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February 14, 2022

Via E-Filing – Notice of Ex Parte Communications

Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Re: *Report on the Future of the Universal Service Fund*, WC Docket No. 21-476;
***Universal Service Contribution Methodology*, WC Docket No. 06-122**

Dear Ms. Dortch:

On behalf of the Ad Hoc Telecom Users Committee, INCOMPAS, NTCA – The Rural Broadband Association, Public Knowledge, the Schools, Health & Libraries Broadband (SHLB) Coalition, and the Voice on the Net Coalition, I am submitting a letter from 332 entities representing a broad and diverse group of stakeholders, including public interest groups, communications companies, anchor institutions, and consumers that collectively are urging the Federal Communications Commission (Commission) to take immediate action to reform and stabilize the funding mechanism that supports the Universal Service Fund (USF). The "Call to Action" letter urges the Commission to expand the services that pay into the USF to include broadband internet access services (BIAS). I also am submitting into the record of the above-captioned dockets the *USForward* report that I published in 2021, which concludes that including BIAS revenues in the contribution base would lower the USF contribution factor to less than 4% for the foreseeable future.[1]

The USF is under significant duress because the mechanism that pays for these important programs has not been modernized despite much more recent updates to the services that the programs support. As a result, we have seen the contribution factor rise significantly, and it could reach 40% in just four years if action is not taken. As explained in the *USForward* report, including BIAS revenues in the contribution base is smart and equitable public policy that the FCC can implement quickly. There are several reasons for the Commission to move forward with USF contribution reform now. Here's why:

First, the current funding mechanism is not sustainable. In the last two decades, the revenues subject to USF assessment have declined by 63%, which has led to a 400%-plus increase in the contribution factor

[1] Mattey Consulting, *FCC Must Reform USF Contributions Now: An Analysis of the Options* (Sept. 2021).

over that same period. This increase is unreasonable, unsustainable, and inequitable for providers and their customers. Indeed, the dramatic decline in assessable revenues has continued since the *USForward* report was published five months ago. As can be seen in the Commission's quarterly announcements of the proposed contribution factor, the adjusted contribution base for the last four quarters (Q2 2021 through Q1 2022) has declined more than 10% compared to the previous four quarters (Q2 2020 through Q1 2021). Stabilizing the USF is not a new issue, but what has made reform urgent is the increased (and continuing) instability of the funding mechanism at a time when broadband access has never been more important. Promoting the deployment, sustainability, and affordability of communications networks and services is how we help connect rural and low-income consumers, schools, libraries, and rural health care providers.

Second, expanding the current revenues-based system to include BIAS mitigates gamesmanship and promotes transparency by removing incentives of providers to arbitrarily allocate revenues from bundled services to one service and not the other. It would not require the development of complicated and untested reporting regimes to implement. This modification would lower the current USF assessment on voice service, resulting in a more equitable contribution system. Moreover, the small assessment on BIAS would not impact consumer broadband adoption.[2]

Third, there is significant and diverse support for the Commission to act fast to stabilize the USF. No proposed solution for USF reform will be perfect, but the Commission should not wait any longer. Time is of the essence. The calls for action are only getting louder. It is time to modernize the USF contribution methodology and sustain the USF for the future.

Please do not hesitate to contact the undersigned if there are questions regarding this submission.

Respectfully submitted,

/s/

Carol E. Mattey
Principal
Mattey Consulting, LLC

cc: Office of Chairwoman Jessica Rosenworcel
Office of Commissioner Brendan Carr
Office of Commissioner Geoffrey Starks
Office of Commissioner Nathan Simington
Kris Monteith, Chief, Wireline Competition Bureau
Jodie Griffin, Chief, Telecommunications Access Policy Division
Karen Sprung, Deputy Division Chief, Telecommunications Access Policy Division
Charles Eberle, Assistant Division Chief, Telecommunications Access Policy Division

[2] *See* Letter from Michael R. Romano, Senior Vice President, NTCA – The Rural Broadband Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 06-122 (filed May 11, 2020) (submitting a report prepared by the Berkeley Research Group, *NTCA-USF Study, Expert Report of Michael A. Williams and Wei Zhao* (dated May 7, 2020), that found a modest USF assessment on broadband service would have no material impact on broadband adoption and retention).

REPAIRING THE
FCC's UNIVERSAL SERVICE FUND CONTRIBUTION MECHANISM

A CALL TO ACTION

February 14, 2022

To Broadband Policymakers:

The federal Universal Service Fund (USF) is one of the nation's most important programs designed to address the digital divide and connect families, small businesses, and communities in need of critical communications services. Indeed, it enables the deployment and operation of broadband-capable networks and ensures the availability of more affordable services in rural America. It also supports the connectivity of schools, libraries, rural healthcare providers, and low-income families.

Unfortunately, this universal service system is in danger of collapse because the mechanism that funds it has not been updated since it was adopted nearly 25 years ago. As a result, the USF fee has spiraled from about 7% in 2001 to over 30% in 2021 and could exceed 40% in the coming years. The existing system is also inequitable and discriminatory because some consumers pay a disproportionate amount compared to others, even when using similar services.

The undersigned organizations support immediate action to reform and stabilize the funding mechanism that supports the USF by expanding the list of services that pay into it to include broadband internet access services (BIAS). A 2021 report called **USForward** by USF expert Carol Mattey finds that including BIAS revenues would lower the USF fee to less than 4% for the foreseeable future. The report also suggests that assessing BIAS is reasonable because most USF funds are used to expand the availability and affordability of that service. An **economic analysis** released in 2020 determined that the imposition of a relatively small assessment on BIAS to support USF would have no material impact on broadband adoption and retention. To the extent there are concerns about the impact of such reform on the most vulnerable populations, such concerns can be addressed by tailored measures to protect low-income households.

Our recommendation would reduce regulatory uncertainty, would better reflect evolving uses of services, would be straightforward to administer, and would be more equitable and nondiscriminatory for residential and business consumers than the current system. Moreover, the Federal Communications Commission could make this change under its existing authority without requiring new legislation.

The undersigned parties represent a broad swath of stakeholders, including public interest groups, communications companies, anchor institutions, and consumers. Despite these diverse perspectives, we share a common interest in the broad statutory mission of universal service, in the viability and sustainability of the USF, and the predictability that both residential and business consumers need. When it comes to reform of this critical mechanism, the perfect should not be the enemy of the better—improvements to the contribution mechanism should not be deferred or declined simply because other reform options may warrant further examination. We therefore urge policymakers to preserve the long-term stability of our universal service system and help solve the

digital divide by reforming the USF funding mechanism to include BIAS revenues as soon as possible.

Sincerely,

Public Interest Organizations

- California Emerging Technology Fund, Concord, CA
- California IT in Education (CITE), Sacramento, CA
- Communication Workers of America, Washington, DC
- Gigabit Libraries Network, Sausalito, CA
- National Digital Inclusion Alliance, Columbus, OH
- Public Knowledge, Washington, DC
- Schools, Health & Libraries Broadband (SHLB) Coalition, Washington, DC

Residential and Business Consumer Organizations

- 2600Hz, San Francisco, CA
- Ad Hoc Telecom Users Committee
- Telecom Training Corporation, Nashville, TN

Trade Associations

- Alaska Telecom Association, Anchorage, AK
- Albany Mutual Telephone Association, Albany, MN
- American Library Association, Chicago, IL
- Association of TeleServices International (ATSI), Saint Paul, MN
- Broadband Association of North Dakota, Mandan, ND
- Chamber of Progress, Washington, DC
- Cloud Communications Alliance, Delray Beach, FL
- Colorado Hospital Association, Greenwood Village, CO
- Colorado Telecommunications Association, Denver, CO
- Communications Coalition of Kansas, Topeka, KS
- CoSN, the Consortium for School Networking, Washington, DC
- Iowa Communications Alliance, West Des Moines, IA
- INCOMPAS, Washington, DC
- Indiana Rural Broadband Association, Rochester, IN
- Information Technology Industry Council (ITI), Washington, DC
- Kentucky Telecom Association, Frankfort, KY
- Minnesota Telecom Alliance, St. Paul, MN
- Montana Telecom Association, Helena, MT
- NTCA – The Rural Broadband Association, Arlington, VA
- Rural Wireless Association, Washington, DC
- South Carolina Telephone and Broadband Association, Columbia, SC
- South Dakota Telecommunication Association, Pierre, SD
- Telecommunications Association of Maine, New Gloucester, ME
- Tennessee Broadband Association, McMinnville, TN
- Texas Telephone Association, Austin, TX
- Urban Libraries Council, Washington, DC
- Utah Library Association, Salt Lake City, UT

- Utah Rural Telecom Association, Salt Lake City, UT
- Voice on the Net Coalition, Washington, DC
- Wisconsin State Telecommunications Association, Madison, WI
- WTA – Advocates for Rural Broadband, Washington, DC

Anchor Institutions (Schools, Libraries, Healthcare Providers, etc.)

- Alaska State Library, Juneau, AK
- Asbury Park Free Public Library, Asbury Park, NJ
- Asotin County Library, Clarkston, WA
- Chief Officers of State Library Agencies (COSLA), Lexington, KY
- Connections Telehealth Consortium, Bangor, ME
- Fresno Unified School District, Fresno, CA
- Friday Institute for Educational Innovation, Raleigh, NC
- High Desert Education Service District, Redmond, OR
- Imperial County Office of Education, El Centro, CA
- Kansas City Public Library, Kansas City, MO
- New England Telehealth Consortium, Bangor, ME
- San Jose State University School of Information, San Jose, CA
- Steamboat Springs School District, Steamboat Springs, CO
- Utah State Library Division, Salt Lake City, UT
- Washington State Library, Olympia, WA
- Westchester Library System, Elmsford, NY

Broadband Service Providers

- 3 Rivers Communications, Fairfield, MT
- Alaska Telephone Company, Bettles Telephone, Inc. and North Country Telephone, Inc., Wasilla, AK
- Alenco Communications, Inc., Joshua, TX
- Alliance Communications, Garretson, SD
- Allstream Business US, LLC, Vancouver, WA
- Amery Telcom, Amery, WI
- Arctic Slope Telephone Association Cooperative, Inc. , Anchorage, AK
- ATC Communications, Albion, ID
- Baca Valley Telephone Co., Inc., Des Moines, NM
- Ballard Rural Telephone Cooperative Corporation, Inc., La Center, KY
- BBT, Alpine, TX
- Beehive Telephone Co., Inc., Nevada, Lake Point, UT
- BEK Communications Cooperative, Steele, ND
- Ben Lomand Connect, McMinnville, TN
- Benkelman Telephone Company, Wauneta Telephone Company, Hartman Telephone Exchanges, Inc., Benkelman, Nebraska
- Benton Cooperative Tel Co, Rice, MN
- Beresford Municipal Telephone Company, Beresford, SD
- Bloomingdale Communications, Inc., Bloomingdale, MI
- Blue Valley Tele-Communications, Inc., Home, KS
- BPS Telephone, Bernie, MO

- Bulloch County Rural Telephone Cooperative, Inc., Statesboro, GA
- Cap Rock Telephone Cooperative, Inc., Spur, TX
- Cascade Communications Company, Cascade, IA
- Central Arkansas Telephone Cooperative, Inc., Bismarck, AR
- Central Oklahoma Telephone Co., L.L.C., Davenport, OK
- Chequamegon Communications Cooperative dba. Norvado, Cable, WI
- Cheyenne River Sioux Tribe Telephone Authority, Eagle Butte, SD
- Christensen Communications Company, Madelia, MN
- Citizens Mutual Telephone Cooperative, Bloomfield, IA
- Citizens Telephone Cooperative, Inc. DBA: Citizens Connected, New Auburn, WI
- Citizens Telephone Corporation, Warren, IN
- City of Ketchikan, KPU Telecommunications, Ketchikan, AK
- Clay County Rural Telephone Cooperative/Endeavor Communications, Indiana
- Clear Lake Independent Telephone Company, Clear Lake, IA
- Coleman County Telephone Cooperative Inc., Santa Anna, TX
- Colorado Valley Telephone Cooperative, Inc., La Grange, TX
- Community Telephone Company, Windthorst, TX
- Consolidated Companies, Lincoln, NE
- Consolidated Telcom, Dickinson, ND
- Cooperative Telephone Company, Victor, IA
- Copper Valley Telecom & Copper Valley Wireless, Valdez, AK
- Craigville Telephone Company, Inc., Craigville, IN
- CTC, Brainerd, MN
- Cunningham Telephone Company, Inc., Glen Elder, KS
- Custer Telephone Cooperative Inc., Challis, ID
- Danville Mutual Telephone Company, Danville, IA
- Diller Telephone Company, Diller, NE
- Direct Communications/Star Telephone, Rockland, ID
- DTC Communications, Alexandria, TN
- Dumont Telephone Company, Dumont, IA
- East Buchanan Telephone Cooperative, Winthrop, IA
- Ellington Telephone Co, Ellington, MO
- Emily Cooperative Telephone Company, Emily, MN
- F&B Communications, Wheatland, IA
- Farmers Independent Telephone Company, Grantsburg, WI
- Farmers Mutual Communications, Moulton IA
- Farmers Mutual Telephone Company, Fruitland, ID
- Farmers Telecommunications, Rainsville, AL
- Farmers Telephone Cooperative, Inc., Kingstree, SC
- Federated Telephone Cooperative, Chokio, MN
- Fenton Cooperative Telephone Company, Fenton, IA
- Filer Mutual Telephone Company, DBA TruLeap Technologies, Filer, ID
- Five Area Telephone , Muleshoe, TX
- Foothills Rural Telephone Cooperative Corp Inc, Staffordsville, KY
- Garden Valley Technologies, Erskine, MN
- GBT-Golden Belt Telephone Association Inc., Rush Center, KS

- Geetingsville Telephone Company, Inc., Geetingsville, IN
- Glenwood Telephone Membership Corporation, Blue Hill, NE
- Golden West Telecommunications, Wall, SD
- Gorham Telephone Company, Gorham, KS
- Granite State Communications, Weare, NH
- Granite Telecommunications, LLC, Quincy, MA
- Great Plains Communications, Blair, NE
- Green Hills Communications, Breckenridge, MO
- GRM Networks, Princeton, MO
- H&B Communications, Holyrood, KS
- Hardy Telecommunications, Inc., Lost River, WV
- Harrisonville Telephone Company, Waterloo, IL
- Hart Telephone Company, Hartwell, GA
- Heart of Iowa Communications Cooperative, Union, IA
- Hemingford Coop Telephone Co., Hemingford, NE
- Hill Country Telephone Cooperative, Inc. (HCTC), Ingram, TX
- Home Telephone Co., Saint Jacob, IL
- Hubbard Cooperative Telephone Association, Colo, IA
- Huxley Communications Cooperative, Huxley, IA
- Interactive Services Network, Inc DBA IPFone, North Miami, FL
- InterBel Telephone Cooperative, Eureka, MT
- Interstate Telecommunications Cooperative, Inc., Clear Lake, SD
- ITS Telecommunications Systems, Inc., Indiantown, FL
- Kalida Telephone Co., Kaalida, OH
- Kalona Cooperative Technology Company, Kalona, IA
- KanOkla Networks, Caldwell, KS
- KanREN, Inc., Lawrence, KS
- Kennebec Telephone Co., Inc., Kennebec, SD
- Kerman Telephone Co / Foresthill Telephone Co. (dba Sebastian), Kerman, CA
- Kingdom Telephone Company, Auxvasse, MO
- KMTelecom, Kasson, MN
- Lakeland Communications, Milltown, WI
- La Ward Telephone Exchange, Inc., La Ward, TX
- Lehigh Valley Coop Telephone Association, Lehigh, IA
- Lennon Telephone Company, Lennon, MI
- LightStream, Buffalo, IN
- Lincoln Telephone Company, Inc., Lincoln, MT
- Link Oregon, Portland, OR
- Logic Networks, Tampa, FL
- Lone Rock Cooperative Telephone Company, Lone Rock, IA
- Loretto Telecom, Loretto, TN
- Lost Nation-Elwood Telephone Company, Lost Nation, IA
- LTC Connect, Auburn, KY
- Lumos/NorthState, Waynesboro, VA
- Lynxx Networks, Camp Douglas, WI
- Madison Telephone, LLC, Madison, KS

- Mainstay Communications, Henderson, NE
- Marne & Elk Horn Telephone Company, Elk Horn, IA
- Matanuska Telecom Association, Inc., Palmer, AK
- McDonough Telephone Cooperative, Colchester, IL
- MCNC, Research Triangle Park, NC
- Midstate Communications, Kimball, SD
- Minburn Communications, Woodward, IA
- Missouricom, Seneca Telephone, Ozark Telephone, Goodman Telephone, ARK-O Holdings, New Florence, MO and Seneca, MO
- Mobile Citizen, Boulder, CO
- Monon Telephone Company Inc., Monon, IN
- Mosaic Technologies, Cameron, WI
- NCC, Ray, ND
- NC Telehealth Network Association, Concord, NC
- Nelson Communications Cooperative, Durand, WI
- NEMR Telecom, Green City, MO
- New Lisbon Telephone Company and Pennsylvania Telephone Company, New Lisbon, IN
- Newport Telephone Company, Inc., Newport, NY
- NineStar Connect, Greenfield, IN
- Nortex Communications, Muenster, TX
- North Central Telephone Cooperative, Inc., Lafayette, TN
- North Texas Telephone Company, Byers, TX
- Nsight Telservices, Green Bay, WI
- Oklatel Communications, Dustin, OK
- Oneida Telephone Exchange, Oneida, IL
- Oran Mutual Telephone Co, Oran, IA
- Oregon Telephone Corporation, Mt Vernon, OR
- OTZ Telephone Cooperative, Kotzebue, AK
- Palmer Mutual Telephone Company, Palmer, IA
- Palmetto Rural Telephone Cooperative, Inc., Walterboro, SC
- Panora Communications Cooperative, Panora, IA
- Park Region, Underwood, MN
- Paul Bunyan Communications, Bemidji, MN
- PC Telcom, Holyoke, CO
- Penasco Valley Telephone Cooperative, Inc., Artesia, NM
- Peoples Rural Telephone Cooperative, McKee, KY
- Perry-Spencer Rural Telephone Cooperative d/b/a PSC, St. Meinrad, IN
- Piedmont Rural Telephone Cooperative, Laurens, SC
- Pine Belt Telephone & Wireless, Arlington, AL
- Pineland Telephone Cooperative, Inc., Metter, GA
- Pioneer Communications, Ulysses, KS
- Pioneer Telephone Company, LaCrosse, WA
- Pioneer Telephone Cooperative dba Pioneer Connect, Philomath, OR
- Plainview Telephone Company, Plainview, NE
- Planters Rural Telephone Cooperative, Newington, GA

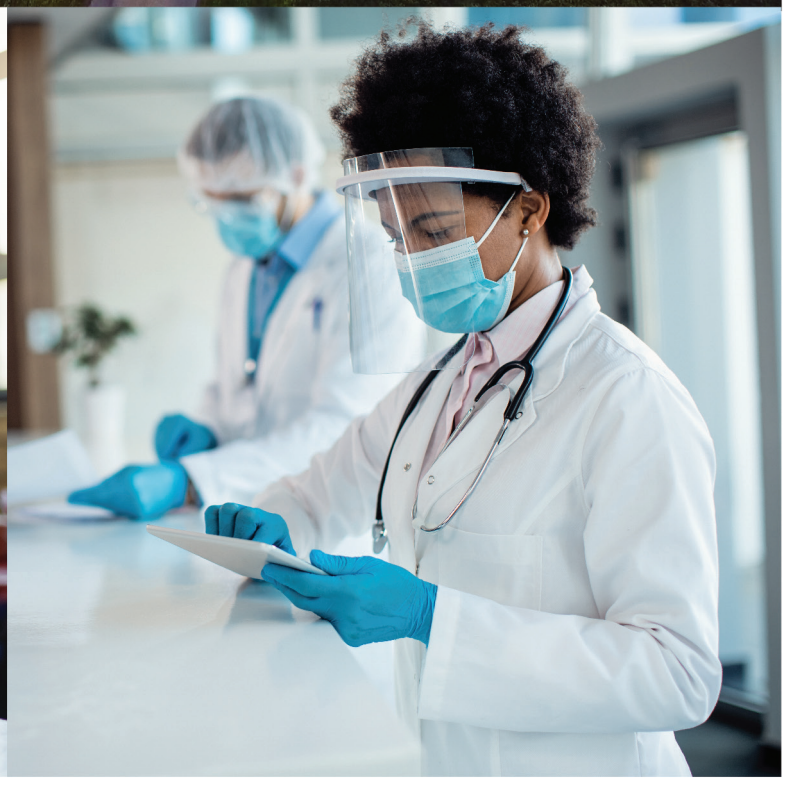
- Poka Lambro Telephone Cooperative, Wilson, TX
- Polar Communications Mutual Aid Corp, Park River, ND
- Ponderosa Telephone; Table Top Telephone, O'Neals, CA; Ajo, AZ
- Prairie Grove Telephone Company, Prairie Grove, AK
- Premier Communications, Sioux Center, IA
- PTCI, Guymon, OK
- Rainbow Communications, Everest, KS
- Randolph Telephone Membership Corporation, Asheboro, NC
- Range, Forsyth, MT
- RC Technologies, New Effington, SD
- Readlyn Telephone Company (dba RTC Communications), Readlyn, IA
- Ridgeville Telephone Company, Ridgeville Corners, OH
- River Valley Telecommunications Coop, Graettinger, IA
- Rochester Telephone Company, Rochester, IN
- Roggen Telephone Cooperative Company, Roggen, CO
- Runestone Telecom Association, Hoffman, MN
- S&T Telephone Association, Brewster, KS
- Sacred Wind Communications, Inc, Yatahey, NM
- Sandhill Telephone Cooperative, Jefferson, SC
- Santa Rosa Telephone Cooperative, Vernon, TX
- Santel Communications Cooperative, Woonsocket, SD
- SCTC, Stayton, OR
- SEI Communications, Dillsboro, IN
- Shawnee Communications, Equality, IL
- Siskiyou Telephone Company, Etna, CA
- SkyLine Membership Corporation, West Jefferson, NC
- Solarus, Wisconsin Rapids, WI
- South Central Telephone Association, Inc (KS & OK), Medicine Lodge, KS
- South Plains Telephone Cooperative, Inc, Lubbock, TX
- South Slope Cooperative Communications Company, North Liberty, IA
- Southeast Nebraska Communications, Inc., Falls City, NE
- Southern Montana Telephone, Wisdom, MT
- Southwest Texas Communications, Rocksprings, TX
- Springport Telephone Company, Springport, MI
- SRT Communications, Inc., Minot, ND
- STRATA Networks, Roosevelt, UT
- Sun Corridor Network, Tucson, AZ
- TDS Telecom, Madison, WI
- Telephone Service Company, Wapakoneta, OH
- Templeton Telephone Company, Templeton, IA
- Texoma Communications, LLC dba TekWav, Sherman, TX
- Thacker-Grigsby Communications, Hindman, KY
- Three River Telco, Lynch, NE
- Tohono O'odham Utility Authority, Sells, AZ
- Totelcom Communications LLC, De Leon, TX
- Triangle Communications, Havre, MT

- Tri-County Communications Cooperative, Inc., Strum, WI
- Trilogy 5G, Inc., Irving, TX
- TrioTel Communications, Inc., Salem, SD
- Twin Lakes Telephone Cooperative, Gainesboro, TN
- Twin Valley Telephone & Southern Kansas Telephone, Miltonvale, KS
- United Communications, Langdon, ND
- UniTel, Inc., Unity, ME
- Upsala Cooperative Telephone Assn., Upsala, MN
- USConnect, Bedford, NH
- Valley Telephone Cooperative, Inc., Raymondville, TX
- Valley Telephone Cooperative, Inc., Willcox, AZ
- Venture Communications Cooperative, Highmore, SD
- Viola Home Telephone Company, Viola, IL
- Voqal, Boulder, CO
- Wabash Communications CO-OP, Louisville, IL
- Wahkiakum West Telephone Co., Rosburg, WA
- Waitsfield and Champlain Valley Telecom, Waitsfield, VT
- WANRack, Overland Park, KS
- Webster-Calhoun Cooperative Telephone Association, Gowrie, IA
- Wellman Cooperative Telephone Association, Wellman, IA
- West Carolina Rural Telephone Cooperative, Abbeville, SC
- West Central Telephone Association, Sebeka MN
- West Wisconsin Telcom, Co-op, Inc., Downsville, WI
- Western Iowa Networks, Breda, IA
- Western Iowa Telecommunications, Lawton, IA
- Wes-Tex Telephone Cooperative, Inc., Stanton, TX
- Wheat State Technologies, Udall, KS
- Wiggins Telephone Association, d/b/a Blue Lightning, Wiggins, CO
- Wilkes Communications / RiverStreet Networks, Wilkesboro, NC
- Wittenberg Telephone Company, Wittenberg, WI
- WTC, Wamego, KS
- YK Communications, Ganado, TX

Others

- ADS Advanced Data Services, Inc., Mount Pleasant, TX
- AdTec, Centerville, Indiana
- Arizona Department of Education, Phoenix, AZ
- Alianza, Pleasant Grove, UT
- Bandwidth Inc., Raleigh, NC
- Channelford Associates Inc., Westlake Village, CA
- Autry, Hall & Cook, LLP, Atlanta, GA
- Digital Wish, Milton, DE
- BluIP, Inc., Las Vegas, NV
- BT Americas, United Kingdom
- Educational Professional Services, Pine Grove, LA
- Epic Communications, Solon, OH

- E-Rate Central, Westbury, NY
- E-Rate Online LLC, Orange, CT
- Espy Services, Inc., Bedford, IN
- CRW Consulting, Tulsa, OK
- E-rate Services, LLC, Sanford, NC
- Healthcare Funding Connection, Prospect, KY
- Educational Professional Services, Pine Grove, LA
- Infinity Communications & Consulting Inc., Bakersfield, CA
- E-Rate and Educational Services, LLC, Rapid City, SD
- Janice Meyers Educational Consulting, LLC, Mount Pleasant, SC
- Kellogg & Sovereign Consulting, San Antonio, TX
- EveryLibrary Institute NFP, Berwyn, IL
- Funds For Learning, Edmond, OK
- HealthConnect Networks, Bangor, ME
- Heartland Consulting, Mitchell, SD
- Heberly & Associates, Havre, MT
- Los Angeles County Office of Education, Los Angeles, CA
- Lucky Thirteen Design and Consulting, LLC, Berkeley, CA
- Mattey Consulting LLC, Bethesda, MD
- SpectraCorp Technologies Group Inc., Dallas, TX
- State Educational Technology Directors Association (SETDA), Glen Burnie, MD
- TCA, Inc. - Telcom Consulting Associates, Colorado Springs, CO
- Telcom Insurance Group, Wichita, KS
- Telconnections, Inc., Little Rock, AR
- TelNet Worldwide, Clinton Township, MI
- Utah Broadband Center, Governor's Office of Economic Opportunity, Salt Lake City, Utah
- Van Hoet & Company, Chartered, Olathe, KS
- VST Services, LP, Trophy Club, TX
- Western New York Rural Area Health Education Center (WNY R-AHEC), Warsaw, NY



Universal Service Fund

FCC Must Reform USF Contributions Now:
An Analysis of the Options
September 2021

MATTEY
CONSULTING LLC

USForward

WRITTEN BY

Carol Mattey,

MATTEY CONSULTING, LLC.

A REPORT IN CONJUNCTION WITH

INCOMPAS

NTCA THE RURAL BROADBAND ASSOCIATION®

SHLB SCHOOLS, HEALTH & LIBRARIES BROADBAND COALITION

Executive Summary

The Federal Communications Commission's (FCC) Universal Service Fund (USF or Fund) has been one of the nation's most important tools for connecting our nation, including rural communities, low-income families, schools, libraries, and rural health care facilities. However, the funding mechanism that supports the Fund is under significant duress. The "contribution base" – the revenues used to calculate USF contributions – has declined 63% in the last two decades, from $79.9 billion in 2001 to $29.6 billion in 2021. Meanwhile, the "contribution factor" – which is the USF fee assessed on interstate and international telecommunications service and certain telecommunications revenues – has increased from 6.9% in 2001 to a historic high of 33.4% in the second quarter of 2021. Assuming a continuation of historical trends, the contribution factor could approach 40% or more in the coming years. This situation is unsustainable and jeopardizes the universal broadband connectivity mission for our nation without immediate FCC reform.

To ensure the enduring value of the USF program and America's connectivity goals, we must have a smart and substantive conversation about the program's future. At the request of INCOMPAS, NTCA – the Rural Broadband Association, and the Schools, Health & Libraries Broadband (SHLB) Coalition, this report analyzes several options for FCC reform of the current status quo that have been pending in FCC rulemakings dating back to the early 2000's: (1) modifying the current revenues-based contribution methodology to assess broadband internet access service revenues, (2) assessing connections, or (3) assessing telephone numbers.

Today, USF fees are assessed on reported end user (retail) telecommunications revenues of wireline and mobile providers, cable operators and others providing interconnected Voice over Internet Protocol (VoIP). Contributors are required to pay the assessment based on their reported revenues, and they typically pass those fees along to consumers and businesses. The FCC does not assess wholesale (provider-to-provider) service revenues, nor does it assess information services, retail fixed broadband internet access or retail mobile data services that provide internet access.

The most dramatic decline in reported retail revenues has been for mobile services. Reported retail mobile telecommunications service revenues (namely, mobile voice) declined 66% between 2010 and 2019; most mobile service revenues are attributed to data service, which is not assessed.

In contrast, local service revenues – which include both traditional landline telephone service and interconnected VoIP – declined 36% over this period, while toll (long-distance) revenues declined 35%.

Meanwhile, revenues not subject to assessment (such as broadband internet access) have grown dramatically, more than doubling in the last decade, from $173 billion to $361 billion. It is apparent that service providers that bundle voice service with broadband internet access service are allocating only a small portion of the monthly rate to the assessable service (voice telephony).

Reforming the current revenues-based system to include broadband internet access service revenues is the preferred approach, both as a matter of policy and ease of implementation. Doing so would reduce the contribution factor to less than 4%.

First, it is appropriate as a matter of public policy to assess broadband internet access service revenues because all four programs in the USF promote universal broadband. The revenues from broadband internet access services that are increasingly used by Americans today should contribute to the USF programs that support the expansion of such services to all. This will better reflect the value of broadband internet access service in today's marketplace for both consumers and businesses.

Second, broadband internet access service revenues are expected to be stable in the future, with the potential for some modest growth. This would stabilize the funding mechanism and stop the death spiral in the current USF contribution methodology.

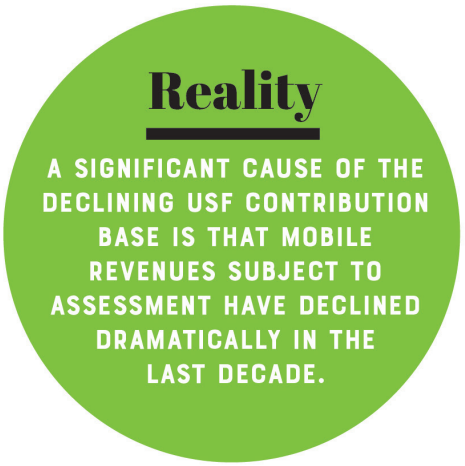
Third, it is a solution that can be implemented more quickly than the alternatives. It would be far

less uncertain than seeking congressional intervention and can be done by the FCC pursuant to its current statutory mandate. FCC reform of the USF contribution mechanism now is an important first step in stabilizing the current system.

Fourth, there is a significant advantage to retaining the current revenues-based system because most of the revenues reported to the FCC for USF purposes come from publicly traded companies that are audited and subject to stringent financial reporting standards for their revenues. This external financial scrutiny would provide an additional level of assurance that the metric used to assess USF contributions is accurately reported.

Fifth, assessing both broadband internet access service and voice services removes the incentives of providers to arbitrarily allocate revenues from bundled services to one service and not the other. This creates an inequitable situation where some end users continue to pay into USF, while others do not, yet everyone benefits from the positive network externalities of universal connectivity made possible from the four USF programs that support broadband-capable networks and service.

Reform of the current system of financing universal service is long overdue. The FCC has sought comment multiple times on various permutations of the options analyzed in this report and has the ability to move forward to assess broadband internet access service revenues without congressional action. The rapid increase in the contribution factor over the last decade and potentially in the future puts the stability of the entire USF at risk. While other proposals to help finance universal broadband may warrant further examination, the FCC should reform the current contribution methodology now to assess broadband internet access service revenues.



Introduction

The Federal Communications Commission's (FCC) Universal Service Fund (USF or Fund) is currently financed by collecting a fee from providers of "telecommunications" and "telecommunications services" based on their end user interstate and international revenues. There are increasing concerns about the growth and the disparate impacts of this fee on consumers, business customers, and the communications industry that serves them. There is a growing consensus that the current methodology for assessing the fee is unsustainable and, as a result, all of the USF programs that are critical to the availability of broadband across the U.S. are at risk if the funding mechanism is not stabilized.

This report compiles and analyzes the relevant data using a consistent set of terms and documented sources. The report is intended to facilitate a comparison of different assessment systems that could be implemented by the FCC now to avert the immediate crisis on the horizon. While supplemental measures to preserve and advance universal service may be warranted, desirable, and advisable, contribution reform by the FCC need not – and should not – wait for congressional consideration of and action on other proposals to broaden the contributions base. FCC reform of the contribution mechanism now is an important first step in stabilizing the current system.

Background

Under federal law, all telecommunications service providers and certain other providers of telecommunications contribute to the federal USF. Since the creation of the USF in its current form in the wake of the Telecommunications Act of 1996 ('96 Act),[1] service providers contribute based on a percentage of their interstate and international end user telecommunications revenues. Today, most contributions come from wireline phone companies, mobile (cellular) providers, cable operators and others providing interconnected Voice over Internet Protocol (VoIP).

Section 254(d) of the Communications Act of 1934, as amended by the '96 Act, provides that "[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."[2] Under this mandatory contribution provision, every provider of interstate telecommunications services must contribute,[3] although the FCC has authority to exempt a carrier or class of carriers if their contributions would be *de minimis*. Section 254(d) also provides the FCC with broader, permissive authority to assess contributions, stating "[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."[4]

When the FCC implemented the '96 Act, it chose to assess contributions based on end user revenues.[5] It had sought comment on basing contributions on gross revenues, net telecommunications revenues (gross revenues net of payments to other carriers for telecommunications services), or a per-line or per-minute charge. At that time, it also exercised its permissive authority to require payphone aggregators and private carriers (i.e., companies that sell services on an individualized contractual basis, such as special access) to contribute to USF.[6]

The FCC first initiated a rulemaking proceeding to consider changes to its framework for assessing USF contributions in 2001.[7] In 2002 and 2003, the FCC sought to develop the record on alternative methodologies to the current system, specifically seeking comment on the potential assessment of connections or telephone numbers.[8] In 2006, the FCC exercised its permissive authority to require interconnected VoIP providers to contribute. While

noting that it had not addressed the regulatory classification of interconnected VoIP services under the '96 Act, the FCC concluded that interconnected VoIP providers are "providers of interstate telecommunications" and therefore subject to the FCC's permissive authority. The FCC concluded that it would exercise that permissive authority to ensure a level playing field among direct competitors.[9] The FCC sought comment on contribution reform again in 2008,[10] and most recently, in 2012, seeking comment on the three reform methodologies this report discusses.[11]

In 2014, the FCC referred the record from the contribution reform docket to the Federal-State Joint Board on Universal Service.[12] The Joint Board was unable to reach a consensus, and ultimately the State Members of the Joint Board submitted their views on a Recommended Decision to the FCC in 2019.[13]

The State Members recommended that the FCC adopt a connections-based assessment on residential services and an expanded revenues-based assessment on business services. They recommended that the FCC structure the revised contributions system so that the rate per residential connection would yield an amount equal to 50% of overall USF demand, and the contribution factor for assessing business services revenues would cover the other 50% of overall USF demand. (This was not the product of any specific analysis of what the relative residential-business contribution share was at the time, but rather a policy recommendation on how to implement such a hybrid system.) Under their recommended approach, residential voice and broadband connections, as reported on FCC Form 477, would each be assessed a per-connection fee. For business services, the State Members recommended that the FCC expand the current revenues-based assessment system to include revenues associated with "current and future generation virtual private network (Gen VPN) services, Video Conferencing, Web Conferencing, Unified Communications, and business wireless broadband access services."[14]

The Current Contribution Base

WHAT IS ASSESSED

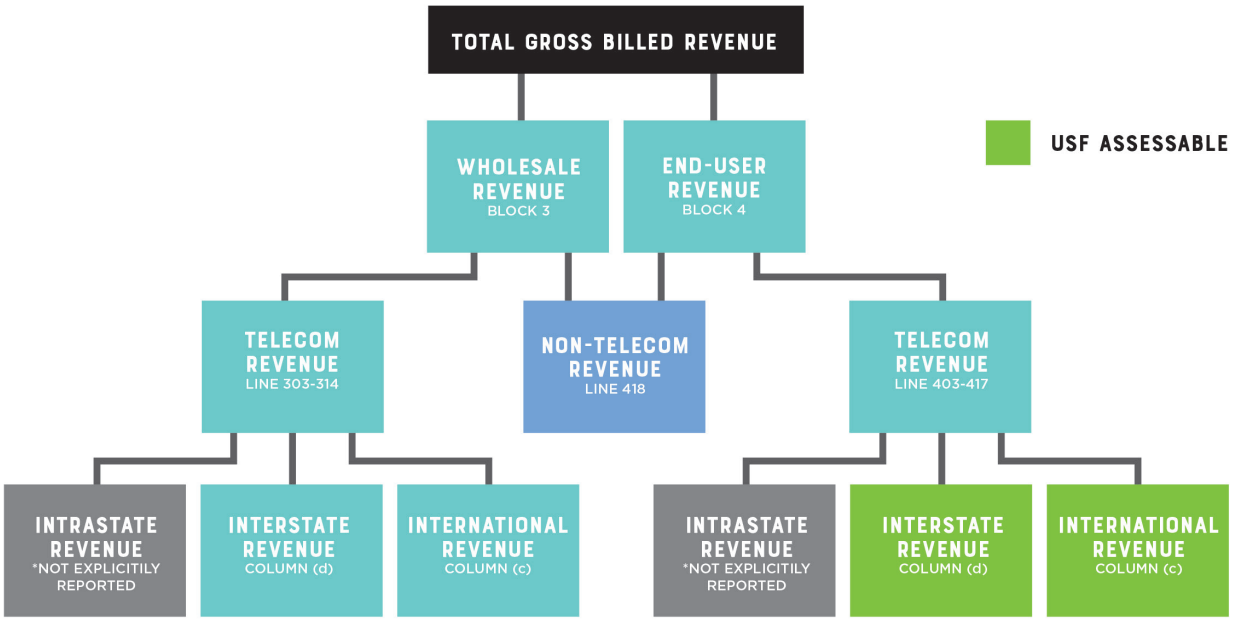
The total amount of money that must be collected each year for USF is generally determined based on quarterly projections of demand for each of the four universal service programs.[15] The relevant percentage assessment – often referred to as the contribution factor – is based on the ratio of total projected quarterly expenses of the universal service support mechanisms to total projected collected interstate and international end user telecommunications revenues, with minor adjustments to take into account true-ups and to account for uncollected revenues. The FCC's Fund Administrator, the Universal Service Administrative Company (USAC), submits information for both projected demand and projected revenues to the FCC every quarter, and then the FCC's Managing Director announces the contribution factor for the upcoming quarter.

Service providers file quarterly estimates of their projected revenues for the upcoming quarter on FCC Form 499-Q, and then annually provide more detailed information on their actual billed revenues for the prior calendar year on FCC Form 499-A.

When filing FCC Form 499-A, companies must break out their revenues in several ways. First, filers report separately wholesale and retail revenues; generally, only retail revenues are subject to assessment. Second, filers assign the revenues associated with their service offerings into one of several categories that have remained largely unchanged on FCC Form 499-A since its inception. The major categories on the form are "fixed local exchange service" (also generally referred to as local service), "mobile service" (cellular mobile radio service, or CMRS), and "toll service" (long distance), with revenues in each major category further subdivided into specific rows on the form. Third, filers identify what portion of revenue for a given category is "interstate" or "international." Finally, filers report certain non-telecommunications revenues, which are not subject to assessment.

The FCC's rules specify that "[e]ntities that provide interstate telecommunications to the public, or

FIGURE 1. HOW CARRIERS REPORT REVENUES ON FCC FORM 499



FCC FORM 499-A REVENUE REPORTING

to such classes of users as to be effectively available to the public, for a fee will be considered telecommunications carriers providing interstate telecommunications services and must contribute . . . Certain other providers of interstate communications . . . also must contribute . . . ."[16] The rules enumerate a list of specific services that are considered interstate telecommunications.

There are several major categories of revenue that are not currently assessed for USF. For example, the FCC does not assess non-interconnected VoIP,[17] which includes one-way VoIP. The FCC also does not assess information services, retail fixed broadband internet access or retail mobile data services that provide internet access. Moreover, there are other services that fall in a grey area because the FCC has not expressly classified those services. For certain services, it may not be clear whether a particular service is assessable "telecommunications" or "telecommunications service" bundled with an information service, or merely an information service and therefore non-assessable. And finally, under federal law, the FCC lacks authority to assess providers of intrastate services to support the USF.[18]

Section 54.706 of the FCC's rules and the FCC Form 499 Instructions specify which services are subject to assessment:

TABLE 1. SUMMARY OF SERVICES THAT DO AND DO NOT CONTRIBUTE

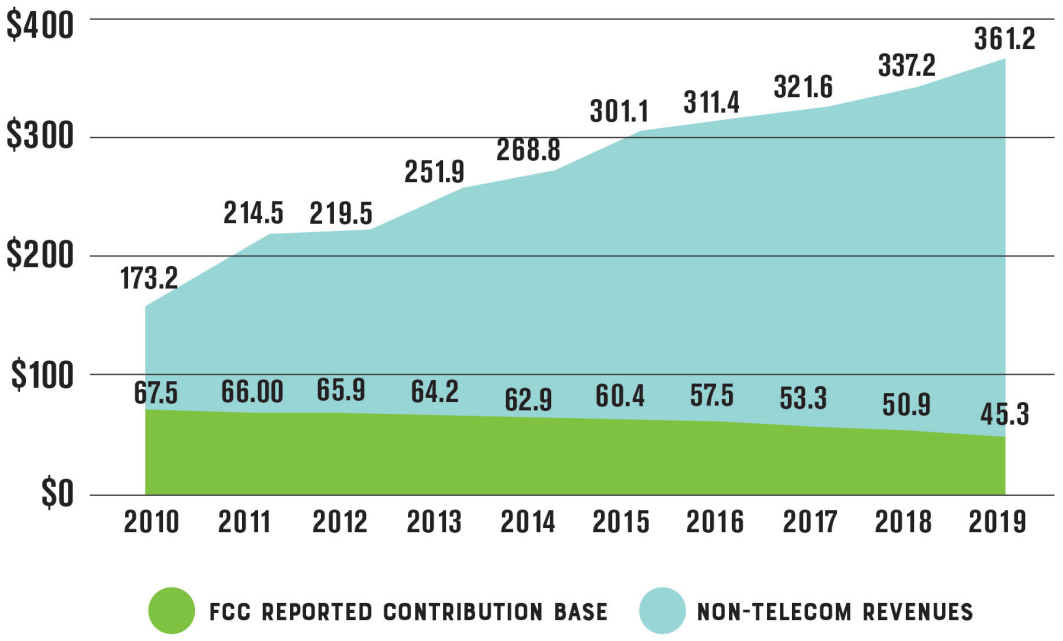
ASSESSED	NOT ASSESSED
Voice, including mobile voice and interconnected VoIP	Broadband internet access service
Access to interexchange service	Wireless data, texting
Customer charges such as Universal Service Fee, Subscriber Line Charge and Access Recovery Charge	One-way VoIP
Cellular telephone, mobile radio, personal communications services	Intrastate services
Paging	Cable video
Dispatch and operator services	Direct Broadcast Satellite (DBS) video
Business data services/special access/private line service[19]	
Wide area telecommunications services (WATS)	
Toll-free services	
900 services	
Telex, telegraph	
Video services (i.e., telecommunications services that deliver video signals to cable head-ends)	
Satellite services (i.e., space segment and earth station link-up for those who provide telecommunications service via satellite)	
Resale of interstate services	
Audio bridging services	
Payphone services	
Prepaid calling cards	

TRENDS IN THE CONTRIBUTION BASE

According to the FCC's most recent *USF Monitoring Report*,[20] the contribution base has been steadily declining, falling from $67.5 billion in 2010 to $45.3 billion in 2019. USAC's submissions to the FCC – the figures used to determine the contribution factor –show an even more dramatic decline over the last two decades, with the revenues used to calculate contributions falling from $79.9 billion in 2001 to $29.6 billion in 2021 – a 63% decrease.[21] In contrast, non-telecommunications revenues – which are not assessed, but reported to the FCC – grew from $173.2 billion in 2010 to $361.2 billion in 2019, according to the *2020 USF Monitoring Report*.

REVENUES SUBJECT TO USF ASSESSMENT HAVE DECLINED 63% SINCE 2001.

FIGURE 2. **REVENUE TRENDS OVER THE LAST DECADE (BILLIONS)**



Source: Contribution base from 2020 USF Monitoring Report Table 1.5;
Non-Telecom Revenues from 2020 USF Monitoring Report Table 1.2.

One potential explanation for the decline in assessable revenues is the fact that many consumers buy bundled voice and internet service. Under the FCC's rules regarding bundling of assessable and non-assessable services offered as a package to the end user, contributors have discretion in how they determine what portion of the bundle is assessable. There are two safe harbors for bundled offerings: filers can treat the whole bundle as assessable revenues, or they can attribute a portion of the revenues as assessable, based on the price of the assessable service when offered on an unbundled basis. But – and this is important – the FCC also allows contributors to use any other "reasonable" allocation method, which may be evaluated on a case-by-case basis if the contributor is audited.[22] The FCC has not re-exam-

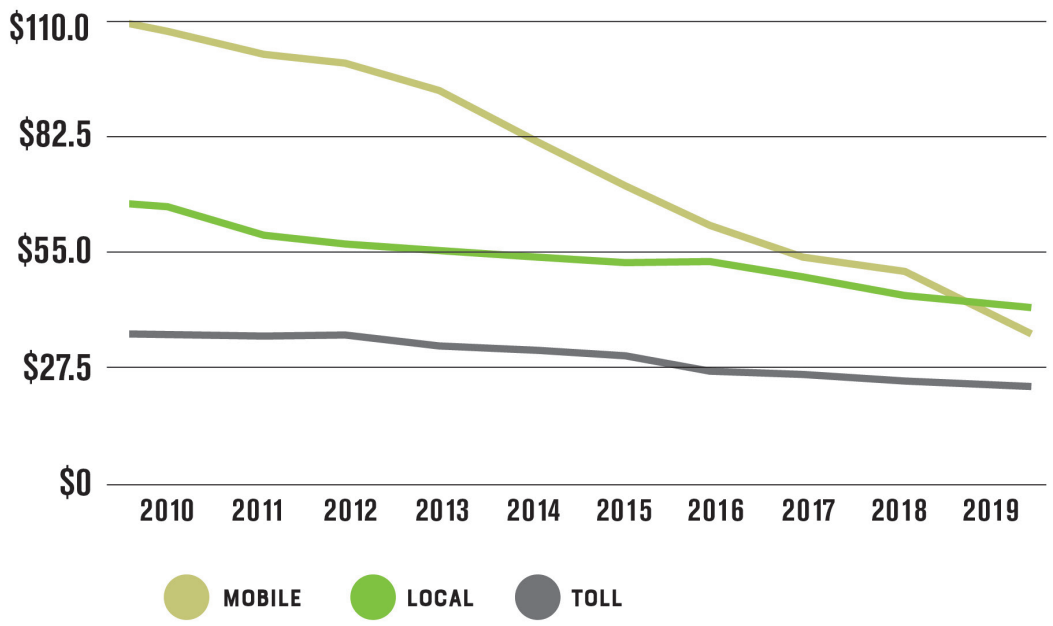
ined this rule since it was adopted in the late 1990s.

In those situations where a broadband provider is not offering voice as a standalone product – which presumably includes the vast majority of mobile providers and also some cable operators – they are likely using varying cost allocation methodologies to determine the revenues in the bundled offering that are attributable to the voice service. What this means in practice is that providers that bundle voice service with internet access have the ability to allocate only a small portion of the bundled price to voice. Indeed, because mobile providers and VoIP providers are not rate-regulated, they could choose, if they wanted, to provide voice for free as part of a broadband internet access service offering – which means they would not contribute at all for voice because they would not have any revenue to assess for that service.

While some may assume the decline in the USF contribution base is due to a decline in long distance revenues or many consumers cutting their landline voice service, in fact the most dramatic decline in reported retail revenues over this period has been for mobile services, as shown in Figure 3 below. Mobile providers are likely allocating a greater portion of their monthly service revenues to non-assessable "data" (i.e., broadband internet access), and less to assessable voice than they did a decade ago. Reported retail mobile revenues declined 66% between 2010 and 2019; in contrast, local service revenues – which include interconnected VoIP – declined 36% over this period, while toll revenues declined 35%. Notably, reported mobile revenues dipped below local revenues for the first time in 2019.

THE DRAMATIC DROP IN USF CONTRIBUTION BASE IS LARGELY DUE TO A STEEP DECLINE IN REPORTED ASSESSABLE MOBILE REVENUES: MOBILE OPERATORS ARE CLASSIFYING MOST OF THEIR MONTHLY SERVICE REVENUES AS "DATA," NOT "VOICE."

FIGURE 3. **DECLINE IN RETAIL REVENUES BY CATEGORY OF REVENUE (BILLIONS)**

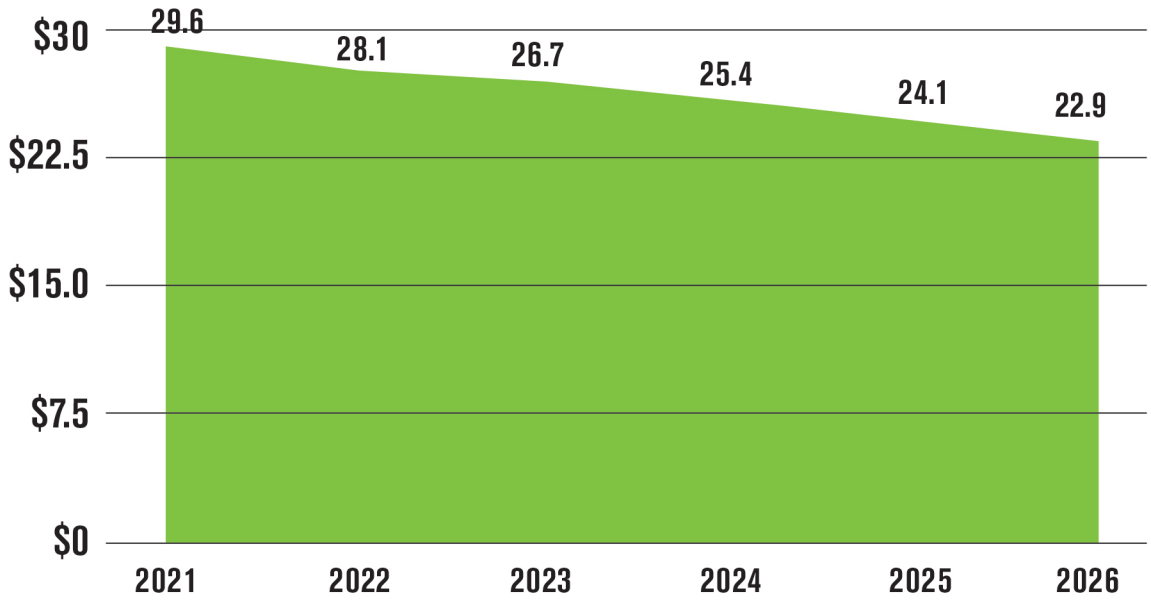


Source: FCC, 2020 USF Monitoring Report Table 1.2.
These figures are total end user revenues (intrastate, interstate and international.)

The FCC's *2020 USF Monitoring Report* and USAC's filings show a yearly decline in the contribution base averaging about 5 to 6% over the last five years. There is no reason to believe these trends will significantly change in the future, much less reverse course.

Figure 4 below shows what the contribution base is projected to be over the next five years, assuming a continued 5% annual decline.

FIGURE 4. PROJECTED DECLINE IN USF ASSESSABLE REVENUES (BILLIONS)



Source: 2021 revenues based on quarterly USAC revenue filings;
2022-2026 revenues based on an assumed 5% continued decline in contribution base

THE SIZE OF THE UNIVERSAL SERVICE FUND

Under federal law, the FCC is required to submit a forecast of USF program outlays over a ten-year period to the Office of Management and Budget because the USF is a component of the FCC's budget. This represents the FCC's own projection of how much money will be spent in any given year for the foreseeable future. This report uses projected outlays from the FCC's ten-year forecast to estimate the impact of different options.

TABLE 1. FCC TEN-YEAR FORECAST FOR "USF OUTLAYS" (BILLIONS)

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
$9.7	$9.6	$8.9	$9.6	$9.8	$9.8	$9.8	$9.8	$9.8	$9.8	$9.8

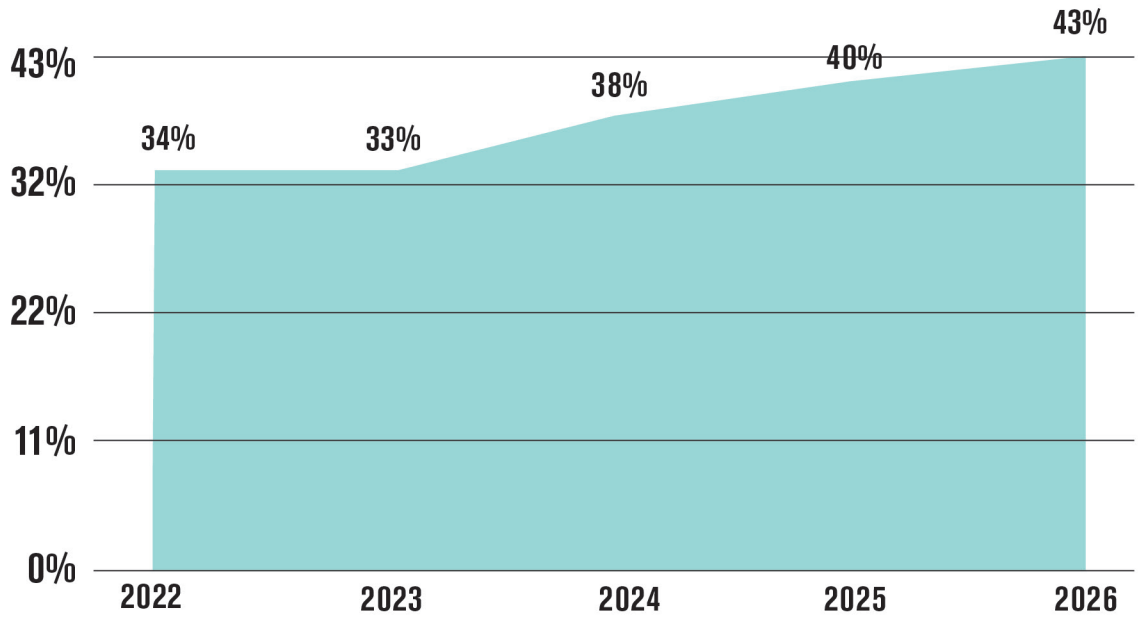
Source: Table 21-1. Federal Budget by Agency and Account, FY 2022 President's Budget Policy, page 417, available at https://www.whitehouse.gov/wp-content/uploads/2021/05/21-1_fy22.pdf

PROJECTED CONTRIBUTION FACTOR UNDER THE CURRENT REVENUES-BASED SYSTEM

When the FCC first opened a contribution reform docket in 2001, the contribution factor was 6.9%. By the end of 2010, the contribution factor was 12.9%. By the end of 2020, the factor had risen to 21.7%. The contribution factor for each of the first three quarters of 2021 was 31.8%, 33.4% and 31.8%, respectively. While reform has been pending for nearly two decades, the USF contribution factor has risen by nearly 400%—an unreasonable outcome by any measure.

Using the FCC's own assumptions about program demand from its Ten-Year Forecast and an assumed 5% continued decline in the contribution base, the contribution factor is projected to continue to rise in the next five years, as shown in Figure 5 below.

TABLE 2. **PROJECTED GROWTH IN CONTRIBUTION FACTOR**



Source: Projections use the projected decline in contribution base shown in Figure 4, and FCC Ten-Year Forecast of program demand from Table 2.

Key Takeaways

1. *The contribution base has been steadily declining for more than a decade.*

2. *One primary cause is assessable mobile service revenues have plummeted – declining 66% between 2010 and 2019.*

3. *The contribution factor has spiraled upward over the last decade and is on track to rise to 40% and above by 2025.*

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Options for Reform

Over the years in its contributions methodology reform docket, the FCC has sought comment multiple times on three primary options for reform: (1) expanding the current revenues-based system by assessing revenues for additional services that do not currently contribute, (2) assessing connections, or (3) assessing telephone numbers. This section of the report provides an analysis of each option.

EXPANDED REVENUES

Expanding the contribution base to include broadband internet access service revenues would broaden the contribution base, reversing the decade long decline in assessable revenues.

In order to estimate the contribution factor if broadband internet access service revenues were assessed, this report considered estimates from several sources. There is no single authoritative source for the revenues derived from the sale of broadband internet access service, but Wall Street analysts develop estimates based on the publicly reported information from the major providers of such services and their own internal analyses. While there are more than 2,000 USF contributors today, ten companies (and their affiliates) collectively report close to 80% of the billed interstate and international retail revenues reported on FCC Form 499-A.[23] Therefore, estimates that are based on the consumer broadband revenues of major service providers are likely to be a reasonable, but conservative estimate for the overall size of the U.S. broadband internet access service market.[24]

Raymond James' estimates for fixed broadband and mobility service revenues from a number of large publicly traded companies are shown below in Table 3.

TABLE 3. **RAYMOND JAMES INDUSTRY REVENUE ESTIMATES 2020 – 2022 (BILLIONS)**

	2020A	2021E	2022E
FIXED BROADBAND	$70.6	$72.8	$76.8
MOBILE	$167.6	$176.3	$185.1

Source: Raymond James. Fixed broadband revenues for AT&T, Verizon, Lumen, Frontier, Consolidated, Altice, Cable One, Charter, Comcast, and Wow. Mobile revenues for AT&T, Verizon, T-Mobile, Altice, Charter, and Comcast. 2020 figures are annual revenues; 2021-2022 are estimates of projected revenues.

Mobile providers do not typically report a breakout of their mobile revenues between voice (which is assessed) and data (which is not assessed) when publicly reporting their revenues. Given the dramatic decline in mobile revenues reported on FCC Form 499 over the last decade, however, it is apparent that a sizeable percentage of industry mobile revenues are not currently being reported to the FCC as assessable revenues. To put these figures in context, according to the FCC's *2020 USF Monitoring Report*, total (i.e., intrastate, interstate and international) retail mobile service revenues reported on FCC Form 499 in 2019 were $36.1 billion.[25] In contrast, Raymond James estimates that the top three carriers alone had $166 billion in mobile service revenues in 2019. It appears, therefore, that roughly 80% of the mobile service revenues that carriers are reporting to Wall Street are data revenues not currently subject to USF assessment.

New Street Research, a research boutique firm that focuses exclusively on the communications sector, has developed estimates for fixed broadband revenues, as shown below in Table 4. These projections are slightly higher than the Raymond James estimates for fixed broadband, potentially because New Street Research may be including a few more service providers.

MOBILE CARRIERS HAVE SHIELDED CLOSE TO 80% OF THEIR MOBILE SERVICE REVENUES FROM FEDERAL USF ASSESSMENT BY CLASSIFYING THOSE REVENUES AS DATA, NOT VOICE.

TABLE 4. **NEW STREET FIXED BROADBAND REVENUE ESTIMATES 2020 – 2024 (BILLIONS)**

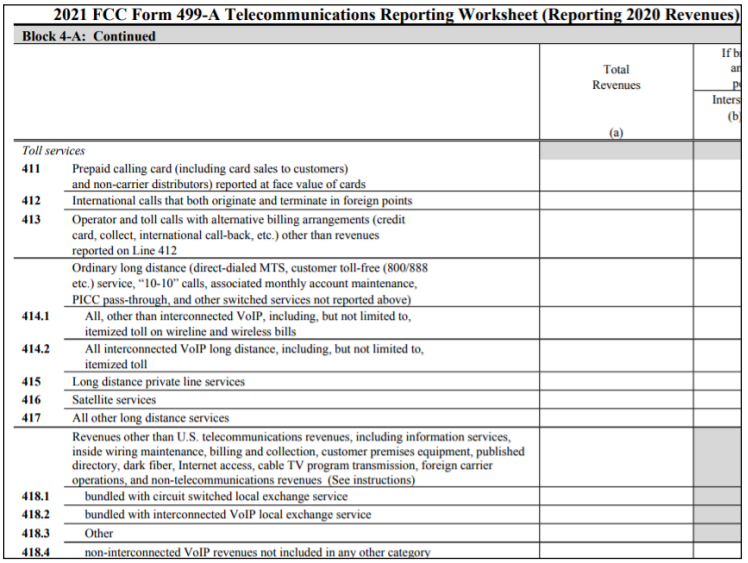
	2020	2021	2022	2023	2024
FIXED BROADBAND	$76.8	$84.6	$90.7	$96.7	$102.4

Source: New Street Research. Fixed broadband revenues for Comcast, Charter, Altice, Cable One, "Other cable," Verizon FIOS, AT&T U-Verse, and "Other telco." 2020 figures are estimated annual revenues; 2021-2022 are projected revenues.

While the FCC does not assess retail broadband internet access service (either fixed or mobile), it does collect revenue information for other services not subject to assessment on FCC Form 499-A. Companies are required to report on Line 418: "Revenues other than U.S. telecommunications revenues, including information services, inside wiring maintenance, billing and collection, customer premises equipment, published directory, dark fiber, Internet access, cable TV programming transmission, foreign carrier operations, and non-telecommunications revenue."

In particular, firms must report on Line 418.3: "All other revenues properly reported on line 418 except those reported in Lines 418.1, 418.2, and 418.4, including broadband Internet access service subject to forbearance and broadband transmission service provided on a non-common carrier basis to a broadband Internet access provider" on Line 418.3.[26]

According to the FCC's *2020 USF Monitoring Report*, in 2019, $45.7 billion in revenues were reported on Line 418.1, $3.1 billion in revenues were reported on Line 418.2, and $311.5 billion in revenues were reported on Line 418.3 – together, more than $360 billion.[27] It is likely that a significant portion of the total revenues reported on Line 418 are revenues derived from broadband internet access services, both fixed and mobile.



2021 FCC Form 499-A Telecommunications Reporting Worksheet (Reporting 2020 Revenues)

Block 4-A: Continued

		Total Revenues (a)	If b ar p Inters (b
Toll services			
411	Prepaid calling card (including card sales to customers) and non-carrier distributors) reported at face value of cards		
412	International calls that both originate and terminate in foreign points		
413	Operator and toll calls with alternative billing arrangements (credit card, collect, international call-back, etc.) other than revenues reported on Line 412		
	Ordinary long distance (direct-dialed MTS, customer toll-free (800/888 etc.) service, "10-10" calls, associated monthly account maintenance, PICC pass-through, and other switched services not reported above)		
414.1	All, other than interconnected VoIP, including, but not limited to, itemized toll on wireline and wireless bills		
414.2	All interconnected VoIP long distance, including, but not limited to, itemized toll		
415	Long distance private line services		
416	Satellite services		
417	All other long distance services		
	Revenues other than U.S. telecommunications revenues, including information services, inside wiring maintenance, billing and collection, customer premises equipment, published directory, dark fiber, Internet access, cable TV program transmission, foreign carrier operations, and non-telecommunications revenues (See instructions)		
418.1	bundled with circuit switched local exchange service		
418.2	bundled with interconnected VoIP local exchange service		
418.3	Other		
418.4	non-interconnected VoIP revenues not included in any other category		

For modeling purposes, this report assumes assessable broadband internet access service revenues year-by-year would be the amounts depicted in Table 5 below. These are believed to be conservative estimates, as they are based on reported and projected revenues of the larger publicly traded companies and do not capture revenues from numerous smaller contributors.

TABLE 5. **ASSUMED ASSESSABLE BROADBAND INTERNET ACCESS SERVICE REVENUES 2020 – 2024 (BILLIONS)**

	2020	2021	2022	2023	2024
FIXED BROADBAND	$76.8	$84.6	$90.7	$96.7	$102.4
BROADBAND	$134.0	$140.0	$148.1	$153.3	$158.2
TOTAL	$210.8	$225.6	$238.8	$250.0	$260.6

Source: New Street projections for fixed broadband revenues; mobile broadband estimates derived from Raymond James 2020-2022 projections for mobile revenues; assumes 80% of reported mobile service revenues attributable to data (broadband); assumes mobile broadband grows 3.5% from 2022 to 2023, and 3.2% from 2023 to 2024.

Under these assumptions, if the FCC were to expand the contribution base to include broadband internet access service revenues, the contribution factor over the next few years would remain under 4%.

TABLE 6. **CONTRIBUTION FACTOR UNDER EXPANDED REVENUES REFORM OPTION**

	2021	2022	2023	2024
USF DEMAND (BILLIONS)	$9.7	$9.6	$8.9	$9.6
TOTAL REVENUE (BILLIONS)	$255.2	$266.9	$276.7	$286.0
TELECOM REVENUE	$29.6	$28.1	$26.7	$25.4
BROADBAND REVENUE	$225.6	$238.8	$250.0	$260.6
CONTRIBUTION FACTOR	3.8%	3.6%	3.2%	3.4%

Source: FCC Ten-Year Forecast of program demand from Table 2; estimated telecom revenues from Figure 4; estimated broadband revenues from Table 5; assumes the full amount of end user retail broadband revenues would be assessable, and that broadband internet access service is a wholly interstate service, so that all retail revenues would be subject to federal USF.

Key Takeaway

Assessing broadband internet access service revenues would expand the current USF contribution base and stabilize the USF funding system, and the contribution factor would drop from levels projected to approach 40% (or even higher) to less than 4%.

Connections

FCC Form 477 collects information about voice and broadband connections. The FCC defines a broadband connection as "[a] wired line or wireless channel that terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the Internet at information-transfer rates exceeding 200 kbps in at least one direction."[28]

A mobile voice subscriber is defined as "[a] mobile handset, car-phone, or other revenue generating, active, voice unit that has a unique phone number and that can place and receive calls from the public switched telephone network."[29]

When analyzing the impact of a connections-based contribution methodology, it is commonly assumed that there would be a separate assessment on voice and internet connections, so that a single physical line that provides both voice and broadband would be treated as two connections.

The FCC periodically publishes reports summarizing the data filed on FCC Form 477 in the Voice Telephone Services Report and the Internet Access Services Report.[30]

The most recent publicly available Form 477 data for voice and broadband connections are presented in Table 7 below.

TABLE 7. **FCC DATA ON NUMBER OF CONNECTIONS (MILLIONS)**

VOICE CONNECTIONS (AS OF JUNE 2019)	
Mobile	351.5
Wirelinc (incl. Interconnected VoIP)	107.5
Total	461.1

BROADBAND CONNECTIONS (AS OF DEC 2018)	
Mobile	331.5
Fixed	111.9
Total	443.3

Source: April 2021 Voice Services Report, Figure 1; Sept. 2020 Internet Access Services Report, Figure 1

Historically, VoIP and mobile voice connections have been growing, while traditional landline voice connections have been declining due to customers "cutting the cord" on wired telephony.[31] At a minimum, it is reasonable to assume voice connections overall will continue to grow consistent with U.S. population growth.

According to the most recent FCC published figures, total internet connections grew more than 4% on an annual basis. A more conservative estimate for modeling purposes would be 3% annual growth in the number of broadband connections.[32]

Using the latest FCC reported connections as a baseline, Table 8 below projects the number of connections through 2024.

TABLE 8. **PROJECTED NUMBER OF CONNECTIONS (MILLIONS)**

	2018	2019	2020	2021	2022	2023	2024
VOICE	458.6	461.1	463.4	465.7	468.1	470.4	472.7
BROADBAND	443.4	456.7	470.4	484.5	499.1	514.0	529.4
TOTAL	902.0	917.8	933.8	950.2	967.1	984.4	1002.2

Source: Voice and broadband connections from Table 7; assumes overall voice connections will grow at rates roughly consistent with U.S. population growth (0.5%), while broadband connections will grow 3% annually.

It often is assumed that under a reformed contributions methodology, Lifeline connections would not be assessed. Therefore, when modeling the per-connection fee, this report subtracts an assumed number of Lifeline connections.

There were 6.9 million Lifeline subscribers as of June 2021.[33] For modeling purposes, this report assumes those connections would be exempt from assessment, and that the number of Lifeline subscribers remains stable over the next few years.

Utilizing those assumptions results in the projected monthly per-connection charges shown below in Table 9. Physical connections that provide both voice and broadband would be assessed as two connections.

TABLE 9. **PROJECTED PER-CONNECTION CHARGE (MONTHLY)**

	2021	2022	2023	2024
USF DEMAND (BILLIONS)	$9.7	$9.6	$8.9	$9.6
CONNECTIONS (BILLIONS)	0.943	0.960	0.978	0.995
PER-CONNECTION CHARGE	$0.86	$0.83	$0.76	$0.80

Source: FCC Ten-Year Forecast of program demand from Table 2; assessable connections derived by subtracting 6.9 million Lifeline connections from figures in Table 8; voice=1 connection; broadband=1 connection.

These estimated per-connection charges do not reflect any assessment on business connections that are not currently reported on FCC Form 477. In order to implement this option, the FCC presumably would need to develop and implement an additional data collection for providers to report such business connections, which could take a year (or more), further delaying reform. Moreover, there likely would be difficult definitional issues to resolve. For instance, it would be difficult to delineate between residential and business connections for mobile services, which could lead to arbitrary distinctions and uncertainty. It could also be difficult to determine the difference between business private network connections from a service provider (which would theoretically be assessed) and self-provisioned connections (which would theoretically not be assessed).

If a connections-based methodology were to assess additional business connections not currently reported on FCC Form 477, the per-connection charge would be lower.

It is important to understand that a connections-based fee would be a flat fee that would remain the same, regardless of how much revenue may be derived from that connection.

Key Takeaways

1. *Under a connections-based approach, the estimated monthly charge for a physical connection that provides both voice and broadband is estimated to range between $1.52 and $1.72.*

2. *Further information and analysis would be required to determine how to assess high-capacity business connections on an equitable and nondiscriminatory basis, which could further delay reform.*

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Telephone Numbers

Under a numbers-based system, a common assumption is that each assigned North American Numbering Plan (NANP) telephone number would be assessed.[34] The total amount of required USF disbursements would be divided by the total number of assigned NANP telephone numbers.

The FCC collects data regarding telephone number utilization on FCC Form 502 twice a year. Companies are required to report numbers in the following categories: assigned, intermediate, reserved, aging, administrative, and available. An assigned phone number is one that is in use by an end user. This is the category of numbers that the FCC and most industry stakeholders typically have focused on when considering a number-based assessment methodology.

The most recent Numbering Resource Utilization Report, summarizing data as of December 31, 2018, was released in October 2020. According to that report, there were a total of 901,670,677 assigned telephone numbers at year end 2018, which was 3.5% higher than the 2017 total.[35] Assuming similar continued growth in assigned phone numbers, the monthly per-phone number assessment would be in the range of $0.72 to $0.83, assuming that Lifeline connections remain stable at 6.9 million subscribers, as shown in Table 10 below.

TABLE 10. **PROJECTED PER-NUMBER CHARGE (MONTHLY)**

	2021	2022	2023	2024
USF DEMAND (BILLIONS)	$9.7	$9.6	$8.9	$9.6
ASSESSABLE NUMBERS (BILLIONS)	0.978	1.000	1.023	1.047
PER-NUMBER CHARGE	$0.83	$0.80	$0.72	$0.76

Source: FCC Ten-Year Forecast of program demand from Table 2; assessable phone numbers derived by subtracting an assumed 6.9 million Lifeline connections from projected working numbers for 2021 to 2024; projections for assessable numbers assume a 3% annual growth rate in working phone numbers from 2018 figure reported in the 2020 Numbering Resource Utilization Report.

As a practical matter, under this option, the assessment burden would continue to rest largely on voice services, as those are the services that typically have assigned telephone numbers. A numbers-based assessment methodology would not assess high-capacity business services or broadband internet access service that do not have an associated NANP phone number. As with connections, the charge for a telephone number would be a flat monthly fee regardless of the amount of revenue derived from the service associated with that number.

Key Takeaways

1. *The monthly assessment under a numbers-based system would be $0.83 or less.*

2. *High-capacity business data services (without assigned phone numbers) and broadband internet access service would not contribute to support universal service under a numbers-based contribution methodology.*

USForward

Concluding Thoughts

No option considered in this report is perfect; each one has advantages and disadvantages. But now is not the time to let the perfect be the enemy of the good. It is time for the FCC to take action, and to move away from the worst option of all – the status quo – that is jeopardizing the USF which is critical to connecting our nation.

There are several reasons why expanding the existing revenues-based USF contributions methodology to assess broadband internet access service revenues is the preferred solution.

First, it is appropriate as a matter of public policy to assess broadband internet access service revenues. The service that is driving value in the communications marketplace should contribute to support today's modern communications network for all. Residential consumers and businesses have largely adopted broadband internet access service. While consumers and businesses continue to use other services that contribute, those services alone should not carry the responsibility to finance USF. This conclusion is buttressed by the fact that all four programs in the USF now support the availability of broadband networks that can deliver broadband internet access service.

The status quo is not an option.

Second, broadband internet access service revenues are expected to be stable in the future, with the potential for some modest growth. This would stabilize the funding mechanism and stop the death spiral in the current USF contribution methodology.

Third, it is a solution that can be implemented more quickly than the alternatives. Companies have been contributing based on revenues for more than two decades; it is a known system. Internal accounting and tax reporting systems would require only modest adjustment to add revenues from broadband internet access services to the "assessable" side of the ledger. For existing contributors that currently are reporting broadband internet access service revenues on FCC Form 499 Line 418, they merely would report those revenues on a new row on the form.

In contrast, moving to a connections- or numbers-based assessment system likely would require a significantly longer implementation timeline. There would be definitional issues to resolve as different stakeholders seek to persuade the FCC that particular types of numbers or connections should not be assessed. In the past, commenters in the FCC's long standing contribution reform docket have sought to exclude certain kinds of phone numbers, or to treat them as only fractional units for assessment. The existing FCC Form 477 data collection does not capture all business connections, so a new data collection would need to be adopted and implemented to capture such connections. The FCC would need to resolve whether and how to define different tiers of connections, and how to adjust the assessment level for connections of different capacity as the marketplace evolves.

THE SERVICE THAT IS DRIVING VALUE IN THE COMMUNICATIONS MARKETPLACE SHOULD CONTRIBUTE TO SUPPORT TODAY'S MODERN COMMUNICATIONS NETWORK.

Fourth, there is a significant advantage to retaining the current revenues-based system because there would be an additional level of assurance that the revenues reported to the FCC for USF assessment purposes have been subject to external scrutiny for accuracy. The revenues of publicly traded companies are audited for financial reporting purposes, and the vast majority of USF contributions come from publicly traded companies. USAC would be able to look at publicly reported revenues in those companies' annual 10-Ks and quarterly 10-Qs to spot any significant discrepancies compared to what has been reported to USAC to identify FCC Form 499 filers that warrant further investigation. In contrast, there are no comparable safeguards to provide comfort that numbers or connections are accurately report-

ed. Historically, there has been no meaningful FCC enforcement activity regarding the reporting of numbers or connections. While most companies are assumed to be acting in good faith in their reporting of numbers or connections twice a year, it is likely that they do not invest significant resources into developing policies and procedures to ensure accurate reporting because, as a practical matter, there is no regulatory consequence for getting it wrong.

Fifth, assessing both broadband internet access service and voice services removes the incentives of providers to arbitrarily allocate revenues from bundled services to one service and not the other. As discussed in this paper, mobile providers are increasingly shifting their allocation of bundled service revenues to unassessed broadband internet access service, which reduces the amount they must contribute. This creates an inequitable situation where some end users continue to pay into USF, while others do not, yet everyone benefits from the positive network externalities of universal connectivity made possible from the four USF programs that support broadband-capable networks and service.

Reform of the existing federal contributions methodology is long overdue. The FCC has sought comment multiple times on various permutations of the options analyzed in this report and has the ability to move forward to assess broadband internet access service revenues without congressional action. While other proposals may warrant further examination to supplement the reform that can be achieved immediately by the FCC, reforming the current contribution methodology now to assess broadband internet access service is a necessary and important step in stabilizing the current system.

Even if Congress appropriates additional funding to support the nation's goal to achieve universal broadband, it is critical for the USF to be on a stable financial footing to ensure the viability and sustainability of the FCC's longstanding USF programs – the high-cost program, the E-rate program, Lifeline, and the rural health care program. While appropriated grant programs may help with the initial deployment of networks, the USF programs advance different, more enduring policy aims that are expressly mandated by law – including promoting adoption of services by low-income consumers, ensuring reasonably comparable services at reasonably comparable rates for urban and rural consumers alike, and robust communications services for critical institutions such as schools, libraries, and rural health care facilities. These existing programs collectively play a significant role in preserving and advancing universal service in the United States today and will continue to do so in the years to come.

Endnotes

[1] Prior to 1996, the FCC had implemented various measures to ensure universal service, including high-cost assistance, Linkup, and Lifeline, pursuant to its existing authority in the Communications Act of 1934. Many of these measures that pre-dated the '96 Act were funded through intercarrier payments and rate averaging, also referred to as implicit subsidies.

[2] 47 U.S.C. § 254(d).

[3] Section 254(d) refers to "telecommunications carriers," which are defined as "any provider of telecommunications services." 47 U.S.C. § 153(51).

[4] 47 U.S.C. § 254(d).

[5] *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 9205, para. 842 (1997) (*Universal Service First Report and Order*) (*subsequent history omitted*).

[6] *Id*. at 9183–85, paras. 794–98.

[7] *See Federal-State Joint Board on Universal Service et al*., CC Docket No. 96-45 et al., Notice of Proposed Rulemaking, 16 FCC Rcd 9892, 9895 (2001).

[8] *See id.* at 9905–06, paras. 25–30 (seeking comment on modifications to the existing revenues-based contribution methodology and on replacing that methodology with one that assessed contributions on the basis of a flat-fee charge, such as a per-line charge); *see also Federal-State Board on Universal Service et al*., CC Docket No. 96-45 et al., Further Notice of Proposed Rulemaking and Report and Order, 17 FCC Rcd 3752, 3766-89, paras. 131, 34-38 (2002) (seeking comment on other universal service contribution methodologies, including moving to a numbers-based methodology); *Federal-State Joint Board on Universal Service et al.*, CC Docket No. 96-45 et al., Report and Order and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 24952, 24983-97, paras. 66-100 (2002) (seeking comment on capacity-based proposals that had been developed in the record and on telephone number-based proposals advocated by certain parties).

[9] *See Universal Service Contribution Methodology et al.*, WC Docket No. 06-122 et al., Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518, 7537, 7541, paras. 35, 44 (2006).

[10] *High Cost Universal Service Support et al*., CC Docket No. 96-45 et al., Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, 24 FCC Rcd 6475, 6536–64, paras. 92–156 (2008) (App. A: seeking comment on a proposal to modify the contribution methodology); *id*. at 6669–95, paras. 39–104 (App. B: same); *id*. at 6735–62, paras. 88–151 (App. C: same).

[11] *Universal Service Contribution Methodology*, Further Notice of Proposed Rulemaking, 27 FCC Rcd 5357 (2012).

[12] *Federal-State Joint Board on Universal Service; Universal Service Contribution Methodology*, Order, 29 FCC Rcd 9784 (2014).

[13] State Members of the Joint Board on Universal Service, *Federal-State Joint Board on Universal Service; Universal Service Contribution Methodology et al.*, Recommended Decision, WC [sic] Docket No. 96-45, WC Docket No. 06-122, WC Docket No. 09-51 (rel. Oct. 15, 2019).

[14] *Id*. at para. 24.

[15] 47 C.F.R. § 54.709(a)(2).

[16] 47 C.F.R. § 54.706(a).

[17] The FCC defines one-way VoIP as including all services that provide users with the capability to originate calls to the Public Switched Telephone Network (PSTN) or terminate calls from the PSTN, but in all other respects meet the definition of "interconnected VoIP."

[18] *Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 417-18 (5th Cir. 1999).

[19] The FCC Form 499 instructions specify that business data service revenues include "[r]evenues from offering dedicated capacity between specified points even in the service is provided over local area switched, multi-protocol label switching (MPLS), asynchronous transfer mode (ATM), or frame relay networks." *2020 Telecommunications Reporting Worksheet Instructions* (*FCC Form 499-A*) at 26 (*2020 Form 499 Instructions*).

[20] The FCC summarizes historical information regarding USF contribution base and program disbursements in an annual report prepared by the federal and state staff of the Universal Service Joint Board, known as the *USF Monitoring Report. See generally* FCC, *Universal Service Monitoring Report: 2020* (data received through September 2020) (*2020 USF Monitoring Report*). Table 1.5 of the *2020 USF Monitoring Report* contains historical information regarding the contribution base from 2010 through 2019.

[21] These figures are derived from USAC's quarterly revenue filings submitted to the FCC. The contribution factor is determined each quarter based on USAC's filing summarizing revenues to be used for the coming quarter. As noted by the FCC, the amounts used by USAC to determine the contribution factor may differ from the figures shown in the USF Monitoring Report due to various factors. For instance, while Table 1.5 in the *2020 USF Monitoring Report* indicates that the contribution base in 2019 was $45.3 billion, USAC reported a total of $38.3 billion in projected revenues for 2019, based on FCC 499-Q submissions. In 2001, USAC reported $80 billion in assessable revenues to the FCC, while Table 1.4 of the *2002 USF Monitoring Report* indicated that the contribution base for 2001 was $78.5 billion.

[22] *2020 FCC Form 499 Instructions* at 35. This author is not aware of any USAC contributions audits that found allocation methods to be unreasonable, nor aware of any FCC cases shedding additional light on what allocation methods are reasonable.

[23] *2020 USF Monitoring Repor*t, Table 1.7.

[24] Generally, companies report revenues for services sold to large enterprise customers separately from services sold to residential and small business customers, with the latter often referred to as the "consumer" segment. Companies use different terminology in reporting their financial results. For instance, the Raymond James estimates of wireline broadband revenues include the following: AT&T "High-speed Internet," Verizon "Consumer and Other Connections Revenue," Frontier "Data and Internet Services," and Consolidated "Data and Transport Services." Mobility estimates include the following: AT&T "Service Revenue" (all mobility not including equipment), Verizon "Consumer Wireless Service Revenues," and T-Mobile ("Total Service Revenues").

[25] *2020 USF Monitoring Report*, Table 1.3. This figure is end user revenue (intrastate, interstate, and international).

[26] *2020 FCC Form 499 Instructions* at 34.

[27] *2020 USF Monitoring Report*, S.1.1 Revenue Details 2019.

[28] *Form 477 Local Competition and Broadband Reporting Instructions for Filings as of December 31, 2019 and Beyond* at 5 (June 19, 2021) (emphasis omitted). "In-service broadband" is defined as a "connection with information-transfer rates above 200 kbps in at least one direction that is (1) delivering Internet access service at the residential or non-residential premises of the end user that has purchased Internet access service on a month-to-month or longer-term basis (in-service fixed broadband), or (2) is service to a terrestrial mobile wireless service subscriber whose device and data plan provide the ability to transfer, on a monthly basis, either a specified or unlimited amount of data to and from lawful Internet sites of the subscriber's choice (in-service mobile broadband)." *Id*. at 35.

[29] *Id*. at 37 (emphasis in original).

[30] Industry Analysis Division, Office of Economics & Analytics, FCC, *Voice Telephone Services Report as of June 30, 2019* (rel. April 2021) (*April 2021 Voice Services Report*); Industry Analysis Division, Office of Economics & Analytics, FCC, *Internet Access Services Status as of December 31, 2018* (rel. Sept. 18, 2020) (*Sept. 2020 Internet Access Services Report*).

[31] According to the most recent *Voice Services Report*, "Over the three-year period presented in Figure 1, interconnected VoIP subscriptions increased at a compound annual growth rate of 3%, mobile voice subscriptions increased at a compound annual growth rate of 2%, and retail switched access lines declined at a compound annual growth rate of 13% per year." *April 2021 Voice Services Report* at 2.

[32] According to the most recent *Internet Access Services Report*, "total Internet connections increased by about 4.9% between December 2017 and December 2018 to 441 million. Mobile Internet connections increased 5.7% year-over-year to 331 million in December 2018, while fixed connections grew to 111 million – up about 2.5% from December 2017." *Sept. 2020 Internet Access Services Report* at 1. The report further notes, "Between December 2008 and December 2018, total (business and residential) fixed connections grew from 76 million connections to 111 million connections – at a compound annual growth rate of 4%." *Id.* at 7.

[33] Wireline Competition Bureau, *Report on the State of the Lifeline Marketplace*, WC Docket No. 09-197 et al., at 6 (rel. Jul. 2, 2021).

[34] In the past, when the FCC has sought comment on a numbers-based option, some parties have argued that some assigned numbers should not be assessed or assessed at a fractional rate. This report assumes all assigned numbers would be assessed equally, with the exception of numbers utilized for Lifeline subscribers.

[35] Industry Analysis Division, Office of Economics & Analytics, FCC, *Numbering Resource Utilization in the United States: Status as of December 31, 2018*, Table 1 and Table 21 (rel. Oct. 2020) (*2020 Numbering Resource Utilization Report*).

MATTEY

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