



April 15, 2022

The Honorable Sharon Quirk-Silva
Chair
Assembly Communications and
Conveyance
LOB, Room 169
Sacramento, CA 95814

The Honorable Jim Patterson
Vice Chair
Assembly Communications and
Conveyance
LOB, Room 169
Sacramento, CA 95814

The Honorable Ben Hueso
Chair
Senate Energy, Utilities, and
Communications Committee
Sacramento, CA 95418

The Honorable Brian Dahle
Vice Chair
Senate Energy, Utilities, and
Communications Committee
Sacramento, CA 95418

RE: \$40 Low Cost Offering within Federal Funding Account

Dear Chairs Quirk-Silva, Hueso, and Vice-Chairs Patterson and Dahle:

We write to you to respond to recent concerns raised regarding the California Public Utilities Commission (CPUC) intention to require minimum quality of service and price offerings for broadband networks that are fully subsidized by taxpayers. We wish to express full support for the CPUC's cost analysis and will detail in this letter why it would be appropriate for the government to set expectations on networks, particularly fiber networks, that are completely paid for by taxpayers. Such obligations would ensure that taxpayers receive the appropriate benefit of their subsidy dollars, but would also establish controls that prevent waste, fraud, and abuse over an infrastructure that many believe to be as important to their lives as water and electricity. At this time, it is critical the state sets the rules, expectations, and rigorous standards on what is to be delivered to Californians with its infrastructure program given that doing it right will solve the digital divide issue for decades to come. However, the risk of squandering this once-in-a-generation investment is significant and has already happened with past federal efforts.

By way of background, the Electronic Frontier Foundation (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 38,000 dues-paying members (with several thousand California members) and well over 1 million followers on social networks, we focus on promoting policies that benefit both creators and users of technology. EFF has been at the forefront of studying the future of broadband access in the high-speed market and has conducted in-depth research and produced both legal and technical publications on the issue. EFF's goal in broadband access is the deployment of universally available, affordable, and competitive high-speed networks. EFF focuses on fiber because it is the only data transmission medium capable of low latency and speed upgrades for generations to come that far exceed alternative last-mile options and is a necessary component for ubiquitous 5G coverage.



Establishing a Robust Low-Cost Offering Will Protect Consumers From Price Gouging and Ensure They Receive the Benefits of Tax Payer Funded Networks

Unserved communities by definition have no broadband options. Broadband today is enormously valuable to citizens — a recent Consumer Reports poll found that 80% of Americans view broadband access to be as important to them as water and electricity.¹ That level of demand for an essential service comes with a willingness to bear an awfully high level of pain in the wallet to obtain service, which creates a situation where monopoly exploitation is a real danger. To control for this, the CPUC established a bare minimum offering of \$40 at 50/50 mbps to ensure that an affordable offering is always present in order to prevent exploitation.

It is important to recognize the enormity of the gift the legislature is providing network providers: the state is willing to finance up to nearly \$10,000 per household completely at taxpayer expense, which will enable ***fiber gigabit capacity connectivity*** to virtually every Californian. Construction debt that carriers would be forced to wrestle with for decades to deploy these networks is completely being removed from the balance sheet and more importantly will not impact the monthly price for service. EFF's extensive cost model studies and research in this space has found that a fully paid off fiber network has potentially 1/10th the operations and maintenance cost of legacy networks and negligible costs to upgrade further.

Furthermore, it has been demonstrated that the “at cost” delivery (meaning the pure cost of providing broadband) could be ***as low as \$3 a month per household***. In the city of Chattanooga, Tennessee, for example, public data of the municipal ISP (which has completely paid off its construction debt) indicated that providing 100/100 mbps broadband to all low-income families with children in public school ***for free*** had negligible impact on their costs.²

In other words, fully grant financed networks paid for by the taxpayer are extremely profitable to the carrier and some means of controlling what they charge consumers is necessary to ensure that the taxpayer receives the benefit. Absent full rate regulation, establishing a basic tier is the most logical means of controlling costs for all users. Restricting the low-cost offering to just low-income users will have the perverse impact of subjecting middle-class residents to uncontrolled price hikes from a state funded monopoly.

To the extent large national Wall Street investor directed carriers have asserted to the legislature that they could not feasibly operate a fully subsidized network with a basic low cost tier offering, EFF believes these assertions to be categorically false. They simply do not want to operate networks that do not yield them obscene profits. Fortunately for the legislature, dozens of other local private and public providers have stepped up including the formation of a multi-county effort to deliver open access fiber to the home to all rural Californians without exception.³ In

¹ Jonathan Schwantes, *Time to Treat Broadband Like the Essential Service It Is*, TECHDIRT GREENHOUSE (Nov. 2, 2020), available at <https://www.techdirt.com/2020/11/02/time-to-treat-broadband-like-essential-service-it-is>.

² Chattanooga Area Chamber Press Release (Aug. 5, 2020), available at <https://chattanoogacalling.com/news/epb-provides-internet-for-hamilton-county-students-at-no-charge-for-low-income-families>.

³ RCRC Votes to Form Golden State Connect Authority, available at <https://www.rcrcnet.org/rcrc-votes-form-golden-state-connect-authority-gsca-broadband-all-rural-californians>.



fact, states that have emphatically embraced local small businesses and local governments to the exclusion of large private national carriers have only benefited from that choice. For example, North Dakota has no national private carriers and more than 2/3s of their residents already have affordable gigabit fiber to the home connectivity.⁴

The Danger of Waste, Fraud, and Abuse is Significant as Illustrated by the 2020 FCC's Hands Off Approach to the Rural Development Opportunity Fund

The above advice comes from watching the errors made during the FCC's process with the Rural Digital Opportunity Fund (RDOF); the CPUC has learned important lessons from the RDOF process and is endeavoring to not repeat those mistakes. In the course of the RDOF, more than \$9bn in the form of a 10-year subsidy was dispersed in a reverse auction process to companies that promised to deliver everything from 25/3 to gigabit service, defined as 1Gbps upstream and 500 Mbps downstream. One of the largest winning bidders was LTD Broadband, a wireless internet service provider that, in exchange for \$1.3bn, promised to provide gigabit service to more than 500,000 locations.⁵

A major problem is that the purported gigabit wireless technology does not currently exist in any rural market and has yet to come into existence.⁶ Wireless technology, on an engineering level, depends wholly on excess capacity from underlying wireline infrastructure. In other words, it is ***impossible*** to deliver gigabit wireless without an excess of multi-gigabit capacity in the underlying wires, i.e. fiber optics. LTD Broadband, a wireless internet service provider, should have been (but was not) vetted on its ability to deploy what is essentially a fiber to the home network as opposed to a network heavily dependent on wireless delivery.⁷

Similarly concerning was the \$885 million the FCC awarded towards SpaceX's Low Earth Orbiting Satellites (LEOs) to deliver 100/20 to about 640,000 locations.⁸ In even the best case scenario where SpaceX's Starlink fleet is at full size, has the maximum stated throughput capacity, and only serves RDOF locations, more than half of RDOF subscribers are predicted to have ***congested services by 2028***.⁹ Taking into account how SpaceX's LEOs would likely also serve non-RDOF subscribers and may not reach full fleet size or maximum stated throughput capacity, less than promised service would likely occur before then. These were not hidden secrets of industry but required in-depth scrutiny of unproven deployments that should have been compared against proven deployments that are happening in similar markets with cooperative,

⁴ Karl Bode, *Why North Dakota Has the Best Internet in the United States*, VICE (May 6, 2020), available at <https://www.vice.com/en/article/wxqegb/why-north-dakota-has-the-best-internet-in-the-united-states>.

⁵ Christopher Mitchell, *RDOF Auction Ends But Confusion and Corruption May Just Be Beginning*, Community Networks (December 9, 2020), <https://muninetworks.org/content/rdof-auction-ends-confusion-and-corruption-may-just-be-beginning>

⁶ Doug Dawson, *Fixing the RDOF*, Pots and Pans by CCG (February 3, 2021), <https://potsandpansbyccg.com/2021/02/03/fixing-the-rdof/>

⁷ Presentation, *Week 2: Why Fiber is the Only Future Ready Broadband (January 12, 2022)*, Fiber Broadband Association's Fiber for Breakfast (January 12, 2022), <https://www.fiberbroadband.org/page/fiber-for-breakfast>

⁸ Mike Dano, *Here Are All the Winners of the FCC's \$9.2B RDOF Auction*, Light Reading (December 7, 2020), [https://www.lightreading.com/opticalip/here-are-all-winners-of-fccs-\\$92b-rdof-auction/d/d-id/765937](https://www.lightreading.com/opticalip/here-are-all-winners-of-fccs-$92b-rdof-auction/d/d-id/765937)

⁹ Cartesian, *Starlink RDOF Assessment Final Report*, Cartesian (February 8, 2021), https://ecfsapi.fcc.gov/file/10208168836021/FBA_LEO_RDOF_Assessment_Final_Report_20210208.pdf



municipal and local rural private fiber to the home. The fact that SpaceX CEO Elon Musk noted the possibility of bankruptcy¹⁰ should serve as a reminder that regulatory expertise in protecting state investments is critical.

In both cases, lack of vetting and regulation meant more than \$2bn in RDOF monies went to companies that will likely fail to deliver future proof networks (let alone be ready for today's needs) and either undervalue or fail to deliver upon promised service ready for the future. The CPUC is charting a different course that the legislature should support, which is to exert proper, transparent, and rigorous vetting to ensure award process monies are used in a way that continues to yield value into the future. The need for this to happen across the state as the National Telecommunications Information Administration (NTIA) begins to deliver the \$45 billion of state grants is greater than it has ever been.

California is the First State to Set a Goal of Delivering 21st Century Ready Fiber Optic Connectivity, with No Exceptions, to All Californians with its Infrastructure Law

The historic passage of SB 156/AB 156 has set in motion for the state of California to be on par with global economies such as China. For the first time in telecommunications policy, a state had invested and made available enough funding to provide not just basic broadband service, but future proof fiber infrastructure capable of delivering multiple gigabits of capacity and enabling 5G and successor wireless advancements in rural markets. The passage of SB 156/AB 156 has provided the means to focus on delivering high quality and affordable services for all Californians, but doing so requires regulatory expertise at the helm, reliance on local communities to partner with the state, and skepticism of large national private industry players that have intentionally neglected these communities for decades.

Much as with rural electrification, delivering universal 21st century ready broadband access will come from working with new local private and public partners motivated to tackle what will be long term infrastructure needs of communities. The large national private industry players, all of which opposed SB 156/AB 156, have no interest in its success and should not be allowed to set the terms of its implementation.

Sincerely,

Electronic Frontier Foundation

¹⁰ Derek Wise, *Elon Musk Says SpaceX Could Face 'Genuine Risk of Bankruptcy' From Starship Engine Production*, SPACE EXPLORED (Nov. 29, 2021), available at <https://spaceexplored.com/2021/11/29/spacex-raptor-crisis>.