see the enhancement of meaningful racial and economic equity provisions within the final rules. Most notably, there is a greater need for these metrics to be used within the project selection process in order to ensure that these federal funds are used as intended – to close the persistent gap of the digital divide within disadvantaged communities. The current proposal lacks the specific granularity required to prevent these funds from merely being an opportunity to subsidize private industry without commensurate benefits to consumers.

To remedy the current situation, it is a high priority for our organizations to have the Commission include a sliding scale within the scoring matrix rather than merely opting for a binary allocation of additional points when scoring applicant projects. The Commission's most recent Federal Funding Account allocations have unfortunately rewarded providers for including the bare minimum number of serviceable locations within proposed project areas, which is not aligned with the intent of community groups and local governments. Nor does it advance the state's goal of ensuring high-speed and high-quality broadband internet service for all California residents. A sliding scale scoring matrix could reward applicants with additional points for serving disadvantaged communities in a manner that is proportionate to the percentage of serviceable locations within a project that includes low-income communities (those that fall below the state's median income) or communities of color. In this situation, a project proposal that includes 25% of a project area within disadvantaged communities would be eligible for 25% of the available additional points on the funding application. A project that proposed to serve only 10% of disadvantaged communities would only be eligible for 10% of the available points. Assuming the same proportionality that was used in the FFA application, this would ensure that 15% of the points allocated to applicants are gauging them on equity-based provisions in their

BEAD application.[7]

B. Requested Modifications to the Challenge Process

In specific regions of California (such as Oakland), consumers are unable to subscribe to mass-market broadband internet services at speeds under 100/20. In regions where all available plans are above 100/20 mbps, a challenger should be able to sign an affidavit stating that the minimum serviceable speeds for all subscribers meet the 100/20 mbps state threshold in lieu of providing individual subscriber-level billing information.This would be particularly helpful for low-income communities and communities of color where larger shares of the population also reside in MDU-type housing units.

Volume 1 of the initial proposal states that "speed tests may be conducted by subscribers, but speed test challenges must be gathered and submitted by units of local government, nonprofit organizations, or a broadband service provider."[8] In order for both local government and nonprofit organizations to support the collection of speed tests, we urge the Commission to modify the proposed rules to minimize the burden placed on these challengers. When the slowest plans offered exceed 25/3 Mbps (unserved) or 100/20 Mbps (underserved) within a franchise area, the Commission should eliminate the requirement that "A certification of the speed tier to which the customer subscribes (e.g., a copy of the customer's last invoice or signed certification by the customer of the speed tier and a statement indicating the customer is subscribed to the highest service tier available)".[9] The Commission should also eliminate the requirement that "An agreement, using an online form provided by the CPUC, that grants access to these information elements to the CPUC, any contractors supporting the challenge process, and the service

[7] For the FFA funds, 20 out of 130 total awarded points were allocated due to equity provisions within the application.
[8] BEAD Initial Proposal Volume 1, pg. 20
[9] BEAD Initial Proposal Volume 1, pg. 21

provider".[10] Requiring the submission of an online form from someone who is unserved is a prohibitive barrier, one that is not included in the NTIA BEAD Model Challenge Process, and adds yet another burdensome requirement for nonprofits and municipalities to collect. This requirement will not allow municipalities and nonprofits to support data collection at scale, which is needed to improve the accuracy of existing maps and ensure federal BEAD funds are invested in areas that need it the most. Seeing as it is both burdensome and not included in any federal requirements to incorporate an online form submission into the BEAD challenge process, we strongly recommend the Commission omit this language from the final proposal in order to comply with the intentions of the NOFO for the BEAD Program.

Understanding that community organizations and local governments are the only eligible entities who can submit challenges in this process, the CPUC Communications division should be required to proactively notify local governments and partner nonprofit organizations at least thirty days in advance of the challenge process clock beginning. This proactively provided information should explicitly state which test is an acceptable measurement of speed (and what is not), as well as resources to support the challenge submission process. It is our hope that by communicating which tests are *not* an acceptable measurement of speed, the Commission will prevent CBO's and local partners from submitting ineligible challenges. In addition, Commission staff should partner with providers to send notice to consumers (similar to the process used in advance of public participation hearings) to ensure that this process is transparent and available to all. An expansive outreach process (facilitated by the Commission) will help to ensure the increased validity of maps used for project proposals and selection.

As referenced in earlier comments in this proceeding and in our comments at the most recent BEAD workshop, the required provision of customer bills during the challenge process

[10] BEAD Initial Proposal Volume 1, pg. 21

unduly shifts the burden of proof away from providers who readily have subscriber-level data available. We are incredibly concerned that the Commission has not ensured that consumers will readily have access to this information at *no cost* when they contact providers. In an ongoing #OaklandUndivided internet speed study of Oakland residents, one participant reported a $5 fee required for access to their bill, while others reported phone calls lasting almost an hour with their service provider in order to gain access to a copy of their most recent bill.[11] Excessive wait times (which are dictated by service providers) and other common barriers for consumers to access billing information can delay or prevent challenges from being filed.

At the very least, if speed tests are under federal limits (such as 25/3 Mbps), then the proposed customer bill requirement should be automatically waived. Earlier this year, #OaklandUndivided reviewed 108 affordable housing MDUs in Oakland, California. By using the publicly available look up tools on the website of Comcast, AT&T, Sonic, and Wave, #OU was able to determine the highest speeds offered at each address. All properties received offerings from service providers above 50/10 Mbps. In fact, at 102 of the 108 properties, a single provider claimed to offer speeds up to 1200/35 Mbps. As speeds offered in Oakland are consistently above the 25/3 Mbps threshold, the Commission should not require individual subscriber-level billing information if speed test results are below 25/3 Mbps.

As was mentioned during the October 27th workshop, the process of requiring billing information also puts highly-valuable Personal Identifiable Information of California consumers who are submitting challenges at increased risk because of the required transmission between a third party before being sent to the Commission. The removal of this requirement would be beneficial to both consumers and to local governments and nonprofits who will be liable for

[11] This is qualitative data collected as part of an ongoing study of Oakland residents. More information is available at https://www.oaklandundivided.org/internetstudy

transmitting PII as part of the proposed process, as the current requirement increases the risk for future cybersecurity attacks and potential data breaches.

C. Requested Modifications to Commission Communications

As #OU and GLI will be supporting challenges within disadvantaged communities as well as areas with significant deployment needs in California, we strongly encourage the Commission to prioritize ongoing and transparent communication. This begins with transparency surrounding the initial map creation or the publication of eligible locations. We encourage the Commission to provide additional details to section 5.3, "Process description," in order to inform communities of the methodology utilized to create the most accurate map possible before the commensuration of the challenge process. The provision of additional information and granularity in reference to initial maps to be challenged will help to assuage the concerns about information asymmetry creating a process that is incredibly biased against California consumers.

To support parties with the challenge process, hybrid informational events, with the option of attending in person or virtually, are preferred and encouraged. It is critical that these events are held at least one month before the 30-day challenge submission period commences but after the publication of eligible locations. They additionally should be recorded and posted on the Commissions BEAD Program webpage.[12] In doing so, the Commission provides ample time for communities to organize all parties supporting the challenge process as well as ask relevant mapping questions to Commission staff.

We encourage the commission to allow more than one individual as the point of contact for the application to ensure that no communications, such as emails, are missed. We also recommend an automated text or call that notifies challengers if service providers have rebutted their claim, as well as the CPUC's final determination of the classification of the location(s) that

[12] The referenced webpage is available at https://www.cpuc.ca.gov/beadprogram

remain in the disputed state.

D. Requested Modifications Related to MDUs

The language proposed by NTIA alludes to a desire for challenges to be submitted at scale via nonprofits and local governments. However, the Commission needs to streamline the proposed process to actually allow this to happen. We strongly recommend the Commission move forward with a final set of rules that allow for the submission of a single location challenge (supplanting and replacing the 10% or 3 unit rule) to allow for challenges to be submitted without a significant burden on community groups and local governments.[13] This should be explicitly stated within the instructions the Commission provides for the challenge process. In the absence of the Commission's ability to move forward with this request, at a minimum, the adoption of NTIAs updated guidance released in November of 2023 would be preferable to what is included in the current initial proposal.[14]

In a letter dated November 17, 2023, The City of Oakland and The City of Sacramento brought concerns before the Commission regarding the prioritization of MDUs and low-income communities within the State of California's BEAD Challenge Process.[15] We agree with their recommended modifications to NTIA's MDU challenge module. This letter recommends that the CPUC should include in its BEAD Initial Proposal that an MDU challenge *only requires a challenge by one or more units* of the unit count of the multi-dwelling unit listed in the Fabric

[13] There is a precedent for such action in California with the successful passage of California Senate Bill 745 in 2016 which defined "unserved"locations as being inclusive of a housing development where at least one housing unit is not being offered broadband service. In addition to this request being in alignment with state law, it also makes sense from a technological perspective. If all units in a MDU rely on the same internal wiring then all units should be "served" or "unserved" at the same rate.

[14] On 11/15 the NTIA released minor updates to the BEAD Challenge Process Policy Notice, the BEAD Model Challenge Process, and the challenge results submission templates. The updated guidance we refer to in this document is ""An MDU challenge requires challenges for one unit for MDUs having fewer than 15 units, for two units for MDUs of between 16 and 24 units, and at least three units for larger MDUs. Here, the MDU is defined as one broadband serviceable location listed in the Fabric. An MDU challenge counts towards an area challenge (i.e., six successful MDU challenges in a census block group may trigger an area challenge)."

[15] See "*Letter from City of Sacramento and City of Oakland*" dated November 17th, 2023 available at Appendix A (pg. 16) of this document.

within the broadband serviceable location. We agree with the notion of only requiring a single challenge, even in MDU location types, and believe that the current requirements documented within the Commission's initial proposal place an undue burden on residents who are the least connected to file multiple submissions to local government or nonprofits to challenge on their behalf.

The reality of what affordable housing looks like in California is unique when compared to other states due to the persistence of privately financed affordable housing in contrast to the alternative of government-financed and operated affordable housing developments. With this being top of mind, the Commission should adopt a definition of "Community Anchor Institutions" (or "CAI's") which better encapsulates the reality of affordable housing in California, and that is inclusive of privately owned MDUs such as those in the flatlands of Oakland, California. As acknowledged in the Broadband Public Housing Account proceeding, the majority of qualified low-income Californians do not live in publicly-owned housing, but instead find housing in a wide array of publicly-supported and financed housing types. These often function as Community Anchor Institutions in exactly the same way publicly-owned housing does. Therefore, if funding permits, it should be a priority for the Commission to adopt a definition of CAIs that resembles the CPUC CASF Public Housing Account Program definitions.

E. Removal of Legacy Technologies from Served Locations

The NTIA NOFO is fiber first, and places a strong emphasis on future-proofing our broadband internet infrastructure. In accordance with this intent by the federal government, the Commission should move forward with the adoption of all locations utilizing the following technologies to be marked as "unserved" on the challenge maps used by the State of California to disseminate BEAD funds. We support the modification of the classification of DSL, copper

wireline, DOCSIS (1,1.1, and 2) as "unserved" rather than "underserved" on the BEAD Program serviceable location maps.[16] In addition to the aforementioned reclassifications, we are also supportive of the reclassification of Cellular Licensed Fixed Wireless served locations as unserved. Understanding the limitations of this technology, they do not effectively meet the requirements of the BEAD Program for service quality or service longevity. The classification of these technologies as no longer meeting minimum service standards would facilitate the phase-out of legacy copper technologies and could benefit California residents who live in MDU housing and experience differential rates of service due to their proximity (i.e. the distance of the copper wire runs) to the ISP's facilities.

Conclusion

As stated in our previous comments within this proceeding, we believe that the forthcoming federal infrastructure funds provide California with the opportunity to make strident gains in closing the digital divide and to guarantee broadband internet access service is available to all communities throughout the state – with a particular focus on low-income communities of color who have traditionally been underserved. We look forward to seeing final rules for the BEAD Program that facilitate this vision becoming reality and are appreciative of Commission staff for their work on this issue.

Respectfully submitted,

November 27th, 2023

[16] Most cable systems have upgraded their networks to DOCSIS 3.0 or 3.1, which provide a practical download capability of delivering 100 Mbps or 1 Gbps. However, many, if not most, cable systems did not upgrade the upload portion of their networks, which means that oftentimes the cable companies are operating an older, slower technology. Unlike fiber networks, upgrading to higher speeds in coaxial (copper) networks is not a matter of upgrading the electronics. Cable operators, especially in older networks, must replace numerous components – nodes, amplifiers, and taps – as well as replace portions of the coaxial cable with fiber. It is expensive to upgrade a cable network and less likely in a low-income area than highly competitive affluent urban and suburban markets.

/s/ Caroline Siegel Singh
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Authorized to sign on behalf of #OaklandUndivided

Appendix A. Letter from Cities of Oakland and Sacramento, California

November 20, 2023

Alice Busching Reynolds, President
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Dear President Reynolds,

We, the undersigned cities, write to you today to respectfully request the prioritization of *multifamily dwelling units (MDUs) and low-income communities* as a key component of California's Broadband Equity, Access, and Deployment (BEAD) Plan.

Nearly 1 of every 4 disconnected households in California live in an MDU[1], and a specific focus on the unique circumstances of these communities is necessary to reverse decades of underinvestment that prevents Californians from accessing essential services and reliable, high-speed internet as a 21st-century civil right. Effective policy adopted by the California Public Utilities Commission (CPUC) has the potential to direct this once-in-a-generation broadband funding into the communities where it will have the greatest impact.

The National Telecommunications and Information Administration (NTIA) explicitly acknowledges the importance of "deployment of Wi-Fi service within multi-family buildings" on page 7 of the BEAD NOFO,[2] but their affiliated guidance to States–absent considerable modification–would effectively bar many of these MDUs from qualifying for the funding intended to serve them. As such, we urge the CPUC to incorporate the following language into California's BEAD Initial Proposal:

1. **Include the NTIA's Area Challenge Module as is explicitly stated in the BEAD Model Challenge Process on page 18**[3]
    a. **Recommendation:** *NTIA BEAD Model Challenge Process*: "An area challenge reverses the burden of proof for availability, speed, latency, data caps, and technology if a defined number of challenges for a particular category, across all challengers, have been submitted for a provider.

[1] U.S. Census Bureau (2020) Public Use Microdata Samples ACS 5 Year. Retrieved 2021 from https://www.census.gov/programs-surveys/acs/microdata.html. Data sourced from Census ACS 5 Year 2020 Public Use Microdata Sample(PUMS). 22% of California unconnected households are within MDUs. MDUs are defined here as buildings with 10 or more residential units. Unconnected households are defined as households with either no internet at all, cell phone only internet and/or dial up only internet.
[2] *Broadband Equity, Access, and Deployment Program*, Notice of Funding Opportunity, at 7 (rel. May 12, 2022) (*NTIA BEAD NOFO*).
[3] NTIA, *Internet for All: BEAD Model Challenge Process* at 18 (last modified Sept. 5, 2023) (NTIA BEAD Model Challenge Process).

Thus, the provider receiving an area challenge must demonstrate that they are meeting the availability, speed, latency, data cap, and technology requirements, respectively, for all (served) locations within the area or all units within an MDU . . . An area challenge is triggered if 6 or more broadband serviceable locations using a particular technology and a single provider within a census block group are challenged" (page 18).

b. **Justification**: According to Volume 1, the CPUC is planning on utilizing the National Broadband Map as a basis for the California BEAD Challenge Process and the CPUC's BEAD grantmaking. However, the National Broadband Map is vastly inaccurate, severely undercounting need in the lowest income communities. As the map requires changes of great magnitude to create a better source of truth and the challenge process spans only 30 days, there must be a viable pathway to correct inaccuracies on a larger scale. The area challenge module, as outlined in the BEAD Model Challenge Process, achieves this goal.

2. **Include the NTIA's MDU Challenge Module with the modification that an MDU challenge is initiated by the challenge of one or more units**
   a. **Recommendation**: The CPUC should include in its BEAD Initial Proposal that an MDU challenge ***only requires a challenge by one or more units*** of the unit count of the multi-dwelling unit listed in the Fabric within the broadband serviceable location.
   b. **Justification**: California Senate Bill 745 set a precedent in the state (although no longer in effect) by defining "unserved" as a housing development where at least one housing unit is not offering broadband service. Therefore, this request is consistent with prior California state law.
      1. From a network perspective, all units in an MDU rely on the same internal wiring. Therefore, it is reasonable to assume one unit in an MDU is "unserved" by a provider and a specific technology (e.g., coaxial cable), then other units attempting to access the internet with the same technology and provider will also be "unserved."
      2. Furthermore, the recommended language that would require the larger of 3 units or 10% of the unit count listed in the Fabric within the same broadband serviceable location places an undue burden on residents who are the least connected to file multiple submissions to local government or nonprofits to challenge on their behalf.

3. **For NTIA's Optional Module 2, modify the classification of DSL locations from "underserved" to *"unserved"***
    a. **Recommendation**: As noted by way of the Optional Module 2 example in the NTIA BEAD Model Challenge Process, the CPUC should treat locations showing available qualifying broadband service (i.e., a location that is "served") delivered via DSL as "unserved" if DSL is the only technology at the location satisfying the "served" requirements. Importantly, as the module notes, "this designation cannot be challenged or rebutted by the provider" (page 8).
    b. **Justification**: In Decision 22-04-055 released last year, "the Commission adopts a rebuttable presumption that legacy networks cannot provide reliable Internet service at speeds of 25Mbps download and 3 Mbps upload. Specifically, areas with Internet service provided only by legacy technologies such as copper telephone lines (typically using Digital Subscriber Line technology)...these legacy technologies typically lag on speeds, latency, and other factors, as compared to more modern technologies like fiber." (page 20). In addition, NTIA's optional module 2, states that reassigning DSL "will better reflect the locations eligible for BEAD funding because it will facilitate the phase-out of legacy copper facilities and ensure the delivery of "future-proof" broadband service" (page 8).
        1. The CPUC's BEAD workshop on October 26, highlighted an interesting point, with panelist Lance Ware from AVN Networks noting, "providers like AT&T have discouraged the use of copper lines for voice - DSL has all but been abandoned - ultimately abandoning them in Catalina - we think there is a strong case for raising the bar and categorizing DSL as unserved." Marking these locations as unserved will facilitate the phase-out of legacy copper facilities and ensure the delivery of "future-proof" broadband service.[4]
        2. Households in an MDU with DSL service experience different speeds based on the distance of the copper runs from the unit to the ISP's facilities. Providers try to overcome this limitation of DSL by pair-bonding copper wiring. In doing so, they effectively take 2 copper lines and turn them into one connection. As a result, only 1 of 2 households would have access to service; consequently, a substantial share of

[4] *NTIA Model Challenge Process* at 8.

households would now be unserved.

4. **Include a Module on Cellular Licensed Fixed Wireless served locations reclassified as "unserved"**
    a. **Recommendations**: The CPUC should treat the "served" locations on the National Broadband Map where Licensed Fixed Wireless using cellular technologies (e.g., T-Mobile or Verizon 4G/5G Home Internet) is the only technology at the location satisfying the "served" requirements as "unserved".
    b. **Justification**: According to speedtest.net, as of March 2023, the median cellular internet speeds in the United States are approximately 80 Mbps download and 10 Mbps upload,[5] which do not meet the definition of served.[6] Additionally, cellular networks, by design, have a significant drop-off of data rates the farther a user is from the source (e.g., a cell tower). Marketed data rates are often not reached at only 1-2 miles from the cellular source. While mobile broadband providers may not impose unreasonable data caps, they do impose throughput limits and deprioritization of traffic on data plans[7]. A heavy data user could be defined as a customer using as little as 50Gb of data in a single bill cycle. These customers can experience extreme data throttling (i.e., reducing bandwidth allocation) during periods of high demand when a network is congested; consequently, users will often experience inconsistent broadband service, including the inability to access speeds of 25/3 or 100/20 to meet the underserved or served requirements of the BEAD Program respectively.[8]

    Earlier this year, Assembly Bill 1065, amending the requirements of the California Advanced Service Fund (CASF) Broadband Infrastructure Grant Account and Federal Funding Account, aimed to expand CASF eligibility to include wireless projects. The bill was met with opposition from the community and ultimately vetoed by Governor Newsom. In his remarks concerning the bill and its impacts on communities, Governor Newsom uplifted the importance of reserving funding for "superior technologies", with a specific emphasis on the long-term reliability of fiber optic cables in

[5] *Speedtest Global Index: United States Median Country Speeds*, SPEEDTEST (last visited May 5, 2023), https://www.speedtest.net/global-index/united-states.
[6] See, Speed Test Global Index ranking mobile and fixed broadband speeds from around the world on a monthly basis.available at https://www.speedtest.net/global-index/united-states (Last accessed May 5, 2023)
[7]Examples can be found in Verizon's documentation https://www.verizon.com/support/broadband-services/ (Last accessed May 5, 2023)
[8] Additional examples of language from providers is provided in the Appendix to this letter

the digital era. This commitment to ensuring communities are future-proofed illustrates California's dedication to providing dependable connectivity for all residents.

5. **Modify the "Speed Test Requirements" to ensure municipalities and non-profits can support data collection resulting in mapping accuracy**
   a. **Recommendations:** The CPUC should eliminate the requirement of "A certification of the speed tier to which the customer subscribes (e.g., a copy of the customer's last invoice or signed certification by the customer of the speed tier and a statement indicating the customer is subscribed to the highest service tier available)" (page 21). The Commission should also eliminate the requirement of "An agreement, using an online form provided by the CPUC, that grants access to these information elements to the CPUC, any contractors supporting the challenge process, and the service provider" (page 21).
   b. **Justification:** These requirements are invasive, cumbersome, and unnecessary. This requirement necessitates customers to individually submit their internet bill when they may lack internet access and/or the digital skills to do so. The vast majority of plans available in these cities do not offer a subscription tier below served, meaning that all customers are paying for above 25/3 mbps.
   c. Requiring an agreement from each challenger does not allow municipalities and non-profits to support data collection at scale, which is needed to correct a map as erroneous as the National Broadband Map.

6. **Expand the state's definition of Community Anchor Institution to include public housing and/or *low-income communities*, as is currently being considered by the CPUC**[9]
   a. **Recommendation:** Adopt the inclusive definition of low-income communities currently under consideration for the CASF Broadband Public Housing Account Program, and include low-income communities in the state's definition of Community Anchor Institution.[10]
   b. **Justification**: As acknowledged in the Broadband Public Housing Account proceeding, the majority of qualified low-income Californians do not live in publicly-owned housing, but instead find housing in a wide array of publicly-supported and financed housing types. These often function as

[9] *See Order Instituting Rulemaking Regarding Revisions to the California Advanced Services Fund*, Assigned Commissioner's Ruling Inviting Comments on Proposed Modifications to Broadband public Housing Account Program, Rulemaking 20-08-021, at 3 (filed Apr. 27, 2023) (listing definition for "Low-income community").
[10] Further information about CPUC's "low-income communities" definition in the Appendix

Community Anchor Institutions in exactly the same way publicly-owned housing does, so should be considered as equivalent in the state's definition for BEAD eligibility.

We, the undersigned, very much appreciate your consideration of these recommendations and your service to the most unconnected in our state.

Sincerely,

Luisa Calumpong
City Broadband Manager
City of Oakland

Signature
DocuSigned by:
Luisa Calumpong
7C7439319B3C4DB...

Date
11/20/2023

Darin Arcolino
Chief Information Officer
City of Sacramento

Signature
DocuSigned by:
Darin Arcolino
C772C064B0C7469...

Date
11/20/2023

cc: Genevieve Shiroma, Commissioner
Darcie L. Houck, Commissioner
John Reynolds, Commissioner
Karen Douglas, Commissioner

Appendix

I. *Low-income community definition:*

- *B. "Low-income community" is a*
  - *a. A publicly supported housing development*
  - *b. Farmworker housing*
  - *c. Other housing development*
  - *d. Mobile home park*
  - *e. One or more Census block group(s), each with a median household income at or below 80 percent of the statewide median income or with median household incomes at or below the county-specific threshold designated as "low-income" by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093.*
    - *C. "Other Housing Development" is*
      - *(a) any multi-dwelling unit development in which all units are owned by the same entity(ies) and that has 80% or greater residential units that are "low-income;"*
      - *(b) tribal housing, including developments funded with Housing and Urban Development (HUD) funding or through a Tribally Designated Housing Entity (TDHE)*

II. *Cellular Fixed Wireless Provider Disclosure Language*

The following disclosure language was accessed directly from the websites of cellular fixed wireless providers Verizon and T-Mobile during the week of October 23, 2023. The disclosure language demonstrates that providers' practices of delivering inconsistent broadband service may leave many households, in reality, "unserved:"[11]

[11] Verizon and T-Mobile websites accessed during the week of October 23, 2023

Verizon:

Lack of speed guarantees

- Broadband Services Info & Terms of Service: *Speeds and plans vary depending on address/location, equipment, and network connection*
- Specific plan details are described in "Important Plan Information" which show most plans have a speed range that typically does not meet advertised speeds with only 1 plan claiming a range of upload speeds that meets BEAD served criteria of 20Mbs: "*5G Home Plus plan with up to 1 Gig download speeds"*

Lowering speeds based on:

- **Network load**
  - Broadband Services Info: *"On certain plans, we may prioritize your 5G and 4G LTE data behind other traffic. If the cell site you are connected to begins experiencing high demand during the duration of your session, your 5G and 4G LTE data speeds may be slower than the other traffic's. Once the demand on the site lessens, or if you connect to a different site not experiencing high demand, your speed will return to normal. Any such network management practices will be disclosed in the descriptions of impacted plans."*

- **Video Streaming**
  - Broadband Services Info: *Video speeds may be slower....in order to optimize customers' video viewing experiences...Verizon limits the throughput speeds of such video downloads or streams over our 5G and 4G LTE networks (which may be below the 9 - 56 Mbps 5G and 4G LTE download speeds typically provided)*

- **Data Usage**
  - From the customer agreement: *If the amount of a single mobile line's total monthly data use in a bill cycle exceeds the average amount of data consumed by the top 0.5% of users on our network during the preceding six-month period, we may reduce data speeds to your device to 4Mbps for the remainder of the cycle. If the amount of a single 5G Home Internet or LTE Home Internet line's total monthly data use in a bill cycle exceeds the average amount of data consumed by the top 0.5% of users on our network during the preceding six-month period, we may reduce data speeds for the remainder of the cycle to (i) 5 Mbps for*

LTE Home, LTE Home Plus and 5G Home plans, and (ii) 15 Mbps for 5G Home Plus plans. We can also temporarily limit your Service for any operational or governmental reason.

T-Mobile:

Overview:

- T-Mobile's terms of service make clear that speeds are not guaranteed, due to cellular technology limitations to the number of users and limited bandwidth causing congestion leading to lower speeds for users.
- Smartphones are prioritized over wireless internet (Wi-Fi) users.
- They also illustrate that certain video streams are "optimized", meaning downgraded, and that they even restrict access to certain TV streaming services.
- They reserve the right to implement other practices to ensure optimization, meaning additional throttling, deprioritization, etc.

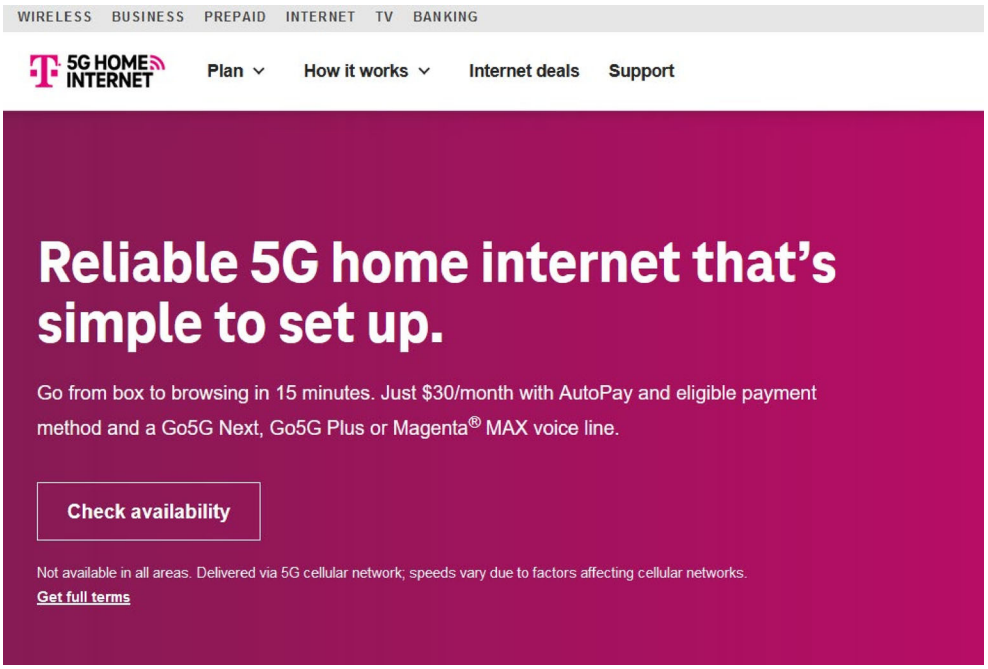
Sources:
https://www.t-mobile.com/home-internet

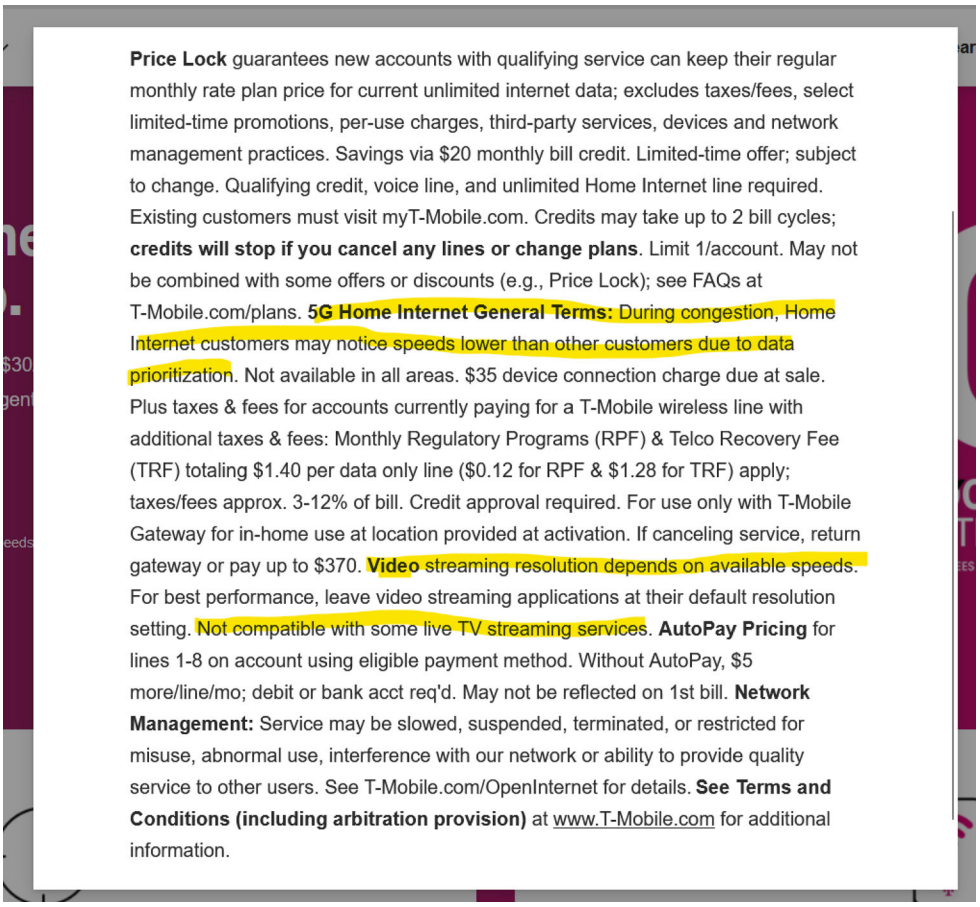
- Not available in all areas. Delivered via 5G cellular network; speeds vary due to factors affecting cellular networks.
- During congestion, Home Internet customers may notice speeds lower than other customers due to data prioritization.
- Video streaming resolution depends on available speeds.
- Not compatible with some live TV streaming services.

https://www.t-mobile.com/responsibility/legal/terms-and-conditions

- Your experience on our networks may vary and change without notice depending on a variety of factors. You agree that we are not liable for problems relating to Service availability or quality.
- We prioritize the data usage of a small percentage of our heavy data users, below that of other customers.
- Customers whose data is prioritized lower may notice speeds lower than customers with higher priority in times and locations where there are competing customer demands for network resources.
- We prioritize smartphone and mobile internet (tablet) over Smartphone Mobile HotSpot (tethering) and wireless internet traffic on our network.

- We utilize streaming video optimization technology in our networks to help minimize data consumption while also improving the service experience for all customers.
- Additionally, we may implement other network practices, to ensure optimized network performance as technologies evolve.
- Devices also have varying speed capabilities and may connect to different networks depending on technology. Even within coverage areas and with broadband-capable devices, network changes, traffic volume, outages, technical limitations, signal strength, obstructions, weather, public safety needs, and other conditions may impact speeds and service availability.
- We engineer our network to provide consistent high-speed data service, but at times and at locations where the number of customers using the network exceeds available network resources, customers will experience reduced data speeds.
- At times and locations where the network is heavily loaded in relation to available capacity, however, these customers will likely see significant reductions in data speeds, especially if they are engaged in data-intensive activities.





Price Lock guarantees new accounts with qualifying service can keep their regular monthly rate plan price for current unlimited internet data; excludes taxes/fees, select limited-time promotions, per-use charges, third-party services, devices and network management practices. Savings via $20 monthly bill credit. Limited-time offer; subject to change. Qualifying credit, voice line, and unlimited Home Internet line required. Existing customers must visit myT-Mobile.com. Credits may take up to 2 bill cycles; **credits will stop if you cancel any lines or change plans**. Limit 1/account. May not be combined with some offers or discounts (e.g., Price Lock); see FAQs at T-Mobile.com/plans. **5G Home Internet General Terms:** During congestion, Home Internet customers may notice speeds lower than other customers due to data prioritization. Not available in all areas. $35 device connection charge due at sale. Plus taxes & fees for accounts currently paying for a T-Mobile wireless line with additional taxes & fees: Monthly Regulatory Programs (RPF) & Telco Recovery Fee (TRF) totaling $1.40 per data only line ($0.12 for RPF & $1.28 for TRF) apply; taxes/fees approx. 3-12% of bill. Credit approval required. For use only with T-Mobile Gateway for in-home use at location provided at activation. If canceling service, return gateway or pay up to $370. **Video** streaming resolution depends on available speeds. For best performance, leave video streaming applications at their default resolution setting. Not compatible with some live TV streaming services. **AutoPay Pricing** for lines 1-8 on account using eligible payment method. Without AutoPay, $5 more/line/mo; debit or bank acct req'd. May not be reflected on 1st bill. **Network Management:** Service may be slowed, suspended, terminated, or restricted for misuse, abnormal use, interference with our network or ability to provide quality service to other users. See T-Mobile.com/OpenInternet for details. **See Terms and Conditions (including arbitration provision)** at www.T-Mobile.com for additional information.

WHERE, HOW, AND WHEN DOES MY SERVICE WORK?

These T&Cs describe the experience you can expect on our networks, including information about our reasonable network management practices, and the experience on our roaming partners' networks. Please check our coverage maps, which approximate our anticipated coverage area outdoors. Your experience on our networks may vary and change without notice depending on a variety of factors. You agree that we are not liable for problems relating to Service availability or quality. To provide the best possible experience for the most possible customers on T-Mobile or Sprint branded rate plans, for many Rate Plans, we prioritize the data usage of a small percentage of our heavy data users, below that of other customers. This threshold number is specified in your Rate Plan and is also periodically evaluated and may change over time. We also prioritize the data of customers who choose certain Rate Plans after the data for other T-Mobile or Sprint branded rate plans, but before customers who are prioritized as heavy data users. Customers whose data is prioritized lower may notice speeds lower than customers with higher priority in times and locations where there are competing customer demands for network resources. See your selected service or visit our Open Internet page at the link below for details. We prioritize smartphone and mobile internet (tablet) over Smartphone Mobile HotSpot (tethering) and wireless internet traffic on our network. We utilize streaming video optimization technology in our networks to help minimize data consumption while also improving the service experience for all customers. For example, a small number of Rate Plans experience video optimization via the Binge On feature. Some qualifying video providers may choose to opt-out of the Binge On program. For a list of opt-out providers visit http://www.t-mobile.com/offer/binge-on-streaming-video.html#[DI1] . The Binge On optimization technology is not applied to the video services of these providers, and high-speed data consumption will continue as if Binge On were not enabled. Additionally, we may implement other network practices, to ensure optimized network performance as technologies evolve. For example, some plans may offer gaming or audio streaming at standard or at high definition. Our Open Internet Policy, located at www.T-Mobile.com/OpenInternet[DI2] , includes important information on these topics as well as information on commercial terms and performance characteristics (such as expected speed, latency, and network practices.)

WILL MY SERVICE VARY? WHAT FACTORS MAY AFFECT MY SERVICE?

As our customer, your actual Service area, network availability, coverage and quality may vary based on several factors, including your selected service, network capacity, terrain, weather, if you are on a private or public Wi-Fi network, using a non-T-Mobile device, or if your Device no longer supports network technologies compatible with or available on T-Mobile's network or the networks of our roaming partners. Outages and interruptions in Service may occur, and speed of Service varies. Devices also have varying speed capabilities and may connect to different networks depending on technology. Even within coverage areas and with broadband-capable devices, network changes, traffic volume, outages, technical limitations, signal strength, obstructions, weather, public safety needs, and other conditions may impact speeds and service availability.

We engineer our network to provide consistent high-speed data service, but at times and at locations where the number of customers using the network exceeds available network resources, customers will experience reduced data speeds. In those cases, customers who choose certain rate plans may notice speeds lower than customers on other T-Mobile or Sprint branded rate plans, which are prioritized higher on our networks. Further, to provide the best possible on-device experience for the most possible customers on T-Mobile or Sprint branded plans and minimize capacity issues and degradation in network performance, we may, without advance notice, take any actions necessary to manage our network on a content-agnostic basis, including prioritizing all on-device data over Smartphone Mobile HotSpot (tethering) data and, for the vast majority of Rate Plans, further prioritizing the data usage of a small percentage of heavy data users (as defined in their Rate Plans) and wireless internet, below that of all other customers in times and locations where there are competing customer demands for network resources, for the remainder of the billing cycle. This threshold number is periodically evaluated and may change over time.

Where the network is lightly loaded in relation to available capacity, a customer whose data is prioritized below other data traffic will notice little, if any, effect from having lower priority. This will be the case in most times and locations. At times and locations where the network is heavily loaded in relation to available capacity, however, these customers will likely see significant reductions in data speeds, especially if they are engaged in data-intensive activities. Customers should be aware that these practices may occasionally result in speeds below those typically experienced on our 5G or LTE networks. We constantly work to improve network performance and capacity, but there are physical and technical limits on how much capacity is available, and in constrained locations the frequency of heavy loading in relation to available capacity may be greater than in other locations. When network loading goes down or the customer moves to a location that is less heavily loaded in relation to available capacity, the customer's speeds will likely improve. Visit www.T-Mobile.com/OpenInternet for details and for current data amount subject to this practice.