



**Testimony of Ernesto Falcon, Senior Legislative Counsel
Electronic Frontier Foundation**

**Before the
U.S. House Committee on Energy and Commerce
Subcommittee on Communications and Technology**

**Legislative Hearing On:
“Breaking Barriers: Streamlining Permitting to
Expedite Broadband Deployment.”**

**Washington, DC
April 19, 2023**

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Chair Latta, Ranking Member Matsui, Members of the Subcommittee, my name is Ernesto Falcon. I am the Senior Legislative Counsel for the Electronic Frontier Foundation (EFF). The EFF is the leading nonprofit organization defending civil liberties in the digital world. Founded in 1990, EFF champions user privacy, free expression, and innovation through impact litigation, policy analysis, grassroots activism, and technology development. With over 35,000 dues-paying members and well over 1 million followers on social networks, we focus on promoting policies that benefit both creators and users of technology.

My organization has been at the forefront of studying the future of broadband access in the high-speed market because without 21st century ready connectivity, you are not a full participant in society. We have conducted in-depth research and produced publications on the issue from both a legal and technical perspective. For years, I have interviewed ISPs, both big and small, consultants, municipalities, cooperatives, financial experts, and advocates for schools, libraries, and telehealth. My research asked two key questions in broadband policy: 1) What does 21st century access to the internet look like, and 2) What were the mistakes we’ve made in past policy decisions that prevented us from being there now?

The answer to the first question is straightforward, fiber optics. Fiber infrastructure underlies *all* advancements in broadband access today from satellites to fixed wireless to wireline. The answer to the second question is more complex and layered, and I appreciate the opportunity to share what I have learned with the Subcommittee in hopes of building on the successful policies initiated under the bipartisan Infrastructure Investment and Jobs Act (IIJA).

The Success of the Broadband Equity Access and Deployment (BEAD) Program is Critical to Our International Competitiveness

The EFF's goal in broadband access is focused on the deployment of universally available, affordable, and competitive fiber networks. EFF's focus on fiber is due to its properties as the only data transmission medium capable of low latency and cost-efficient capacity upgrades for generations to come, once built. We were original sponsors of the California broadband infrastructure law (S.B. 156) that promises to deliver the largest deployment of open-access fiber of any state throughout its rural and urban unserved and underserved areas.

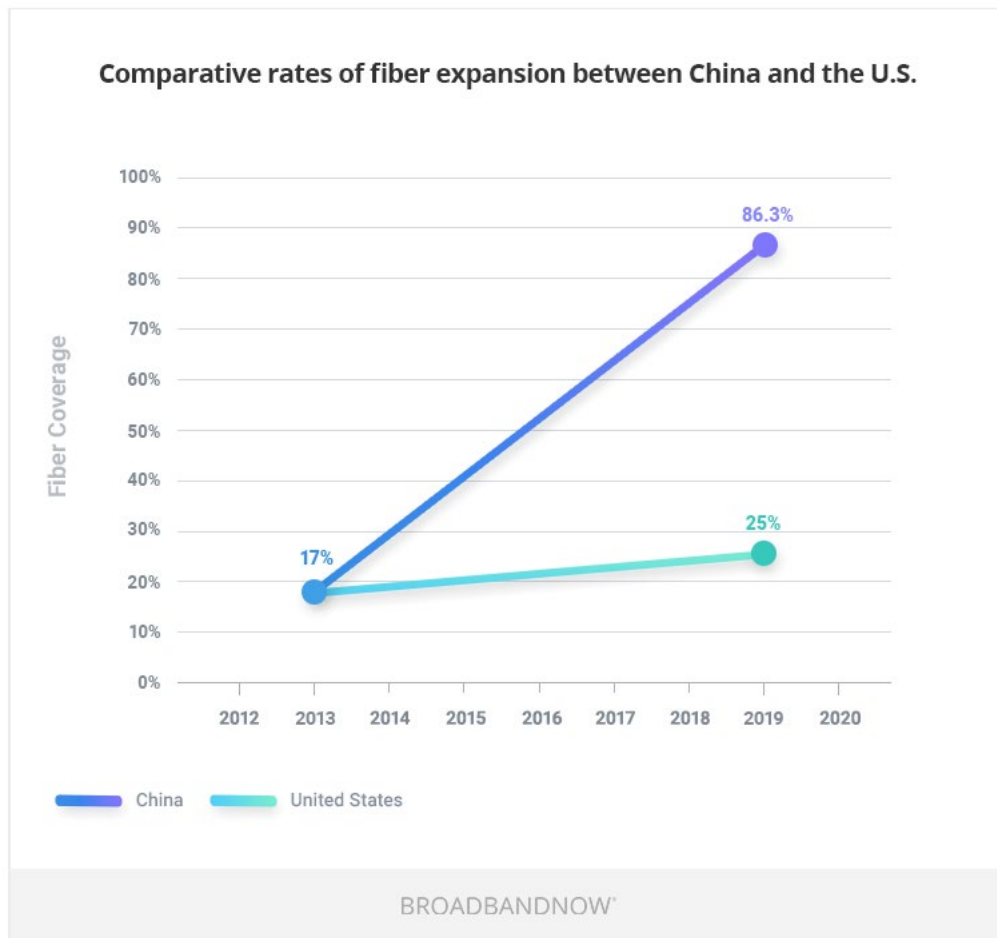
We were also strong supporters of the “priority broadband project” provision of the IJA that requires federal investments to focus on future-proof infrastructure that was scalable, able to meet evolving needs of households and businesses, and able to support 5G and successor wireless technologies. This prioritization of fiber infrastructure (except for “extremely high-cost” areas) by Congress and the Biden Administration is both necessary and essential for the United States to remain economically competitive with countries like China.

A published report by BroadbandNow¹ assessed that China's fiber infrastructure program has been building fiber connections nine times faster (chart on following page) than the United States since 2013. The country's “Belt and Road Initiative,” which has been its global development infrastructure strategy, had allowed China to run laps around the U.S. communications infrastructure on not just on fiber to the home (FTTH) but on 5G as well.² This is due to the convergence between FTTH and 5G (a vast majority of advanced wireless services are actually fiber wireline based) that Chinese telecommunications companies leveraged. China Telecom openly stated their plan to have both a universal fiber network with 5G deployment riding on top of the wires.³

¹ Tyler Cooper, *China's Fiber Broadband Internet Approaches Nationwide Coverage; United States Lags Several Behind*, BROADBANDNOW (Dec. 3, 2019), available at <https://broadbandnow.com/report/chinas-fiber-broadband-approaches-nationwide-coverage>.

² Susan Crawford, *China Will Likely Corner the 5G Market – and the US Has No Plan*, Wired (Feb. 20, 2019), available at <https://www.wired.com/story/china-will-likely-corner-5g-market-us-no-plan>.

³ Alan J. Weissberger, *China Telecom to Accelerate 5G Deployment; 100% Fiber Network Coverage; Gigabit Fiber Broadband Deployment*, IEEE COMMUNICATIONS SOCIETY, (Mar. 19, 2019), available at



This is why the EFF in 2019 declared that federal and state policymakers needed to come up with “fiber for all” plans⁴ in order to catch up. With the passage of IIJA and the various state infrastructure laws coming online, the United States now has the requisite focus and resources deployed to achieve a national upgrade towards 21st century ready infrastructure, but barriers still remain. EFF believes careful updates and recalibrations of federal, state, and local laws will ensure the promise of the NTIA’s Broadband Equity Access and Deployment (BEAD) program can be fulfilled. However, careful attention must be paid to ensure access is delivered to everyone while changing regulations to assist industry deployment.

<https://techblog.comsoc.org/2019/03/19/china-telecom-to-accelerate-5g-deployment-100-fiber-network-coverage-gigabit-fiber-broadband-deployment>.

⁴ Ernesto Falcon, *The U.S. Desperately Needs a “Fiber for All” Plan*, Electronic Frontier Foundation (March 22, 2019), available at <https://www.eff.org/deeplinks/2019/03/us-desperately-needs-fiber-all-plan>.

Why the Future Points Towards Fiber Infrastructure

Every community will need fiber-based infrastructure as envisioned by the Biden Administration. Future innovations in applications and services will rely on multi-gigabit near instantaneous transmission of data possible as soon a decade from now. Federal policy now appropriately presumes that usage will always grow. Since the 1980s, consumer usage of the internet has grown by 21% on average every year and that rate of growth has only shown signs of increasing, not decreasing.⁵

Using Openvault's finding that average use in 2021 was 207 Mbps downstream and 16 Mbps upstream, applying a 21% annual growth places usage in 2026 as over 500 Mbps downstream and 40 Mbps upstream. By 2032, average use will be nearly 2 gigabits downstream.⁶ Even conservative estimates for demand in rural areas predict the need for gigabit speeds by 2029.⁷

Crucially, downstream and upstream growth are not equivalent, with consumer need for upstream data growing at an even faster pace. As the pandemic underscored, people are moving toward remote socializing, remote learning, remote work, telehealth, and various other services that require high upstream speed and capacity as well. In fact, services reported an increase of 56% in upstream traffic in 2020 alone.⁸ This was not an aberration; these are the new facts of life when it comes to the provisioning of broadband service and upstream-limited infrastructure will be ill suited for the shift.

⁵ Doug Dawson, *Why Fiber?*, CircleID (February 13, 2021), available at <https://circleid.com/posts/20210213-why-fiber/>

⁶ Ernesto Falcon and Katharine Trendacosta, *The Future Is In Symmetrical, High-Speed Internet Speeds*, Electronic Frontier Foundation (July 2, 2021), available at <https://www.eff.org/deeplinks/2021/07/future-symmetrical-high-speed-internet-speeds>; See also Presentation, *Week 2: Why Fiber is the Only Future Ready Broadband* (January 12, 2022), Fiber Broadband Association's Fiber for Breakfast (January 12, 2022), available at <https://www.fiberbroadband.org/page/fiber-for-breakfast>

⁷ *The Rural Digital Divide: Fiber Broadband Can Eliminate The North American Rural Digital Divide*, Fiber Broadband Association (June 2021), <https://www.fiberbroadband.org/p/cm/ld/fid=978>

⁸ Dan O'Shea, *Pandemic Drove Upstream Broadband Traffic Boom: Openvault*, Fierce Telecom (April 1, 2021), available at <https://www.fiercetelecom.com/telecom/pandemic-drove-upstream-broadband-traffic-boom-openvault>

To contextualize the increase in average use, consider the many critical services that now require both high upstream and downstream capacity. At the start of the pandemic, the surge in home usage led to a massive degradation of service for capacity constrained networks. The cable networks operators and legacy telecoms dependent on copper wires were not ready to handle what we now consider normal volumes of data usage.⁹ Contrary to what many allege, American broadband infrastructure did not handle the widespread transition to remote well.

While most businesses will not transition to a 100% remote workforce going forward, nearly 80% of businesses now have work-from-home policies, signaling that remote work, and the demands it places on networks, is here to stay.¹⁰ The white-collar economy is no longer urban high rises, but suburbs, multi-tenement apartments, and Americans in rural areas who will all require a reliable, fast network to participate and contribute to the American economy.

Rural economies also increasingly require high quality, reliable broadband. Essential economic endeavors like agriculture, forestry, mining, and energy production are best suited to rural areas and, with increasing digitization, need greater speeds and capacity to remain competitive. Precision farming requires the use of ground sensors, drones, and satellite data to analyze the needs of the soil and monitor applications of water and nutrients on a foot-by-foot basis.¹¹

Beyond what is necessary for the future of work, drastically higher upstream speeds to the point of requiring symmetrical usage will be necessary for the future of person-to-person communication (telehealth, videoconferencing, distance learning) and entertainment. All these services require high upload speeds to establish a reliable connection. AR/VR technology as recreational entertainment and business uses will likely require higher upstream than downstream speeds to properly function.¹²

⁹ Cecilia Kang, Davey Alba, and Adam Satariano, *Surging Traffic is Slowing Down Our Internet*, New York Times (May 20, 2020), available at <https://www.nytimes.com/2020/03/26/business/coronavirus-internet-traffic-speed.html>

¹⁰ *The Future of Work: Analyzing Global Broadband Trends*, Fiber-To-The-Home Council Global Alliance (July 31, 2021), available at <https://www.ftthcouncil.eu/knowledge-centre/all-publications-and-assets/233/the-future-of-work-analyzing-global-broadband-trends>.

¹¹ *Supra* note 7.

¹² *Cloud AR/VR Whitepaper*, GSMA Future Networks (April 26, 2019), available at <https://www.gsma.com/futurenetworks/wiki/cloud-ar-vr-whitepaper/>.

The discussed projections only calculated usage out 10 years and all findings unanimously point toward the need for, at the very least, a gigabit connection for each person. Because usage will always grow, twenty years from now user demand could conservatively be in the realm of 6 gigabit per second symmetrical speeds.

History Shows us That Overriding Local and State Power Has Not Promoted Equitable Distribution of Broadband

Several proposals before the Subcommittee today, I believe, address parts of the puzzle to ensuring the successful implementation of BEAD, and I will suggest additional areas the Subcommittee should consider if it is to move a package to enhance BEAD's chances of success. However, we should remember some of the lessons we have learned along the way here. Past deregulation efforts did not lead to equitable deployment of broadband, but rather gave us digital redlining problems even in areas that were completely profitable to serve in the long run.

In 2005, the Federal Communications Commission (FCC) made a foundational decision on how broadband competition policy would work with the entry of fiber to the home. In short, the FCC concluded that competition was growing, government policy was unnecessary in deference to market forces, and that the era of communications monopoly was rapidly ending. We explored at length¹³ why the FCC was wrong, but there is more to the history. The federal decision to deregulate broadband was later followed by the decisions of many states, including California,¹⁴ to eliminate the local power of cities at the request of companies like Verizon and AT&T at the advent of FTTH.

¹³ Blake Reid and Elliot Browning, *Managing Last-Mile Monopolists: Reevaluating Sharing Obligations for the Modern U.S. Wireline Broadband Market*, Samuelson-Glushko Technology Policy Clinic at Colorado Law (May 3, 2019), available at <https://tpc.colorado.edu/tpc-releases-white-paper-for-eff-reevaluating-sharing-obligations-for-the-modern-u-s-wireline-broadband-market/>.

¹⁴ Eric Bangeman, *California Rewrite Cable TC Franchise*, Ars Technica (September 1, 2006), available at <https://arstechnica.com/tech-policy/2006/09/7641/>.

States began to consolidate local “franchises” into single statewide franchise agreements with ISP-backed laws, but not all states made that mistake. EFF researched¹⁵ the differences such decisions made and found wide discrepancies in broadband deployment. For example, in New York, where local franchising was maintained, New York City through local power was able to push the industry to connect hundreds of thousands of low-income households with FTTH. Meanwhile, the County of Los Angeles, which EFF estimates can deliver fiber in up to 95 percent of its territory¹⁶ commercially—without subsidies—languishes at 40% FTTH coverage today with systemic digital redlining.¹⁷

New York City understood that with its massive population, wealthy communities, business sector, and density, Verizon could provide fiber to every single home and signed that into a franchise in 2008. When Verizon discontinued its fiber service expansion in 2010, the city reminded the company that they had an agreement. The city decided to take Verizon to court to enforce their franchise in 2014, and while the litigation was lengthy, the city secured a settlement from Verizon to build another 500,000 FTTH connections to low-income communities.¹⁸

This wide difference between two similarly situated communities provides a key lesson for the Subcommittee as it contemplates the power balance between local communities and ISPs. Something must be in place to ensure equity in the deployment of broadband and typically that is through local governments. We can’t forget the “E” in BEAD.

While all of us want broadband networks to be deployed faster, a careful balance must be struck if we want broadband delivered to everyone. When we lose track of that balance, such as

¹⁵ *Supra* Note 13.

¹⁶ Benoît Felten and Thomas Langer, *Wholesale Fiber is the Key to Broad US FTTP Coverage*, Diffraction Analysis (October 27, 2021), available at <https://www.eff.org/document/wholesale-fiber-key-broad-us-ftp-coverage> at page 32.

¹⁷ Hernan Galperin, Thai Le, Kurt Daum, *Who Gets Access to Fast Broadband? Evidence from Los Angeles County*, USC Annenberg (October 8, 2019), available at <https://amicusc.org/publications/who-gets-a-access-to-fast-broadband-evidence-from-los-angeles-county-2014-17/>.

¹⁸ Scott Moritz, *Verizon to Expand NYC Broadband Access, Settling Suit with City*, Bloomberg (November 24, 2020), available at <https://www.bloomberg.com/news/articles/2020-11-24/nyc-says-verizon-settlement-to-build-out-high-speed-internet>.

the FCC's Small Cell Order, the local government ends up with the cost burdens¹⁹ with little to show for it in regard to improved access for low-income and unserved communities.

Congress recognized this problem by mandating that the FCC create rules with its new Digital Discrimination authority at the same time it created BEAD. Study²⁰ after study²¹ after study²² showed that major national ISPs have decided to invest in fiber-optic infrastructure in wealthy neighborhoods in large densely populated cities while skipping *profitable to serve* low-income neighborhoods in those same cities simply because the returns were not enticing enough. The result of this digital redlining has been the formation of two-tiered broadband infrastructure where wealthy communities easily access 21st century opportunities with low-cost, fast Internet while everyone else is left behind. The most recent report by The Markup detailed the extent this problem has been repeated across the country.²³

Overall Goals Should be Predictable Construction Timelines and Standardized Costs

Broadly speaking, the most important positive goals to legislating here will be providing private, public, and non-profit sector applicants with *predictable timelines* when entering the construction phase as well as *standardized fees* when accessing federal and state lands. Predictability is essential because delays result in increased labor costs with no countervailing benefit, which may turn a project that was once viable into a failure. Standardization is critical because the transition to fiber has changed how this infrastructure can be financed as well as the

¹⁹ *Stretched Thin and Feeling the Squeeze, The Harmful Effects of Small Cell Preemption on Local Government*, National Association of Telecommunications Officers and Advisors (March 2021), available at https://assets.noviams.com/novi-file-uploads/natoya/20210317_NATOA_CWAReport.pdf

²⁰ Vincent Le and Gissela Moya, *On the Wrong Side of the Digital Divide: Life Without Internet Access, and Why We Must Fix It in the Age of COVID-19*, THE GREENLINING INSTITUTE (June 2, 2020), available at <https://greenlining.org/publications/online-resources/2020/on-the-wrong-side-of-the-digital-divide>.

²¹ Galperin, H., Bar, F., Kim, A.M., Le, T.V., Daum, K., *Who Gets Access to Fast Broadband? Evidence from Los Angeles County*, *Spatial Analysis Lab at USC Price*, Annenberg School for Communication (Sept. 2019), <http://amicusc.org/wp-content/uploads/2019/10/Policy-Brief-4-final.pdf>.

²² Communications Workers of America & National Digital Inclusion Alliance, *AT&T's Digital Redlining Leaving Communities Behind for Profit* (Oct. 2020), available at <https://cwa-union.org/sites/default/files/20201005attdigitalredlining.pdf>.

²³ Leon Yin and Aaron Sankin, *Dollars to Megabits, You May Be Paying 400 Times As Much As Your Neighbor for Internet Service*, The Markup (October 19, 2022), available at <https://themarkup.org/still-loading/2022/10/19/dollars-to-megabits-you-may-be-paying-400-times-as-much-as-your-neighbor-for-internet-service>.

models. For example, it is now realistic for many new providers such as cooperatives, small local private, and public sector entities to approach these deployments with 10-to-30-year repayment plans because the fiber infrastructure will remain useful for decades beyond. Given that a supermajority of Americans view broadband as essential to their lives as water and electricity, the demand will remain stable, much like it did for electricity during rural electrification. The Department of Agriculture is fond of pointing out that no one defaulted on a loan from that era due to the sustained demand.

Many of the bills before the Subcommittee emphasize shot clocks and removing environmental reviews as the solution to the permitting process. The most expensive parts of deploying the network are the one-time sunk costs that come with the public works making up nearly 60-80 percent of a network deployment costs.²⁴ With fiber-optic infrastructure, getting it right the first time will provide a community with capacity that will last for decades, because future advancements in speed will only require changes in hardware, not additional construction. Understandably, shot clocks with deem-granted provisions are attractive and EFF has heard of certain instances where a city or incumbent pole owner is dragging their feet on approving a permit even for routine matters. We agree that it would be appropriate to direct some pressure toward reasonable timeliness in routine approvals such as utilizing an already existing right-of-way for incidental changes. However, the lion's share of the challenge is likely due to the lack of resources and staff available to process the volume of incoming requests.

H.R. 1241 Creates a Win-Win Scenario for ISPs and Local Communities

The amount of funding the federal government and states are providing to build broadband infrastructure is staggering. Building a broadband network is a public works project at a scale most communities have not seen in decades, so naturally the staffing in place to handle the construction is missing. This is why Congresswoman Fletcher's legislation, H.R. 1241, the

²⁴ EUROPEAN COMMISSION, *Analysys Mason: Support for the Preparation of an Impact Assessment to Accompany an EU Initiative on Reducing the Costs of High-Speed Broadband Infrastructure Deployment* at 36, <http://ec.europa.eu/digital-agenda/en/news/support-preparation-impact-assessment-accompany-eu-initiative-reducing-costs-high-speed>; See also INTERNATIONAL TELECOMMUNICATION UNION, *Cost Analysis for Fiber to the Home*, <http://www.ictregulationtoolkit.org/en/toolkit/notes/PracticeNote/2974>.

“Broadband Incentives for Communities Act,” is likely a win-win for both industry and communities motivated to facilitate their entry while protecting the public interest at the same time. It recognizes that broadband deployment is a mutual endeavor between cities and industry given the need for coordination between city assets and the deployment schedule.

Furthermore, new ways to utilize the rights-of-way are emerging to meet the demand for new fiber given the crowded nature of existing rights of way infrastructure. The legislation promotes additional methods of utilizing the rights-of-way with Sec. 3(b)(2)(B) by promoting expedited processes for things like micro-trenching. One suggestion I can make to the bill is establishing a method to take best practices beyond just the covered entity to help promote their adoption and standardization. EFF supported legislation in California that standardized micro-trenching rules for communities to help take the guesswork out of each local jurisdiction, which helped advance the deployment of new fiber providers.

To truly maximize the benefits of BEAD, at least as much attention must be paid to the staffing resource needs of permitting agencies, if more shot clocks are instituted to ensure predictable timelines. Otherwise, the lack of coordination could result in a lose-lose situation where public property is damaged in a way that makes the right-of-way unusable. For example, a rush to deploy could result in damaging critical electrical or gas lines.²⁵

Standardized Costs on Public Lands

Fees for use of public lands based on obsolescent models or seemingly arbitrary scales can be detrimental to the deployment of future-proof fiber. For example, EFF knows of an open-access fiber provider in California called Netfly Fiber,²⁶ which originally designed a plan to deploy 10,000+ strands of fiber optical wire throughout a community. Such capacity could be useful, potentially into the 22nd century, with the advancements in hardware that fiber could leverage; however, because a portion of their network had to pass a railroad, forcing a portion of the network to reduce its fiber count to below 432 strands. This was due to the incidental use fees

²⁵ *Supra* Note 19.

²⁶ See more about Netfly here: <https://www.netlyfiber.com/about-us/>

(see chart below) set by the county being designed around a deployment model where each household (and each individual wire) would pay a large subscription fee early and the county would recover a portion of it. An open-access model is premised on leasing *excess capacity* to multiple users at low costs and cannot operate on a per wire charge basis that would inherently penalize its future proof capacity. The result of this use fee structure was less fiber (and therefore less future-proof capacity) being provisioned to the portion of the community that was literally on the wrong side of the tracks.

Incidental Use Fees

| | |
|--|--------------------------|
| Set-Up and Administration | |
| Incidental Use Viability, Negotiations & License Set-Up Fee (One-Time) | \$1,500 |
| Administration Fee (Recurring Annually) | \$190 |
| Incidental Use Fees (Recurring Annually) | |
| Standard Transverse Wireline Crossing (Electric, Telephone, CATV) | \$2,000 |
| Telecommunication Fiber Optic Cable (0 - 432 strands) | \$4,500 |
| Telecommunication Fiber Optic Cable (>432 strands) | \$10.42/strand per cable |

Source: North County Transit District Board Approved Cost Recovery Fee Schedule

The Standard FEES Act before this Subcommittee heads in the right direction here by requiring consistency across all federal agencies so that applicants planning network build that must cross public land can account for their costs with confidence. It is important that the annual costs applied to a new network don't scale up on arbitrary metrics. Otherwise, long term financial models of new entrants will be rendered unviable. If we want to ensure the lowest possible price point for residents and businesses, keeping every additional cost applied to the network attached to actual costs is key.

Free Up the Public Sector

Congresswoman Eshoo's legislation, the Community Broadband Act, is probably one of the most important bills here before the Subcommittee. To get 21st century ready access to every single American, we must have an all-hands-on-deck approach. The private sector has limitations in how much risk they can tolerate and how long they can wait on a return on investment. Typically, the industry prioritizes areas that will yield a return on their investment at around 3 to

5 years, potentially even up to 10 years. That runs contrary to many of the goals laid out in BEAD, where Congress is seeking to connect the most difficult and expensive areas in our country. This is where the public sector's involvement is most needed.

Certain parts of this country will require an entity who is willing to accept zero profit and operate "at cost" in order to keep the price of broadband low. They may require an entity to accept a nearly 40-year low-interest debt instrument to long term finance the construction of the fiber with the goal of meeting the debt obligation and not much more. These factors are ill-suited for private sector participants who will not only want to avoid such areas, but also are unlikely to invest the requisite local resources needed to maintain the network in terms of staffing personnel and other operations and maintenance costs. In these instances, only the local community itself can meet the challenge.

California, which removed its own restraints on local government networks in 2018, went through this experience in recent years. The 2020 bankruptcy of Frontier Communications sent a wakeup call throughout its rural communities. The county governments concluded that if the only major private provider (which was still only providing obsolete copper-based DSL) has gone bankrupt, then they were on their own to build the future. And so, without any state restraints on their ability to map out their own destiny, they began to plan. Leveraging the passage of the state's infrastructure law, S.B. 156, the rural county governments formed a Joint Powers Authority known as the Golden State Connect Authority.²⁷ The plan they created, modeled after successful efforts in the state of Utah by its own municipalities, was to deliver open-access fiber to all rural residents. In their own financial models, they determined that if the state could provision them with long-term low-interest financing, they could reach more people with infrastructure than any private option ever could deliver, and they could enable small local private ISPs to flourish. They are beginning to build today even before the passage of the IJA and I believe every community in every state must be given the full range of options or they will fall short.

²⁷ See more about the Golden State Connect Authority here: <https://goldenstateconnect.org/>

Additional Ideas for Improving Deployment

One of the big bottlenecks that Congress can address is modernizing pole attachment rights to apply to the next generation of deployers. The pole infrastructure is a natural monopoly and requires regulation in order to address gatekeeper power, particularly if the pole owner is a competitor. This is exactly what happened when Google Fiber ran into roadblocks in Austin, Texas; AT&T refused to allow Google to connect to its poles solely on the premise that Google had no clear attachment rights. Current law gives privileges to telecommunication carriers and cable television providers, but not to standalone broadband providers. This promotes inefficiencies because one would have to structure their network to become something other than a standalone broadband provider (increasing their costs) merely to obtain key regulatory benefits. Ensuring that all broadband providers and infrastructure entities that enable broadband such as open-access carriers receive the same rights to attach to poles would go a long way to promoting BEAD applicants' ability to deploy.

But even if you grant the right, some balls and strikes need to be called about cost-sharing for accessing poles. Right now, the FCC is reviewing the appropriate rules for who foots how much of the bill when a new entrant wants to attach to a pole. There is real fundamental disagreement in the ecosystem between pole owners and broadband providers, and each dispute at each pole is a delay that undermines BEAD's success. EFF generally disagrees with the premise that new entrants must foot the entire cost of a shared resource given that all parties benefit from new poles, but the FCC must make decisions here to provide clarity and reduce delay. To the extent the Subcommittee is focused on the utilization of shot clocks on permits, imploring the FCC to conclude its proceeding on cost sharing rules in order to provide more predictable cost outcomes when attaching to poles, is also important.

Another discrete area that if improved would result in positive outcomes for broadband competition is building codes. Right now, older apartment buildings are unprepared to allow new entrants to enter and wire their premises. This is mostly because adding broadband access is generally outsourced to incumbent carriers, who merely wire the building for their own needs and have incentives to exclude competitors. Codifying legal rights for new ISPs to enter

apartment buildings along with incentivizing building owners to modernize their infrastructure to facilitate their entry, or for cities to update their building codes to require their buildings to have basic accessible conduit, would significantly reduce the cost to deploy in cities.

Lastly, small providers are at a disadvantage when navigating the bureaucracy of permits when running into federal lands. They would benefit significantly if it was clear there was some “lead” agency with responsibility for the timely resolution of a permit. Along with the need to provide additional resources to federal agencies to improve staffing to review and process permits, some centralized point of contact for communities would be beneficial. This is similar to what Kansas City did to attract Google Fiber back when cities were competing to be awarded a project. Rather than having the provider navigate several local agencies individually to process its permits for construction, the city provided a single point of contact who served as the interface with the other agencies.

What Should Change After BEAD is Done?

Looking forward, if BEAD is successful in delivering fiber infrastructure to many unserved communities, it will probably be time to abandon speed metrics as a means of testing whether an area is “served” or “unserved.” The reality is that on an all-fiber network, the cost differences between offering a gigabit connection, a ten-gigabit connection, and a hundred-gigabit connection, will continue to shrink rapidly. This is because the future of broadband as envisioned by the NTIA will be ever increasing speeds at lowering costs.

Therefore, it is time we plan the move away from using speed metrics as a means to determine if an area is receiving sufficient connectivity and broadly adopt the “priority broadband project” provisions to determine who is “served” and “unserved.” I would argue today using 25/3 mbps is generally a waste of everyone’s time as average user needs are 400% that number today. And unless the FCC regularly updates what is “broadband” with an annual increase of 21 percent to reflect the real-world consistent growth curve, the number obfuscates what’s happening on the ground. No one benefits if we set our metrics so low that any obsolete form of broadband infrastructure qualifies.

Are the connections in a community able to scale in a cost-efficient basis and can it support 5G and successor technologies? Will it be able to deliver faster speeds at lower prices in order to reduce the cost of subsidizing low-income user access? These are the questions we should pivot towards next after the rollout of BEAD based fiber infrastructure. Otherwise, we will miss the creation of a new digital divide premised on who has future-proof infrastructure and who is stuck in the past.