June 13, 2023

Senate Energy, Utilities & Communications
Chair Senator Steven Bradford - Senate Energy, Utilities & Communications Committee
Vice Chair Senator Brian Dahle - Energy, Utilities & Communications Committee
And members of the Senate Energy, Utilities & Communications Committee
cc: Committee Consultant’s Nidia Bautista, Sarah Smith
1021 O Street, Room 3350
Sacramento, CA 95814

AB 1065 Oppose

On behalf of the organizations listed we write to express our opposition to Assembly Bill 1065 (Patterson), which would utilize CPUC designated FFA (Federal Funding Accounts), that is exclusive for funding fiber projects, to be allocated to both fiber and wireless projects.

We Stand Behind the CPUC

The FFA has received $2 billion over three fiscal years to fund grants for last-mile broadband infrastructure projects. The CPUC has determined that the FFA fund be allocated exclusively for fiber and their reasoning for funding fiber only projects is that most funding should be reserved for superior technologies, such as projects using fiber optic cables, which reliably provide greater speed
capabilities and are much more likely to meet a user’s technological needs in the long run. As well, fiber projects are easier and less costly to upgrade!

**Shortsighted**

Don’t let the wireless carriers confuse you. The narrative that wireless is the best solution because it’s quicker and cheaper is not accurate. As well, it is playing on our emotional desire to solve the digital divide quickly. Telecom will invariably seek the cheapest, quickest, and most profitable path, which has led to the current emphasis on wireless. And rushing wireless infrastructure without broad analysis and due diligence is shortsighted and only serves to profit the multi-billion dollar telecom industry.

Although wireless technologies are sometimes the quickest projects to deploy and sometimes have less **upfront** costs compared to fiber projects to the premises (FTTP), in the end, wireless is actually more expensive. The cost of FTTP is actually less costly when you consider the overall quality, performance, energy efficiency, and lifetime expectancy. According to Electronic Frontier Foundation, “In any decision in building out a broadband network, we must also factor in its usefulness and capacity to handle the projected growth of consumption. For years without fail, data consumption has continued to rise as more applications and services require greater amounts of capacity.”

Wireless networks will require constant, expensive upgrades in the near future and as data demands increase. Over time, fiber optic cable to the premises will prove to be much more economical, with an investment return within 5 – 10 years and will outlast wireless for decades! No more 6G or 7G, etc., your job will be complete!

**Who’s looking out for the Cost and Impact to Consumers?**

And by the way, how many wireless antennas will it take to close the digital divide? Brenda Martinez is at the heart of an underserved community. She and her family live in Boyle Heights which is an area in East Los Angeles. This underserved area has **297 towers and 3,119 antennas** within a 3.0 mile radius according to antennasearch.com. During the Pandemic those towers and antennas weren't enough to give them the service they needed and the hot spot given to them as a solution from telecom didn’t help. As a matter of fact, these hotspots were recalled due to them catching on fire!

Brenda’s wireless plan was 100 mbps which couldn’t keep up with the demands of having 5 people in her family using it at the same time. So they often had to prioritize who got access. Service was often spotty and inconsistent, even though they were paying up to $200 monthly for their service! After talking to a fiber optic technician she realized that her neighborhood had access to dark fiber. So she galvanized her neighborhood and got fiber to the premises for her family and for her neighbors! Brenda and her family now have high quality broadband from a fiber connection to her home and the cost to her family? Just $50 a month. Incidentally, she is now applying for ACP reduced cost of $30 for 3,000 mbps! **Why aren’t we advocating for these communities like Brenda is?**

As you can see, wireless broadband, especially the kinds of basic services offered to low-income families, does not meet consumer needs and does not meet the 100/20 threshold guidance from the U.S. Department of the Treasury. Higher speed plans offered by wireless carriers come with a hefty price and are frankly out of reach for low income families and will never give them the speeds and performance generated by fiber.

Fiber is the best value for everyone to include low income families, rural communities and unserved and underserved communities. And according to Frank Clegg, former President of Microsoft Canada, “**Wireless technology is no longer advanced technology, it has outlived its usefulness as a main source of connectivity.**
Wired broadband is at least 100 times faster, more reliable, and resilient, and is far more protective of privacy, than wireless connectivity.”

Trying to use wireless broadband as a ‘quick fix’ for the digital divide will only perpetuate and widen the gulf between those with premium fast broadband and those without.

**Energy Waster**

One very important thing to consider is that wireless infrastructure is being touted as ‘green,’ but it is not. The energy consumption of wireless infrastructure, especially within the context of the rollout of 5G is exponential. The CTIA, which is the telecom industry trade association, states that 5G will require 5x more infrastructure than currently exists! As well, the IoT (Internet of Things) will connect billions of devices adding additional demands on the electric grid and has been deemed an energy hog and will double greenhouse gas emissions.

A report entitled Reinventing Wires - The Future of Landlines and Networks, answers the question; Why has the Internet been growing in an inefficient, insufficient, and unsustainable direction? Written by Timothy Schoechle, PhD a communications technology expert, and published by the National Institute for Science, Law and Public Policy (NISLAPP) whose mission is to reconcile legal and scientific concerns in the formulation of intelligent, safe, and sensible public policy.

The report shows:

- Up to 90% of this carbon footprint comes from wireless access network technologies.
- Exposes the explosion in electricity consumption up 460%
- An increase in carbon footprint from 6 megatons of CO2 in 2012 to 30 megatons in 2015.

**Basically the report shows** that “the excess energy needed to move data wirelessly through the air via wireless access networks is clearly the biggest and most inefficient consumer of energy in the cloud environment.”

This energy consumption is growing at an unsustainable rate, possibly doubling every two years. Wireless antennas require a significant amount of power to transmit signals, while fiberoptic (wired) broadband connections require almost none. But telecom will invariably seek the cheapest, quickest, and most profitable path, which has led to the current emphasis on wireless.”

**The Viable Answer for Californians is Fiber to the Premises**

In a white paper report written by Electronic Frontier Foundation, a non-profit digital rights group, it relayed that, “by every measurement, fiber connections to homes and businesses are, by far, the superior choice for the 21st century. It is not even close.”

The CPUC’s reasoning for funding fiber only projects is their belief that most funding should be reserved for superior technologies, such as projects using fiber optic cables, which reliably provide greater speed capabilities and are much more likely to meet a user’s technological needs in the long run.

That is why FTTP is preferred by experts to include the CPUC, the President's broadband advisory agency, the NTIA, who prioritized fiber to the premises over fixed wireless, and as relayed in a Benton Institute report which outlines these reasons stating, “Fiber is sustainable, scalable, and renewable. It offers greater capacity, predictable performance, lower maintenance costs, and a longer technological lifetime than fixed-wireless
technologies. Fiber service is not degraded by line-of-sight issues and is not affected by the capacity issues that constrain fixed wireless networks.” As you can see, fiber is the better value and in the long run, the better choice.

Now is not the time to derail all the work the CPUC has done to make sure Californians receive the highest quality and best broadband value, fiber to the premises. For the reasons stated above, we stand with the CPUC assertion that priority funding must be given to superior fiber optic connections and we respectfully ask that the committee vote no on AB 1065.

Sincerely,

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