

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Report on the Future of the Universal Service	)	WC Docket No. 21-476
Fund	)	
	)	

**COMMENTS OF FREE PRESS**

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## EXECUTIVE SUMMARY

The U.S. telecommunications market has significantly evolved since Congress last overhauled the Communications Act more than a quarter century ago. But unfortunately, the Commission's universal service policies have not.

However, the Commission now has before it an opportunity to reimagine and reinvent universal service policy for the future. When the Commission and Congress last embarked on designing what was then a new era of universal service and pro-competitive policy in 1996, the good intentions that fueled that effort are no longer a reliable blueprint in a fundamentally changed marketplace. And however good those original intentions were, their implementation since 1996 has been marked by too many missteps and cascading concessions to incumbents.

Over the past two years, Congress has appropriated more than \$80 billion to address the nation's broadband deployment, adoption and homework gaps. The more than \$50 billion in deployment funding alone should ensure that people living in rural areas are no longer left without access to broadband. This historic investment also sets the stage for the Commission to revisit its universal service policies in order to align them with Congress's vision of a competitive market that provides high-quality affordable services, and policies that protect users from unjust and unreasonable practices.

The current universal service regime was constructed based on the particulars of the market as it was in 1996, an era with no last-mile, facilities-based wireline competition, and with only modest levels of wireless deployment in rural areas. In the years since, rural areas have seen widespread deployment of mobile and fixed wireless services, the entry of satellite telecommunications services, and substantial — though not universal — wired broadband deployments. Yet the FCC's high-cost universal service policies in particular remain structured to benefit legacy telephone company incumbents, and the result is massive waste of scarce funds. The Infrastructure Act's investments take away any last excuses for maintaining these outdated policies. Indeed, Congress recognized as much, and mandated this inquiry so that the Commission could revisit its policies and revise them for the future.

The Commission's overhaul of its universal service policies in 2011 was long overdue, and improved what came before. But it still protected telephone company interests and did not take advantage of market forces. This changed with the Rural Digital Opportunity Fund ("RDOF"). Though this new program was certainly not without its problems, documented extensively by Free Press and others, it demonstrated that if subsidies were made available on a competitive basis, the job of bringing next-generation broadband to high cost areas could cost far less than the billions the Commission doles out to incumbent carriers every year. The Commission has shown it is already learning lessons from RDOF, and we urge it to apply those lessons broadly to all of its universal service policies.

With Congress appropriating enough funding to close the deployment gap, the Commission's central high-cost area challenge is no longer how to best fund capital expenditures, but how to ensure the rates rural residents pay are reasonably comparable to those throughout the nation. The Communications Act affords the Commission a wide array of options on how to meet this challenge.

We suggest that the first step for the Commission is analysis: it should perform a stress test, to determine what market rates would be in the absence of any additional support. If it determines that in the absence of ongoing subsidies rates will not be reasonably comparable, it must probe why. If it is because rural carriers themselves have few options for affordable backhaul, the solutions to that problem could come in the form of regulation, or recommendations for Congress to increase middle mile infrastructure funding. If the answer is that rural ISPs' remaining cost of capital cannot be recovered from reasonably comparable end-user rates, then the solution to that problem could come in the form of subsidies paid to end users to offset their high bills, or increased support from the Rural Utilities Service subsidized loan program.

Congress of course funded much more than just rural deployment in the IJA and other recent bills. It made substantial investments in equipment and services that will benefit students and rural health care centers, and answered the call to help low-income families with their monthly broadband bills. The creation of the Emergency Broadband Benefit program, and its extension into the longer-term Affordable Connectivity Program ("ACP") is already benefiting over 10 million families in need. The affordability problem is one that will persist however. We urge the Commission to recommend in this Future of USF Report that Congress make the ACP a permanent program, and appropriate the funding needed to ensure that low-income households can afford broadband long after the initial appropriation from the Infrastructure Act is expended.

Finally, we strongly urge the Commission to reject the cynical call from some of the nation's largest businesses to massively lower their own USF contribution burdens by imposing a regressive tax on residential broadband services. These parties have for years falsely warned that the USF contributions system is in a death-spiral, but as we document below, this is simply not true. The fact is that the total USF contribution pool in real terms peaked in 2012, and has declined substantially since. While the overall contribution factor has risen, the average residential consumer has seen their contribution burden decline slightly, as the burden borne by large businesses increased slightly. It is not surprising that these big corporate interests would like to see more tax cuts, but their plan to "broaden" the contribution base to broadband could result in as much as a \$4 billion annual shift of their USF taxes to hard-working families. This policy change would not be in the public interest. It would frustrate the Commission's universal service goals by making broadband more expensive for retail consumers, and would disproportionately harm low-income families. This is why we strongly urge the Commission to recommend that Congress fully fund universal service and provide much needed relief to ratepayers.

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## I. Introduction

In 1996, Congress overhauled the Communications Act of 1934 (“Communications Act”) in order to help realize a promise: the promise that rapid technology advances and market forces answerable to basic regulatory oversight would bring everyone in the nation a competitive, affordable, high-quality communications marketplace. Congress was responding to the change in the zeitgeist brought on by the twin advances in computing equipment and home internet access. Throughout 1995, policymakers were sold a bold vision of the future, one captured in the details of President Clinton’s remarks delivered during the signing ceremony for the Telecommunications Act of 1996 (“Telecommunications Act” or “1996 Act”) at the symbolically-rich Library of Congress: Out was the old stodgy Ma Bell monopoly, represented in a live video call by actress Lily Tomlin playing the role of grouchy switchboard operator Ernestine. In was the dream of an information access revolution that would foster economic prosperity and social enlightenment.

Technology was the key to this revolution, but according to President Clinton it had been “held back by outdated laws, designed for a time when there was one phone company, three TV networks, no such thing as a personal computer.”<sup>1</sup> The solution was to “create an open marketplace where competition and innovation can move as quick as light.”<sup>2</sup> The President noted that the creation of an open marketplace in the face of entrenched monopolies wasn’t something that would happen on its own; it would require rules to promote and preserve competition.<sup>3</sup>

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<sup>1</sup> “Remarks by the President in Signing Ceremony for the Telecommunications Act Conference Report,” The White House Office of the Press Secretary (Feb. 8, 1996).

<sup>2</sup> *Id.*

<sup>3</sup> *See id.* “This law also recognizes that with freedom comes responsibility. Any truly competitive market requires rules. This bill protects consumers against monopolies. It guarantees the diversity of voices our democracy depends upon. Perhaps most of all, it enhances the common good.”

While the President's signing ceremony statement was light on the details, the Congressional hearings that preceded the final bill were not. Congress had debated the overhaul of the Communications Act in earnest ever since a federal court ordered the Bell monopoly broken into pieces that included 22 smaller regional monopolies.<sup>4</sup> This decision forced the Federal Communications Commission ("FCC" or "Commission") to accelerate its own attempts to open up markets to greater competition, and to use regulation to produce the same behavior and outcomes where competition wasn't possible.<sup>5</sup>

But the Commission faced a key challenge: how to set efficient rates while also preserving universal service. The Ma Bell breakup freed up competition in the long distance market, but long distance companies and their customers were still at the mercy of local telephone monopolies, who charged the long distance carriers for connecting the call through to the called-party. The Commission regulated these "access charges," allowing them to be well above cost, so that the local telephone monopolies could meet all their carrier of last resort obligations (*i.e.*, universal service obligations) while also keeping basic residential rates in check.

Opening up these local telecom monopoly markets would completely undermine this access charge method for preserving universal service, something Congress understood and attempted to address with the 1996 Act. First, Congress had to make sure the last-mile market was actually open to competition; it couldn't simply direct the Commission to make it happen because that would just result in stagnation-by-litigation as parties challenge every action by the agency. So Congress adopted the highly detailed provisions of Sections 251, 252, 259, and the

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<sup>4</sup> See *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

<sup>5</sup> See generally, *e.g.*, S. Derek Turner, Free Press, "Dismantling Digital Deregulation," at 28-60 (2009) (providing a general overview of this history).

Bell Operating Company-specific Sections 271 through 276. Collectively, these market-opening provisions (and those in the earlier but related 1993 amendments to the Communications Act concerning wireless telecommunications)<sup>6</sup> were designed to foster last-mile competition, foremost from cable company incumbents whose coaxial wires were already in nearly 90 percent of U.S. homes, but also from new entrants such as Competitive Local Exchange Carriers (“CLECs”) — who would use a combination of their own equipment and the last mile of Incumbent Local Exchange Carriers’ (“ILECs”) networks — and of course from wireless carriers, who were rapidly expanding beyond their 1980s “carphone” era.

But Congress was much less prescriptive on how the Commission was to preserve universal service as it crafted rules to foster robust competition and market-based outcomes. Section 254 (aside from the very detailed “e-Rate” subsection (h))<sup>7</sup> is largely aspirational and goal-driven. There are universal service principles and definitions, with a directive to the Commission to create and rely on the policy recommendations of a Federal-State Joint Board on Universal Service. There was no directive on precisely how to do this, or what form subsidies should take. And when it came to the question central to most policy debates, of who pays for universal service, Congress simply left it at “every telecommunications carrier that provides interstate telecommunications services” and possibly other interstate telecommunications providers “if the public interest so requires.”<sup>8</sup> Congress’s instructions on the matter of low-income household telecom service subsidies were even less prescriptive, merely stating that

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<sup>6</sup> See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66.

<sup>7</sup> See 47 U.S.C. § 254(h). Though much of this subsection is directly related to the Schools and Libraries program, the Commission’s authority for the Rural Health Care universal service program is also found in § 254(h)(1)(A).

<sup>8</sup> *Id.* § 254(d).

nothing in the 1996 Act's amendments was meant to affect the FCC's Lifeline program in place at that time.<sup>9</sup>

This regulatory flexibility was necessary. The communications marketplace was rapidly changing due to the massive advances in IP-based technology and in the overall computing industry. The Commission, as an expert agency, needed the flexibility to respond and iterate its policies based on external realities that were in constant flux.

However, this vision and rightful desire for a nimble regulatory agency comes directly into conflict with a recurring pattern: the Commission's regulations are often path-dependent, with layers of new industry-accommodating policy built upon older policy compromises likewise designed to satisfy powerful incumbents. The Commission's universal service policies exemplify this incumbent-driven path dependence. Little of Section 254 itself would obviously lead to the current FCC rules drawn from it, and no rational policy analyst would design the current system if starting from scratch.

Regulatory path dependence is highly resistant to external events. Thus, the very flexibility initially granted to the Commission to adapt and iterate became, paradoxically, the design that produced a highly static system prone to capture. But the 2021 Infrastructure Investment and Jobs Act<sup>10</sup> ("Infrastructure Act" or "IIJA") directs the Commission to consider how this once-in-a-generation investment in broadband impacts universal service policy.<sup>11</sup> That gives the Commission a rare opportunity to set aside the past and put sensible policy first. The landscape before the Commission is radically different from the one it faced in 1996, or even in

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<sup>9</sup> *See id.* § 254(j).

<sup>10</sup> *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) ("Infrastructure Act" or "IIJA").

<sup>11</sup> *See id.*, div. F, tit. I, § 60104(c).

2011 when it last overhauled the universal service High Cost Fund (“HCF”).<sup>12</sup> Today, nearly every single person in the U.S. resides at a location served by multiple terrestrial wired and/or wireless telecommunications carriers, and there are multiple satellite telecom service options available to those in the most remote locations.<sup>13</sup> This is a far cry from the twisted-pair copper monopolies that dominated the market when the Commission first implemented the 1996 Act’s amendments.

Many other factors that should impact the Commission’s USF policies have changed as well, including massive declines in telecom equipment costs, substantial changes in tax law that lowers carriers’ effective cost of capital equipment, and a steady environment of historically-low interest rates. The demand-side of the market is also much different than it was in 1996, with both cellular and fixed home internet access approaching adoption levels similar to the peak for home telephony. Add in a market of multiple, high revenue-generating services (such as data, data overage fees, equipment rental fees, fixed and mobile telephony, video, security monitoring, etc. . .) in an unregulated oligopoly environment, and the result is an overall marketplace that profitably rewards broadband investment in all areas, including high-cost rural areas, even in the absence of legacy universal service subsidy support.

Despite these massive changes, the Commission’s universal service programs, and particularly the High Cost Fund and its progeny, remain stuck in a time warp: partly in the distant

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<sup>12</sup> See, e.g., *Connect America Fund et al.*, WC Docket No. 10-90 *et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, ¶ 76 (2011).

<sup>13</sup> Throughout this comment we will use the terms “telecommunications carriers,” “carriers,” “telecom service providers,” and other variations interchangeably. To pretend that broadband internet access services are not telecommunications services, as the Commission has previously and currently does until broadband is properly reclassified — and thus that providers of those services are not telecom carriers — leads to too many patently ridiculous sentences. However, we will use these terms precisely when we discuss the consequences of the Commission’s flagrant disregard for the plain meaning of the law for its overall universal service and competition policies.

past, partly in the compromises of a dozen years ago, and with very little evidence of an eye towards the future. The Infrastructure Act and this pending Commission report offer a way out of this path dependence. The Commission can rebalance its policies to better fit its statutory duties, to promote universal service and competition for the world of 2022, while also removing policies that distort competition, protect incumbents and ultimately frustrate the swift realization of the 1996 Act's goals.

## **II. The Sizeable Investment from the Infrastructure Act and the Completely Changed Broadband Marketplace Require a New Universal Service Paradigm.**

### **A. The Infrastructure Act Provides Adequate Funding to Close the Deployment Digital Divide, and that Requires the Commission to Fundamentally Reassess the Utility of the USF High Cost Fund.**

Talking about the existence of a digital divide is an oft-used apolitical tool for politicians to signal to their constituents that they are working to solve an important and largely non-controversial problem. Yet all of that talk hasn't usually resulted in action. For example, despite direct control over the appropriation of funds that could be used to build broadband where it is needed, and despite the constitutional authority to determine who should receive that funding and what they're expected to do with it, Congress has largely until now left the question of solving the digital divide to others.

The exceptions to this trend tend to come during moments of crisis, when the concerns about the real-world consequences of the digital divide are too great to assuage with rhetoric alone. When the U.S. experienced a massive economic shock in early 2009, Congress acted to address the digital divide with a \$7.2 billion investment in certain types of telecom infrastructure, and directed the FCC to write a report on how to "ensure that all people of the United States have

access to broadband.”<sup>14</sup> More than a decade after that money was spent and the report was delivered, Congress found itself in a familiar place: the economy was in free fall and too many people lacked access to the affordable broadband technologies needed to help pull the nation back from the brink. However, unlike 2009, Congress’s response was broad, iterative, and most-importantly, backed with a right-sized appropriation. Throughout 2020 and 2021, Congress appropriated more than \$80 billion for broadband-related funding, with more than \$50 billion of that devoted for broadband deployment.<sup>15</sup>

This level of funding may not be as high as some interested parties hoped for. Yet for infrastructure alone, the \$42.5 billion of Broadband Equity, Access, and Deployment (“BEAD”) program grants, plus the billions allocated for state capacity grants, Rural Utility Service grants, USDA grants, and Emergency Connectivity Fund grants for schools and libraries, almost equals the prior decade’s worth of High Cost Fund spending. Indeed, the \$42.5 billion in BEAD program spending alone is nearly five times the amount the Commission provisionally awarded in Phase I of the Rural Digital Opportunity Fund (“RDOF”), which is slated to bring mostly fiber-level services to all of the remaining homes supposedly located in an area unserved by any fixed terrestrial providers at the 25/3 megabits per second (Mbps) downstream/upstream

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<sup>14</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

<sup>15</sup> Combining 2020 and 2021 broadband-related appropriations from the IIJA, Consolidated Appropriations Acts of 2020 & 2021, the Further Consolidated Appropriation the CARES Act, the deployment-related funds: BEAD, Tribal Broadband Connectivity, Middle Mile Grant, Broadband Infrastructure Deployment, and USDA ReConnect programs. The actual figure could be significantly higher as the American Rescue Plan Act of 2021 included emergency funding for state, local, and territorial and tribal governments, amounting to the hundreds of billions, that could be used for broadband infrastructure expansion and dedicated broadband funds and grant programs.

threshold.<sup>16</sup> We recognize that many commenters flatly reject the Commission’s Form 477-based estimates about the “true” number of unserved homes; but even under the most pessimistic analysis, the grants made in the BEAD program, in conjunction with the RDOF spending, should be more than enough to bring every household and business location in this country a “reasonably comparable” broadband option, in the parlance of Section 254(b)(3)’s mandate.<sup>17</sup>

Congress funded the BEAD program with the level of funding needed to completely close the rural-urban deployment gap, especially in light of the foundation from RDOF and CAF and other capex-heavy spending by the FCC. The Commission’s experiences with the RDOF reverse auction certainly offer reason to believe that the more than \$50 billion combined in

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<sup>16</sup> According to the much-maligned (and especially given the Commission’s January 2021 reforms, over-maligned) Form 477 data, as of December 31, 2020, there were approximately 6.5 million rural persons residing in areas where no fixed terrestrial ISP reported offering services at or above the 25/3 Mbps threshold (which equates to 9.5 percent of the rural population). In the Commission’s December 2020 RDOF results press release, it noted that the provisional awards were slated to bring mostly gigabit level services to 5.2 million locations, which it stated included “10 million” rural persons. Of these 5.2 million locations, 85 percent are slated to see gigabit-level deployment, and 99.7 percent are slated to see deployment of services with transmission capabilities exceeding 100 Mbps downstream and 20 Mbps upstream. *See* Federal Communications Commission, “Successful Rural Digital Opportunity Fund Auction to Expand Broadband to Over 10 Million Rural Americans: Phase I Auction Allocates \$9.2 Billion to Close the Digital Divide in 49 States and the Commonwealth of the Northern Mariana Islands” (rel. Dec. 7, 2020).

<sup>17</sup> According to the December 31, 2020 Form 477 data, approximately 19.2 million people reside in a rural area that lacks a 100/10 or better fixed terrestrial service option, or 28 percent of the rural population. This implies then that RDOF Phase I awards would reduce this population unserved at this speed by more than half. We will not opine herein on the appropriate baseline capacity threshold for the purposes of the Commission’s annual Section 706 report; we do however note that as the RDOF results indicate, when subsidies are made available on a competitive basis to all qualifying carriers and not simply ILECs, the overwhelming majority of the subsidy bidders are committing to gigabit-level deployments. We also note that the most-recent Form 477 data indicated that 6.9 percent of urban area residents lived in a Census block where no fixed terrestrial provider reported 100/10 Mbps deployment. This figure is worth the Commission’s attention as it crafts policies based on the requirement that services in high-cost rural areas be “reasonably comparable” to those in low-cost areas. If millions of people in low-cost areas are not able to access services at a given threshold, that threshold may be too high to be considered “reasonably comparable.”

BEAD and RDOF Phase I funding are more than enough to ensure that, whatever obstacles might remain in rural telecom markets, capital spending would not be one.

Congress didn't simply stop at funding rural America's remaining need for telecom infrastructure investment; it recognized that this massive spending likely obviates the need for the Commission to continue sending more than \$5 billion each year directly to rural ILECs. Specifically, Section 60104(c) of the IIJA directs the Commission to submit to Congress "a report on the options of the Commission for improving its effectiveness in achieving the universal service goals for broadband in light of this Act."<sup>18</sup> This report, which is the subject of this proceeding, is to be broad, evaluating "the implications of [the IIJA] and the amendments made [ ] on how the Commission should achieve the universal service goals for broadband."<sup>19</sup> Congress also stated that in submitting this report, the Commission "may not in any way reduce the congressional mandate to achieve the universal service goals for broadband."<sup>20</sup> Congress specified that these goals were "the statutorily mandated goals of universal service for advanced telecommunications capability under section 706 of the Telecommunications Act of 1996."<sup>21</sup> This invocation of Section 706 indicates Congress's desire for a broad policy review, as Section

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<sup>18</sup> Infrastructure Act, div. F, tit. I, § 60104(b), (c). We refer herein to this report as "the Future of USF Report."

<sup>19</sup> *Id.* § 60104(b).

<sup>20</sup> *Id.* § 60104(c)(3)(A).

<sup>21</sup> *Id.* § 60104(a)(2).

706 is a directive that encompasses all of the Commission’s charge on this subject, not simply the general universal service principles of Section 254.<sup>22</sup>

In light of the new directive and the massive appropriations in the Infrastructure Act, along with the overall broad and permissive nature of Section 254, we strongly believe the Commission has a duty to finally toss aside the USF legacy of the Ma Bell monopoly era particularly with regards to the High Cost Fund. Perhaps the Commission believes that the changes it has made to the High Cost Fund subsequent to the National Broadband Plan have already made this necessary break with the past; but that’s not the case. The current High Cost Fund largely remains heavily tilted in favor of entrenched incumbents, and thus distorts markets in a manner inconsistent with the Act’s preference for competition-based outcomes.

Though the Commission did finally move to a competitive-based system for awarding some of the HCF support, even this system is plagued with issues such as tying initial support

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<sup>22</sup> See Telecommunications Act of 1996, Pub. L. 104–104, title VII, § 706, 110 Stat. 153 (1996) (codified as amended at 47 U.S. Code § 1302) (requiring the Commission to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . . by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment”). In the *Notice*, the Commission seeks comment on defining for the purposes of the Future of USF Report its universal service goals for broadband as “universal deployment, affordability, adoption, availability, and equitable access to broadband throughout the United States.” We agree that this definition is in line with the requirements of the IJA, though we would suggest that the Commission must clarify the differences if any between “deployment” and “availability.” See *Report on the Future of the Universal Service Fund*, WC Docket No. 21-476, Notice of Inquiry, FCC 21-127 (rel. Dec. 15, 2021) (“*Notice*”).

levels to dubious cost models.<sup>23</sup> Much of the Commission’s HCF support is still not subject to competition, and appears to be unnecessary and excessive even before considering the impact of the BEAD program.

For example, during 2021, 55 percent of High Cost funding was allocated to rate-of-return carriers, who are by definition earning profits well above the efficient market level.<sup>24</sup> Nearly 14 percent of HCF support in 2021 went to competitive carriers, who are by definition competing against other carriers. These figures alone do not demonstrate inefficient spending; but when examined in light of the restricted nature of entities to whom HCF funding is made available and what the funding is for, and when compared to the results of RDOF’s fully

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<sup>23</sup> Some of the same inputs to the Commission’s so-called “Alternative Connect America Model” (“ACAM”) cost model were used to produce areas that were eligible for RDOF support, despite the fact these areas contained no serviceable locations. Further, RDOF bids overwhelmingly came in well below the Commission’s model-based reserve estimates, at an assigned support weighted-average of 43 percent of the reserve price. More than \$2 billion of the \$9.2 billion in assigned support was for bids 20 percent or below the reserve price. *See, e.g.,* S. Derek Turner, Free Press, “Space-X Broadband: Coming to an Empty Traffic Island Near You,” (Dec. 24, 2020).

<sup>24</sup> Free Press analysis of USAC FCC Filings.

open competitive bidding process, it certainly suggests a high potential that much of HCF support is inefficient and market-distorting.<sup>25</sup>

In other words, the results of RDOF suggest that when funding is opened to competition, our nation’s universal service goals could be met at funding levels well below what the Commission currently allocates solely to entrenched incumbents through policies that protect their incumbency. This entrenchment is plainly the opposite of Congress’s intentions, as seen in the 1996 Act, as well as the Infrastructure Act’s preference for competitively-awarded, goals-based subsidies.

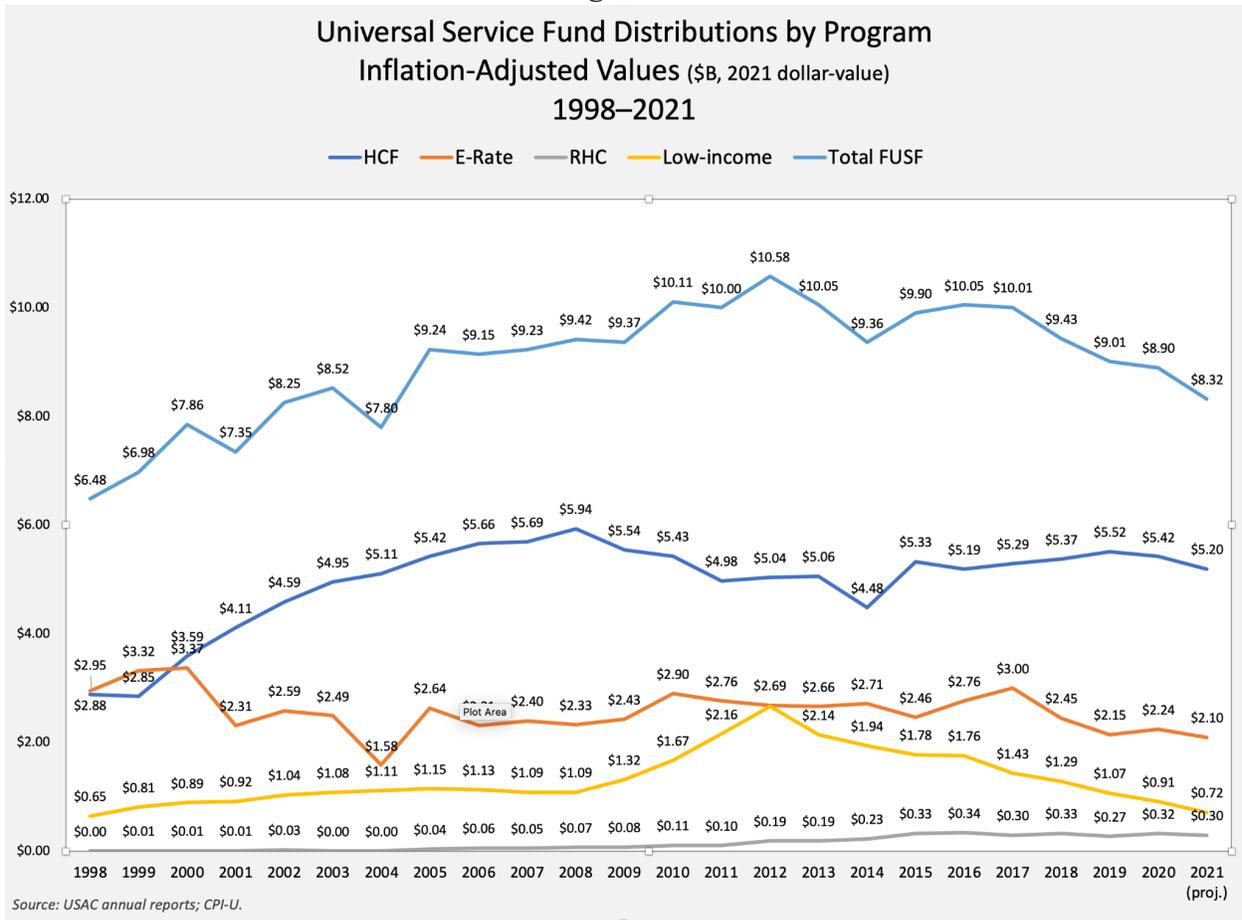
**B. The Commission Cannot Let the Vestiges of the Broadband Marketplace of 1996 or 2011 Drive Its High Cost Support Decisions in 2022 and Beyond.**

The Commission has allocated nearly a quarter of a trillion dollars in federal Universal Service Fund support over the past quarter century, when adjusting for inflation (see Figure 1 below). The program grew at a rapid rate during its first few years, primarily due to consistent growth in High Cost Fund support.

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<sup>25</sup> Much of the spending in the Commission’s “reformed” High Cost Fund programs is not only restricted to ILECs, but specific types of ILECs, which in some cases are granted right of first refusal support based on cost-models that RDOF demonstrated to be wildly excessive, and for service quality levels well below those funded in RDOF. ACAM and its even more generous cousin ACAM-II accounted for one quarter of all HCF support in 2021. More than 14 percent of 2021 HCF support went to Connect America Fund Broadband Loop Support (“CAF BLS”), a program intended to replace an already questionable support program for rate-of-return carriers. More than 11 percent of HCF support is for the older High Cost Loop support program (which also includes two other dated support programs, Safety Net Additive and Safety Valve). The High Cost Loop support program is based on ILECs’ loop cost data from 2012. Nearly 7 percent of 2021 HCF support went to intercarrier compensation replacement payments, which the Commission deemed no longer warranted in its 2011 reforms. Nearly 9 percent of HCF support is still made to competitive wireless carriers in the form of “frozen” support, which was supposed to be reduced to zero years ago, but wasn’t for reasons that seem wholly unjustifiable.

Figure 1:



But as Figure 1 shows, the annual allocation has been relatively stable since 2005 at approximately \$9.5 billion (inflation-adjusted). Underneath the surface, we see that spending for the HCF and E-rate programs has been remarkably consistent since 2005. This is certainly expected in the case of E-rate, which is a program with a longstanding cap on annual spending. But the consistency in the HCF is telling, especially considering that the program is not subject to a hard cap, was completely overhauled in 2011 with several subsequent revisions, and has the sole purpose of ensuring the availability of supported services at rates that are reasonably comparable those found in non-high-cost areas. This funding level consistency, along with the lack of any needs-based performance evaluations, may indicate that expenditures are determined largely by the soft-cap.

As we noted previously, the Commission’s experience with RDOF offers strong evidence that its \$5 billion in annual High Cost Fund support is well above the level of spending needed to achieve the Act’s universal service goals.<sup>26</sup> What the actual level of support should be is something for the Commission to determine, on a continuous basis. While Congress never directly answered this question, there’s evidence that it perceived the need in Fiscal Year 2001 to be less than \$3 billion for all of USF, or \$4.8 billion adjusted for inflation.<sup>27</sup>

This budgeted amount for Fiscal Year 2001 is telling in light of what has and has not changed since. The 2021 annual spending totals for the E-Rate and Lifeline programs are largely unchanged in real terms compared to the 1998 allocation. In contrast, the High Cost Fund doubled during this period. There is simply no evidence to suggest that Congress ever envisioned, with the introduction of cable, wireless, and other competition (not to mention the myriad state deregulatory policies that favored incumbents), and with the massive declines in telecom equipment costs, that the High Cost Fund should be double in real terms today what it was in 1998. Nor is there any evidence that Congress desired the Commission to administer massive grant-making deployment programs.<sup>28</sup>

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<sup>26</sup> As we discuss herein, subsidies are not the sole method to achieve universal service goals. The Act gave the Commission regulatory authority in other areas that, if properly utilized, could lower entry barriers and input costs for rural ISPs.

<sup>27</sup> Section 3006 of the Balanced Budget Act of 1997 appropriated \$3 billion to the Universal Service Fund for fiscal year 2001. This appropriation was repealed in a subsequent 1998 law. *See* Pub. L. No. 105-33, 111 Stat. 269, § 3006; *see also, e.g.*, Pub. L. No. 105-119, 111 Stat. 2521, § 622.

<sup>28</sup> It is noteworthy that with both the 2009 ARRA and the 2021 IJA, Congress designated the NTIA, not the Commission, to administer the broadband grant programs.

While the relative level of real spending for USF has not changed much over the past two decades, we've seen plenty of change in other factors that impact the telecom market and that should impact the Commission's universal service policies too.

At the end of the 20th century, mobile services were rapidly expanding, but digital cellular services reached very few rural areas.<sup>29</sup> Today 99.9 percent of the U.S. population lives in an area with at least one available 4G LTE carrier, with 99 percent of the population served by three such carriers. As these high availability figures imply, rural coverage is vast, with 99 percent of the rural population served by at least one 4G LTE carrier, and 95.5 percent of those in rural areas having three such options.<sup>30</sup> Though the purported consumer benefits from the evolution of 4G to 5G are mostly industry-driven hype, there's ample reason to believe rural coverage will be as robust for 5G as it was for prior wireless technology generations, with T-Mobile alone set to reach 99 percent population coverage by 2026.<sup>31</sup> Very few homes could subscribe to broadband before 1998, and facilities-based competition was unheard of; today most urban households and two-thirds of rural households are able to choose between at least two fixed terrestrial ISPs offering transmission speeds at or above 25/3 Mbps. And of course, anyone living at a residence with a view of the southern sky has multiple options for satellite broadband, with Low-Earth Orbit options increasing in both availability and quality.

Therefore, the supply of advanced telecommunications services in rural areas — most offered without direct subsidy support — is unquestionably well above where it was in 1996. But

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<sup>29</sup> See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 09-66, Third Report, 13 FCC Rcd 19746, 19780 (1998).

<sup>30</sup> See *Communications Marketplace Report*, GN Docket No. 20-60, Report, 36 FCC Rcd 2945, ¶¶ 73-78 (2020).

<sup>31</sup> See *id.* ¶ 81.

there are still more factors that have changed too, and that also should result in a lower need for carrier subsidies. The telecom, cable, wireless, and satellite industries have all undergone massive consolidation, mergers that each came with either general or explicit promises about the creation of synergies that would benefit people in rural areas. The percent of profits corporations pay in taxes is now around 13 percent, less than half the level seen in 1996.<sup>32</sup> Carriers are now permitted to fully depreciate the value of their capital assets in the first year of use, which is a massive cost-savings that directly boosts their bottom line.

Though it is an often overlooked aspect of the subsidy formula, demand for broadband telecommunications services is vastly higher today than it was in 1996. Though certainly in 1996 Congress and companies alike expected demand for advanced services to grow, expectations cannot be deposited in a bank account. Companies that deployed broadband in 1998 were investing in a product market that only one-in-four households utilized.<sup>33</sup> Today more than 90 percent of households have a home broadband connection, and nearly every single U.S. adult is subscribed to mobile broadband.<sup>34</sup> Users are also spending more for telecom services even after adjusting for inflation. According to data from the U.S. Bureau of Labor Statistics (“BLS”) Consumer Expenditures Survey, the average household that reported purchasing telephone services in 1996 spent \$113 each month in real 2021 dollar-value amounts. That same survey indicates that in 2020, households that purchased home internet access spent \$71.52 (2021 dollar value) on average each month, and households that purchased cellular service spent \$142.45

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<sup>32</sup> Free Press analysis of data from the U.S. Bureau of Labor Statistics, BEA Account Code A053RC.

<sup>33</sup> According to the U.S. Census Bureau’s 1998 Current Population Survey, 26 percent of U.S. households reported having home internet access.

<sup>34</sup> See “US Broadband Universe Databook 2021 - Historical and projected US residential broadband penetration rate, 2016-2025,” S&P Global (Dec. 6, 2021).

(2021 dollar value) on average every month. These expenditures amount to 3 percent of the average consumers' total expenditures, and do not include expenditures for wired home telephone services that approximately 30 percent of households still pay for.<sup>35</sup>

This massive change in consumer demand is important, as it should lower the need for universal service subsidies.<sup>36</sup> In 1996, though the cable TV industry was expected to move into the telecom markets, there was little expectation for cable to deploy to rural areas. That's largely because at the time, a cable system operator's primary revenue generator was pay-TV, and satellite television companies' cost structure advantages meant rural deployment was likely to be unprofitable. That calculation is no longer valid. We are now well into a market where broadband is the cable system operators' primary revenue generator, and the profit margins broadband brings in are well above what these companies earned from pay-TV in the late 1990s. This explains why we see MSOs committing capital to build in rural areas where they never would

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<sup>35</sup> The BLS survey data includes values for residential telephone service expenditures. However, less than 30 percent of household survey respondents reported such expenditures. Therefore we do not include it in our comparison of telephone services purchased in 1996 vs. home internet and cellular services purchased in 2020, services that were widely purchased in their respective periods. However, we can examine the average expenditures for these services by all consumer units in these periods (*i.e.*, the BLS reports the average expenditures across all U.S. households and the percent of households making such purchases, which enables the calculation of the averages spent by households that make these specific expenditures). This data indicates that in 1996, household expenditures for telephone services amounted to 2.3 percent of average consumer expenditures. In 2020, household expenditures for residential telephone services, home internet services and cellular services together accounted for 3.3 percent of average consumer expenditures.

<sup>36</sup> For example, the current view of the broadband market by Wall Street analysts is that ILECs upgrading their systems to fiber-to-the-home technology will earn healthy returns if 40 percent or more of the homes they pass with fiber subscribe. If adoption levels settle below 30 percent of passings, a LEC may not achieve the level of capital cost recovery needed to justify the investment. *See, e.g.*, Mike Dano, "Analysts fret over Lumen's fiber plans," *Light Reading* (Feb. 10, 2022).

have even 10 years ago.<sup>37</sup> The same change in profitability calculus now leading to greater rural infrastructure deployment is seen in the wireless market. In 1996, wireless technology was progressing, but demand in rural areas was limited by both the technology itself (*i.e.*, capabilities were limited to voice calls) and the “chicken or egg” issue of spotty rural availability. But as demand increased overall (with demand increases in urban areas creating network effects that increased demand in rural areas), and as the technology improved (adding the capabilities of data transmission), the rural deployment profitability calculus quickly changed, resulting in advanced wireless networks’ near-universal coverage.<sup>38</sup> We also note that without any Commission

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<sup>37</sup> See, *e.g.*, Comments of Thomas Rutledge, Chairman & CEO, Charter Communications, Inc., at UBS Global TMT Virtual Conference (Dec. 7, 2021) (“[W]e think it’s good for us financially to extend our network, our broadband network and all of our network capabilities to as many people as possible.”); see also, *e.g.*, Joan Engebretson, “Cable One Forms Clearwave Fiber Joint Venture: Rural Broadband is a Priority,” *Telecompetitor* (Jan. 4, 2022); Casey Egan, “‘Rural cable is all the rage,’ analysts say,” S&P Global Market Intelligence (Mar. 1, 2021) (quoting analysis that predicts “[r]ural cable providers stand to benefit the most, as the primary competitive advantage shifts from video scale to internet speed available” and the belief that “an inflection point is approaching, especially in the wake of the pandemic”); see also, *e.g.*, “Cox Network Transformation to Power Next Generation of Internet Users,” PR Newswire (Feb. 17, 2022) (“Cox is committing more than \$400M over the next three years to expand its footprint to reach underserved and rural communities.”).

<sup>38</sup> We note too here the impact of policies other than USF subsidies on the achievement of universal service goals. Carriers in remote areas can invest in towers and antennas, but still require telecommunications services that transport their customers’ communications to the nearest internet interconnection point. This means that Commission policies that result in lower costs for this “backhaul” are just as important, or even more important for its universal service goals, than many subsidies it doles out to ILECs.

subsidies, fixed wireless internet service providers (“WISPs”) deployed where ILECs and cable system operators would not, and now reach a claimed 62 percent of the rural U.S. population.<sup>39</sup>

**III. The Sufficiency of the Infrastructure Act Funding Juxtaposed With the Lessons from RDOF Suggest That the Commission Should Undertake Wholesale Reassessment of the High Cost Program and Should Recommend Stress Testing of Recipients and More Pro-Competitive Policy Changes.**

**A. The Public Interest and the Law Require the Commission to Conduct A Deep And Skeptical Analysis of Its Past and Current High Cost Support Policies and Consider a Pause on Such Support.**

Thus far we have reviewed how changes in the telecommunications markets should have impacted the Commission’s universal service policies. Those real-world changes should have been followed with equally dramatic changes to the Commission’s High Cost Fund policies. The need for the Commission to shake off its path-dependent approach and fully implement Congress’s desire for a pro-competitive (not pro-incumbent) policy framework existed long before Congress allocated \$42.5 billion in high cost funding in the IJA. But the IJA appropriation and other related recent appropriations mean the Commission’s existing universal policies are untenable in an environment with such a large influx of new funding.

Thus, in the *Notice* the Commission asks the central question: How should it “account for the relationship between projects to be funded by the Infrastructure Act and those funded by

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<sup>39</sup> This information is based on the December 31, 2020 Form 477 data. As we’ve previously noted for the Commission, WISPs as a whole have a more spotty track record of reporting their coverage areas than other fixed terrestrial ISPs. These issues range from lapses in reporting to blatant over-reporting. But there’s likely more uncertainty in the accuracy of WISP coverage maps due to Form 477’s standard for whether or not an ISP may claim deployment in a given Census Block. Though the Commission’s 2021 reforms addressed this issue, it is still possible that the standard of deeming an area as covered if the provider is “capable of performing a standard broadband installation . . . that can be completed not later than 10 business days after the date on which the service request is submitted” results in WISPs in particular over-reporting their coverage areas. *See* Comments of Free Press, WC Dockets Nos. 19-195, 11-10, at 17-19 (filed Sept. 23, 2019); *see also* 47 C.F.R. § 1.7001(a)(19) & § 1.7004(c)(1).

USF?”<sup>40</sup> We suggest that the accounting be ongoing, based on both Form 477/Digital Opportunity Data Collection data, and continuous reporting from the states via NTIA about what projects are being funded. This information will offer an inventory of where broadband is, is not, and will soon be; it will also, in conjunction with the results of RDOF Phase I, offer a wealth of information about what all this deployment funding could buy in an efficient market. Depending on the timing, it is likely the Commission will not have much information about BEAD-funded projects before submitting this report. The Commission will complete its maps nearly simultaneously with the NTIA’s rollout, as the NTIA designs and begins reviewing applications based on the Commission’s not-yet-completed maps. Thus, based on its experience with RDOF — where the Commission vastly exceeded its own expectations of how many unserved locations could be served for a given subsidy amount — the Commission’s report to Congress should include an estimate of how far the BEAD money could go, and how much it could reduce support offered via existing HCF programs.

Of course, shaking off years of path-dependent policymaking in the face of intense industry lobbying pressure to keep receiving essentially “free” money will not be easy. But the immediate task before the Commission now is not policy making, but policy analysis first. The

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<sup>40</sup> *Notice* ¶ 25. We disagree with the Commission that state-to-state differences in how they disburse their funds could make it “difficult to develop ‘apples-to-apples’ comparisons between the BEAD Program-funded projects and those funded by the USF.” *See id.* ¶ 24. The Commission is already in the process of determining every single serviceable location in the U.S., and what is and is not available at those locations. That information is the basis of determining where BEAD funding is first targeted. The Commission’s task is then to identify which of those currently unserved locations is located in a BEAD award area. With that knowledge in mind, the Commission can then apply whatever method it develops to determine if any ongoing support (for carriers, or preferably their customers) is needed to ensure the services offered in those (and all other) high cost locations are available at reasonably comparable rates. This task only is “difficult” if the Commission fails to analyze its HCF policies through a need-based lens. For example, comparing BEAD to USF is made difficult if the Commission’s high-cost area policies are based on the premise that it has a legal duty to fund ILECs via convoluted methods like ACAM, or to continue to offer competitive wireless carriers frozen support that it originally determined should be sunset years ago.

Future of USF Report could be a first step towards policy change, but this is in practice simply a long overdue first step.

This analysis should be based on answering a few fundamental questions: is there demand for broadband telecommunications services in a given high-cost area, and if so, what supply has the market offered to meet that demand? The Commission then needs to address whether or not, and how, that supply would change in a given area without subsidies. In answering this last question, the Commission must take care to recognize that the existence of incumbency, as well as state and federal regulations, can impact the entry decisions of other providers. In other words, the Commission's analysis must incorporate the market-distorting impacts of its current universal service policies and other federal and state policies.

Similar to how U.S. banks were required to undergo "stress tests" in the aftermath of the 2008 financial system crisis, we suggest the Commission conduct stress tests on all current USF recipients. This hypothetical analysis would use both publicly-available data and confidential provider data to model the range of outcomes that would arise if the Commission were to stop offering individual carriers high cost support. Would the carrier in question be able to recover its weighted-average cost of capital in the absence of federal USF support? Would other non-supported carriers expand their offerings after being able to compete on a more-level playing field? Would end-user prices change, and if so, by a reasonable or unreasonable level? Would user demand for satellite-based services increase? Given the general trends in declining producer costs combined with the need for growth in a saturated urban market, would future entry be

likely in unsupported high-cost areas? This stress test should be applied to the High Cost Fund, Schools and Libraries program, and Rural Health Care Program.<sup>41</sup>

In the Future of USF Report, the Commission should consider that nothing in Section 254 requires it to directly fund incumbent carriers operating in high-cost areas; the law only requires the Commission to establish “specific and predictable support mechanisms” to which all interstate telecommunications carriers contribute. While this currently involves complex systems of direct payments to carriers based on factors ranging from cost model results to frozen support based on decades-old accounting results, the support mechanism could take any number of other forms. It could be a one-time payment based on the results of a reverse auction; it could be support in the form of a subsidized loan; it could be support in the form of regulated access charges; it could even be support in the form of end-user subsidies that bring prices in high-cost areas into the realm of reasonableness.<sup>42</sup> Some of these ideas come with other tradeoffs, and thus are potentially worse (or better) than the others.

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<sup>41</sup> Unlike these USF programs, the Lifeline program is a social welfare program with the sole purpose of offsetting a portion of the price of telecommunications services purchased by low-income households. In other words, the purpose of Lifeline is the payment itself, while the purpose of the other programs is to ensure the continued availability of telecom services in high cost areas, schools and libraries, and rural health care facilities.

<sup>42</sup> Though the Act requires USF support mechanisms to offer “predictable” support, this does not mean that the support must be given directly to a carrier. If universal service support is necessary because the service would not be available without it, and if the service is one like broadband that is demanded by nearly all households, then vouchers paid to end users could be tailored to ensure the effective price of the service is at a level where demand is constant and predictable. Further, predictability doesn’t bind the Commission to convoluted cost models or legacy high-cost mechanisms or certain support recipients indefinitely. Predictability is not reliance — it only requires the Commission to provide a reason to abandon the prior regime and propose a new one for the future. This is further reinforced by Congress’s mandate that the Commission undertake the present inquiry and further underscores the importance of our recommendation that the Commission fully lay out the alternative paths towards universal service for the world of 2022, not 1996.

The Future of USF Report should look critically at the results of RDOF in contrast with the Connect America Fund (“CAF”) and ACAM programs, and analyze the benefits of a fully-open reverse auction versus the closed, incumbent-favoring cost-model support mechanisms. We believe this analysis would clearly demonstrate that the incumbent-favoring programs are highly inefficient and ultimately market distorting, potentially reducing unsubsidized investment in certain areas that would have happened had the Commission not propped up legacy carriers.<sup>43</sup>

In sum, the Commission needs to conduct a deep and skeptical analysis of its own policies, and ask difficult questions that will likely upset powerful incumbents. The Commission may be reluctant to take a hard look at its own policies, but the public interest and the law require it. Even though the Commission’s 2011 reforms of the High Cost Fund and intercarrier compensation system were substantive, these policy changes failed to adequately capitalize on market forces, and in fact still distorted markets in favor of ILECs. The Commission has both a duty and opportunity with IIJA (and all the other new spending) to pause, and center actual future needs in high cost areas. Given the massive amount of government-supplied capital investment, if there are instances where market forces would fail to ensure adequate facilities at reasonable charges, then this problem would manifest primarily in the form of high prices and not the absence of deployment. In such cases, the most efficient and equitable way to achieve universal service is to subsidize users, not carriers.

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<sup>43</sup> For example, it is telling that the ILEC Lumen was granted \$500 million in annual CAF support, but when faced with competition in a reverse auction, only secured an award worth \$26 million annually. Whether or not Lumen’s CAF award was the appropriate award given its cost structure is not the right policy question; the right question is what level of support, if any, is needed to ensure that affordable advanced telecommunications capability is deployed in a reasonable and timely fashion to locations in Lumen’s service area, whether by it or a different provider.

**B. The Commission Should Urge Congress to Make the ACP a Permanent Congressionally-Funded Program.**

The Future of USF Report is not just an analysis of policy changes the Commission should make to ensure affordable, advanced telecommunications services are made available on a reasonable and timely basis; the report is also an invitation for the Commission to use its expertise to recommend that Congress pass new laws to reach this goal.<sup>44</sup>

This invitation is an opportunity to critically examine the policy inefficiencies created when the primary responsibility for universal service is placed on a federal agency that is notorious for its revolving door relationship with industry, when the task of doling out billions in subsidies should be a job for elected representatives who are accountable to their voters. The IIJA has taken a great leap towards this responsibility shift, but there is much more that Congress could do to promote and preserve universal service.

As we discuss below, ending the regressive and market-distorting pass-through contributions system should be a top priority. The only way to ensure the total end of the implicit subsidy system for high-cost areas is to make the subsidies explicit. And in order to minimize the distortions from regulatory capture and regressive taxation, these explicit subsidies should be funded from general U.S. Treasury revenues. The Commission should recommend that Congress shoulder this funding responsibility.

The Commission should also recommend that Congress make additional, and ongoing appropriations for the Affordable Connectivity Fund (“ACP”), and recommend that the benefit amount keep up with inflation. We have high expectations for the ACP and believe it will be one of the most efficient and impactful universal service programs. However, it is clear that this much-needed program never could have been stood up by the Commission alone. The funding

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<sup>44</sup> Infrastructure Act, div. F, tit. I, § 60104(c)(2).

needs are simply too great to be borne by a system that is fully supported by the customers of telecom carriers. The Lifeline program was created in the aftermath of the breakup of the Bell monopoly, in order to offset other Commission rate increase policies, which were implemented in response to the partial erosion of the former monopoly's system of cross-subsidies. By 1996, when Congress enacted Section 254(j) — which merely clarified that the 1996 Act did not alter the Lifeline program as it then existed — the average per-subscriber benefit was \$4.50 (in 2021 dollar value), less than half of the current \$9.25 monthly support. Lifeline was created to be just that — a literal life line. It offered marginal subsidy support to ensure that home telephone adoption levels amongst the poor were not negatively impacted by the Commission-authorized increases in local telephone rates.

Lifeline now ensures that low-income households have access to basic telephone and data services. But basic is not the same as equitable. Congress's creation of the Emergency Broadband Benefit ("EBB") and its transition into the ACP reflects a consensus that equitable broadband access is a critical social and economic need. Therefore the Commission should recommend that Congress adopt laws that ensure low-income households have access to affordable broadband. This will require Congress to appropriate billions annually for a permanent ACP.<sup>45</sup> Subsidies will always be needed, but they are not the sole way to promote broadband equity. Policies that foster greater price competition at all levels of the market will

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<sup>45</sup> It's not yet clear what the necessary level of ongoing ACP funding will be. As of January 2022, 9 million households are enrolled in the soon-to-sunset EBB, and another 1 million are newly enrolled in ACP. This corresponds to almost four years of \$30 per-month per-household subsidies at the \$14.2 billion ACP appropriation and remaining EBB appropriation. Therefore these early results suggest that demand for ongoing ACP support could be \$4 billion or more annually. However, it is unclear how market and economic changes will impact the need for low-income support. It is also important to note that there are additional, non-mutually exclusive methods to ensure low-income households have access to affordable home broadband. These include direct provision (*e.g.*, free or low-cost municipal broadband) and other methods that produce overall lower market prices.

maximize the efficiency of low-income user subsidies, and maximize the welfare of all consumers.

Finally, given that the Commission has only allocated approximately \$4 billion of the \$7.1 billion appropriated for the Emergency Connectivity Fund (“ECF”), and the fact that less than one tenth of one percent of U.S. students are participating in full remote learning,<sup>46</sup> the Commission should seek Congressional authority to repurpose remaining ECF funding to the Schools and Libraries fund. The Commission should also advise Congress on the costs and benefits of directly funding the construction of dark fiber services at schools and libraries, which would likely lead to substantial long-term cost savings and the elimination of substantial program waste.

**IV. There is No “Death Spiral” as the Contributions Factor Increases. The Total Size of the USF Remains Stable, and A Decline in Assessable Mobile Revenues Means Large Businesses are Carrying Slightly More of the USF Funding Burden.**

The policy debate over the supposed USF contributions “crisis” is rife with misunderstanding and misinformation. Large business interests that have fought for years to reduce their telecom pass-through fees have bemoaned the rising contribution factor as a warning sign of impending collapse, and were doing so when the contribution factor was a lower percentage than it is today.

But missing from this rhetoric is any mention that the total size of the USF is remarkably stable, and in fact on an inflation-adjusted basis is more than 20 percent below its 2012 peak. If the total annual disbursements by the USF are stable and declining, then by definition the total payments into the fund are stable and declining.

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<sup>46</sup> According to the U.S. Department of Education, as of the first week of February 2022, less than 0.1 percent of students and 0.2 percent of school districts were fully remote, with 1 percent of students and 0.7 percent of districts engaged in hybrid instruction.

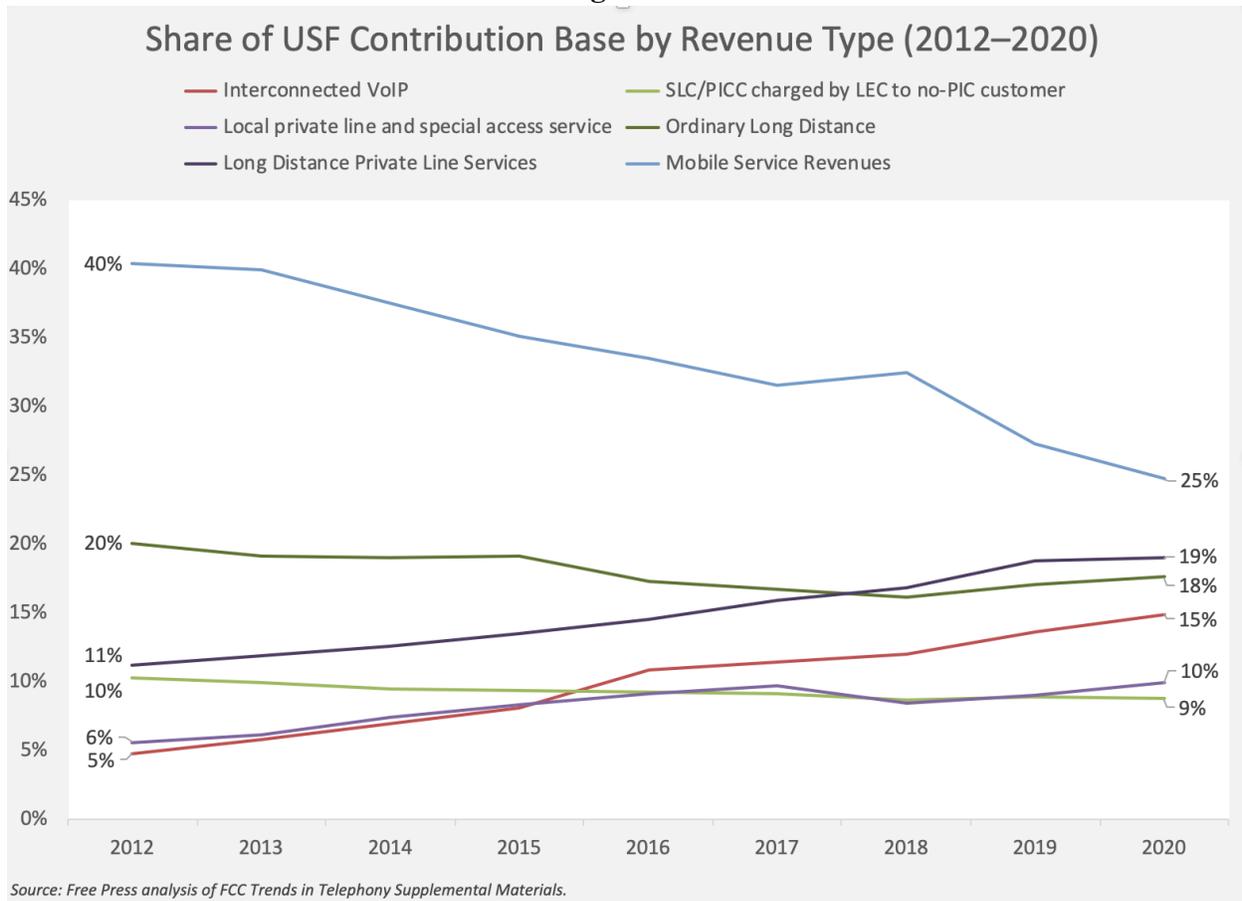
So if the total fees assessed to fund USF are stable and declining in real terms, why is the contribution factor so much higher today than it was when the total of USF fees collected was far higher in real-dollar terms? The answer is that the interstate telecom revenue base has declined, primarily due to a decline in mobile interstate telecom revenues, and this decline means that the relative burden for funding what are stable, total USF outlays has shifted from consumers to large businesses.

It is important to note that the final payers of USF contributions are interstate telecommunications carriers. They are permitted to, and often do, pass through this burden to their end-user customers, in a manner that is proportional to the interstate revenue streams that are assessed in Form 499-A. Thus given the unassailable fact that the total size of the payments into USF is stable and declining, the key question becomes one of distribution: who pays, and how much? Put another way, how much of the USF burden is borne by consumers and how much is borne by businesses, and how is this changing over time?

With this central distributional question in mind, it is illustrative to think of USF as being paid for by a single person with multiple pockets. The amount paid each year is stable and in fact declining in real terms. But over time, the payments come less out of the left pocket, and more out of the right pocket. In this cartoon-level model, consumers and small businesses are the pocket that is paying less over time, and large businesses are paying more. As consumer advocates already wary of the regressive nature of USF fees on residential consumers, we view this shift as a positive development, and are incredibly wary of any so-called reforms that would shift more of the USF contribution burden away from big business and back onto consumers. The Commission should be equally wary of large monied interests hiding under the cover of the public's interest.

The Commission’s data, which seems to be completely missing from this debate, shows quite clearly that the contribution factor is increasing almost solely because of a sharp drop in the amount of contributions that flow in from interstate retail mobile revenues. As Figure 2 shows, in 2012 (the peak year for total USF spending on an inflation-adjusted basis) mobile revenues made up 40 percent of the assessable contribution revenues.<sup>47</sup> This declined to 25 percent in 2020. In real-dollar terms, this represents a 56 percent decline in the contribution base coming from retail mobile carriers (and their customers).

**Figure 2:**



<sup>47</sup> This figure shows the six revenue types that account for the largest relative amounts to the USF contribution base. Not shown are: traditional circuit switched, payphone coin revenues, other telecom service revenues, prepaid calling cards, alternative billing arrangement toll calls, satellite services, and all other long distance services.

As we're all keenly aware, cell phone bills certainly did not decline during this period, so what explains this sharp drop in the pool of mobile revenues that can be assessed for USF contributions? The answer is that mobile carriers made changes to their accounting, booking an increasingly smaller total of their revenues in the interstate voice category.

Because most mobile services are sold as a bundle of voice, SMS and data services at a single price point, it begs the question of how carriers decide how to allocate the portion of their customer's bill to each line of service, and whether or not there's purposeful manipulation. Yet we have no reason to believe that this decline in booked mobile voice revenues is anything but reflective of reality. As technology improves and competition in the interstate voice market increases, the prices of mobile voice service should decline.<sup>48</sup>

Other services' interstate contribution bases are shrinking too, but not all of them. Understanding these changes is critical to measuring the distributional impacts of both status quo and alternative contribution policies. There are three services that are contributing more to the USF today: interconnected VoIP, local private line/special access services, and long distance private line services. In real-dollar terms, between 2012 and 2020, interconnected VoIP's contributions increased 124 percent, private line/special access contributions increased 27 percent, and long distance private line contributions increased 22 percent.

Of these three service types, the latter two are products exclusively purchased by businesses. Interconnected VoIP is of course a service purchased by both businesses and

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<sup>48</sup> A decline in the interstate minutes-of-use could also explain the decline in assessable interstate mobile revenues. However, data from CTIA suggests that total minutes-of-use increased between 2012 and 2019. It is also possible that the total minutes-of-use increased because of an increase in intrastate calls, and not interstate. These are all possibilities, but we believe the largest and most-likely factor behind the decline in the interstate mobile revenue base is a real decline in the share of cell phone bills that are paid to interstate voice calls. Indeed, the Commission's reforms of the intercarrier compensation system have resulted in lower interstate access charges, which should result in lower long distance revenues overall.

consumers, but residential consumers are rapidly dropping wired voice services, while business subscriptions continue to rise.

Interconnected VoIP's total assessable interstate revenue base peaked in 2016 (on a real and nominal basis). This peak and decline reflects the general consumer migration away from fixed voice services.

According to data from the BLS Consumer Expenditure Survey, 46 percent of households purchased residential telephone services (including interconnected VoIP) in 2013, which declined to 29 percent of households in 2020. Data from Form 477 confirms this residential decline: Residential interconnected VoIP subscriptions peaked in mid-2016 at 40.2 million. By mid 2019 (the most recent public Form 477 voice data) this declined to 37.4 million. During this time the number of interconnected VoIP subscriptions purchased by businesses increased from 20.1 million to 29.1 million.

Taken together, these data indicate that over the past several years, residential consumers are paying less into USF in both relative and absolute terms, while large businesses are paying more. Consumers' USF burden from their mobile subscriptions is in sharp decline; their burden from circuit switched is in decline; their burden from long distance is in decline; and though the overall contribution burden shouldered by VoIP increased in recent years, the percentage of households subscribing to VoIP (and the amount they pay for it) is rapidly declining.<sup>49</sup>

We estimate that the share of USF contributions passed through to businesses increased from approximately 50 percent in 2012 to approximately 62 percent in 2020. This means the

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<sup>49</sup> According to data from the BLS Consumer Expenditure Survey, in 2013 all consumers (including those who spent \$0) spent on average \$317.42 on residential phone services for the year. For the 46 percent of households who purchased residential phone service, this equates to \$68.64 per month in inflation-adjusted 2021 values. In 2020, all consumers spent \$187.54 on average for residential phone services. Adjusting for inflation, this represents an average monthly expenditure of \$57.21 for the 29 percent of households that purchased fixed voice.

share of the USF contribution burden passed through to residential consumers declined from approximately 50 percent in 2012 to approximately 38 percent in 2020. And because the nominal size of USF was flat during this period, with the real, inflation-adjusted value declining, this means that residential consumers are paying less in USF contributions today, even as the contribution factor rises. We estimate that the average household has seen a slight nominal decline and meaningful real decline in its USF contributions, from about \$3.50 per month in 2012 to about \$2.30 per month in 2020 (inflation-adjusted, 2021 dollar values).

Therefore any move to “broaden” the contribution base to retail broadband services could significantly shift the USF contribution burden away from businesses and towards consumers. This shift will impart disproportionate harm on low-income households already harmed by the home internet digital divide. We estimate that a connection-based contribution system could reduce the business burden to less than 25 percent of total contributions, and increase the consumer burden to more than 75 percent. An expanded revenues-based contribution system (*i.e.*, one that includes broadband revenues in the assessable base) would also substantially reduce the business burden, down to approximately 30 percent, and increase the consumer burden to approximately 70 percent. Either method would produce a disproportionate impact on low-income broadband adoption, due to the higher price sensitivities among these users and potential users.

The corporations’ supposed contribution “reform” plan is little more than a reverse-Robin Hood: Assuming the full increase to the overall USF from e-Rate’s potential growth, the plan to tax broadband for USF would result in a massive \$4 billion annual wealth transfer from consumers to giant companies. Particularly in an era of historic and compounding wealth

inequality, acquiescing to such a scheme would have the Commission buying into self-interested industry spin and providing yet more tax cuts to those who need it the least.

Given that the Commission's current classification of broadband as an information service means broadband customers are denied all of Title II's consumer protections, making them shoulder a higher USF contribution burden so that big businesses can lower theirs is plainly not in the public interest. There is simply no good reason to adjust the current status quo contribution policies until broadband is properly classified as a telecommunications service, especially given the fact that the total size of the USF is not increasing, and even then the policy would be of dubious merit based on the distributional analysis above. However, if the Commission is insistent that information services should pay into the USF, we suggest looking at other information services that benefit from having a fully-addressable audience.<sup>50</sup>

## **V. Conclusion**

The Infrastructure Act presents the Commission with the opportunity to shake off the weight of a quarter-century's worth of path-dependent USF policy making. Congress has appropriated more than enough funds to ensure adequate broadband facilities are available to every person in every corner of the nation. The Commission must now reduce all unnecessary high cost subsidies and focus on ensuring that the broadband market is maximally competitive and that it offers affordable options to everyone.

Congress has asked the Commission for recommendations on changes to the law as well, for better constructs to reach the end goal of universally available and affordable broadband. The Commission should seize this opportunity to recommend that Congress, not ratepayers, should provide the funding needed to ensure reasonably comparable prices in high cost areas. And the

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<sup>50</sup> See, e.g., Federal Communications Commission, Press Release, Office of Commissioner Brendan Carr, "Carr Calls for Ending Big Tech's Free Ride on the Internet" (rel. May 24, 2021).

Commission should strongly recommend that Congress make the Affordable Connectivity Program permanent, funded at the levels needed to ensure equitable broadband access.

Respectfully submitted,

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