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Nearly every nation in the world has a government mandated program aiming to make telecommunications service more widely available and affordable. Universal service funding subsidies have garnered popular support largely based on the shared view that society and individuals benefit from progress in achieving ubiquitous and affordable access, initially to voice telephone service. Technological developments and changes in consumer requirements have generated support for expanding the universal service mission to include broadband access to the Internet, and to identify a growing number of subsidy beneficiaries, now including schools, libraries, healthcare facilities, telephone companies operating in high-cost areas, and people with low incomes.

This Article summarizes the history and structure of the universal service funding in the United States with an eye toward identifying matters warranting immediate reform. The expansion of the mission to include affordable and widespread access to broadband service has added significant cost, complexity, and incentive to secure funding through fraudulent acts. Telecommunications carriers can lawfully pass through universal service funding requirements directly to subscribers, many of whom now question the efficacy and efficiency of the funding process. For the first quarter of 2023, consumers paid a 32.6% surcharge on telecommunications services, but incurred no contribution obligation when providing broadband Internet access and other data services.

"Compassion fatigue" has encouraged litigation challenging whether the Federal Communications Commission ("FCC") has clear statutory authority to impose the functional equivalent of a tax on consumers and to delegate management of the collection and distribution of funds to a private company. This Article evaluates the validity of such claims especially when the Covid-19 pandemic highlights the essentialness of broadband access. Additionally, congressional legislation, enacted in 1996, codified the universal service mission and required the FCC to act.

This Article also evaluates several different types of universal service funding reform proposals with an eye towards identifying their marketplace impacts. Most proposals recommend expanding the

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categories of universal service contributors to spread the burden more equitably that in turn would reduce the subsidy cost now exclusively borne by telecommunications service subscribers. New categories of subsidy contributors include federal income taxpayers, any venture assigning telephone numbers to subscribers, broadband carriers delivering data to and from subscribers, platform intermediaries, such as eBay, Facebook, Google, and Twitter, and creators and aggregators of content, such as Amazon Prime, Netflix, and YouTube. The Article concludes with an assessment of what reforms can possibly occur in the short term.

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I. INTRODUCTION

Soon after the introduction of telephone service, governments and service providers throughout the world[1] sought to make access to these services more widely available and affordable.[2] Both telephone companies and national governments executed strategies for subsidizing investments to expand geographical coverage, and to offer subscribers lower than market-driven local service rates. Over decades, the United States[3] and most other nations[4] have adopted similar tactics to make voice telephone service ubiquitous and affordable. Technological developments and changes in consumer requirements have generated support for expanding the universal

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[1] *See* Scott Wallsten, *Reverse Auctions and Universal Telecommunications Service: Lessons From Global Experience*, 61 FED. COMM. L.J. 373, 374 (2009) (tracking use of reverse auctions to achieve universal service goals at the lowest cost); *see also* Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, *High-Cost Universal Serv. Support*, 24 FCC Rcd. 6475, 6501–05 (2008) (discussing early adoption in the United States of reverse auctions to achieve more efficient disbursement of universal service funds); *see generally* Sarah Oh Lam, *Using Reverse Auctions to Stretch Broadband Subsidy Dollars: Lessons From The Recovery Act of 2009*, 18 OHIO STATE TECH. L.J. 301 (2022).

[2] Daniel A. Lyons, *Narrowing the Digital Divide: A Better Broadband Universal Service Program*, 52 U.C. DAVIS L. REV. 803, 805 (2018).

[3] *See id.* at 808 (citing Communications Act of 1934, 47 U.S.C. § 151 (2021)) ("The basic tenet of universal service has been a cornerstone of telecommunications policy for nearly a century. The 1934 Communications Act charges the Federal Communications Commission to 'make available, so far as possible, to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges.' Over the years, Congress and the Commission have taken numerous steps to assist those who, because of geographic or socioeconomic difficulties, lack basic access to the nation's telecommunications network.").

[4] *What is Universal Connectivity?*, BROADBAND COMM'N FOR SUSTAINABLE DEV., https://www.broadbandcommission.org/universal-connectivity/ (last visited Mar. 24, 2023); *see generally* U.N. INT'L TELECOMM. UNION [hereinafter "ITU"], CONNECTIVITY IN THE LEAST DEVELOPED COUNTRIES STATUS REPORT 2021 (2021).

service mission to include broadband[5] services[6] and more categories of subsidy beneficiaries.[7] Expanding the universal service mission triggers substantial cost increases that only recently have generated pushback from some telecommunications consumers, carriers, advocacy groups, and legislators.

Rather than impose a tax, or disburse funds from the treasury, most nations establish a universal service funding subsidy mechanism requiring telephone companies to contribute a small portion of their voice service revenues[8] to the national regulatory authority, ministry,

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[5] The term broadband commonly refers to the speed that a data network can transmit bits of information. Section 706(b) of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) [hereinafter "1996 Act"], *as amended in relevant part* by the Broadband Data Improvement Act, Pub. L. No. 110-385, 122 Stat. 4096 (2008) (codified in scattered sections of Title 47, Chapter 12 of the United States Code); *see also* 47 U.S.C. § 1302(b) (requiring the FCC annually to "initiate a notice of inquiry concerning the availability of advanced telecommunications capability to all Americans [including, in particular, elementary and secondary schools and classrooms]").

In conducting this inquiry, the Commission must "determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion." 47 U.S.C. § 1302(b). The FCC has established a minimum bits per second transmission speed standard for what constitutes a broadband network capability. For fixed networks, the benchmark is 25 megabits per second ("Mbps") for traffic delivered downstream to network subscribers and 3 Mbps for traffic generated by subscribers for upstream delivery: "25/3 Mbps is the Commission's current benchmark for evaluating whether a fixed service is advanced-telecommunications capable." Notice of Proposed Rulemaking, *Rural Dig. Opportunity Fund Connect Am. Fund*, 34 FCC Rcd. 6778, 6782 (2019); *see also* 2018 Broadband Deployment Report, *Inquiry Concerning Deployment Advanced Telecomms. Capability to All Ams. Reasonable & Timely Manner*, 33 FCC Rcd. 1660, 1667 (2018) ("We find that the current speed benchmark of 25 Mbps/3 Mbps remains an appropriate measure by which to assess whether a fixed service provides advanced telecommunications capability."); *see generally* FED. COMMC'NS COMM'N, [hereinafter "FCC"] BROADBAND SPEED GUIDE (Feb. 05, 2020).

[6] ITU & WORLD BANK, *Access for All*, *in* DIGITAL REGULATION HANDBOOK 52–53 (Aug. 28, 2020) (citing U.N. GAOR Res. A/70/1 (Sept. 25, 2015)).

[7] John D. Borrows (Sr. Rsch. Specialist) et al., NAT'L REGUL. RSCH. INST., NRRI 94-08, UNIVERSAL SERVICE IN THE UNITED STATES: DIMENSIONS OF THE DEBATE 55 (1994), *available at* https://pubs.naruc.org/pub/FA85D879-91E5-8025-F857-8CCD4395DC24.

[8] *Universal access and services funds (UASFs)*, DIG. REGUL. PLATFORM (Aug. 31, 2020) (citing ITU, UNIVERSAL SERVICE AND DIGITAL INCLUSION

or an unaffiliated organization, subject to regulatory oversight. The carriers typically pass through the entire cost to ratepayers,[9] framing the subsidy as a contribution or fee. Understandably, telecommunications subscribers may not differentiate a carrier-elected, service billing line item from a government-mandated fee or tax.[10] Most subscribers may not even notice the additional cost, until the amount becomes high enough to significantly increase the total monthly out of pocket cost of service.

Many U.S. telephone service subscribers have questions about universal service billing line items, because the monthly pass through continues to rise and additional unrelated fees, taxes, and surcharges have proliferated.[11] For the first quarter of 2023, carriers imposed a 32.6% surcharge on the portion of total charges applicable to basic telecommunications service.[12]

Wireline and wireless telephone service subscribers understandably might recoil from the proliferation of billing line items that, in addition to the universal service contribution, may include fees for toll free, emergency 911 and suicide prevention access, support for

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FOR ALL 1 (June 2013), https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/USF_final-en.pdf).

[9] *Contribution Methodology & Administrative Filings*, TELECOMMS. ACCESS POL'Y DIV., FCC, https://www.fcc.gov/general/contribution-methodology-administrative-filings (last visited Apr. 14, 2023); *see also* 47 C.F.R. § 54.712(a) (2020) (permitting carriers to recover universal service contributions through interstate telecommunications-related charges to end users).

[10] Rob Frieden, *Killing with Kindness: Fatal Flaws in the $6.5 Billion Universal Service Funding Mission and What Should Be Done to Narrow the Digital Divide*, 24 CARDOZO ARTS & ENT. L.J. 447, 460 (2006); *see also Consumers' Research v. FCC and the Legality of the Universal Service Fund Contribution Regime,* FEDERALIST SOC'Y (July 19, 2022); Thomas M. Johnson Jr., *The Future of Universal Service,* AM. ENTER. UNIT (Sept. 2022).

[11] *See generally* Scott Mackey & Ulrik Bosen, *Excise Taxes and Fees on Wireless Services Increase Again in 2021,* TAX FOUND., Fiscal Fact No. 780 (Oct. 12, 2021); *Summary of Charges on Telecommunications Services Bills*, PUB. UTIL. COMM'N TEX.,

https://www.puc.texas.gov/consumer/phone/Taxes.aspx (last visited Apr. 14, 2023).

[12] *Contribution Factor & Quarterly Filings - Universal Service Fund (USF) Management Support*, FCC, https://www.fcc.gov/general/contribution-factor-quarterly-filings-universal-service-fund-usf-management-support (last visited Apr. 14, 2023). Out of pocket monthly universal service funding charges to subscribers represents a small portion of the total fees and taxes paid, amounting to no more than a few dollars, not an additional 32.6% of the subscription rate. Mackey & Bosen, *supra* note 11.

network access by hearing impaired users, and several types of state and local taxes.[13] Universal service funding promotes worthwhile goals, such as creating subsidies for carriers to extend services into high cost, rural areas, and to provide service discounts for schools, libraries, health care facilities, and people with low incomes.[14] But even the most sympathetic subscriber may experience "compassion fatigue" at having to incur an ever-increasing subsidy burden.[15]

This Article summarizes the history and structure of universal service funding in the United States with an eye towards explaining how the process needs significant reform. The Article identifies and evaluates several remedies and predicts what, if any, reforms might occur in the short run.

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[13] *See Understanding Your Telephone Bill, Typical Charges*, FCC, https://www.fcc.gov/consumers/guides/understanding-your-telephone-bill (last visited Apr. 14, 2023).

[14] *See Universal Service*, FCC, https://www.fcc.gov/general/universal-service (last updated May 22, 2023) ("Universal service is the principle that all Americans should have access to communications services. Universal service is also the name of a fund and the category of FCC programs and policies to implement this principle. Universal service is a cornerstone of the law that established the FCC, the Communications Act of 1934. Since that time, universal service policies have helped make telephone service ubiquitous, even in remote rural areas. Today, the FCC recognizes high-speed Internet as the 21st Century's essential communications technology, and is working to make broadband as ubiquitous as voice, while continuing to support voice service."); *see also* Atsuko Okuda et al., U.N. ESCAP, *The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific* 7 (AP-IS Working Paper Series Oct. 2017), https://www.unescap.org/sites/default/files/Universal%20Access%20and%20Service%20Funds.pdf ("Enhanced and affordable access to ICT connectivity will deliver an expanding range of development interventions and public services, not only in urban areas but also in remote and rural areas for vulnerable groups in society.").

[15] *See* CONG. BUDGET OFF., FINANCING UNIVERSAL TELEPHONE SERVICE, vii (Mar. 2005), https://www.cbo.gov/sites/default/files/109th-congress-2005-2006/reports/03-28-telephone.pdf ("Since the enactment of the Telecommunications Act, spending for USF programs has steadily increased. Meanwhile, the revenue base that is taxed to fund those programs has eroded. Some observers argue that rapid changes in the telecommunications marketplace have rendered the current financing system increasingly impracticable and unfair."). The term "compassion fatigue" is used to emphasize how USF has generated popular support, especially during the Covid pandemic, but also growing pushback in light of the subsidy burden borne by telecommunications service subscribers.

II. THE COSTS AND BENEFITS IN UNIVERSAL SERVICE FUNDING

Universal service goals and tactics started with efforts by telephone companies to execute a strategy serving both public and private interests. In the United States, the American Telephone and Telegraph Company ("AT&T") devised a cost accounting system that made it possible to underprice local service using a portion of highly profitable long distance service revenues.[16] Such a cross subsidy achieved two complementary outcomes: (1) AT&T's affiliated Bell Operating Companies as well as other, unaffiliated local telephone companies, could tap into a source of external funds that they could use to extend their networks into lightly populated, rural areas, while also reducing their local service rates everywhere; and (2) AT&T could make a persuasive case that it should remain a monopoly, without any obligation to connect its network to market entrants, because it had unilaterally implemented a subsidy regime without a government mandate, taxation, and oversight.[17] Throughout the decades that followed, universal service funding goals have remained constant, including a fundamental commitment to avoid pervasive federal government involvement in the collection and disbursement of funds.

When technological innovation enhanced prospects for marketplace competition, the AT&T managed subsidy system became a government regulated one, while still eschewing taxation and direct disbursements from the national treasury. In the United States and elsewhere, universal service funding has never involved monetary payments to and from the national treasury, a basic element for what

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[16] *See, e.g.,* William P. Barnett & Glenn R. Carroll, *How Institutional Constraints Affected the Organization of Early U.S. Telephony*, 9 J.L. ECON. & ORG. 1, 98 (1993); Richard Gabel, *The Early Competitive Era in Telephone Communication, 1893-1920 Communications*, 34 L. & CONTEMP. PROBS. 340 (1969); Milton Mueller, *Universal service in telephone history: A reconstruction*, 17 TELECOMM. POL'Y 352 (July 1993).

[17] *See Universal Service*, *supra* note 14 ("The U.S. government allowed AT&T, then the monopoly provider, to operate in a non-competitive environment in most areas of the country in exchange for the federal and state government regulation of price and service quality. In areas that AT&T did not provide service, small companies, including cooperatives owned by residents of the local community, provided phone service. The concept of universal service evolved over the decades to mean the development of an infrastructure that provides telephone service to all consumers at a reasonable price. Funding for universal service came from a series of access charges that long distance carriers paid as intercarrier compensation (ICC) to local exchange companies for originating and terminating the long distance calls. Even after the breakup of AT&T in 1982, only interstate long distance companies were required to contribute funds towards universal service.").

constitutes a federal tax.[18] The FCC, and national regulatory authorities or ministries in other nations, have opted to maintain cross subsidies as the primary financial vehicle for promoting universal service.[19] Rather than rely on obscure, private carrier management of the process, federal and state regulators acted to make it transparent and compliant with any legislative mandate.

After assuming the responsibility to oversee the universal service funding in the United States, the FCC adopted a variety of policymaking, management, oversight, and enforcement roles. Rather than hire more federal government employees to collect and disburse universal service funds to an increasingly large number of subsidy beneficiaries, in 1997, the FCC delegated administrative tasks to an unaffiliated organization, the Universal Service Administrative Company ("USAC").[20]

Over time, the scope of the universal service mission in the United States has expanded because of changed circumstances and consumer service expectations. Growing consumer adoption of services provided via broadband networks has supported legislative codification of a universal service mission to provide all Americans access to affordable voice and "advanced telecommunications capability."[21] The Covid-19 pandemic underscores the prevailing view

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[18] *See, e.g.*, *In re F.C.C. 11-161*, 753 F.3d 1015, 1046 (10th Cir. 2014) (largely affirming FCC revisions to universal service funding rules, regulations, and policies); *Rural Tel. Coal. v. F.C.C.*, 838 F.2d 1307 (D.C. Cir. 1988) (holding that the FCC did not exceed its statutory authority, engage in taxation, or confiscate property by establishing rules allocating carrier costs, a process that impacts their universal service funding obligation).

[19] A secondary strategy uses government grants, loans, loan guarantees, and technical assistance for projects that might not receive funding or would do so at high interest rates. *See, e.g.*, *Telecom Programs*, U.S. DEP'T AGRIC., https://www.rd.usda.gov/programs-services/telecommunications-programs (last visited Mar. 22, 2023); *Grants*, U.S. NAT'L TELECOMMS. & INFO. ADMIN., U.S. DEP'T COM., https://www.ntia.doc.gov/category/grants (last visited Apr. 14, 2023); *see generally* BROADBAND USA, https://broadbandusa.ntia.doc.gov/ (last visited Apr. 14, 2023).

[20] The FCC designated USAC as the interim USF Administrator in 1997. USAC became permanent Fund Administrator in 1998. *See generally* Report and Order and Second Order on Reconsideration, *Changes to Bd. Dirs. Nat'l Exch. Carrier Ass'n*, 12 FCC Rcd. 18400 (1997); Third Report and Order, Fourth Order on Reconsideration, and Eighth Order on Reconsideration, *Changes to Bd. Dirs. Nat'l Exch. Carrier Ass'n*, 13 FCC Rcd. 25058 (1998).

[21] § 706, 110 Stat. 56 (reproduced in the notes under 47 U.S.C. § 157), defines "advanced telecommunications capability . . . without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive

that broadband access now has become a necessity, particularly when essential services are delivered primarily via the Internet with alternatives diminishing, or abandoned,[22] and unlikely to resume after containment of a health emergency.

Incumbent telecommunications carriers have responded to robust subscriber demand for access to data services by retrofitting and installing new networks capable of handling broadband traffic,[23] in addition to narrowband voice service. These upgrades add significant costs that result in higher monthly bills borne by subscribers opting for access to both voice and data services.[24] Additionally, broadband service subscribers must acquire computers, modems, and routers, costing much more than a conventional handset used to make telephone calls via a wired network. New subsidy beneficiaries include schools, libraries, and health care facilities having both equipment and network access requirements far more costly than traditional wired telephone service subscriptions.

Even as universal service costs have increased, the amount of revenues attributable to basic telecommunications services, subject to a universal service subsidy obligation, has dropped substantially.[25]

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high-quality voice, data, graphics, and video telecommunications using any technology."

[22] For example, most automobile registration renewals in Pennsylvania are processed online. However, to continue using this option, one now must have the ability to print out a form: "[t]o renew online you will need your registration plate number, title number, insurance information, odometer reading, a valid credit card, and a printer. At the end of the transaction, you will be given the opportunity to print a receipt and a permanent registration credential. PennDOT will no longer mail a registration card for registrations renewed online." *Renewing Your Registration*, PA. DEP'T TRANSP., https://www.dmv.pa.gov/Vehicle-Services/Title-Registration/Pages/Renew-Registration.aspx (last visited Apr. 14, 2023).

[23] *See, e.g.*, *What 5G networking brings to edge computing*, VERIZON (2020), https://www.verizon.com/business/resources/whitepapers/tech-target-whitepaper-what-5g-networking-brings.pdf. Currently, wireless carriers introduce so-called fifth generation network upgrades to accommodate consumer demand for faster networks capable of handling large capacity traffic, such as full motion video. *See generally What is 5G?*, QUALCOMM, https://www.qualcomm.com/5g/what-is-5g (last visited May 22, 2023).

[24] *See, e.g.*, *Wireless Service Plans*, AT&T, https://www.att.com/plans/wireless/ (last visited May 22, 2023) (monthly subscriber rates increase with the amount of data available for downloading and uploading).

[25] *See* section 254(d) of the Communications Act, *amended by* 47 U.S.C. § 254(d) (requiring every telecommunications carrier that provides interstate

U.S. universal service funding for programs in effect before the Covid-19 pandemic amounted to about $8.3 billion in 2020.[26] The available domestic interstate and international telecommunications service revenues, subject to universal service contributions, have declined, because subscribers increasingly abandon legacy services, such as

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telecommunications services to contribute, on an equitable and nondiscriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service). Telephone company contributions to the federal universal service support mechanisms are determined using a quarterly contribution factor calculated by the FCC. *See* 47 C.F.R. § 54.709(a) ("The Commission calculates the quarterly contribution factor based on the ratio of total projected quarterly costs of the universal service support mechanisms to contributors' total projected collected end-user interstate and international telecommunications revenues, net of projected contributions."); *see also* Public Notice, *Proposed Second Q. 2023 Universal Serv. Contribution Factor*, No. CC96-45 (F.C.C. Mar. 14, 2023), 2023 WL 2559889 (proposing a 29% contribution factor for carriers providing basic domestic and international telecommunications services).

While total revenues accrued from data services have increased substantially in recent years, the amount generated by basic, voice services have declined: "[a]s communications-related spending by consumers and businesses has shifted from telephony to broadband services, the pool of revenue assessed for USF—known as the 'contribution base'—therefore has declined. As a result, the contribution factor for calculating USF assessments has grown from around six percent two decades ago to [as much as] 33 percent. . . . [t]his means that for every dollar spent on assessable communications services, consumers and businesses pay an additional 33 cents into the USF. At the same time that revenues assessed for the USF have declined, the need for support from the USF has grown because demand for broadband service has increased significantly and shows no sign of abating." *Debate Over How to Fund the Federal USF Continues with Potential Impacts for Tech Companies, ISPs, and Consumers*, COVINGTON ALERT (Aug. 04, 2022); *see also* Report, *Rep. on Future Universal Serv. Fund* ¶ 90, No. WC21-476 (F.C.C. Aug. 15, 2022), 2022 WL 3500217 ("Providers are increasingly offering packages of bundled services that include both assessable telecommunications services and services that are not currently assessable. These revenues must be apportioned between assessable and non-assessable services for contribution purposes.").

[26] *See Frequently Asked Questions*, UNIVERSAL SERV. ADMIN. CO., https://www.usac.org/about/universal-service/faqs/general/ (last visited Apr. 14, 2023) (reporting approximately $2.0 billion for the E-Rate program subsidizing voice and broadband access at schools, libraries, and health care facilities; $5.0 billion in subsidies for carriers operating in localities with above average service costs; $850 million in discounts for low income subscribers; and $297 million in rural health care initiatives).

wireline voice telephony, or they rely more extensively on data services currently not subject to any universal service contribution requirement.[27]

For example, consumers can launch free teleconferencing services, such as Zoom, Apple Facetime, and Microsoft Skype and Teams, that combine voice and video. These services are exempt from a Universal Service Fund ("USF") contribution,[28] because the FCC classifies them as data carriage, a category not included in the legislated definition of what types of basic telecommunications services are subject to the universal service subsidy requirement.[29]

A recent study estimates that U.S. telephone company revenues, subject to universal service contributions, declined 63% in the last two decades, from $79.9 billion in 2001 to $29.6 billion in 2021.[30] The study attributes the decision by wireless carriers to deem most revenues as subsidy-exempt data carriage to be the primary cause for the precipitous decline in revenues subject to the universal service

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[27] While the "contribution burden on households has been relatively stable in recent years, ... [t]he contribution factor, however, has increased in recent years, from 16.7% in the first quarter of 2017, to 25.2% in the first quarter of 2022, 23.8% in the second quarter of 2022, and 33.0% in the third quarter of 2022. These increases are due in large part to a decline in the contributions revenue base, i.e., reported revenues from interstate telecommunications services, which decreased from $65.9 billion in 2011 to $41.4 billion in 2020. The decline does not generally appear to be a result of service providers reclassifying telecommunications revenues from interstate to intrastate; rather, providers are reporting a declining share of telecommunications revenues and an increasing share of non-telecommunications revenues." *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶ 91.

[28] The core universal service funding programs, created by the FCC, are collectively subsidized by the "Universal Service Fund." *Universal Service Fund*, FCC, https://www.fcc.gov/general/universal-service-fund (last visited Apr. 14, 2023).

[29] *See* 110 Stat. 56 (codified at 47 U.S.C. § 254(d)) (specifying that only providers of interstate telecommunications services have a universal service obligation: "[e]very telecommunications carrier that provides interstate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service").

[30] Carol Mattey, *USForward Report 2021*, UNIVERSAL SERV. FUND 3 (Sept. 2021),

https://www.shlb.org/uploads/Policy/Policy%20Research/SHLB%20Research/FINAL%20USForward%20Report%202021%20for%20Release%20(1).pdf.

subsidy obligation.[31] The reduction in core telecommunications service revenues has forced remaining telecommunications subscribers to pay much higher monthly contributions to universal service, triggering advocacy for better control of waste, fraud, and other abuses, as well as for expanding the categories of universal service funding contributors.[32]

III. NATIONS THROUGHOUT THE WORLD HAVE PRIORITIZED UNIVERSAL ACCESS TO AFFORDABLE TELECOMMUNICATIONS ON PAR WITH ELECTRICITY, WATER, AND OTHER ESSENTIALS

Soon after the introduction of the telephone, telecommunications company executives, elected representatives, and the public largely supported the goal of ubiquitous and affordable service:

> [i]t is commonly thought that schools, businesses, hospitals, units of government, families, neighborhoods, and public safety institutions benefit and function more efficiently and effectively if all of society has telecommunications service.[33]

Universal telephone service generates substantial societal, national security, and economic dividends:

> [u]niversal access in the digital era goes beyond extending networks, addressing the use of those networks and framing broadband as a key enabler of digitalization. Evidence of digitalization can be seen throughout society, whether in financial technology applications, such as mobile money and mobile wallets to ensure that anyone with a mobile phone can be banked, or in e-health and online education services, which have been transformative and had a significant economic impact. Globally,

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[31] *Id.* at 10.

[32] *See, e.g.*, Juan Londoño, *The Debate on Universal Service Fund Reform: A Primer*, AM. ACTION F. (Jan. 12, 2022); Greg Guice, *The Time for Can-Kicking Has Passed: Fix Universal Service Contribution Now*, PUB. KNOWLEDGE (Aug. 30, 2022); John Sarkis, *What's Next for the Universal Service Fund?*, TELECOMPETITOR (Sept. 20, 2022).

[33] Borrows et al., *supra* note 7, at 55.

> the economic impact of digitalization is on par with that of mobile broadband, with a greater impact enjoyed by advanced economies, which is understandable given that the digital economy by 2016 was already worth USD 11.5 trillion, equating to 15.5 percent of GDP globally but about 18 percent in developed economies and 10 percent in developing ones, on average.[34]

Society benefits when residents in rural, high-cost areas can accrue the same opportunities from accessing telecommunications and information networks, available to residents in densely populated locations, having much lower operating costs.[35] Telecommunications carriers and governments long ago recognized the merits in generating a pool of funds to stimulate greater geographical penetration of networks into rural locations, beyond what marketplace resource allocation would achieve. Similarly, universal service funds partially defray the cost of subscribing to telecommunications services, making it possible for more people to connect, including individuals whose financial circumstances would have foreclosed access, absent a subsidy.

In addition to supply-side financial support, universal service funding can stimulate demand for services by partially defraying the cost of equipment needed for network access, now including wireless handsets, personal computers, modems, and routers. Such demand-side promotion also can help existing and prospective subscribers acquire the digital literacy skills needed for using computers and smartphones to access the variety of public and private services offered via broadband digital networks.[36] Safe, secure, affordable, and ubiquitous access to telecommunications also enhance societal wellbeing, including the ability to communicate and transact personal

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[34] ITU, FINANCING UNIVERSAL ACCESS TO DIGITAL TECHNOLOGIES AND SERVICES 8 (2021), https://digitalregulation.org/wp-content/uploads/Financing-universal-access-to-digital-technologies-and-services-2021-1.pdf.

[35] MILTON L. MUELLER, JR., UNIVERSAL SERVICE, COMPETITION, INTERCONNECTION, AND MONOPOLY IN THE MAKING OF THE AMERICAN TELEPHONE SYSTEM 1 (1997).

[36] *See, e.g.*, Report and Order and Further Notice of Proposed Rulemaking, *Fed.-State Joint Bd. on Universal Serv. Advancing Broadband Availability Through Dig. Literacy Training*, 27 FCC Rcd. 6656 (2012); *see generally* NAT'L DIG. INCLUSION ALL., https://www.digitalinclusion.org/ (last visited Apr. 14, 2023).

and business matters free of foreign surveillance and disruption, a growing national security concern.[37]

Telecommunications networks increase in value as the number of connections and subscribers increase, what economists classify as a positive networking externality.[38] Connectedness for all promotes access to public and private services by subscribers with emphasis on parity, with less regard for the costs incurred in serving specific subscribers and locales.

To achieve such access, private actors, such as telephone companies and public actors, including legislatures and national regulatory authorities, throughout the world have relied on market countervailing or augmenting initiatives. A key universal service tactic, used throughout many different phases, spanning decades, creates a pool of funds available to subsidize and reduce the price of services deemed worthy of such promotional pricing. Subsidy beneficiaries in the United States currently include carriers operating in expensive to serve, mostly rural locales, schools, libraries, health care facilities, and people with low incomes, regardless of their location.

Most nations, including the United States, create subsidy funding pools without taxation:

> USFs are typically funded via some form of contribution mechanism from telecommunication service providers/ operators. In the majority of cases, the operator contributions are in the form of a levy based on a percentage of annual operating revenues.[39]

Initially, carriers unilaterally opted to price interstate and international, long distance telephone service at rates sufficiently high to subsidize infrastructure buildouts into locales with low population densities and to offer intrastate, local telephone service at low rates with an eye towards stimulating subscribership. Later, government agencies, including the FCC, established rules, procedures, and regulations designed to achieve the same outcome:

> [u]niversal service has been a fundamental

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[37] *See infra* notes 105, 106.

[38] UNIVERSAL SERVICE IN THE UNITED STATES: DIMENSIONS OF THE DEBATE, *supra* note 7, at 53.

[39] UNIVERSAL SERVICE AND DIGITAL INCLUSION FOR ALL, *supra* note 8, at 1.

> goal of federal telecommunications regulation since the passage of the Communications Act of 1934. Indeed, the FCC's very purpose is 'to make available, so far as possible, to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and communication service with adequate facilities at reasonable charges.'[40]

The recent Covid-19 pandemic provides clear evidence of the harms resulting from costly, inferior, or nonexistent access to essential services transmitted via the Internet, such as education, government and commercial transactions, health care, self-expression, and entertainment. The need for unconnected people to seek a wireless broadband connection far from home dramatically evidences the importance of the universal service mission.[41]

A. The universal service mission spans decades and has changed in terms of scope, technologies supported, methods to promote ubiquitous and affordable access, who qualifies for financial support, and how to finance, structure, and manage the subsidy process.

Achieving progress in terms of broader geographical reach, affordability, and demand requires both well calibrated subsidies and effective oversight, to ensure that only qualified beneficiaries receive funding. Telecommunications networks typically require very high initial capital expenditures in infrastructure that carriers must install and activate before generating any revenues. Having made these sunk investments, carriers can accrue positive networking externalities because low incremental costs for network expansion create incentives to expand subscriber numbers quickly and inexpensively.[42] Universal service subsidies help carriers extend their networks into the hinterland, where incremental costs remain high because of low population density, difficult terrain, harsh climate, and the lack of other utilities, such as electricity. Subsidies also enhance the value proposition to prospective subscribers and reduce the cost of local

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[40] *Alenco Commc'ns v. F.C.C.*, 201 F.3d 608 (5th Cir. 2000) (*quoting* 47 U.S.C. § 151 (as amended)) (*citing Tex. Off. Pub. Util. Couns. v. F.C.C.*, 183 F.3d 393, 405–06, n.2 (5th Cir.1999)).

[41] FINANCING UNIVERSAL ACCESS TO DIGITAL TECHNOLOGIES AND SERVICES, *supra* note 34, at 1.

[42] Lyons, *supra* note 2, at 808–09.

services.

Over time, universal service goals and funding strategies have changed because of technological innovations, diversifying consumer requirements and interests, identification of new subsidy beneficiaries, such as schools, libraries, and health care facilities, and the inability of carriers to generate funds for subsidies due to the onset of competition. These factors collectively have made the universal service mission more comprehensive, diversified, and expensive. They also have made the process more complicated, vulnerable to abuses, and less transparent.

Problems, challenges, inefficiencies, and even criminal conduct have triggered numerous calls for reform[43] and litigation.[44] While certainly justifying ongoing evaluation and change, shortcomings and flaws do not constitute a credible basis for challenging the lawfulness of the mission, or for recommending its abandonment.

B. Global recognition for a universal service funding process, initially to make access to dial-up, voice telephone service widely available and affordable

Several global and regional intergovernmental organizations, including the International Telecommunication Union ("ITU"),[45]

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[43] *See, e.g.*, Ryan Nabil, *How Congress and the Federal Communications Commission Can Help Improve Affordable Internet Access to Underserved Populations*, COMPETITIVE ENTER. INST., No. 279 (June 30, 2022); *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217; *Universal Serv. Contribution Methodology*, 24 FCC Rcd. 12129 (2009); Mattey Consulting, Comment Letter on Universal Service Contribution Methodology (Feb. 14, 2022), https://www.shlb.org/uploads/Policy/Additional%20Policy/SHLB-USForward-Call-to-Action-Updated-Signatories.pdf; Londoño, *supra* note 32; Mattey, *supra* note 30; Joel Thayer & Alexiaa Jordan, *Options to Give the Universal Service Fund a Much-Needed Upgrade,* LINCOLN POL'Y (July 26, 2021); Brendan Carr, *Ending Big Tech's Free Ride*, NEWSWEEK (May 24, 2021); *Resolution Supporting Reform of the Federal Universal Service Fund Contribution System*, NAT'L ASS'N REGUL. UTIL. COMM'RS (Feb. 12, 2014).

[44] *See, e.g.*, Brief for Respondents FCC and United States of America, *Consumers' Rsch. v. F.C.C.*, 63 F.4th 441 (5th Cir. June 10, 2022) (No. 22-60008), 2022 WL 2158819.

[45] *See, e.g.*, ITU, HOW BROADBAND, DIGITIZATION AND ICT REGULATION IMPACT THE GLOBAL ECONOMY: GLOBAL ECONOMETRIC MODELLING (Nov. 2020); FINANCING UNIVERSAL ACCESS TO DIGITAL TECHNOLOGIES AND SERVICES, *supra* note 34, at 1, 8 ("Universal access in the digital era goes beyond extending networks, addressing the use of those Networks and framing broadband as a key enabler of digitalization. Evidence of digitalization can

United Nations,[46] and Organization of American States,[47] have declared universal access to both voice and broadband data services an essential, core objective that will accrue ample dividends.[48] In 1985, the ITU endorsed the goal to "bring all mankind within easy reach of a telephone by the early part of the next century."[49] Financial subsidies help nations achieve the twin goals of ubiquity and affordability that generate both societal and individual benefits. National welfare enhancement occurs when measurable, empirically proven, economic benefits result from universal service subsidy programs.[50] On a macro-level, they can stimulate economic vitality, particularly in rural areas that otherwise would have competitive disadvantages and risk outmigration by businesses and residents. On an individual basis, telecommunications network access can enhance one's quality of life by providing a link to an ever-increasing array of services, information, education, and entertainment:

> [a]s a matter of fundamental fairness, this nation cannot accept a division of our people among telecommunications 'haves' and

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be seen throughout society, whether in financial technology applications, such as mobile money and mobile wallets to ensure that anyone with a mobile phone can be banked, or in e-health and online education services, which have been transformative and had a significant economic impact.").

[46] *Information and communication technologies (ICTs)*, U.N. DEP'T ECON. & SOC. AFFAIRS, https://www.un.org/development/desa/socialperspectiveondevelopment/issues/information-and-communication-technologies-icts.html (last visited Apr. 14, 2023).

[47] *E.g., Initiatives to Expand Telecommunications/ICT in Rural, Unserved or Underserved Areas,* INTER-AM. TELECOMM. COMM'N. ORG. AM. STATES, Res. AG/2966, https://www.oas.org/ext/en/main/oas/our-structure/agencies-and-entities/citel (last visited Apr. 15, 2023).

[48] *See* ITU, THE MISSING LINK: REPORT OF THE INDEPENDENT COMMISSION FOR WORLD WIDE TELECOMMUNICATIONS DEVELOPMENT 1, 65 (Dec. 1984), https://search.itu.int/history/HistoryDigitalCollectionDocLibrary/12.5.70.en.100.pdf ("Given the vital role telecommunications play not only in such obvious fields as emergency, health and other social services, administration and commerce, but also in stimulating economic growth and enhancing the quality of life, creating effective networks world wide will bring immense benefits.").

[49] *Id.* at 5.

[50] *See, e.g.*, Katherine LoPiccalo, *Impact of Broadband Penetration on U.S. Farm Productivity* (FCC Off. Econ. & Analytics, Working Paper No. 50, 2020).

> 'have-nots.' The [Executive Branch] . . . is committed to developing a broad, modern concept of Universal Service—one that would emphasize giving all American who desire it easy, affordable service to advanced communication and information services, regardless of income, disability, or location. [51]

C. Many nations have expanded the number and type of universal service beneficiaries to include broadband service, particularly at schools, libraries, hospitals, and clinics

Even as the universal service funding continues to improve subscribership of voice telephone service, many nations have expanded the mission to include broadband network access: "[t]he universal service challenge of our time is to ensure that all Americans are served by networks that support high-speed Internet access—in addition to basic voice service—where they live, work, and travel."[52]

Expanding the number and type of subsidy recipients greatly complicates the process of collecting and disbursing funds and increases the total amount of necessary subsidies because carriers must upgrade and replace existing networks to provide broadband connections. Additionally, broadband subscribers need to rent or purchase new equipment to secure network access. Data networks typically have higher cost and complexity compared to legacy voice telephone connections.

These so-called next generation networks have the capacity to accommodate an ever-increasing demand for broadband services, such as video and high-speed Internet access. Predictably, carriers initially install such networks in densely populated areas where ample numbers of prospective subscribers desire such enhanced service and are willing, and able, to pay higher rates for them.

Adding to the cost of doing business, most wireline carriers, such as AT&T, Verizon, Lumen Technologies, and Frontier, currently must maintain two separate networks: one providing legacy wired and wireless voice telephone services, and new or upgraded facilities used to provide broadband services. The D.C. Circuit Court of Appeals rejected telephone company assertions that they should not have to maintain their legacy, copper wire network, because new wireless

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[51] The National Information Infrastructure: Agenda for Action, 58 Fed. Reg. 49,025-01, 49,035 (Sept. 21, 1993).

[52] Report and Order and Further Notice of Proposed Rulemaking, *Connect Am. Fund*, 26 FCC Rcd. 17663, 17668 (2011).

networks offer a better replacement service:

> [w]e owe deference to the FCC's decision to hold a preexisting regime in place for an interim period, so as to avoid commandeering agency resources and to respect the agency's judgments about how to maintain baseline universal service in the context of uncertainties attending a major regulatory transition. Second, in response to Petitioners' generalized allegations that vulnerable consumers do not need the disputed services and that the existing program leaves Petitioners with underfunded obligations, the FCC has made clear that it will grant case-by-case forbearance or supplemental funding in areas where providers can meet their burden to show that their services are not required or that they need additional financial help. Especially in the context of this systemic regulatory transition, no more is required.[53]

D. Many national governments have created a separate, or affiliated entity, to manage universal service funds collection and distribution, subject to oversight by the National Regulatory Authority or Ministry

Because of the complexity in collecting and disbursing universal service funds among a diverse and expanding array of beneficiaries, most national governments have delegated tasks to an organization unaffiliated with the national regulatory authority or ministry,[54] but subject to its oversight. Such a separate entity can secure the services of people with the necessary expertise, but not at the expense of adding hundreds, or even thousands, more federal government employees.

A list of best practices in universal service funding and management, compiled by the ITU, recommends "[e]stablishment of

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[53] *AT&T v. F.C.C.*, 886 F.3d 1234, 1241 (D.C. Cir. 2018).

[54] *See, e.g.*, FINANCING UNIVERSAL ACCESS TO DIGITAL TECHNOLOGIES AND SERVICES, *supra* note 34, at 33; *Indonesia's Universal Service Obligation Fund*, DIG. REGUL. PLATFORM (Sept. 24, 2020) (public service institution separate from the Directorate General of Posts and Telecommunications regulator manages the Universal Service Obligation Fund).

the USF . . . [by a] separate, independent (autonomous) entity."[55] Creating an independent and well-qualified fund administrator promotes efficiency, impartiality, and professionalism.[56] Having a separate organization, such as the USAC in the United States, promotes greater transparency, accountability, and efficiency in the collection and disbursements of funds.[57] Additionally, USAC can maintain its independence from specific stakeholders and funding beneficiaries that might attempt to lobby the telecommunications regulator with an eye towards thwarting reforms.[58] Similarly, an independent body can offer

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[55] UNIVERSAL SERVICE AND DIGITAL INCLUSION FOR ALL, *supra* note 8, at 21.

[56] A joint program of the ITU and The World Bank recommends "autonomous UASFs in administrative budgeting and allocation of resources." *Universal access and service funds*, DIG. REGUL. PLATFORM (Aug. 28, 2020).

[57] The FCC designated USAC as the interim USF Administrator in 1997. USAC became permanent Fund Administrator in 1998. *See generally Changes to Bd. Dirs. Nat'l Exch. Carrier Ass'n*, 12 FCC Rcd. 18400, 13 FCC Rcd. 25058.

Several Circuit Courts of Appeal have or will consider whether the lawfulness of the FCC's delegation of universal service administrative duties to USAC. *See, e.g., Consumers' Rsch.*, 63 F.4th at 441 (holding the Telecommunications Act of 1996 and the FCC did not unlawfully delegate administration of universal service funding collection and distribution to the Universal Service Administrative Company); Order Denying Petition for Review of an Order of the Federal Communications Commission, *Consumers' Rsch. v. F.C.C.*, No. 21-3886 (6th Cir. May 04, 2023), 2023 WL 3244274.

The FCC has determined that it does have lawful authority to delegate administrative tasks to USAC. *See Rep. on Future Universal Serv. Fund*, WL 3500217, at ¶ 116 ("First, USAC does not exercise government power. It merely provides ministerial support to the Commission: 'billing' contributing carriers, 'collecting' universal service contributions, and 'disbursing' universal service funds. . . . [s]econd, even if USAC's role were more substantial, the delegation to USAC is permissible because the Commission retains final decision-making authority. In particular, the Commission—not USAC—has the final say in establishing the contribution factor for each quarter.").

[58] *See Board of Directors*, UNIVERSAL SERV. ADMIN. CO., https://www.usac.org/about/leadership/board-of-directors/ (last visited Apr. 15, 2023) (The composition of USAC's nineteen Board of Directors represents a wide array of stakeholders including three directors from schools eligible to receive subsidies, one director from an eligible library, and two directors from eligible rural health care providers that are eligible to receive discounts. Additionally, seven directors must represent one of the following constituencies: eligible consumers, state telecommunications regulators, state consumer advocates. wireless providers, competitive local exchange carriers, cable operators, and information service providers).

unbiased forensic assessments whether a carrier has achieved progress in reaching universal service goals, conduct periodic audits of beneficiaries' use of funds, and notify regulators about wasteful or fraudulent conduct warranting an investigation and possible sanctions.

As technology evolves and existing or prospective consumer requirements change, an independent universal service funding organization can readily adapt to new circumstances and implement administrative refinements.[59] Congress recently validated the importance of having USAC available to manage new universal service funding initiatives in response to the Covid-19 pandemic. The 2021 Infrastructure Investment and Jobs Act[60] authorized the FCC to rely on USAC for implementation of the Affordable Connectivity Program[61] that added $14.2 billion in universal service funding support during the Covid-19 pandemic.[62]

Additionally, the Consolidated Appropriations Act directed the Secretary of Agriculture, the Secretary of Education, and the Secretary of Health and Human Services to enter into a memorandum of understanding with USAC to provide for the expeditious sharing of data through the National Verifier, or any successor system, for the

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[59] *See, e.g.*, Notice of Debarment and Order Denying Waiver Petition, *NEC-Bus. Network Sols.*, 21 FCC Rcd. 7491 (2006) (debarring company convicted of fraud-related felonies against the E-Rate program); Order and Consent Decree, *N.Y. City Dep't Educ.*, 30 FCC Rcd. 14223 (2015) ($3 million settlement for E-Rate bidding violations); Order and Consent Decree, *Total Call Mobile*, 31 FCC Rcd. 13204 (2016); Consent Decree, *Verizon New York*, 32 FCC Rcd. 7723 (2017) (On its own accord and at the direction of Congress, the FCC regularly seeks to improve the universal service funding program, with an eye toward imposing financial sanctions for fraudulent receipt of universal service funding, reducing waste, and adapting to changed circumstances); *see also* Press Release, FCC, FCC Learns that Sprint Received Tens of Millions in Lifeline Subsidies—But Provided No Service (Sept. 24, 2019); Order, *Assurance Wireless USA*, 35 FCC Rcd. 12679, 12685–86 (2020) (detailing the $200 million settlement reached between T-Mobile and the Commission on these claims); Order, *Establishment of Fraud Div. of Enf't Bureau*, 34 FCC Rcd. 781 (2019).

[60] Pub. L. 117-58, 135 Stat. 429 (2021).

[61] *See, e.g., Affordable Connectivity Program*, FCC, https://www.fcc.gov/acp (last visited Apr. 15, 2023); *Affordable Connectivity Program*, UNIVERSAL SERV. ADMIN. CO., https://www.usac.org/about/affordable-connectivity-program/ (last visited Apr. 15, 2023).

[62] Notice of Inquiry ¶ 48, *Rep. on Future Universal Serv. Fund*, No. WC21-476 (F.C.C. Dec. 15, 2021), 2021 WL 5986835 (citing Infrastructure Investment and Jobs Act, div. F, title V, §§ 60502(a)(2)(C), (a)(2)(E); Consolidated Appropriations Act, div. N, tit. IX, § 904(i)(5) (2021)).

purposes of verifying consumer eligibility for the program.[63]

USAC serves an ever-increasing number of beneficiaries, including approximately 8.1 million individuals, 1.2 million households qualifying for discounted telecommunications and broadband service, 100,000 schools and libraries, and 9,000 rural health care facilities.[64] Predictably, the amount of funds available and a large group of subsidy candidates create incentives for criminal conduct and uncertainty about who qualifies and how much they should receive. Both USAC[65] and the FCC[66] conscientiously work to identify and sanction abuses through audits and investigations. In its duty to provide extensive reports to the FCC on administration of universal service funding, USAC can offer current insights on how best to narrow the Digital Divide, because it works closely with beneficiaries and can identify ways to better achieve an expanding universal service mission.[67]

The need to identify and eliminate inefficiencies and abuses has increased in importance as the financial burden on telecommunication subscribers grows, possibly reaching the point of

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[63] *Id.* at ¶ 79 (citing Infrastructure Act, div. F, title V, § 60502(e)).

[64] *USAC Open Data*, UNIVERSAL SERV. ADMIN. CO., https://opendata.usac.org/ (last visited Apr. 15, 2023).

[65] *Appeals & Audits*, UNIVERSAL SERV. ADMIN. CO., https://www.usac.org/about/appeals-audits/ (last visited Apr. 15, 2023).

[66] Report and Order, *Promoting Telehealth Rural Am.*, 32 FCC Rcd. 7335, 7336 (2019); *see also* Order, *Am. Broadband & Telecomms.*, DA 22-421 (F.C.C. June 03, 2022), 2022 WL 2063348 (recovering $16,618,235.44 for, *inter alia*, failing to maintain proper procedures to ensure compliance with the Commission's rules, and seeking subsidies for ineligible and duplicate accounts and deceased individuals); Notice of Apparent Liability for Forfeiture and Order, *DataConnex*, 33 FCC Rcd. 1575 (2018) (proposing an approximately $19 million forfeiture for filing forged, false, misleading, and unsubstantiated information to increase funding); Amendment to Notice of Apparent Liability for Forfeiture and Order, *Network Servs. Sols.*, 32 FCC Rcd. 5169 (2017) (proposing an approximately $22 million forfeiture for alleged violations including preparing and transmitting forged and false documents).

[67] *See* COLBY LEIGH RACHFAL, CONG. RSCH. SERV., R46613, THE DIGITAL DIVIDE: WHAT IS IT, WHERE IS IT, AND FEDERAL ASSISTANCE PROGRAMS (Mar. 09, 2021); Patricia M. Worthy, *Racial Minorities and the Quest to Narrow the Digital Divide: Redefining the Concept of "Universal Service,"* 26 HASTINGS COMM. & ENT. L.J. 1 (2003) (explaining how an amendment of the Rural Electrification Act of 1936 effectively created loan guarantees that accelerated the pace for improved access to telephone service in rural areas); Jodie Griffin, *Universal Service in an All-IP World*, 23 COMMLAW CONSPECTUS 346 (2015).

"compassion fatigue."[68] Because telephone companies in the United States can lawfully pass through most of the universal service financial burden, ratepayers currently must pay an additional surcharge representing 32.6% of revenues subject to the universal service funding obligation.[69] This so-called contribution factor[70] has risen substantially in recent years, because most non-Covid 19, universal service mission funding, comes from monthly billing line-item payments by telecommunications service subscribers based on telephone company revenues attributable to basic telecommunications services.[71]

Limiting the contribution requirement to core services made sense when telephone companies derived most of their revenues from voice services and the assignment of telephone numbers. Similarly,

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[68] The term "compassion fatigue" reflects the consumer pushback at having to pay what is commonly assumed to be a 25–33% "tax," which is well above any sales or excise tax. *See* Will Yepez, *The Universal Service Fund Is On The Brink, But It's Not Too Late To Save It*, NAT'L TAXPAYERS UNION (Apr. 15, 2021) ("The USF provides important funding to help close the digital divide, but the unstable funding base puts this program in peril. Will the USF collapse tomorrow? No. However, the longer this program limps on without reform, the more consumers will be on the hook to pay increasingly outrageous taxes. The contribution factor is on track to hit 40 percent by the end of the year. That means for every dollar spent by the consumer, they are billed an additional 40 cents, which would be an astronomical tax in almost any context.").

[69] *See Contribution Factor & Quarterly Filings - Universal Service Fund (USF) Management Support*, FCC, https://www.fcc.gov/general/contribution-factor-quarterly-filings-universal-service-fund-usf-management-support (last visited May 22, 2023) (reporting surcharge from 2020).

[70] *See Contribution Methodology & Administrative Filings*, *supra* note 9 ("Telecommunications companies must pay a percentage of their interstate end-user revenues to the Universal Service Fund. This percentage is called the contribution factor. The contribution factor changes four times a year (quarterly) and is increased or decreased depending on the needs of the Universal Service programs.").

[71] The decline does not generally appear to be a result of service providers reclassifying telecommunications revenues from interstate to intrastate; rather, providers are reporting a declining share of telecommunications revenues and an increasing share of non-telecommunications revenues. *See* Mattey, *supra* note 30, at ¶ 91 ("The contribution burden on households has been relatively stable in recent years, as indicated by the table. The contribution factor, however, has increased in recent years, from 16.7% in the first quarter of 2017, to 25.2% in the first quarter of 2022, 23.8% in the second quarter of 2022, and 33.0% in the third quarter of 2022. These increases are due in large part to a decline in the contributions revenue base, i.e., reported revenues from interstate telecommunications services, which decreased from $65.9 billion in 2011 to $41.4 billion in 2020.").

this limitation protected other telecommunications companies and their subscribers from having to contribute for accessing non-voice services, such as cable and satellite television. However, changed circumstances, including the substantial increase in the contribution factor borne by telephone service subscribers, warrants a reassessment of who benefits from the direct and indirect effects of universal service funding, whether to expand the pool of contributors, and how to make the collection and disbursement process more effective, efficient, equitable, and less vulnerable to fraud.

Technological and market convergence has eliminated a bright line dichotomy between voice services, always subject to the USF contribution requirement, and something else, including broadband access to the Internet, data services, and software configured, voice over the Internet ("VoIP") services that provide local and long-distance calling capability.[72] The FCC now requires USF contributions from wireline and wireless companies, as well as VoIP providers, including cable television companies, for that portion of their revenues attributable to voice services accessible to and from conventional wired and wireless telephone service networks.[73]

The FCC has not extended the USF contribution requirement

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[72] VoIP is the real-time, instantaneous carriage and delivery of data packets that correspond to voice. VoIP services can offer a functional equivalent to conventional public switched telephone service provided by wireline and wireless carriers. *See Voice Over Internet Protocol (VoIP)*, FCC, https://www.fcc.gov/general/voice-over-internet-protocol-voip (last visited Apr. 15, 2023); *see generally* Kevin Werbach, *No Dialtone: The End of the Public Switched Telephone Network*, 66 FED. COMMC'NS L.J. 203 (2014); Rob Frieden, *The FCC's Name Game: How Shifting Regulatory Classifications Affect Competition*, 19 BERKELEY TECH. L.J. 1275 (2004).

[73] *See, e.g.*, Further Notice of Proposed Rulemaking, 27 FCC Rcd. 5357, 5457–58; Report and Order, 27 FCC Rcd. 6656; Federal-State Joint Board on Universal Service, 67 Fed. Reg. 11,254-01 (Mar. 13, 2002) (codified at 47 C.F.R. pt. 54); Telephone Communication by Hearing and Speech Impaired, 55 Fed. Reg. 50,037-01 (proposed Dec. 04, 1990) (to be codified at 47 C.F.R. pts. 0, 32, 36, 64, 69); Order, *Admin. of N. Am. Numbering Plan*, 16 FCC Rcd. 12963 (2001); Numbering Resource Optimization, 65 Fed. Reg. 37,703 (July 17, 2000) (codified at 47 C.F.R. § 52); Telephone Number Portability, 61 Fed. Reg. 38,605-01 (July 25, 1996) (codified at 47 C.F.R. pts. 20, 52); Report and Order and Notice of Proposed Rulemaking, *Truth-in-Billing*, 21 FCC Rcd. 7518 (2006), *aff'd in part and rev'd in part*, *Vonage Holdings v. F.C.C.*, 489 F.3d 1232 (D.C. Cir. 2007); *see also* Memorandum Opinion and Order, *Vonage Holdings*, 19 FCC Rcd. 22404 (2004) (preempting state regulations and policies regarding VoIP services that accesses conventional telecommunications networks), *aff'd sub nom*., *Minnesota Pub. Utils. Comm'n v. F.C.C.*, 483 F.3d 570 (8th Cir. 2007).

to Internet Service Providers ("ISPs") whose broadband networks originate and terminate all kinds of traffic that blur the distinction between voice and data services, as well as telecommunications and information services.[74] For example, consumers increasingly access voice, text, and video services via a wired or wireless broadband connection. Such traffic provides an alternative to legacy services, such as a telephone call, but ISPs make no universal service funding contribution when providing such services. Equipment manufacturers, such as Apple, software and teleconferencing vendors, such as Zoom and Skype (Microsoft), and messaging app companies lawfully avoid a contribution obligation. Likewise, content providers avoid a contribution obligation, even though ISPs originate and terminate such traffic, some of which constitute a less expensive, or free alternative to services provided by incumbent carriers who incur a contribution obligation.

The USF contribution factor has risen substantially in recent years for several reasons. The decision to expand the universal service mission to include broadband access substantially increased the total subsidy amount required annually. Most telecommunications carriers provide both basic voice services, subject to the contribution factor, and other exempt services, such as broadband access. Such market and technological convergence accord carriers nearly unfettered discretion to determine how much revenues to deem subject to the contribution factor.[75] They can attribute a small and declining portion of total revenues to telecommunications services, because subscribers increasingly rely on broadband network access to data services, including real time "streaming" of video content.

For example, wireless carriers have insulated a large portion of their revenues from having to contribute to universal service funding

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[74] The FCC uses the term Broadband Internet Access Service ("BIAS") provider to identify ventures that provide Internet access. BIAS is a "mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part." Report and Order on Remand, Declaratory Ruling, and Order, *Prot. & Promoting Open Internet*, 30 FCC Rcd. 5601, 5610 (2015), *partially reversed, but retaining the BIAS definition; see also* Declaratory Ruling, Report and Order, and Order, *Restoring Internet Freedom*, 33 FCC Rcd. 311 (2018), *review granted in part, vacated in part*, *Mozilla v. F.C.C.*, 940 F.3d 1 (D.C. Cir. 2019).

[75] *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶ 90.

contribution, because they can attribute most of their revenues as accruing from exempt, broadband services. Internet access does not constitute a telecommunication service subject to universal service funding requirements established by section 254[76] of the Telecommunications Act of 1996.[77] Additionally, many telephone service subscribers have abandoned or downgraded subscriptions to conventional wireline telephone services subject to universal service funding contributions.[78]

The current allocation of USF burdens and exemptions has generated an unlevel competitive playing field. For example, telecommunications carriers must make USF contributions when providing dial up telephone calls between two users and teleconferencing calls linking more parties. Telephone and teleconference calls managed by software and carried via broadband links trigger no USF contribution. Avoidance of a USF contribution, whether paid by the service provider or passed onto subscribers, can create artificial price signals to consumers, even though most perceive no significant difference between calls carried via the public switched telephone networks of legacy carriers, and calls set up via a software application such as Zoom and Skype.

IV. A BRIEF HISTORY OF UNIVERSAL SERVICE FUNDING IN THE UNITED STATES PRIOR TO 1996

In the United States, universal service became a goal soon after the introduction of telephone service. In 1907, AT&T President Theodore N. Vail highlighted the company's commitment with the phrase "One Policy, One System, Universal Service."[79] In application, this objective incorporated self-serving interests in promoting a benevolent Bell System "natural monopoly," despite its refusals to interconnect its network with other carriers and acquisitions of many independent local exchange telephone companies. On the other hand, AT&T expressed a commitment to serve the national interest by expanding service far and wide, thereby promoting economies of scale and accrual of positive network externalities. In settling the first of several antitrust lawsuits filed by the Justice Department, AT&T Vice President Nathan Kingsbury, in 1913, announced a commitment to stop acquiring other telephone companies, divest AT&T's interests in

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[76] 47 U.S.C. § 254 (2021).

[77] 110 Stat. 56.

[78] Mattey, *supra* note 30, at 3; *see also* Werbach, *supra* note 72.

[79] *See* Mueller, *supra* note 16, at 352–69; Richard R. John, *Theodore N. Vail and the Civic Origins of Universal Service*, 28 BUS. & ECON. HIST. 71–81 (1999).

Western Union, the primary provider of text-based services, and permit other telephone companies to connect their networks with AT&T's monopoly long-distance facilities.

As AT&T's revenues grew, so too did market penetration of basic telephone services, albeit primarily in urban locales. On its own accord, AT&T sought to bolster network expansion farther from cities by charging high long-distance rates and using some of the profits to maintain or reduce local phone service subscription fees. Eight years after its commitment not to acquire other local telephone companies, AT&T reactivated its acquisition strategy as permitted by the Willis Graham Act of 1921.[80] Having refrained from curbing or prohibiting additional acquisitions by AT&T of independent telephone companies, the federal government in effect accepted AT&T's assertion that it constituted a natural monopoly.[81]

Eventually, AT&T's privately conceived and implemented universal service subsidy mechanism became federal regulatory policy. Starting in the 1950s, the FCC established universal service policies and rules based on a general mandate contained in Title I of the Communications Act of 1934 to promote the wider use of wire and radio.[82] In consultation with the major telephone industry trade association and later, a Federal-State Joint Board on Universal Service, as authorized by 47 U.S.C. § 410(c), the FCC established as federal policy AT&T's previously implemented tactic of using long distance rates to subsidize local service rates and promote universal service objectives.[83]

The FCC sought to make the process clear, uncontroversial, and consistent with AT&T's prior decision to subsidize local rates. The Commission's new cost allocation methodology maintained the status quo by assigning a significant portion of AT&T's total capital

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[80] Act of June 10, 1921 (Willis-Graham Act), Pub. L. No. 15, 42 Stat. 27, ch. 20, § 1 (1921) (amending Transportation (Esch-Cummins) Act of 1920, Pub. L. No. 152, 41 Stat. 482, ch. 91, § 407) (repealed 1934)). For a discussion of the laws prior to enactment of the 1934 Act, *see generally* G. Hamilton Loeb, *The Communications Act Policy Toward Competition: A Failure to Communicate*, 1978 DUKE L.J. 1 (1978).

[81] So-called natural monopolies operate in markets where consumers would not benefit from competition. Government regulatory oversight is necessary to prevent predictable monopoly practices such as price gouging and erecting barriers to market entry when technological innovations could promote robust competition. *See generally* MUELLER, *supra* note 35.

[82] 47 U.S.C. § 151.

[83] *See, e.g.*, *Amend. Part 69 Comm'n's Rules*, 2 FCC Rcd. 2953 (1987); Memorandum Opinion and Order, *Amend. Part 69 Comm'n's Rules*, 4 FCC Rcd. 6134 (1989).

expenditures to the interstate service sector.[84] The Commission's action matched existing goals of incumbent telephone companies and took advantage of ample flexibility in allocating plant costs, because most telecommunications capital expenditures constitute non-traffic sensitive costs that do not vary with usage.[85] A telephone company must invest in network infrastructure regardless of whether calls are local, intrastate, or interstate, and also regardless of how much total traffic routes through installed lines, provided they do not become congested:

> [t]hus long-distance callers, charged on the basis of the frequency and distance of their calls, covered through their payments a significant portion of the costs of local subscriber plant. Revenues paid in by long-distance callers were shared by AT&T with the local companies through a process called settlements and division of revenues.
>
> That basic system remains in effect today. The FCC, working with a Federal-State Joint Board established pursuant to 47 U.S.C. § 410(c) (1976), allocates local plant costs between the interstate jurisdiction (FCC

[84] To ensure that AT&T could self-administer a universal service funding plan without taxpayer subsidization, the FCC and a trade association of state utility commissioners created the so-called Ozark Plan: "[u]nder the Ozark Plan, [non traffic-sensitive ("NTS") costs which do not vary with use] . . . were assigned to the interstate jurisdiction based on a formula that, in effect, shifted approximately 3.3 percent of NTS costs to the interstate jurisdiction for every 1 percent of interstate use. This percentage figure was known as the subscriber plant factor (SPF)." *Farmers Tel. v. F.C.C.*, 184 F.3d 1241, 1244 (10th Cir. 1999) (citing *MCI Telecomms. v. F.C.C.*, 750 F.2d 135, 137–38 (D.C. Cir. 1984)) ("Between 1970 and 1982, the level of interstate calling increased substantially in relation to intrastate calling. Because of the SPF multiplier, NTS costs were allocated to the interstate jurisdiction about three times as fast as actual interstate use. By the early 1980s, some [local telephone companies'] SPFs enabled them to allocate 85 percent of their NTS costs to the interstate jurisdiction.").

[85] *See generally* Gerald W. Brock, *Bypass of the Local Exchange: A Quantitative Assessment* (FCC Off. Plans & Pol'y Working Paper No. 12, Sept. 1984) (explaining non-traffic sensitive costs and how the FCC and the State PUCs agreed to attribute costs to the interstate sector in what is commonly referred to as the Ozark Plan).

> controls recovery of costs) and the intrastate jurisdiction (state commissions control recovery of costs). This mode of allocation—the 'separations process'—currently assigns roughly 26% of the costs of local exchange plant to the interstate jurisdiction.[86]

In close coordination with telephone companies, the FCC decided to allocate 25% of non-traffic sensitive costs to interstate services, a decision considered reasonable by a reviewing court:

> [a]llocating twenty-five percent of NTS costs to interstate jurisdiction in effect transfers those costs to the rate bases of interstate carriers, forces them to recover those costs through their rates, and reduces their profitability. The Supreme Court, however, has reviewed statutorily authorized economic regulation with great deference . . . .
>
> [i]n this case, nothing in the record suggests that the Commission's allocation of twenty-five percent of NTS costs to the interstate jurisdiction constitutes a confiscation of MCI's property . . . .
>
> [w]e can discern no difference rising to the level of a Takings Clause objection.[87]

The court also decided that FCC rules requiring subsidization and even the possible reduction in a carrier's profitability did not constitute an unlawful confiscation, or taking of property:

> [p]etitioners do not present credible evidence that the Order ever will cause the drastic consequences for rural LEC's articulated

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[86] *Nat'l Ass'n Regul. Utility Com'rs v. F.C.C.,* 737 F.2d 1095, 1105 (D.C. Cir. 1984) (citing *Amend. Part 67*, 89 F.C.C.2d 1, 5, 1982 WL 190436, *modified*, 90 F.C.C.2d 522, *recon. denied*, 91 F.C.C.2d 558 (1982)); *see also MCI Telecomms. v. F.C.C.*, 712 F.2d 517, 523 n.4 (D.C. Cir. 1983).

[87] *Rural Tel. Coal. v. F.C.C.*, 838 F.2d 1307, 1313–14 (D.C. Cir. 1988) (The 5th Circuit Court will consider a renewed characterization of universal service funding as an unconstitutional tax.); *see also Consumers' Rsch. v. F.C.C.*, __ F.4th__, No. 22-60008 (5th Cir. 2023).

> in *Duquesne*. The mere fact that, '[f]or many rural carriers, universal service support provides a large share of the carriers' revenues,' Order ¶ 294, is not enough to establish that the orders constitute a taking. The Fifth Amendment protects against takings; it does not confer a constitutional right to government-subsidized profits.[88]

The onset of long-distance telephone service competition eliminated the continuing use of a simple cost allocation methodology to create a subsidy mechanism to promote universal service. When companies, such as MCI, entered the long-distance market, AT&T could no longer maintain the local service subsidy from long distance service revenues, because MCI and other market entrants offered much lower rates. MCI forced long distance rates closer to being cost-based, despite having to interconnect with the Bell System on terms, conditions, and rates designed by AT&T to thwart competition. With the 1984 divestiture of the Bell Operating Companies, AT&T lost control over the terms and conditions for access to the local exchanges used to originate and terminate long distance calls. The newly independent Bell companies established cost-based access charges applicable to both AT&T and competitors.

Between 1984 and enactment of the Telecommunications Act of 1996, the FCC sought to make local exchange access pricing fair, transparent, and cost based. No longer able to rely on high long-distance rates to generate a source for subsidization, the FCC shifted much of the financial burden on accessing long distance networks via local telephone exchanges directly onto consumers. The Commission opted to apply a flat-rate charge that continues to appear on customers' local telephone service bills as the Subscriber Line Charge.[89] This fee replaces retail long distance rates as the primary source of compensation to local exchange carriers for their so-called first mile delivery of long-distance calls to an interexchange carrier, such as MCI and AT&T, and their last mile delivery from an interexchange carrier to the intended call recipient.

Throughout this transition from monopoly to competitive marketplace, the FCC adjusted universal service funding procedures, making it clear that consumers would directly compensate local

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[88] *Alenco.*, 201 F.3d at 624 (citing *Duquesne Light v. Barasch*, 488 U.S. 299, 307 (1989)).

[89] *Understanding Your Bill: Interstate Access Charge*, VERIZON, https://www.verizon.com/business/support/billing/understanding-billing-charges/ (last visited Jan. 21, 2023).

exchange carriers for the costs of providing access to their networks. Reviewing courts largely deferred to the Commission's expertise and determination that it needed to establish a multi-year transition from long distance revenues, serving as the primary source of universal service subsidies, to new billing line items on subscribers' bills: "[i]t is reasonable to conclude that Congress left a gap to be filled by the FCC, i.e., for the FCC to determine and specify precisely how USF funds may or must be used."[90]

Similarly, an appellate court unconditionally determined that the FCC universal service funding regime did not impose a tax[91] on telephone service subscribers: "[w]e also find unacceptable MCI's argument that the twenty-five percent allocation [of non-traffic sensitive, network costs to interstate long distance telephone service] is an exercise of taxing power that Congress has not delegated to the Commission."[92] Likewise, universal service funding in the United States does not constitute an illegal subsidy mechanism: "[w]e affirm the twenty-five percent NTS cost allocation as a reasonable and carefully considered element of the transition towards the access charge regime approved [by the FCC]."[93]

V. CODIFICATION OF THE UNIVERSAL SERVICE MISSION IN 1996

The Telecommunications Act of 1996 codified the universal service mandate and required the FCC to establish an explicit subsidy mechanism.[94] Section 254 of the 1996 Act requires the Commission,

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[90] *In re F.C.C. 11-161*, 753 F.3d at 1046.

[91] *See Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶115 (citing *Skinner v. Mid-Am. Pipeline*, 490 U.S. 212, 223 (1989)) (In its 2022 Future of the USF Report, the FCC rejects the assertion of some commenters that the USF contribution requirement constitutes a tax: "courts have held that universal service contributions are fees, not taxes, because universal service confers special benefits on contributing carriers by expanding the network they can serve. In any event, in this context, it makes no difference whether universal service contributions are fees or taxes. Even assuming that those payments are a form of taxation, the Supreme Court has held that the delegation of . . . authority under Congress' taxing power is subject to no constitutional scrutiny greater than that . . . applied to other nondelegation challenges.").

[92] *Rural Tel. Coal.*, 838 F.2d at 1314.

[93] *Id.* at 1315.

[94] *See Universal Service*, *supra* note 14 (describing the principles adopted by the 1996 Act, including promoting the availability of quality services at just, reasonable and affordable rates for all consumers; increasing nationwide access to advanced telecommunications services; advancing the availability of such services to all consumers, including those in low income, rural, insular,

in consultation with a Federal-State Joint Board comprised of FCC and State Public Utility Commissioners, to establish a comprehensive universal service financial support system to ensure that the largest number of U.S. residents possible has access to high-quality telephone service regardless of their household income or geographic location.[95] The 1996 Act requires transparency in universal service funding and specifies that only revenues generated by providers of telecommunications services must contribute to universal service funding,[96] even though subsidies now support access to broadband data services.

The 1996 Act further authorizes the FCC to provide funding support for "advanced telecommunications capability"[97] that the Commission interprets as including broadband service, available to qualifying carriers operating in high-cost areas, low-income subscribers, schools, libraries, and rural health care providers.

The FCC provides a layperson description of the four subsidy programs:

> High-Cost Support (now known as the Connect America Fund) provides support to certain qualifying telephone companies that serve high-cost areas, thereby ensuring that the residents of these regions have access to reasonably comparable service at rates reasonably comparable to urban areas;

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and high cost areas, at rates that are reasonably comparable to those charged in urban areas; increasing access to telecommunications and advanced services in schools, libraries and rural health care facilities; and providing equitable and non-discriminatory contributions from all providers of telecommunications services for the fund supporting universal service programs).

[95] 47 U.S.C. § 254(a)–(b).

[96] *Id.* at § 254(d) (Note however, the FCC can expand the universal service funding obligation to include both providers of interstate telecommunications services and other ventures that provide telecommunications as an integral part of another type of service: "[a]ny other provider of interstate telecommunications may be required to contribute to the preservation and advancement of universal service if the public interest so requires.").

[97] *Id.* at § 1302(a) ("The Commission and each State commission with regulatory jurisdiction over telecommunications services shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) . . . ."); *see also Connect Am. Fund*, 29 FCC Rcd. 15644 (2014), *clarified* 31 FCC Rcd. 2384 (2016).

> Low-Income Support, also called the Lifeline program, assists low-income customers by helping to pay a portion of monthly local telephone service charges so that telephone service is more affordable;
>
> Schools and Libraries Support, also known as the 'E-Rate,' provides telecommunication services (e.g., local and long-distance calling, both fixed and mobile, high-speed data transmission lines), Internet access, and internal connections (the equipment that delivers these services to particular locations) to eligible schools and libraries; [and]
>
> Rural Health Care Support allows rural health care providers to pay rates for telecommunications services similar to those of their urban counterparts, making telehealth services affordable, and also subsidizes Internet access.[98]

VI. INITIATIVES RESPONDING TO THE COVID-19 PANDEMIC

Congress,[99] the Executive Branch,[100] and the FCC[101] responded to the Covid-19 pandemic with emphasis on mitigating the cost and difficulty in accessing essential services, such as health care provided via a broadband link. Congress allocated billions of dollars, on top of the pre-existing core universal service programs, with an eye towards achieving speedy progress in bridging the Digital Divide, primarily through subsidies for rural telehealth and broadband projects of

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[98] *Universal Service*, *supra* note 14.

[99] *See, e.g.*, Coronavirus Aid, Relief, and Economic Security Act, Pub. L. 116-136 (2020); Consolidated Appropriations Act, Pub. L. 116-260 (2021); American Rescue Plan Act of 2021, Pub. L. 117-2 (2021); Infrastructure Investment and Jobs Act, Pub. L. 117-58 (2021).

[100] *See, e.g.*, *Grants Overview*, *supra* note 19; *Broadband Infrastructure Program*, BROADBAND USA, https://broadbandusa.ntia.doc.gov/resources/grant-programs/broadband-infrastructure-program (last visited Apr. 15, 2023).

[101] *Coronavirus Response and Relief*, FCC, https://www.fcc.gov/coronavirus-response-and-relief (last visited Apr. 03, 2023).

qualifying telecommunications companies.[102]

For its part, the FCC sought to support current Lifeline subscribers and increase enrollment opportunities,[103] modified the E-Rate program rules to promote distance learning objectives,[104] promoted installation of fifth generation wireless networks in rural locales,[105] and created the Rural Health Care Program[106] to subsidize access by rural health care providers to telecommunications and broadband networks capable of carrying telemedicine traffic.

VII. AN ESSENTIAL, LEGITIMATE AND LAWFUL MISSION IN NEED OF REFORM

Throughout the sequence of private, regulatory agency, and legislative initiatives, the United States has led the world in developing a funding and management system to achieve universal service goals. Private and public sector initiatives have made it possible for this nation to accrue economic development and societal benefits. Because circumstances change, the ongoing accrual of such benefits has required reassessments and modifications of the universal service funding system. Reviewing courts have evaluated both the baseline foundations for creating a funding mechanism as well as the modifications and refinements undertaken by the FCC. Courts have affirmed the FCC's initiatives, and its interpretation of the 1996 Act, based on the determination that the Commission has lawfully interpreted explicit legislative language and properly implemented the programs created to achieve specific goals.[107]

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[102] *See, e,g,* Report and Order, *Promoting Telehealth for Low-Income Consumers*, FCC Rcd. 3366 (2020) ("The Commission adopted the COVID-19 Telehealth Program pursuant to Congressional direction to provide funding on a temporary, emergency basis to health care providers responding to the pandemic."); Report ¶ 2, *Promoting Telehealth to Low-Income Consumers*, DA 23-234 (F.C.C. Mar. 21, 2023), 2023 WL 2631080.

[103] *Lifeline & Link Up Reform & Modernization*, 35 FCC Rcd. 2950 (2020), 35 FCC Rcd. 5510 (2020), 36 FCC Rcd. 4612 (2021).

[104] *Establishing Emergency Connectivity Fund to Close Homework Gap*, 36 FCC Rcd. 8696 (2021).

[105] *Establishing 5G Fund for Rural America*, 36 FCC Rcd. 143 (2020).

[106] *Summary of the Rural Health Care Program*, FCC, https://www.fcc.gov/general/rural-health-care-program (last visited Apr. 03, 2023).

[107] *See Blanca Tel. v. F.C.C.*, 991 F.3d 1097 (10th Cir. 2021) (determining the FCC has authority to require reimbursement by a carrier receiving overpayment of universal service subsides without a statute of limitation time limit); *In re F.C.C. 11-161*, 753 F.3d at 1046 (affirming FCC's revisions to universal service funding policies and methodology to add subsidies for

Reviewing courts have rejected as misguided and illogical claims that the FCC exceeded statutory authority and engaged in unconstitutional activities in implementing its universal service funding programs.[108] U.S. universal service policies comport with global practices.[109] When it becomes apparent that reforms are necessary, the Commission has made timely corrections, including finetuning the collection and disbursement of funds. Such midcourse corrections have occurred because of changed circumstances, and occasionally, because of newly enacted statutory requirements.

The FCC and other federal agencies must confront chronic and emerging challenges to the universal service regime, including inefficiency, fraud, declining subscriptions to services subject to a funding requirement, and an expanded mission that now includes broadband access.[110] The Covid-19 pandemic provides a striking example of how changed circumstances can necessitate a more aggressive and expensive universal service mission. It also has increased logistical and oversight challenges, including the need for better oversight to identify and eliminate wasteful duplication of efforts, fraud, and inefficiency. Nearly everyone sheltering in place

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broadband access); *U.S. Telecom Ass'n v. F.C.C.*, 295 F.3d 1326 (D.C. Cir. 2002) (affirming the FCC's determination whether a specific venture provides telecommunications services and qualifies for universal service funding); *Alenco Commc'ns v. F.C.C.*, 201 F.3d 608 (5th Cir. 2000) (affirming FCC's cost allocation methodology that reflects the transition from monopoly to competitive telecommunications marketplace); *Cellular Telecomms. Indus. Ass'n v. F.C.C.,* 168 F.3d 1332 (D.C. Cir. 1999) (affirming FCC determination that its federal, universal service program does not preempt states from enacting a statewide program); *Sprint Spectrum v. State Corp. Comm'n*, 149 F.3d 1058 (10th Cir. 1998) (finding that wireless telecommunications carriers are lawfully subject to both federal and state universal service funding requirements); *Tex. Off. Pub. Util. Coun. v. F.C.C.*, 183 F.3d 393 (5th Cir. 1999) (largely affirming FCC universal service funding cost allocation methodology).

[108] *See In re F.C.C. 11-161*, 753 F.3d at 1046; *Rural Tel. Coal.*, 838 F.2d at 1313–14; *Summary of the Rural Health Care Program*, *supra* note 106.

[109] *See* UNIVERSAL SERVICE AND DIGITAL INCLUSION FOR ALL, *supra* note 8, at 4 (an important comparative study of national universal service funding regimes ranked the United States in the highest category for engagement and performance, a top designation assigned to only 38% of the 69 mostly developed nations studied).

[110] *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-22-104611, BROADBAND: NATIONAL STRATEGY NEEDED TO GUIDE FEDERAL EFFORTS TO REDUCE DIGITAL DIVIDE 9 (May 2022) (identifying the potential for a fragmented and overlapping patchwork of 133 universal service funding programs, administered by 15 federal agencies).

generated greater demand for telecommunications and data services, because home confinement increased the need for robust, remote access to education, telehealth, government services, social networks, ecommerce, entertainment, and communications.

Congress enacted emergency measures that substantially increased universal service funding by tapping into the national treasury, a strategy deviating from having carriers and their subscribers bearing the financial burden.[111] At some future date, these programs will conclude, and substantially reduced universal service funding will be available to achieve further progress.

However, the decline in total funding may not reach pre-pandemic level because of an emerging concern that foreign governments might engage in surveillance and sabotage of vulnerable domestic telecommunications networks. Congress[112] and the FCC[113] have determined that the Chinese government has both the incentive and the ability to order domestic manufacturers and carriers doing business in the United States to spy on Americans, and possibly to disrupt service. Many universal service beneficiaries, particularly telephone companies operating in rural locales, have installed low-cost Chinese-manufactured equipment. Congress allocated $1.895 billion for disbursement by the FCC to fund the extraction and replacement ("rip and replace") of such equipment.[114]

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[111] *See* PATRICIA MOLONEY FIGLIOLA ET AL., CONG. RSCH. SERV., R46780, OVERVIEW OF THE UNIVERSAL SERVICE FUND AND SELECTED FEDERAL BROADBAND PROGRAMS 16–18 (Apr. 30, 2021); BRIAN E. HUMPHREYS, CONG. RSCH. SERV., IN11612, THE EMERGENCY BROADBAND BENEFIT: IMPLEMENTATION AND FUTURE POLICY DIRECTIONS (Feb. 23, 2021).

[112] Secure and Trusted Communications Networks Act of 2019, Pub. L. 116-124, 133 Stat. 158 (codified at 47 U.S.C. § 1601 *et seq*.).

[113] *See Protecting Against Nat'l Sec. Threats*, No. EA21-233 (F.C.C. Nov. 25, 2022), 2022 WL 17335868 (prohibiting the authorization, marketing, and importation of telecommunications equipment identified by the FCC as posing an unacceptable risk to national security of the United States or the security or safety of U.S. persons); *see also Protecting Against Nat'l Sec. Threats*, 36 FCC Rcd. 11958 (2021), 35 FCC Rcd. 7821 (2020), 35 FCC Rcd. 14284 (2020), 34 FCC Rcd. 11423 (2019); *Huawei Techs. USA v. F.C.C.*, 2 F.4th 421 (5th Cir. 2021).

[114] *See Protecting Against Nat'l Security Threats*, 36 FCC Rcd. 4540 (2021) (citing Division N-Additional Coronavirus Response and Relief, Title IX-Broadband Internet Access Service, Pub. L. 116-260, 134 Stat. 1182, §§ 901, 906 (2020)) ("Through the Consolidated Appropriations Act, 2021 (CAA), Congress appropriated $1.9 billion to the Commission to implement the Secure and Trusted Communications Networks Act of 2019 (Secure Networks Act), of which $1.895 billion must be used to remove and replace

A. Better Ways to Finance Universal Service Goals

The combination of the Covid-19 pandemic and substantial increases in the universal service contribution factor has generated even greater pressure for significant change in universal service funding and disbursement. After Covid-19 becomes a manageable public health care issue, Congress, the FCC, and other federal, state, and local agencies likely will face renewed or increased pressure to resolve perennial deficiencies, inequities, and inefficiencies in ongoing universal service programs.

As a threshold matter, stakeholders and decision makers on funding must calibrate what portion of subsidies should flow to carriers and service providers on one hand, and qualifying individuals on the other hand. As well, the parties need to reach agreement on what programs should have recurring, monthly payouts, and what programs should have one-time project funding. Simply put, universal service funding should have programs that can achieve desirable, measurable, and quantifiable benefits, as opposed to programs that become permanent, with little regard to whether the funding remains necessary and effective in reaching specified goals.

Federal and state legislators and regulators will have to make difficult decisions, not simply based on a broad and uncalibrated mission to make access affordable and ubiquitous. They should acquire a better sense of who should qualify as a subsidy beneficiary, what incentives are needed to stimulate participation, the different ways beneficiaries might use subsidies, and what level of funding would trigger desirable outcomes, such as household use of broadband access by large screen personal computers along with wireless services delivered to small screen handsets.

Proposals to narrow the Digital Divide should pass muster in terms of efficient, initial funding for capital expenditures in plant and equipment. Additionally, project proponents should demonstrate that they can meet ongoing operating expenses with subscriber revenues, using realistic projections. If a project likely will need ongoing subsidization, because of predictable revenue shortfalls, applicants should bear the burden of explaining how their proposal will accrue ample dividends, despite a future revenue shortfall.

Who provides the funding, and how much, looms large over almost every reform initiative. In particular, decision makers must find

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communications equipment and services that pose a national security risk and reimburse eligible providers for the cost of doing so."); *see also* Secure and Trusted Commc'ns Networks Reimbursement Program, 47 C.F.R. § 1.50004 (2022).

a solution to compassion fatigue and the prospect for the contribution factor to increase above the current 32.6% level. Set out below are several options to address this acute problem.

1. Direct Allocation from the Treasury

The Covid-19 pandemic clearly and convincingly demonstrated that lack of access to broadband service has profound, adverse impacts, including handicapping education and employment advancement.[115] The need for unconnected people to seek a wireless broadband connection far from home dramatically shows the importance of the universal service mission, especially for remote access to education, government and commercial transactions, health care, self-expression, and entertainment:

> Covid-19 has led to unprecedented limitations on people's mobility as governments have sought to curb the spread of the airborne virus and avert crises in unprepared health systems across the world. Following the varying levels of restrictions put in place globally at different periods throughout 2020 and into 2021, people have been forced to turn to e-learning, remote working, online shopping and even virtual funerals. The pandemic has opened the door to the use of digital technology in ways never before imagined and given real meaning to the prefixes 'e-,' 'remote,' 'virtual,' 'online' and 'distance.' During this time, digital technology has been crucial—for those with access. While on the one hand, the crisis has led to the fast-tracking of digital adoption in countries that already had some level of digitalization; on the other, it has exposed digital inequalities, which are particularly large in less developed

[115] *Homework Gap and Connectivity Divide*, FCC, https://www.fcc.gov/about-fcc/fcc-initiatives/homework-gap-and-connectivity-divide (last visited Jan. 15, 2023); *see generally* Rob Frieden, *Lies, Damn Lies and Statistics: Developing A Clearer Assessment of Market Penetration and Broadband Competition in the United States*, 14 VA. J.L. & TECH. 100 (2009); Benjamin W. Cramer, *'The Nation's Broadband Success Story': The Secrecy of FCC Broadband Infrastructure Statistics*, 31 HASTINGS COMM. & ENT. L.J. 339 (2009).

> economies. Never has the impact of the digital divide been so glaring.[116]

The Covid-19 pandemic also provides a striking example of how changing circumstances necessitate modification of the universal service mission, including significant adjustments to remedy financial, logistical, oversight, and consumer demand challenges. Both Congress and the Executive Branch responded with uncharacteristic speed, including the decision to fund new ad hoc programs with allocations from the treasury. The federal government wisely opted to increase universal service funding, rather than rely solely on existing programs whose increased costs would trigger an even higher universal service contribution factor and more compassion fatigue and pushback from telecommunications carriers and subscribers. Nearly everyone sheltering in place generated greater demand for telecommunication and data services, because home confinement increased the need for robust, remote access to education, government services, social networks, ecommerce, entertainment, and communications.

Covid-19 necessitated a substantial increase in the scope, reach, and budget for universal service program funding, and Congress responded with disbursements from the national treasury. Funding the universal service program from all taxpayers vastly expands the number of subsidy contributors and arguably closes a loophole where prior beneficiaries of universal service funding, such as carriers providing broadband data services, qualified for an exemption from having to contribute.[117] Additionally, it reduces the regressive nature of requiring contributions solely based on subscriber charges without regard to one's income and ability to pay.[118] Direct taxpayer support adds the federal government's considerable investigative resources to identify and sanction criminal and wasteful behavior.[119]

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[116] FINANCING UNIVERSAL ACCESS TO DIGITAL TECHNOLOGIES AND SERVICES, *supra* note 34, at 1.

[117] Victor Glass & Timothy Tardiff, *Reforming Funding of Universal Access to Telecommunications and Broadband Services: Approaches for the New Decade*, 45 TELECOMM. POL'Y 1, 11 (Mar. 2021) ("Perhaps the most practical near-term funding reform proposal is to replace the current definition of assessable services (interstate and international) with a more inclusive definition of all communication services that have a telecommunications component.").

[118] Jeffrey Westling, *Updating the Lifeline Program*, R ST. SHORTS 102 (Apr. 2021), https://www.rstreet.org/wp-content/uploads/2021/04/Final-Short-No.-102-Updating-the-LIfeline-Program.pdf.

[119] Yepez, *supra* note 68.

2. Expanding the Scope of Services and Stakeholders Subject to the Contribution Factor

Responding to compassion fatigue and substantial increases in the contribution factor paid by telecommunications subscribers, a diverse group of stakeholders commissioned studies and generated advocacy documents on ways to reform the universal service funding system.[120] Predictably, such advocacy seeks to exempt research sponsors with analysis purporting to show that such inclusion would violate the Communications Act, impose additional costs to consumers, and generate unnecessary marketplace distortions. This sponsored research also identifies new lawful funding sources, better able to absorb subsidies and less likely to pass them onto consumers. Results-driven advocacy offers little insight into what types of reform initiatives can foster improvements with the least degree of adverse consequences, particularly in the marketplace for telecommunications and data services. For its part, the FCC has expressed a preference for congressional guidance and a reluctance to act without generating a complete evidentiary record and legal analysis.[121]

This section will identify reform strategies with an eye towards achieving two primary goals: (1) reduction in the contribution factor, increasingly borne by a shrinking subset of telecommunications subscribers obligated to pay even as other beneficiaries avoid having to contribute; and (2) identifying additional subsidy funders that have benefited directly, or indirectly, from universal service programs.

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[120] *See, e.g.*, Michael A. Williams & Wei Zhao, *NTCA-USF Study*, BERKELEY RSCH. GRP. (May 07, 2020) (finding that requiring broadband internet access services providers to make a universal service contribution would not materially impact broadband adoption and retention); *Repairing the FCC's Universal Service Fund Contribution Mechanism: A Call to Action*, PUB. KNOWLEDGE (Nov. 29, 2021) (coalition of public interest groups, communications companies, anchor institutions, and consumers advocating inclusion payment of a universal service fund contribution by broadband internet access providers); *see generally* Londoño, *supra* note 32; Daniel Lyons, *Framing the Future of Universal Service*, AEIDEAS (Mar. 01, 2022); Thayer & Jordan, *supra* note 43.

[121] For example, the FCC declined invitations to suggest that platform intermediaries could lawfully be required to contribute to the USF and do so without adding costs to subscribers. *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶ 105.

a. Higher Contribution Factors Promote Avoidance Strategies and Growing Pushback

It should come as no surprise that a growing number of telecommunications consumers have noticed a billing line item that imposes a 32.6% surcharge on a portion of service.[122] Understandably, they have the same resentment as consumers facing a proliferation of line items that appear on the bills for air travel, cable television, car rentals, tickets for sports and other live events, and temporary accommodations. Consumers consider it bait and switch when a business quotes an attractive rate that more than doubles after the inclusion of taxes, fees, surcharges, convenience charges, and previously included service elements, now recast as à la carte supplements.

Additional pushback is likely from subscribers who learn they bear a universal service contribution burden, while other consumers and ventures participating in the Internet ecosystem via broadband networks avoid contribution. This arguably unfair burden occurs because section 254 of the 1996 Act expressly limits who must bear the USF contribution obligation.[123] This section specifies that the FCC can apply the universal service funding burden only to carriers offering telecommunications services[124] and possibly to providers of widely available services that use telecommunications to deliver other types of services to subscribers.[125]

Accordingly, a large group of ventures operating in the Internet ecosystem and reliant on broadband networks to deliver their content and service currently bear no USF subsidy obligation. They include carriers operating data transmission networks, such as broadband

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[122] Toby Bargar, *Read the Fine Print: Federal Universal Service Fund Fee Increases*, AVALARA (May 21, 2021).

[123] *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶ 88; *see also Truth-in-Billing*, 21 FCC Rcd. 7518 (requiring interconnected voice over Internet protocol providers to contribute to the universal service fund because they are providers of interstate telecommunications); *see generally* Public Notice, 24 FCC Rcd. 12129; Public Notice, Petition for Waiver of Universal Service Contribution or Reconsideration, *Network Operator Servs.*, 13 FCC Rcd. 17900 (1998).

[124] *Contribution Methodology & Administrative Filings*, *supra* note 9.

[125] Section 254(d) also vests the Commission with permissive authority to assess contributions such that "[a]ny other provider of interstate telecommunications may be required to contribute to the preservation and advancement of universal service if the public interest so requires." 47 U.S.C. §254(d).

Internet Service Providers ("ISPs"), platform intermediaries that deliver video content and other data services,[126] such as eBay, Facebook, Google, Twitter, and Uber, and creators and distributors of the content and services carried via broadband networks, such as Amazon Prime Video, Netflix, Yahoo, and YouTube. Additionally, carriers subject to the USF contribution requirement have substantial flexibility in deciding what portion of total service revenues constitute telecommunications, which are subject to the contribution obligation.

For example, current wireless cellphone services combine voice, text, and data services. Carriers can attribute a comparatively small portion of total revenues as accruing from telecommunications services, with a much higher percentage of total revenues generated from data services. Arguably, such a division may make sense considering how subscribers currently use their phones. Conventional telephone service, measured in minutes of use, have declined, as consumers increasingly rely on smartphones to access information services that combine video and audio, e.g., teleconferencing offered by Apple, Microsoft, and Zoom, interactive gaming, streaming video, and lengthy interaction on social networks via broadband channels. These services offer consumers an enhanced value position that also exempts such use from a universal service contribution:

> [w]e are using declining voice revenues to pay for programs that are increasingly broadband-centric. As the factor increases, customers who traditionally purchased the legacy services that fund USF today are opting to switch to IP-based alternatives that don't incur the USF tax. The loss of that assessable revenue then triggers another increase to the contribution factor, and so the death spiral

[126] For background on how Internet broadband intermediaries operate, *see generally* Rob Frieden, *Two-Sided Internet Markets and the Need to Assess Both Upstream and Downstream Impacts*, 68 AM. U.L. REV. 713 (2019); Natascha Just, *Governing online platforms: Competition policy in times of platformization*, 42 TELECOMM. POL'Y 386 (2018); Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710 (2017); Kenneth A. Bamberger & Orly Lobel, *Platform Market Power*, 32 BERKELEY TECH. L.J. 1051 (2017); Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87 (2016); DAVID S. EVANS & RICHARD SCHMALENSEE, MATCHMAKERS: THE NEW ECONOMICS OF MULTISIDED PLATFORMS (2016); Lapo Filistrucchi et al., *Definition in Two-Sided Markets: Theory and Practice*, 10 J. COMPETITION L. & ECON. 293 (2014).

accelerates.[127]

On the other hand, subscribers of legacy, wireline voice telephone services pay a higher percentage contribution, because most, if not all, of the service delivered by a carrier clearly falls within the types of services subject to the USF contribution obligation. Even though wireline voice subscriptions typically cost less, an ever-increasing USF subsidy burden narrows the total out of pocket cost differential vis-à-vis mobile wireless carriage. This outcome may expedite the subscriber migration from wireline to wireless service, something telephone companies keenly desire, because it will reduce their operating expenses, such as the maintenance of aging wireline networks.

However, a higher universal service contribution burden arguably constitutes an artificial marketplace distortion.[128] Wireline service subscribers might prefer the greater reliability, sound quality, ease of use, and ready interconnection with facsimile machines, burglar and fire alarms, health monitoring, and devices used by the hearing impaired. Wireline telephone handsets typically operate during storms and other weather-related events that cause temporary outages of wireless and electricity distribution services. Cellphones need frequent battery charging, which cannot occur via a temporarily disrupted electric grid. Nevertheless, the narrowing wireline service discount, relative to cellphone service, might nudge or push consumers into becoming wireless subscribers, despite the real or perceived inconvenience.

In lieu of a fundamental change in funding source from subscribers to taxpayers, reform could focus on spreading the financial burden over a larger set of direct and indirect beneficiaries. Candidates for inclusion could include upstream content providers and platform operators, as well as downstream ISPs providing first and last mile broadband links for consumers. Another option applies a uniform fee for each telephone number assigned to any service provider, not just telephone companies, or VoIP operators that provide service via legacy wired and wireless networks.[129]

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[127] Joan Marsh, *We Need to Fundamentally Rethink How USF Programs are Funded*, AT&T CONNECTS (July 21, 2020).

[128] Different state and local taxes and surcharges also can have a market distorting effect. *See generally* Mackey & Boesen, *supra* note 11.

[129] Further Notice of Proposed Rulemaking, *Universal Serv. Contribution Methodology*, 27 FCC Rcd. 5357, 5457–58 (2012) (The FCC considered, but opted not to implement, this option in 2012, having noted that applying a fixed contribution amount would impose a greater financial burden on consumers generating low call volumes: "[p]roponents of numbers-based methodologies

Expanding the set of universal service funding categories would provide significant relief to telephone service ratepayers. However, several statutory and jurisdictional factors may foreclose any expansion, absent enabling legislation. Section 254(d) of the 1996 Act offers clear guidance that universal service funding contributions shall be based on telecommunications carrier revenues, not the revenues of all ventures providing a conduit for first and last mile delivery of data services and content to consumers.

One could make a plausible assertion that because ISPs combine telecommunications carriage of digital bitstreams with software and other data applications, section 254(d) of the 1996 Act authorizes the FCC to expand the USF subsidy obligation to include ISPs. Arguably, ISPs and other ventures providing broadband data services to retail consumers "offer" public telecommunications in conjunction with the delivery of data, audio, and video content.

However, in determining whether non-discrimination, network neutrality obligations apply to ISPs,[130] the FCC currently classifies

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have historically argued that such a system would enhance the specificity and predictability of the carriers' contributions by eliminating the need to distinguish between information and telecommunications revenues, or interstate and intrastate revenues. Proponents have argued that a numbers-based system would benefit end users because it is technologically and competitively neutral—consumers would pay the same pass-through charge regardless of the type of services they choose—and such pass-through charges would be more stable. . . . [o]thers, however, have raised concerns that a numbers-based methodology would not satisfy the Act's statutory requirements that telecommunications service providers contribute to universal service on an 'equitable and nondiscriminatory basis' because it could reduce contributions from certain industry segments and increase them for others. Some assert that assessing a flat universal service charge (such as a telephone-number based charge) is inherently unfair because it does not take into account the fact that some people make many interstate and international calls, while others make few calls in a given month, yet all users (heavy users or light users) would be subject to the same flat monthly assessment amount.").

[130] For background on the complicated, multi-decade consideration whether and how to impose non-discrimination and other common carrier duties on ISPs, *see generally* Eugene Volokh, Tr*eating Social Media Platforms like Common Carriers?*, 2021 J. FREE SPEECH L. 377 (2021); Adam Candeub, *Bargaining for Free Speech: Common Carriage, Network Neutrality, and Section 230*, 22 YALE J.L. & TECH. 391 (2020); Gigi B. Sohn, A *Policy Framework for an Open Internet Ecosystem*, 2 GEO. L. TECH. REV. 335 (2018); Ellen P. Goodman, *Zero-Rating Broadband Data: Equality and Free Speech at the Network's Other Edge*, 15 COLO. TECH. L.J. 63 (2016); John Blevins, *The FCC and the "Pre-Internet,"* 91 IND. L.J. 1309 (2016); Rob

broadband Internet access as an information service, which does not trigger common carrier duties specified in Title II of the Communications Act of 1934, including section 254 universal service responsibilities.[131] Even though an ISP uses telecommunications to provide Internet access, the FCC considers that feature a subordinate and integrated part of the delivery of content, data, and software applications.

Both upstream content providers and downstream ISPs are not carriers subject to Title II common carrier statutory responsibilities. The former produce or package content created by subscribers or third parties. Some degree of First Amendment protection possibly accrues making it plausible for them to argue that compulsory universal service funding responsibilities unlawfully burden free speech.

Additionally, content providers and platform operators, such as social networks, can readily refute assertions that their content freely rides on telecommunications carrier networks. Such traffic does force telecommunications carriers to make ongoing and substantial financial investments to expand bandwidth to accommodate ever increasing demand. However, this traffic represents what most subscribers want and why they became broadband subscribers in the first place. Additionally, content providers and packagers do contribute significantly to network distribution through investment in transoceanic fiber optic cables[132] and installation of data centers[133] and

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Frieden, *Assessing the Merits of Network Neutrality Obligations at Low, Medium and High Network Layers*, 115 PA. STATE L. REV. 49 (2010); Barbara van Schewick, *Network Neutrality and Quality of Service: What A Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1 (2015); Susan P. Crawford, *Transporting Communications*, 89 B.U. L. REV. 871 (2009); Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. TELECOMM. & HIGH TECH. L.J. 329 (2007); Christopher S. Yoo, B*eyond Network Neutrality*, 19 HARV. J.L. & TECH. 1 (2005); Christopher S. Yoo, W*ould Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate*, 3 J. TELECOMM. & HIGH TECH. L. 23 (2004); Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141 (2003).

[131] *Restoring Internet Freedom,* 33 FCC Rcd, 311, 320.

[132] *See, e.g.*, Public Notice, Streamlined Submarine Cable Landing License Applications, Report No. SCL-00308S (F.C.C. Mar. 26, 2021), 2021 WL 1170008 (application submitted by a Google affiliate for authority to install and operate a non-common carrier fiber-optic submarine cable system connecting the United States with the United Kingdom and Spain).

[133] *See What Is a Data Center?*, CISCO, https://www.cisco.com/c/en/us/solutions/data-center-virtualization/what-is-a-data-center.html (last visited Jan. 18, 2023) (Platform intermediaries, content providers, and packagers of content with high bandwidth and traffic

proxy servers[134] containing the most popular content at various geographical locations closer to subscribers. Despite avoiding having to make direct contributions to universal service funding, content providers do make substantial investments in infrastructure needed for content and broadband services to reach subscribers.

Burdening ISPs with a universal service contribution obligation has similar constraints. These ventures qualify for an exemption, in part because they provide information services, not Title II regulated telecommunications services.[135] Advocates for imposing a contribution obligation note that VoIP service providers, offering access to and from legacy wired and wireless networks, already must make universal service contributions, even though they do not qualify to receive funding. The FCC successfully defended its decision to impose a funding burden, based on the premise that VoIP subscribers accrued financial benefits from having access to and from the so-called Public Switched Telephone Network. In *Minnesota Public Utilities Commission v. F.C.C.*, the court ruled that the FCC could avoid having to determine whether interconnected VoIP constituted a regulated telecommunications service because the integrated nature of the service foreclosed separating interstate and intrastate services.[136]

In terms of net effects on achieving progress in achieving universal service goals, imposing a contribution burden on ISPs might result in regression. Unlike vastly profitable content providers and platform intermediaries, such as Facebook, ISPs generate much smaller profit margins. ISPs likely will pass onto their subscribers the total additional financial contribution burden, just like telephone companies. Arguably, some significant percentage of ISP subscribers might abandon service, or opt for lower cost options, in response to inclusion of the USF contribution factor as a new monthly billing line item.

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requirements install, or share in the installation of, facilities that interconnect with Internet Service Providers and other telecommunications carriers).

[134] *Proxy Server*, PC MAG., https://www.pcmag.com/encyclopedia/term/proxy-server (last visited Jan. 18, 2023).

[135] In 2015, when it had a Democratic party majority, the FCC reclassified broadband Internet access as Title II regulated common carriage, telecommunications service. In 2018, when it had a Republican party majority, the FCC restored the information service classification of broadband access. As of mid-2022, this classification remains in place, but may again be replaced when the FCC has a Democratic party majority of Commissioners.

[136] 483 F.3d 570 (8th Cir. 2007).

VIII. CONCLUSION

Universal service funding in the United States has migrated from a private initiative of AT&T into a major goal of federal and state governments. The mission has become more complicated and expensive over time, because the scope and breadth of goals have grown, and the Covid-19 pandemic has generated much greater appreciation for the need to bridge the Digital Divide. In addition to the four core universal service funding programs, subsidized by subscribers at a rate of over $8 billion annually, the U.S. Government Accountability Office estimates that federal investments totaled nearly $50 billion to promote broadband infrastructure investment in unserved or underserved areas from 2009 through 2017.[137] Additionally, the 2021 Infrastructure Investment and Jobs Act[138] appropriated nearly $65 billion for new and existing broadband programs.

The universal service funding process in the United States requires thorough evaluation and auditing to identify inefficiencies, overlapping programs, duplicative initiatives, and wasteful expenditures. The recent infusion of added funds has addressed acute needs, but it also underscores the importance in achieving greater certainty that subscriber and taxpayer subsidies achieve progress in reaching the goal that everyone, anywhere in the nation, has access to affordable and useful telecommunications and data services.

Legitimate concerns about operational efficiency and reducing waste, along with progress in managing the Covid-19 pandemic, could warrant streamlining, consolidating, and even eliminating some programs, resulting in a reduction in total subsidy amounts. However, such initiatives should not evolve into abandonment of the universal service goals, or the premature declaration of mission accomplished. Millions of U.S. residents still lack broadband access[139] and stakeholders will continue to dispute what constitutes the minimum bit transmission speed to qualify as broadband service.[140]

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[137] GAO-22-104611, *supra* note 110.

[138] 135 Stat. 429, §§ 60101–60604 (codified as amended at 47 U.S.C. §§ 1701–1753); *see generally* Notice of Inquiry, 2021 WL 5986835; *Rep. on Future Universal Serv. Fund*, 2022 WL 3500217.

[139] *See generally* OFF. ECON. & ANALYTICS, INDUS. ANALYSIS DIV., INTERNET ACCESS SERVICES: STATUS AS OF JUNE 30, 2019 (2022); *Report on the State of the Lifeline Marketplace*, WC Docket Nos. 09-197 et al. (Wireline Competition Bureau June 2021), *available at* https://docs.fcc.gov/public/attachments/DOC-373779A1.pdf; Fourteenth Broadband Deployment Report, *Inquiry Concerning Deployment Advanced Telecomms. Capability*, 36 FCC Rcd. 836 (2021).

[140] *See, e.g.,* COLBY LEIGH RACHFAL, CONG. RSCH. SERV., IF11875,

The Internet of Things,[141] households with two or more simultaneous users of bandwidth intensive applications, the need to reduce transmission delays (latency) in many new services, such as self-driving cars and gaming, and a host of other factors point to ever-increasing consumer expectations of what broadband networks should provide. For the foreseeable future, subsidization by a larger pool of beneficiaries can achieve progress in reaching costly, but essential, universal service goals.

The lowest additional cost borne directly by telecommunications and broadband consumers would likely result if upstream content providers and platform intermediaries, such as Facebook, Google, eBay, and Uber, absorb a portion of the USF burden as a relatively minor additional cost of doing business.[142] If the FCC targets ISPs for contributions, these operators likely will join their telecommunications carrier counterparts and pass through the entire cost to subscribers. Having become extraordinarily profitable and having largely evaded regulatory oversight and antitrust sanctions, platform operators could accrue significant good will and public relations dividends by showcasing their contributions towards narrowing the Digital Divide.

RAISING THE MINIMUM FIXED BROADBAND SPEED BENCHMARK: BACKGROUND AND SELECTED ISSUES (July 12, 2021); Press Release, FCC, Chairwoman Rosenworcel Proposes to Increase Minimum Broadband Speeds (July 15, 2022).

[141] U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-75, INTERNET OF THINGS: STATUS AND IMPLICATIONS OF AN INCREASINGLY CONNECTED WORLD (May 15, 2017).

[142] *See Rep. on Future Universal Serv. Fund*, 2022 WL 3500217, at ¶ 111 (While the FCC's comprehensive review of the USF makes no specific recommendation on how to abate compassion fatigue, the Commission did emphasize the need for Congress to "provide the Commission with the legislative tools needed to make changes to the contributions methodology and base in order to reduce the financial burden on consumers, to provide additional certainty for entities that will be required to make contributions, and to sustain the Fund and its programs over the long term."); *id.* at ¶106 (The FCC will "closely evaluate this record and take efforts to avoid raising the cost of broadband service and shifting the financial burden from corporations to consumers at a point in time when the federal government is working to address affordability challenges contributing to the digital divide.").