

Written Testimony of

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Subcommittee on Communications and Technology

Regarding

"Connecting America: Broadband Solutions to Pandemic Problems"

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INTRODUCTION

Chairman Doyle and Ranking Member Latta, Chairman Pallone and Ranking Member McMorris Rodgers, and members of the Subcommittee, it's an honor to appear before the subcommittee again.

Of course, when I say appear today that means on your computer screens, not in the Rayburn House Office Building where I think we'd all rather be free to travel and see each other. In a sense, that's what today's hearing is all about. Not just the changes the COVID-19 pandemic brought to everyone's lives, and the disruptions many of us in this hearing have experienced but typically had the privilege and the safety nets to manage.

It's about the fact that I can afford a broadband internet connection good enough for our three children to attend school from here at home all year, for my wife to run her sole proprietorship as a children's musician holding virtual classes and online concerts from our home, and for me to work from home and join you all online this morning instead of traveling across the District to get there.

The question we must ask, today and always, is this: why can people who look like me and have backgrounds like mine more readily pay for connections that are still out of reach for nearly a quarter of the people in this country.

The answer is all too obvious.

COVID has changed everything. Social distance showed beyond a doubt that broadband is an essential utility for learning and livelihoods. Yet it has also changed nothing, merely highlighting and heightening the racial injustice and income inequality at our country's root.

We can measure the digital divide in many different ways, and my testimony will discuss a few of the most meaningful ones we've identified at Free Press Action, using data from the U.S. Census Bureau's Current Population Survey, the Federal Communications Commission, and other sources. But however we measure this divide between those who have the means to connect and those who don't, our 2016 report *Digital Denied*¹ showed systemic racism plays a staggeringly large role in perpetuating it.

The largest part of this complex digital divide is not people who have no access to broadband options in rural and other hard-to-reach areas, though that problem typically gets sufficient discussion if not sufficient investment. It's people who <u>do</u> have access to broadband today, but cannot afford to purchase it or choose not to adopt it. And as our research shows, this pernicious affordability divide is built on income inequality, with people in lower income brackets less likely to be connected at all—or if they do have a home internet connection, more likely to have a less adequate plan or mobile service alone instead of wired or other types of "fixed" broadband service.

But income alone does not explain the persistent gaps we see in adoption by different racial and ethnic groups. Income inequality is of course created in large part by systemic racism and racial bias, and economic disparity is a significant contributor to the digital divide. But there are adoption and deployment gaps beyond those attributable merely to differences in income, education, or employment figures for people in different racial and ethnic groups.

¹ See S. Derek Turner, Free Press, Digital Denied: The Impact of Systemic Racial Discrimination on Home-Internet Adoption, 105-119 (2016) ("Digital Denied"), https://www.freepress.net/sites/default/files/legacy-policy/digital denied free press report december 2016.pdf.

That's why adoption support programs and subsidies are such a crucial part of closing the digital divide. The FCC's Lifeline program, modernized to support broadband in 2016, was weakened by a series of unfounded and frankly cruel attacks undermining its authority and its capabilities during the prior administration. Restoring its vitality and ending these attacks is absolutely essential to the federal government's work to close the digital divide. But you must do more than cheer on that program, and the events of the last few months and at the very end of the last Congress show that you can.

The \$3.2 billion Emergency Broadband Benefit (or "EBB") passed in the December 2020 spending and stimulus bill was a landmark, bipartisan achievement. That is true even though it's only a temporary fund, and even though in some ways it arrived slower than it might have and yet moves extraordinarily fast. It became law more than half a year later than it should have, since the HEROES Act containing Representative Veasey's initial EBB bill and other important broadband measures first passed the House in May 2020. Yet it is now racing towards implementation in an FCC proceeding due to conclude in a matter of weeks, to get money out the door to people in need of connectivity support during the economic upheaval that COVID brought.

Once implemented, the EBB program will make available up to \$50 a month, and up to \$75 on Tribal lands, for any plan an eligible household can buy from participating internet service providers. That flexibility will be key to its success, allowing eligible households to choose any plan they like rather than either being shunted into pre-ordained "low-income" programs on the one hand, or on the other extreme being upsold and forced to buy more expensive plans just to use the discount.

Free Press Action worked hard with the bill's sponsors to make sure ISPs could be reimbursed for any plan a recipient may choose, not just for a pre-set plan at a speed and price determined by Congress or the FCC. Any attempt to tailor-make the offerings eligible for support, or to re-make the entire broadband market in that way, would have been far slower and less effective for providing emergency benefits than this healthy discount available for any and all retail broadband plans on the shelf today.

The program will succeed as long as ISPs keep working together with non-profits. Not primarily with advocacy groups like ours, though we've played a role; but more importantly with local community leaders and governments, grassroots organizations, and digital inclusion specialists, all to publicize the program and verify people's eligibility for the free and discounted plans these larger payments can temporarily secure.

This benefit will help narrow affordability gaps fostered by systemic racism and inequity that pre-dated the virus. And these inequities made it tougher to connect not only for people who lost jobs and significant income during the COVID crisis, but people already out of work, struggling to afford college, or trying to close the homework gap faced by kids whose families can't afford robust home broadband connections.

Yet Congress and the FCC too can do much more. They can expand and extend robust broadband support programs modeled after the EBB's flexible approach, but subsidizing so much of the retail price of broadband services offered at diminishing cost but increasing profits for ISPs is not the best and only long-term approach. Congress and the FCC also must address affordability by increasing broadband competition and choice in multiple ways, while restoring the agency's oversight of unreasonable practices too.

The third part of my testimony will explain in brief how the last four years at the FCC failed to close the digital divide meaningfully, despite the frequent claims to the contrary made by the just-departed Chairman. It suggests what else must be done at the agency and here in Congress, besides extending an EBB successor and then funding it from general treasury, spectrum auction proceeds, or other such progressive sources rather than increased or expanded regressive contributions from consumer ratepayers.

But the first two parts will demonstrate who is still disconnected, and the primary reason why they are:

It's poorer people who still face the biggest digital divide, sadly but not at all surprisingly. Disproportionately often, that means Black, Latinx, and Indigenous People.

And the main reason so many people cannot get online is the high price of broadband, which is an essential utility for modern life, and one offered in a tightening duopoly or even monopoly setting by ISPs raising their rates far faster than the rate of inflation—even as they cut costs, cut jobs, and cut investments.

I. Black, Latinx, and Indigenous People Faced the Biggest Digital Divides at the Start of the Pandemic, and They Still Do Now.

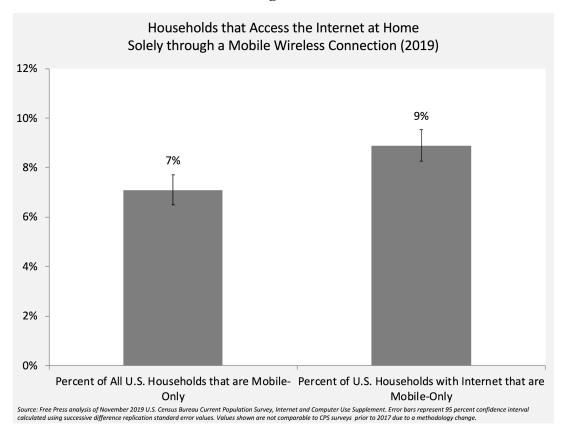
By the end of 2019, according to U.S. Census Bureau Current Population Survey data, approximately 4 out of every 5 households subscribed to the internet using either a mobile or fixed technology. While that overall adoption figure continues to grow, the rate of growth is slowing. And although this means that 80 percent of households are connected at home in some way, only about 68 percent of them subscribe to a wired broadband service.

This reflects the reality that a growing number of households are reliant on mobile data subscriptions as their sole form of access. That mobile service is vital, but mobile subscriptions alone tend to provide an inadequate quality and quantity of connectivity at all times, and especially during these times when many families are working and schooling from home.

Wired Home-Internet Adoption by Households and Persons age 3 and Above (2019)100% 90% 80% 72% 68% 70% 60% 50% 40% 30% 20% 10% 0% Persons (age 3+) with wired internet in home Households with wired home internet Source: Free Press analysis of November 2019 U.S. Census Bureau Current Population Survey, Internet and Computer Use Supplement. Error bars represent 95 percent confidence interval calculated using successive difference replication standard error values.

Figure 1

Figure 2



Broadband, like all technologies, follows what's known as an "S-Curve" of adoption. This refers to the trajectory of adoption over time, where initially uptake is slow, then accelerates, then slows again as the market reaches universal adoption (or a saturation level below such universal adoption).

Yet the slowing that we're seeing is troubling. It's increasingly clear that adequate broadband access at home is as necessary as telephone access at home was for most of the 20th century. But while household-level telephone adoption topped out at about 96 percent, both broadband adoption overall and wired broadband adoption in particular have a long way to go before they reach that level.

While the prior FCC in the Trump administration paid lip service to the issue of the digital divide, it all but ignored its racial and income aspects, and completely ignored the impact that a lack of adequate competition has on broadband prices and adoption.

What that means is that nearly all top income-earning homes are connected to the internet, with 84 percent of those people connected via a wired technology. But only 65 percent of people in the bottom income bracket are online, and just 48 percent of them have the wired connection needed to fully engage in distance learning. The overall internet adoption gap based on income is closing slightly, but this is largely due to poorer households adopting mobile. A low-income household is nearly four times more likely to be mobile-only than is a top-income bracket household.

In sum, this means that **77 million people in the United States** lack an adequate home internet connection (that is, they have no home internet at all, or they are solely reliant on mobile). This is far higher than even the most pessimistic estimates of the gap in deployment of 25 Mbps-level broadband (which range from 14 million according to the FCC's most recent progress report, to as much as three times that number based on outside analysts' re-evaluations of that FCC data).

And those without adequate home broadband are disproportionately people of color. While 26 percent of Census-identified "non-Hispanic whites" lack a wired broadband connection at home, that figure jumps to 34 percent of Black people, 35 percent of Latinx people and 41 percent of Indigenous people without such adequate home connectivity.

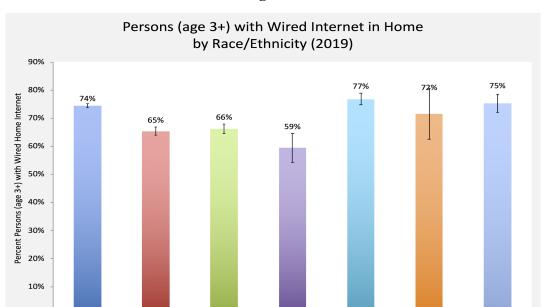


Figure 3

Source: Free Press analysis of November 2019 U.S. Census Bureau Current Population Survey, Internet and Computer Use Supplement. Error bars represent 95 percent confidence interval calculated using successive difference replication standard error values. Differences between values for non-Hispanic Whites and other races/ethnicities (except Asian, Native Hawaiian/Pacific Islander and Multiracial persons) are statistically significant at p<0.05. Values represent persons who live in a home with wired internet, but may not necessarily use the connection

Black

American Indian.

AK Native

Asian

Hawaiian /PI

Multiracial

Even when we add in other types of home broadband connections besides wired, like fixed wireless and satellite options, it's still 13 million Black people, 18 million Latinx people, and 1.3 million Indigenous Americans² who do not have the essential telecommunications services they need to fully participate in today's economic and education systems.

That is how we entered the pandemic: with a shameful lack of connectivity for people of less economic means, and for people and communities subjected to so much discrimination not just for the last four years but the last four hundred years too. Why is there so much we must repair to get people connected?

0%

White, Non-

Hispanic

Hispanic

² This corrects an error in the original testimony submitted on February 17, 2021. That version omitted the decimal point in the number of Indigenous people lacking adequate connections. *See* https://docs.house.gov/meetings/IF/IF16/20210217/111199/HHRG-117-IF16-Wstate-WoodM-20210217-U2.pdf.

II. Broadband Prices Are Still Too High and Rising—Before and During a Pandemic—Despite ISPs' Record Profits and Falling Investments.

While plenty of goods and services get more expensive over time, broadband stands out for several critical reasons.

First, broadband prices consistently increase faster than the rate of inflation while the providers' own costs do not. That makes this increasingly-critical infrastructure service both more expensive in real terms to users, and more profitable for the ISPs.

Second, in almost all consumer product markets, particularly those involving technology, producers offer a wide array of service offerings that attract buyers of all means. But as the broadband market matures, the nation's top ISPs are increasingly moving away from low-priced entry-level tiers in favor of higher-priced, higher-speed packages, which they market as having increased value. That may be true for some, but it's of little use or consolation to people already unable to afford the service today.

Third, in many markets prices are more transparent to buyers. But in the wired broadband market especially, providers market promotional prices to new customers, but increasingly refuse to publish what their monthly charge will be after the introductory rate expires. In addition, many wired ISPs impose additional charges such as data overage fees and equipment rental fees. The latter practice is particularly burdensome, as these rental fees (which also continue to rise even as the ISP's own costs to procure this equipment decline) are often for modems and routers that people could purchase from retail providers. And until Congress stepped in recently, some ISPs would charge their customers a fee even for declining to use the providers' rental equipment.

Fourth, though it moved away from it for a time, the U.S. wireless market has now again fully embraced upfront handset device subsidies as a way of getting customers to enter into expensive two and three year service agreements. While this arrangement may seem beneficial to some customers, it has the impact of distorting the markets both for handsets and wireless service too, and it reduces pressure on wireless providers to compete on price. The recently-completed T-Mobile/Sprint merger only exacerbates this problem of reduced wireless pricing competition.

Finally, there was once a period when customers who lived in areas with a modicum of home internet competition could negotiate a lower rate when their promotional period ended. But even that is increasingly difficult as carriers focus on higher-return customers, and as cable ISPs widen their lead over legacy telephone companies' remaining DSL service. ISPs such as Charter and Frontier have said they've stopped or reduced customer retention efforts, and anecdotes from other ISPs' customers reflect the industry as a whole moving away from retention policies. Thus for many customers, they're stuck on a non-promotional rate, and have to go through the headache (and switching costs) to chase a potentially lower promotional rate from a different ISP, if they're even fortunate enough to have a reasonably comparable alternative.

This all adds up to bad news for internet users, and helps to illustrate why measures like the Emergency Broadband Benefit are so important to offset high and rising prices, but by no means the only measure we should take to combat these increases.

> Broadband Pricing Methodologies and Studies Vary, But We Need More Data on the Actual Prices Individual Customers Pay Each Month.

There are different ways of measuring broadband prices. Understanding each is important for lawmakers' efforts. The broadband market is not like many product markets, where the price advertised is the price everyone pays. Prices in markets for many other consumer goods, commodities, and even other utilities can be far more transparent and easier for researchers to measure. In contrast, the broadband market is a complicated maze for users, with a myriad of promotional and non-promotional prices, hidden fees, and constant price hikes excused by carriers as "value enhancements."

With broadband, there are three main types of prices we can track:

- <u>Price Paid</u>: This is the most important metric when discussing broadband prices, as it is the actual dollar amount a customer forks over each month to their ISP. This price often includes not only the main service price, but additional fees for equipment rental or data use charges.
- Advertised Price/"Rack Rate": Though ISPs' advertised prices are often the easiest metric to track down, this price does not reflect the reality of what people actually pay each month for broadband service. Further, the published prices are often a promotional rate; and because many ISPs make it difficult or impossible to know what prices they charge after promotional periods end, the utility of this metric for policy purposes is limited. The advertised price is still informative, as it reflects the approximate price new customers can initially expect to pay, and gives an indication of whether and how ISPs are serving different customer segments.
- Quality-Adjusted Price: ISPs and those who would like to put a positive spin on constant price increases in this market often cite quality-adjusted prices, usually calculated from published rates divided by the downstream speed of the service, producing a unit of "price per Megabit." Like all data, this is informative; but it can be presented in misleading ways, and may not reflect the practical implications of a price increase. Current customers may be perfectly happy with their current service package, and not look favorably upon a 10 percent price increase that comes with a 25 percent increase in speeds. And people currently unable to afford broadband can no more easily afford it when the price goes up, even if the "value" goes up too.

When it comes to this last category, it is important to keep in mind that in a technology product market the expectation should be for quality-adjusted prices to continually decline, as the technology evolves, the market matures, and providers' reap the benefit of signing up more customers for infrastructure they've already deployed.

But it's that first category—the actual price customers pay every month—that is the most important metric to have for economic analysis and policy-making. And it's the one we're most lacking today because the FCC has not collected granular pricing data directly from ISPs and this information is not easily obtainable from any other source.

However, we can work towards average prices paid (if not individual variations in this key metric) with two methods: using publicly-traded ISPs' reports to the SEC, we can calculate Average Revenue per User (or "ARPU") for residential broadband services.

And there are a variety of surveys that estimate what people are paying on average for broadband and wireless services. By far the most comprehensive of these surveys is the Bureau of Labor Statistics' ("BLS") Consumer Expenditures Survey ("CEX"). This massive survey is conducted quarterly and gives a window into the typical household's outlay on these and many other goods and services. Unlike ARPU data, the CEX data captures the entire U.S. market, not just what is happening at large publicly-traded firms. Yet while the CEX is a very high-quality data source, it also has limitations. Like all survey data, it requires respondents to actually know their broadband expenditures; and further complications crop up when respondents have to estimate the portion of a bundled service bill allocated to broadband.

> The Data We Have Shows People Are Paying More While ISPs Spend Less.

With these data types and limitations in mind, we can look at how U.S. broadband prices and broadband provider performance have changed over the years, and especially during the last few years. For consumers, the results are not good: no matter how you look at it, broadband prices continue to rise far faster than the rate of inflation. Furthermore, the lower-priced tiers that are attractive to newcomers to the market and lower-income families are gradually disappearing.

- According to the BLS, the average U.S. Internet customer's monthly broadband bill in "real" terms (*i.e.*, adjusted for inflation) **increased 19 percent** from 2017 through the end of 2019—the first three years of the Trump administration. The increase will surely be above that once 2020 data is reported too.
- This means the nominal increase in the average bill was **more than four times the rate of inflation** during those three years.
- This CEX data also indicates that from the end of 2016 to the end of 2019, prices for cellular phone service increased "only" 1.3-times the rate of inflation in the general economy.
- But another BLS metric, the wireless consumer price index (which is a quality-adjusted metric, based on published prices), signals trouble after more positive news for eight years. With the T-Mobile/Sprint merger closing last April, the wireless CPI spiked 4.1 percent in 2020. Before that, no annual increase in this index had exceeded 1 percent since BLS began tracking it in 1998. We can't say for sure the merger caused this, but it's hard to ignore the timing.
- And after a lengthy period of single digit year-over-year increases, quality-adjusted prices for home internet services declined significantly in 2015 and continued to do so until mid-2018, when they started to rise once again.

How did ISPs fare in this time? They grew their profits before and during the pandemic by increasing actual charges at levels far exceeding the rate of inflation. For example:

- Between 2016 and 2019 the average price paid by a Comcast customer for residential internet service increased 15 percent, more than double the rate of inflation for all goods and services during that four year period.
- In 2020 Comcast enjoyed its largest-ever single year growth in residential high-speed internet customers and revenues. Comcast's cable segment operating profit margin jumped significantly to 42.1 percent, despite continued declines in its traditional cable TV business.
- Charter's residential internet customers also paid 15 percent more each month on average in 2020 than they did in 2016, double the rate of general inflation.
- Charter saw its largest-ever single year growth in residential high-speed internet customers and revenues during 2020. Its operating profit margin jumped significantly to 38.3 percent, the largest single year increase in profit margin since it closed its acquisitions of Time Warner Cable and Bright House.

Numbers like this, combined with reporting on price increases from other large ISPs, and the re-imposition of data caps that providers either waived last year during the first few months of the pandemic or that they'd held off on imposing for even longer, are not encouraging. We were pleased to see Chairman Pallone, Chairmen Doyle, and Representative McNerney write to nine large ISPs last month to inquire about their pricing practices and data usage restrictions during the current emergency.

Whatever their answers may be for any temporary plans and practices, the kinds of price increases propping up these eye-popping profits are devastating. That's true not only for people already paying too much for broadband yet lucky enough to have it, but for people unable to afford any broadband options in the first place.

In fact, lower-priced entry-level options are disappearing, raising the adoption barrier for low-income families even further.

The FCC's Urban Rate Survey data (another study based on advertised rates rather than actual prices paid) indicates that non-promotional rates for lower-priced, standalone broadband tiers rose 20 percent between 2015 and 2020, more than double the rate of inflation. Many ISPs are eliminating their budget tiers altogether, at least when it comes to offerings outside of their means-tested "low-income" plans. Entry-level prices in some markets have increased by 50 percent or more in the past four years.

These types of price increases may not seem significant to people who are well-off and don't live paycheck to paycheck. But for tens of millions of families, these increases are felt deeply, forcing difficult decisions about which services to forgo so they can maintain critical internet access services.

What's more, these broadband price hikes come even as ISP's own costs to provide service continue to drop. Capital investment by providers large and small declined during the previous four years, with substantial declines at large companies like AT&T (where 2020 investment was 20 percent below 2019's total and 52 percent below 2016's on an inflation-adjusted basis), and Comcast (where 2020 cable segment investment was 4.5 percent lower last year and 22 percent below 2016's level on an inflation-adjusted basis).

According to the most-recent Census data, in 2019 the U.S. telecom industry as a whole saw the largest non-recession year decline in capital investment since the aftermath of the 2001-2003 telecom bubble bursting. Based on data from leading ISPs, 2020's industry-wide investments are expected to be even lower than 2019's.

That means that, despite any bluster or spin to the contrary, broadband investment declined every year of Chairman Pai's tenure. We'll never say this was Chairman Pai's fault. As we've been explaining for years, and as ISPs themselves explain quite clearly to Wall Street, broadband investment is cyclical and driven by factors like competition, demand, and technology evolution, not FCC regulations.

Yet what Chairman Pai must be faulted for is the false premise underlying his chairmanship. He claimed that deregulation alone would spur investment and decrease prices. **It did not**. And even if it had, buildout alone would not lower prices or increase adoption in the absence of competition, oversight, and more robust adoption subsidies.

This data is broad and indisputable. Broadband prices are increasing faster than the rate of inflation. And the best-available data indicates that the pain of these increases is most acute for low-income consumers and others who seek lower-cost service offerings. This should worry anyone who wants to see the economic and racial digital divides closed. It should also be a top concern for policymakers contemplating how to ensure that everyone has internet access during this global pandemic.

III. The Emergency Broadband Benefit and More Recent E-Rate Expansion in the Committee's Reconciliation Package Are a Welcome Change in Direction, But We Need More Affordability Supports and Competition Spurs.

The results from the last four years of FCC inaction on affordability are plain to see. Prices for the general population and for people in need of lower-priced entry-level plans went up, as broadband providers merged, built market share, and generally enjoyed the fruits (for them) of a less competitive landscape. Tens of millions still lack adequate home broadband connections during this pandemic.

The last FCC wasted its opportunities to act on affordability, yet never wasted an opportunity for unjustified boasting about its alleged accomplishments. A fuller litany of the last four years is available in Free Press's filing last fall in the Commission's most recent broadband progress report docket.³

That filing reported the discouraging adoption numbers for Black and Brown communities detailed in Part I above, and gave a more comprehensive accounting of aggregate and individual ISPs' investment declines described in Part II above. It also explained that broadband competition decreased from already meager levels over the last four years, while the vast majority of any increases in fiber deployment and broadband speeds were the result of plans and investments commenced during the prior administration. For example, when it came to deployment:

- The rate of growth in basic broadband deployment at lower speed actually tiers slowed during the Pai era when compared to the prior administration.
- Fiber deployment under Chairman Pai was exactly what one would expect based solely on the deployment trends from the prior eight years accelerating at the predicted rate.
- Some 92 percent of Pai-era fiber deployments came from projects announced during 2015-2016, and AT&T's DirecTV merger buildout commitment (that Pai opposed) accounted for two-thirds of all new household fiber deployments during his tenure.
- AT&T's fiber deployments all but ceased upon completion of these Obama-era commitments.
- Increases in availability of very-high speed cable broadband services were likewise planned, publicly announced, or begun before Pai's tenure as chairman ever began.

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³ See Comments of Free Press, GN Docket No. 20-269 (filed Sept. 18, 2020), https://www.freepress.net/sites/default/files/2020-09/free press 2020 section 706 inquiry comments.pdf.

And in terms of competition and other broadband price and performance metrics:

- At the start of 2014, cable company ISPs controlled 59 percent of the home internet market's customers, but today the cable industry's share is above 68 percent.
- According to BLS data, and as detailed far more extensively above, home internet
 and wireless prices are rising, reversing decreases seen after Title II went into
 effect and before T-Mobile and Sprint started talking merger.
- Chairman Pai often bragged about growth in average broadband speeds, but using the same data he did (from Ookla speed tests), we see that growth in speeds was slower in the Pai era than it was in the last three and a half years under the prior FCC.

Before looking ahead, to what a new Congress and a new FCC can do beyond the great strides already taken with passage of the EBB and last week's E-Rate expansion voted out of this Committee, it's important to say a word on the results of Chairman Pai's "Keep America Connected" Pledge.

That Pledge certainly was not a bad idea in a vacuum, but it could have been so much more useful and comprehensive if the FCC could have required the continuation of service and prohibited unreasonable data caps rather than merely asking ISPs to step up to the plate. Many ISPs did do the right thing, at least for the first several months of the crisis last year, and (less often) with continued relief and expansion of free and reduced-price offers this year too. A shut-offs moratorium, and other measures the House actually passed in the HEROES Act, could potentially have been implemented at the FCC too, if the Commission had not surrendered the authority it has over broadband telecommunications under Title II.

But the Pledge may not have prevented as many disconnections as one might have expected, even though this silver lining provided no real cause to celebrate either.

The number spared disconnections by the Pledge has been difficult to tabulate, not only because ISPs took these steps voluntarily, but because they were not required to report results to the FCC or their investors in any standardized format. Free Press estimates the figure was relatively low, based on these inconsistent reports. We believe approximately 1 million households used the Pledge to maintain residential wired broadband access, and can even more roughly estimate a figure in that same range for the big three wireless carriers combined. Of course, there were also hundreds of complaints filed at the FCC by people who said their providers had not honored Pledge promises.

To characterize a million or two broadband customers potentially benefiting from the Pledge as relatively low should do nothing to minimize the benefits those people obtained. Keeping anyone online in the pandemic was of immeasurable value to their health and safety, economic prospects, educational opportunities, and family connections. But to say that only a million or so customers benefited from the Pledge may tend to suggest that the economic upheaval of the pandemic did not result in a terrible broadband cataclysm and a deepening of the digital divide.

Yet that's likely the case for two reasons: as the adoption figures in Part I illustrate, many people most likely to be impacted by the economic downturn were already offline. They couldn't lose what they already lacked. And as other data suggests, such as ISPs' increased subscriber counts during the pandemic and people reporting increased personal usage, millions who had difficulty affording broadband likely made it work anyway because they had no other choice during the COVID crisis.

So what can Congress and the FCC do next, to ensure not only the success of current emergency broadband measures, but to ensure that more people are connected reliably and affordably once the current health crisis ends?

Free Press has published broadband priorities for 2021 and beyond in various advocacy and academic materials over the last few months, but we look forward to more concrete action from the new administration, the FCC, and Congress too, on the solutions to make affordable connections available to everyone. Just for a start to improve affordability and adoption, especially by people of color, on Tribal lands, and in low-income communities more generally, we must:

- Wholeheartedly support Lifeline, and stop the attacks on that program launched by the last FCC, while also ensuring businesses contribute their fair share to USF.
- Explore more progressive ways to fund broadband support mechanisms as we did with the EBB, not only for people already eligible for Lifeline, with a mix of direct appropriations, spectrum auction revenues, or possible tax-credits to reduce the prices that working families and others pay for broadband today.
- Support legislation mandating FCC collection of data on the actual prices people pay for broadband, to provide a comprehensive picture of cost-based barriers to adoption and formulate policies to address them.
- Restore the FCC's authority under Title II of the Communications Act to investigate and stop unjust and unreasonable practices and penalties, because as the FCC's remand decision in the *Open Internet* litigation shows, a lack of authority jeopardizes Lifeline, the FCC's authority to promote competitive broadband facilities, and public safety too.
- Support FCC action, and new legislation if necessary, to allow for broadband wholesaling and resale competition from providers that do not own their own networks. That kind of competition is still present in the wireless market to some degree but has almost disappeared in the wired broadband market.
- Support legislation that removes barriers to municipal broadband projects, and other cooperative and competitive initiatives, while using federal broadband-deployment subsidies to support local decision-making on construction and maintenance of these kinds of networks.