



# State Universal Service Funds 2018: Updating the Numbers

---

Sherry Lichtenberg, Ph.D.  
Principal Researcher, Telecommunications  
National Regulatory Research Institute

April 2019



© 2019 National Regulatory Research Institute  
1101 Vermont Avenue, NW  
Washington, DC 20005

[www.nrri.org](http://www.nrri.org)

## About the Author

**Sherry Lichtenberg, Ph.D.** is the Principal for Telecommunications at the National Regulatory Research Institute. Her telecommunications background includes competitive advocacy on the state and federal levels, operational support-systems design, performance metrics, contract arbitration, program management, and third-party testing. She has been a product manager, business manager, and operations leader for AT&T, MCI, and Verizon Business competitive local services. Dr. Lichtenberg received her Ph.D. from Rutgers University.

## Acknowledgments

Many thanks to the 49 state public utility commission staff members who responded to NRRI's 2018 study of State Universal Service Funds. Special thanks for their input and review to Sandy Reams, Kansas Corporation Commission; Cullen Robbins, Nebraska Public Service Commission; and Michael Ripperger, New Mexico Public Regulation Commission.

# Executive Summary

Universal Service is a key component of both federal and state communications policy. Its goal is to ensure that regardless of where they live, all citizens have access to robust, reliable communications services, including broadband connectivity, at affordable rates, with “reasonably comparable service” across the country. The four Federal Universal Service funds (FUSF)—High Cost/Connect America (CAF), Schools and Libraries (E-Rate), Lifeline, and Rural Healthcare—provide financial support to carriers (and, in the case of the Lifeline fund, consumers) to bring 21st century communications services to users across the country.

In the spirit of Cooperative Federalism, where the states and the federal government work together to support all citizens, many states also provide support through state universal service funds (SUSF) that address the specific communications issues faced by their constituents. These state funds broaden the reach of the federal fund by providing increased levels of funding and support targeted to the areas where the state legislature and the public utility commissions have determined that such support is necessary. Because these funds are managed by the regulators closest to the ultimate recipient of the services they provide, they are generally more specific than the federal funds, both in contribution requirements and disbursements. Thus, the state funds not only support the four areas covered by the federal fund, but also provide funding for specific state needs, such as public access payphones, broadband adoption, and specialized services for the vision and hearing impaired, to name just a few.

NRRI’s 2018 State USF review examines the way in which the state universal service funds provide support beyond that offered by the federal fund. This paper updates the status of state universal service support since NRRI’s last USF review in 2014. It examines changes to the state USF funds between 2014 and 2018 due to legislation, changes to intrastate access charges, and the increasing focus on broadband as the key communications goal for the 21st century. The paper addresses the ways in which carriers and end users contribute to the funds, including exploring the new contribution methodologies adopted by a number of states to ensure that the funds remain both viable and relevant.

As consumers have increasingly moved away from traditional landlines to VoIP, wireless, and other intermodal communications services, the funding available for state universal programs (historically based on a percentage of intrastate revenues) has changed as well, leading to a number of states refocusing their contribution methodologies from revenue to connections in an attempt to stabilize the funds without overburdening consumers. The paper examines those efforts, as well as changes in the size and direction of the funds themselves.

The 2018 NRRI USF study provides state regulators and legislators with information that they may use to assess and, where appropriate, modify their state funds to address changes in the way in which customers obtain and use communications services. The facts provided by the study will help the states make decisions on their funds, the FCC to understand the impacts of the ICC/USF Transformation Order, the Connect America Fund, and changes to Lifeline and other programs on the states, and will provide input on the way in which fund contributions may be structured in the future.

In all, 42 states and the District of Columbia provide some form of state universal service support in addition to the monies provided by the Federal funds. This number has dropped from the 45 states that provided support in 2014, based on the discontinuance of the Delaware and West Virginia broadband funds and changes to our understanding of the universal service program in Hawaii. While not specifically a USF fund, Michigan provides support to carriers via an intrastate access restructuring fund, so we include that fund here. Eight states, Alabama, Delaware, Florida, Hawaii, Massachusetts, New Jersey, Tennessee, and Virginia, have no state funds. Although it has no fund, Florida requires all carriers to provide Lifeline service. Massachusetts has no state fund but provides broadband support through a State grant program.

State USF support includes funding for telecommunications relay service for the deaf and hard of hearing (33 states), support for telecommunications equipment, such as teletypewriters, captioned telephones, and, in some states, iPads and mobile phones (19 states), high-cost support (22 states), funds for broadband access for schools and libraries (5 states), funding for Lifeline (17 states), and dedicated broadband funding (5 states). The majority of the states with state funds direct contributions to specific areas. Two states, Texas and Washington, use different methodologies. Texas collects its USF as a single lump sum, which is then disbursed to carriers by the Public Utility Commission based on need. Washington funds universal service through the state's General Fund and then directs support to specific funds.

The largest portion of SUSF funding (both in the number of states with a fund and the dollar value of that fund) continues to be directed to supporting carriers that provide service in high-cost or remote areas. Changes to the High-Cost Funds over the study period, including the reduction or elimination of funding in areas served by competitive providers, have reduced the size of the High-Cost Fund in some cases or redirected monies to other uses in other cases.

Nine states have established specialized Intrastate Access Support (IAS) funds specifically designed to mitigate the effects of access charge reductions on carriers. For example, Michigan's fund is designed to mitigate the effects of bringing intrastate access charges into alignment with interstate access charges on rural carriers. Where the states support IAS reform but do not designate a separate fund, the value of those funds is included in the High-Cost Fund.

State Universal Service funding was reduced just under 8 percent over the study period, from \$1,842,521,774 in 2014 to \$1,708,908,846 in 2017. The reduction was largely driven by reductions in high cost support. The overall reduction in funding was tempered by significant increases in broadband and Lifeline funding in California, as well as increases in the contribution percentage in California and other states, and increases in TRS and E-Rate funding across all states.

Unlike the federal fund, which assesses all providers in the same manner, contributors to the state USF vary by state and often by fund. All of the states assess traditional price cap and rural rate of return wireline carriers, including Competitive Local Exchange Carriers (CLECs). Twenty-nine states assess interexchange (long distance) carriers. Thirty states assess wireless providers. Seventeen states assess cable voice providers. Twenty-eight states assess non-cable, interconnected VoIP providers. Eight states assess end users. Six states assess paging companies. Washington continues to fund USF through a contribution from the state's general fund.

The majority of states assess all providers of intrastate telecommunications services, using FCC Form 277 data, regardless of the type of company or the technology they use. Where the states do not assess providers that use alternate technologies such as Voice over Internet Protocol (VoIP), many of these providers contribute voluntarily to the state funds. One VoIP provider contributes voluntarily in New York and one cable company contributes voluntarily in Utah. Some VoIP providers in Oregon also contribute voluntarily.

The picture is less clear for the electric cooperatives that are beginning to offer broadband services as a result of the CAF auctions. Those cooperatives that provide both broadband and intrastate telecommunications services directly to the public generally contribute to the state funds. The cooperatives that simply offer customers broadband connectivity and team with other providers to offer voice services may defer to their partners to provide state USF support. It remains to be seen how these companies will be assessed in the future.

State Universal Service programs are a significant tool for meeting the important policy goal of ensuring access to telecommunications for all citizens, regardless of where they live or their financial status. Continued study and review of the way in which the states meet this goal will remain an important public utility commission activity, now and in the future.

The State Fund Overview table summarizes the findings of the 2018 NRRU Universal Service Survey.

# State Fund Overview

Who is Assessed?									On What Basis?			
State	Landline	Wireless	I-VoIP	Cable	IXCs	Paging	End Users	Other	Intrastate Revenues		Per Line	Other
									Gross	Net		
AL	No fund											
AK	X	X	X		X	X	X		X			
AZ	X	X	X		X	X			X		X	
AR	X	X	X		X				X			
CA	X	X	X	X						X		
CO	X	X			X	X			X			
CT	X	X			X				X			
DC	X		X						X			
DE	No fund											
FL	No fund											
GA	X		X						X			
HI	No fund											
ID	X				X						X	X <sup>(4)</sup>
IL	X	X	X		X					X <sup>(8)</sup>	X <sup>(8)</sup>	
IN	X	X	X <sup>(9)</sup>	X <sup>(3)</sup>	X	X			X			
IA	X	X			X						X <sup>(5)</sup>	
KS	X	X	X	X	X	X		X <sup>(9)</sup>		X		
KY	X	X									X	
LA	X	X	X	X	X					X		
ME	X	X	X	X	X					X	X	
MD	X	X	X		X						X	
MA	No fund											
MI	X	X	X		X					X		
MN	X	X	X	X	X						X	
MS	X										X	
MO	X		X		X					X		
MT							X				X	
NE	X	X	X	X	X	X				X <sup>(10)</sup>	X <sup>(10)</sup>	
NV	X	X	X	X						X		
NH	X			X							X	
NJ	No fund											
NM	X	X	X	X	X	X			X		X	
NY	X		X <sup>(11)</sup>							X		

continues on next page

Who is Assessed?									On What Basis?			
State	Landline	Wireless	I-VoIP	Cable	IXCs	Paging	End Users	Other	Intrastate Revenues		Per Line	Other
									Gross	Net		
NY	X			X <sup>(1)</sup>						X		
NC	X	X	X		X		X				X	
ND											X	
OH	X	X	X	X	X	X					X	
OK	X	X	X	X	X			X	X			
OR	X	X	X <sup>(2)</sup>	X <sup>(2)</sup>	X		X		X		X	
RI	X		X				X				X	
SC	X	X	X	X <sup>(3)</sup>	X		X					X <sup>(6)</sup>
SD	X	X				X					X	
TN	No fund											
TX	X	X			X	X			X			
UT	X	X	X	X <sup>(3)</sup>	X				X			
VT	X	X			X				X			
VA	No fund											
WA												X <sup>(7)</sup>
WV											X	
WI	X	X	X	X	X				X			
WY	X	X	X	X	X	X			X			

Notes:

- (1) NY: 1 VoIP provider contributes voluntarily
- (2) OR: VoIP and cable providers contribute voluntarily
- (3) Cable companies that provide voice service assessed
- (4) ID: Contribution differs by program; per local exchange line; per WATS billed minute
- (5) IA: TRS contribution by assigned number; 2018 legislation
- (6) SC: Wireline: Retail rev., Relay per line, IAS allocated from prior year
- (7) WA: Allocation from State general fund
- (8) IL: TRS fund assessed on connections; Link-up contribution voluntary
- (9) KS: Satellite providers
- (10) Hybrid assessment methodology

# Table of Contents

<b>I. Introduction</b>	<b>1</b>
A. Organization of the Paper	3
B. Study Methodology	4
<b>II. Federal Universal Service Funds: A Brief Overview</b>	<b>4</b>
<b>III. State Universal Service Funds</b>	<b>8</b>
A. Types of State Funds	10
B. Changes in Fund Size 2014 – 2017	12
1. High Cost Support	12
2. Intrastate Access Support (IAS)	16
3. Broadband Funds	17
4. Lifeline	19
5. Funding for Schools and Libraries	21
6. Telecommunications Relay Service and Equipment Programs	22
7. Other funds	24
<b>IV. State Fund Contributors and Recipients</b>	<b>25</b>
A. State USF Contributors	25
B. Basis for Contribution	28
C. Contribution Rates by Fund	28
1. Single Rate for All Funds	29
2. Fund-specific Rate	30
3. Rate by Provider Type	30
4. Rate per Connection	30
D. Fund Distribution Requirements	32
1. Carrier of Last Resort	33
2. Provide Service in High Cost Areas	34
3. Serve areas without unsubsidized competition	34
4. Rate Case	35
5. Access Charge Reductions	35
6. Broadband	35
7. Provide service at benchmark rates	36
<b>V. Conclusions</b>	<b>38</b>

# Table of Figures and Tables

Figure 1.	2017 Federal USF Funds	6
Figure 2.	Federal USF Support 2013–2017	7
Figure 3.	2017 State USF Funding by Category	9
Figure 4.	State Fund Size Comparison 2014–2017	10
Figure 5.	State Funds by Fund Type	11
Figure 6.	States with High Cost and IAS Funds	13
Figure 7.	High-Cost Funds by State 2014–2017	13
Figure 8.	Intrastate Access Reduction Support (IAS) 2014–2017	17
Figure 9.	State USF Broadband Funds 2014–2017	18
Figure 10.	2017 State Lifeline Funding	20
Figure 11.	Lifeline Funding 2014–2017	20
Figure 12.	Schools and Libraries Funding 2014–2017	21
Figure 13.	TRS Funding 2014–2017	22
Figure 14.	Telecommunications Equipment Funds 2014–2017	23
Figure 15.	Contributors by Service Type	26
Table 1.	Specialized State Funds	24
Table 2.	SUSF Contributors by Provider State	27
Table 3.	Revenues Assessed by State	28
Table 4.	Contribution Formulas	29
Table 5.	SUSF Distribution Requirements	33
Table 6.	Benchmark Rates	37



# State Universal Service Funds 2018: Updating the Numbers

## I. Introduction

Universal Service is a key component of both federal and state communications policy. Its goal is to ensure that all citizens, regardless of where they live, have access to robust, reliable communications services, including broadband connectivity, at affordable rates, with “reasonably comparable service” across the country. The four Federal Universal Service funds (FUSF)—High Cost/Connect America fund (CAF), Schools and Libraries (E-Rate), Lifeline, and Rural Healthcare—provide financial support to carriers (and, in the case of the Lifeline fund, consumers) to build voice and broadband facilities that will bring 21st century communications services to users across the country.

In the spirit of Cooperative Federalism, where the states and the federal government work together to support all citizens, many states have also developed State Universal Service funds (SUSF) to add to the funding provided by the federal program, and to address the specific communications issues faced by that state’s consumers. These funds broaden the reach of the federal fund by providing increased levels of funding and support targeted to the areas where the state legislature and the public utility commissions have determined that such support is necessary. Because the state funds are managed by those closest to the ultimate recipient of the services they provide, they are often more targeted than the federal funds. State funds provide additional support for the four areas covered by the federal fund, as well as support for specific areas outside the federal funds, for example, support for public access payphones, broadband adoption, and specialized services for the vision and hearing impaired, to name just a few.

Originally developed to ensure the availability of landline voice communications, with the increasing importance of the internet and the expansion of online services, the federal USF now focuses on increasing broadband availability. To that end, the FCC has directed CAF funding to areas where competition has not yet brought high speed broadband service.

The states have also begun to move their focus toward broadband, adding broadband specific support to their state universal service funds, as well as creating broadband funds outside the traditional USF structure.<sup>1</sup> Due to this increased focus, state USF broadband funds tripled in size (from \$27.7M to \$81.9M) over the period between 2014 and 2017, with further increases predicted for 2018 and beyond.

NRRI’s 2018 State USF review examines the way in which the states have addressed the question of universal service through state funds that supplement the FCC’s four universal service funds. This paper updates the status of state universal service support since NRRI’s last USF review in 2014.<sup>2</sup> It examines changes to the state USF funds between 2014 and 2017 due to legislation and the increased focus on broadband. Based on responses to the 2018 NRRI USF survey, the paper addresses the ways in which carriers and end users contribute to the funds, as well as the methods by which state funds are disbursed. As consumers have increasingly moved away from traditional landlines to VoIP, wireless, and other intermodal communications services, the funding available for state universal programs (generally based on a percentage of intrastate revenues) has changed as well, leading to a number of states refocusing their contribution methodologies in an attempt to stabilize the funds without overburdening consumers. The paper examines those efforts, as well as changes in the size and direction of the funds themselves.

---

1 This paper focuses on broadband funding provided through the State Universal Service funds and does not address the separate funds created by the state legislatures. For a fuller picture of state broadband funding, see Lichtenberg, Sherry, Ph.D., *Broadband Availability and Adoption: A State Perspective*, National Regulatory Research Institute, Report No. 17-03, June 2017, available at [www.nrri.org](http://www.nrri.org).

2 Lichtenberg, Sherry, Ph.D., *State Universal Service Funds 2014*, National Regulatory Research Institute, Report No. 15-05, June 2015, available at [www.nrri.org](http://www.nrri.org).

This paper provides data that state regulators and others may use to examine their own contribution and funding processes and to manage their individual state funds. The information in this study may help regulators and legislatures make decisions about their funds, assist the FCC in understanding the impacts of the changing communications landscape on the states, and provide input on the way in which both federal and state fund contributions may be structured in the future.

Forty-eight states and the District of Columbia responded to the NRRI 2018 survey.<sup>3</sup> Alabama and Hawaii did not respond. Since neither state has a state universal service fund, the missing responses did not impact the final survey results.<sup>4</sup>

The states have multiple funds to support multiple universal service obligations, including special purpose funds that may be hosted outside the public utility commission but funded through provider and customer contributions. For simplicity, NRRI uses the term State USF in this study to refer to all of these funds, including broadband funds, access restructuring funds (Intrastate Access Support or IAS) that make up for reductions in/changes to access charges paid to carriers for completing calls on their networks, Lifeline funds, Telecommunications Relay Service (TRS), accessible telecommunications equipment (TEP) funds to provide specialized customer premises equipment to the hearing and visually impaired, and other funds established by state law. Because many of the states include TRS and TEP funds in one broad fund category, we treat them together in this report and provide individual state information only where available.

In all, 42 states and the District of Columbia provide some form of state universal service support in addition to the federal funds. This number is reduced from the 45 states that provided support in 2014. This reduction in programs includes the realignment of the Alaska fund, which eliminated support for Lifeline and public payphones and restricted high cost support to specific areas of the state in 2018.<sup>5</sup>

Eight states, Alabama, Delaware, Florida, Hawaii, Massachusetts, New Jersey, Tennessee, and Virginia, have no state funds.<sup>6</sup> Although they have no state USF, a number of these states provide support through separate entities not managed by the state regulatory commission. For example, although it has no fund, Florida requires all carriers to provide Lifeline service. Massachusetts, Delaware, and West Virginia provide broadband support through State grant programs.<sup>7</sup> And New York provides broadband support both through the state USF and the “New NY” broadband initiative.

The largest proportion of state USF funding is directed to supporting carriers that provide service in high cost or remote areas. Nearly half of the states with funds (22) provide high cost support. Changes to the High-Cost Funds over the study period, including the reduction or elimination of funding in areas served by competitive suppliers, have reduced the size of the state USF funding in some cases or redirected the monies to other uses, for example broadband.

In addition to the High-Cost Fund, 11 states have funds specifically designed to mitigate the effects of access charge reductions on carriers. Where possible, we review these IAS funds separately. Where the states do not designate separate Intrastate Access Support (IAS) funds, we include their value in the High-Cost Fund.

---

3 For simplicity, the District of Columbia is referred to as a state throughout this report.

4 Forty-nine states responded to the 2014 survey. Connecticut responded to the 2018 survey but did not provide financial data on its funds. Where possible, the paper uses data from outside sources for states that did not respond to the survey or the 2014 survey data to provide a full picture of the funding available.

5 Alaska eliminated its support for Lifeline and public interest payphones and set a 10% cap on SUSF contributions in October 2018. Washington's fund is scheduled to sunset in 2020. See <http://rca.alaska.gov/RCAWeb/Dockets/DocketDetails.aspx?id=fc2f6b7e-4723-47e8-85db-71c60d4a776e>. Hawaii's 2014 survey response provided information on the Hawaii SUSF. Since no information was provided in 2018, this fund was eliminated from the list.

6 North Dakota and New Hampshire fund telecommunications relay service only.

7 The Delaware and West Virginia broadband funds have been discontinued but distributions will continue until the current monies are expended.

State Universal Service funding was reduced just under 8 percent over the study period, from \$1,842,521,774 in 2014 to \$1,708,908,846 in 2017. The reduction was largely driven by reductions in high cost support. The overall reduction was tempered by significant increases in broadband and Lifeline funding in California. These changes were driven by state legislation directed toward increasing broadband penetration and increases in the contribution percentage, as well as increases in TRS and E-Rate funding across all states.<sup>8</sup>

Contributors to the State USF vary by state and often by fund. All of the states assess traditional price cap and rural rate of return wireline carriers, including Competitive Local Exchange Carriers (CLECs). Twenty-nine states assess the revenues of interexchange (long distance) carriers, although this number is decreasing as customers transition to bundled products. Thirty states assess wireless providers. Seventeen states assess cable voice providers. Twenty-eight states assess non-cable, interconnected VoIP providers.<sup>9</sup> Eight states assess end users. Six states assess paging companies.<sup>10</sup> Washington continues to fund USF through a contribution from the state's general fund.<sup>11</sup>

While the intralata telecommunications services provided by telephone cooperatives are assessed, the picture is less clear for those electric cooperatives that are entering the telecommunications market as a result of the CAF auctions. Those cooperatives that will provide telecommunications services directly will be assessed directly. Those companies that offer customers a “dumb” broadband pipe and rely on other companies to deliver intralata services may defer to their partners to fund the state and federal USF. It remains to be seen how this process works out in the future.

In some states, cable and VoIP providers contribute voluntarily to the state funds. One VoIP provider contributes voluntarily in New York and one cable company contributes voluntarily in Utah. Some VoIP providers in Oregon also contribute voluntarily.

Unlike the Federal fund, which assesses providers at a flat rate adjusted on a quarterly basis, the states collect differently depending on the fund to be supported. This allows the states to hone their funding requirements more specifically and to evaluate different contribution and funding methodologies.

State Universal Service programs continue to be an important tool for meeting the important policy goal of ensuring access to telecommunications for all citizens, regardless of where they live or their financial status. Continuing to study and review information on how various states meet this goal will remain an important public utility commission activity now and in the future.

## A. Organization of the Paper

For ease of reading, this paper is organized into five sections, following the order of the questions in the State USF survey.

**Part I** of this paper is this introduction.

**Part II** provides a brief review of the federal universal service fund.

**Part III** is an overview of the state funds. It addresses fund contributors and reviews key changes since the 2014 survey. Part III also reviews changes in the size of the state funds, additions or changes to contributors and contribution rates, and new funds added to address the specific needs of the state's citizens.

---

<sup>8</sup> TRS funding is collected via end-user surcharges and directed toward the companies that provide this service.

<sup>9</sup> For the purposes of this paper, we track voice service provided by cable companies as a separate category from other interconnected VoIP services, such as those provided by Vonage or Skype. We include AT&T U-Verse and Verizon FiOS in the interconnected VoIP category as well.

<sup>10</sup> This number has been reduced as paging companies discontinue service.

<sup>11</sup> The Washington fund is scheduled to be discontinued in 2019.

**Part IV** describes the companies that contribute to state funds, and examines how contributions are assessed, and how funds are distributed. Unlike the revenue based funding methodology used by the federal funds, the states have chosen varying contribution methods, depending on the type of fund and the type of provider. This part also reviews recent state proceedings addressing USF funding and contribution models. It addresses the sunset of parts of the Alaska fund, as well as changes to the contribution model in Maine, Nebraska, New Mexico, and Utah.

**Part V** provides conclusions and recommendations.

## B. Study Methodology

The NRRI 2018 State USF Survey was distributed to commission staff in the 50 states and the District of Columbia. The author worked with NARUC’s USF staff subcommittee to develop the survey questions, distribute the initial questionnaire, and provide follow-up questions. The 2014 survey consisted of 13 questions, asking states to describe the design of their funds, the types of funds supported, fund contributors, and the way in which monies are distributed. The 2018 survey added questions about broadband deployment and funding, as well as questions focused on the changes to state funds resulting from legislation. The survey questionnaire appears in Appendix A. Individual state responses are available on request.

Responses to the survey were tallied and used to provide the data in the report. Responses to closed questions, such as whether the state had a fund and what services those funds support, were tallied and are provided via charts in this paper. Responses to open-ended questions, such as the effect of state or federal legislation on state funds, are discussed in the relevant sections of the paper. The funding data provided in the paper, including the categorization of the funds, were provided by the states.

## II. Federal Universal Service Funds: A Brief Overview

The availability of reasonably comparable communications services to all citizens of the United States at affordable rates, regardless of where they live, has been a key national policy goal since the passage of the Communications Act of 1934. Section I of the Act establishes the Federal Communications Commission (FCC) and instructs it

to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communication . . .<sup>12</sup>

The Act established six key principles for ensuring the availability of comparable services to all users across the nation.

**(1) Quality and Rates**—Quality services should be available at just, reasonable, and affordable rates.

**(2) Access to Advanced Services**—Access to advanced telecommunications and information services should be provided in all regions of the Nation.

**(3) Access in Rural and High Cost Areas**—Consumers in all regions of the nation, including low-income consumers and those in rural, insular, and high-cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

---

<sup>12</sup> See *Communications Act of 1934*, 47 U.S.C. §151 *et. seq.* As NRRI noted in its 2006 paper on Universal Service, these goals were primarily “aspirational” in 1934, when fewer than 50 percent of Americans had a telephone. Other than the Bell System slogan of “one carrier, one network, Universal Service,” stated in the Kingsbury Commitment, there was no specific funding or direction for providing universal telephone service. See also Rosenberg, Edwin, Perez-Chavolla, Lilia, Liu, Zing, *Commission Primer*, National Regulatory Research Institute, Report 06-08, May 2006, available at [nrri.org](http://nrri.org).

**(4) Equitable and Nondiscriminatory Contributions**—All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.

**(5) Specific and Predictable Support Mechanisms**—There should be specific, predictable, and sufficient Federal and state mechanisms to preserve and advance universal service.

**(6) Access to Advanced Telecommunications Services for Schools, Health Care, and Libraries**—Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services.<sup>13</sup>

To achieve these goals, the FCC created the Federal Universal Service Fund, supported by contributions from traditional wireline carriers (the Incumbent Local Exchange Carriers and Competitive Local Exchange Carriers), wireless carriers, and interconnected Voice over Internet Protocol (VoIP) carriers.<sup>14</sup> The fund provides support to eligible companies that provide the interstate communications and advanced (broadband) services defined by the Communications Act. Carriers receiving federal USF support must be certified as “eligible telecommunications carriers” by the states in which they operate and must meet quality and availability standards defined by those states. The federal government and the states share the goal of ensuring universal access to communications services, including advanced services such as broadband, to all citizens. To that end, both the federal government and many states provide universal service support. Although this paper focuses on state universal service programs, we discuss the federal Universal Service Funds briefly here as background for the review of state programs.

Federal Universal Service support is provided through four funds:

- The Connect America Fund (originally called the High-Cost Fund), which provides support for carriers providing voice and broadband connectivity in high cost (primarily rural) areas;
- The Lifeline Fund, which provides discounted wireline and wireless services for low-income consumers;<sup>15</sup>
- The Schools and Libraries (E-Rate) fund, which provides funding for broadband access and other communications support for educational institutions;
- The Rural Health Care Fund, which provides support to eligible health care providers for the telecommunications and broadband services necessary for the provision of telemedicine services in rural areas.

Together, these four federal funds disbursed approximately \$8.8B in 2017, with the largest share (\$4.6 B) coming from the Connect America Fund (CAF).

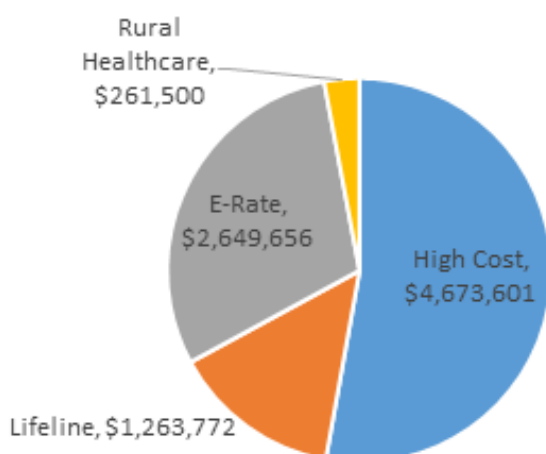
---

13 See 47 USC 254(2)(b). Section 254 includes a seventh principle, directing the Federal-State Board on Universal Service to create “such additional are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act.”

14 Interconnected VoIP carriers allow calls to be completed over the public switched network. Although the FCC has not yet ruled on whether these carriers are telecommunications providers or information service providers, they are required to contribute to the FUSF and to meet certain quality of service standards, including providing emergency services (E911). Cable companies do not contribute to the Federal USF and do not receive support from it.

15 The federal Lifeline Fund was modified in 2012 to reduce costs and eliminate waste, fraud, and abuse by instituting a one resident/one phone rule, eliminating the “link-up” payment that covered installation costs in all areas but on tribal lands, and reducing the subsidy to \$9.25 per month in rural and urban areas and an additional \$25.00/month for participants residing on tribal lands. There will be further reductions in the fund as additional changes, including the implementation of the National (Eligibility) Verifier and reductions in support to voice-only providers, take effect in 2019. See Lichtenberg, Sherry, Ph.D., *Lifeline and the States: Designating and Monitoring Eligible Telecommunications Carriers*, National Regulatory Research Institute, Report No. 13-12, November 2013, available at [http://communities.nrri.org/research-papers?p\\_auth=gfTDCrW6&p\\_p\\_auth=ut7hUO2h&p\\_p\\_id=20&p\\_p\\_lifecycle=1&p\\_p\\_state=exclusive&p\\_p\\_mode=view&\\_20\\_struts\\_action=%2Fdocument\\_library%2Fget\\_file&\\_20\\_groupId=317330&\\_20\\_folderId=0&\\_20\\_name=9102](http://communities.nrri.org/research-papers?p_auth=gfTDCrW6&p_p_auth=ut7hUO2h&p_p_id=20&p_p_lifecycle=1&p_p_state=exclusive&p_p_mode=view&_20_struts_action=%2Fdocument_library%2Fget_file&_20_groupId=317330&_20_folderId=0&_20_name=9102)

Figure 1: 2017 Federal USF Funds



The CAF provides funding to ensure that consumers in rural, insular, and other underserved and unserved areas have access to modern communications networks and services at reasonable rates. The program began focusing its resources on expanding the availability of broadband to customers in rural areas in 2014, first offering funding to the traditional price cap wireline carriers in their territories, then providing support for rural carriers, and, in 2018, adding support for non-traditional carriers (fixed wireless, satellite, electric cooperatives, and others) through a reverse auction.<sup>16</sup>

Expenditures for the CAF, E-Rate, and Rural Healthcare funds have remained constant over the study period. Expenditures for the CAF were \$4.673B in 2017, a slight increase over the 2016 total of \$4.56B.<sup>17</sup> The E-Rate (Schools and Libraries) fund disbursements have increased year over year as more schools adopt broadband connectivity. This fund provided support in the amount of \$2.64B in 2017. The newest and smallest of the funds, the Rural Health Care Fund, expended \$261.5M in 2017, down from \$298M in 2016. Expenditures in this fund should increase as the CAF fund recipients deploy more broadband in rural areas.

Lifeline fund expenditures vary depending on the number of consumers who obtain support. This fund disbursed \$1.5B in 2016, but dropped to \$1.26B in 2017, primarily due to program changes that tightened eligibility criteria and eliminated duplicate enrollments.<sup>18</sup> Lifeline disbursements may decrease as payments for standalone voice subscriptions are phased out and program criteria are tightened further.<sup>19</sup>

<sup>16</sup> Reverse auctions are often referred to as “Dutch” Auctions, after the 17th century Netherlands tulip auctions that award funding (or tulips) to the lowest bidder. See Federal Communications Commission (FCC) Connect America Fund Phase II Auction (Auction 903) Overview, available at <https://www.fcc.gov/auction/903>. See also CAF Phase II Auction Report and Order on Reconsideration, 32 FCC Rcd 1624 (2), available at <https://www.fcc.gov/document/caf-phase-ii-auction-report-and-order-and-order-reconsideration>.

<sup>17</sup> The CAF total shown here does not include monies from the 2018 CAF II auctions or other specialized CAF disbursements.

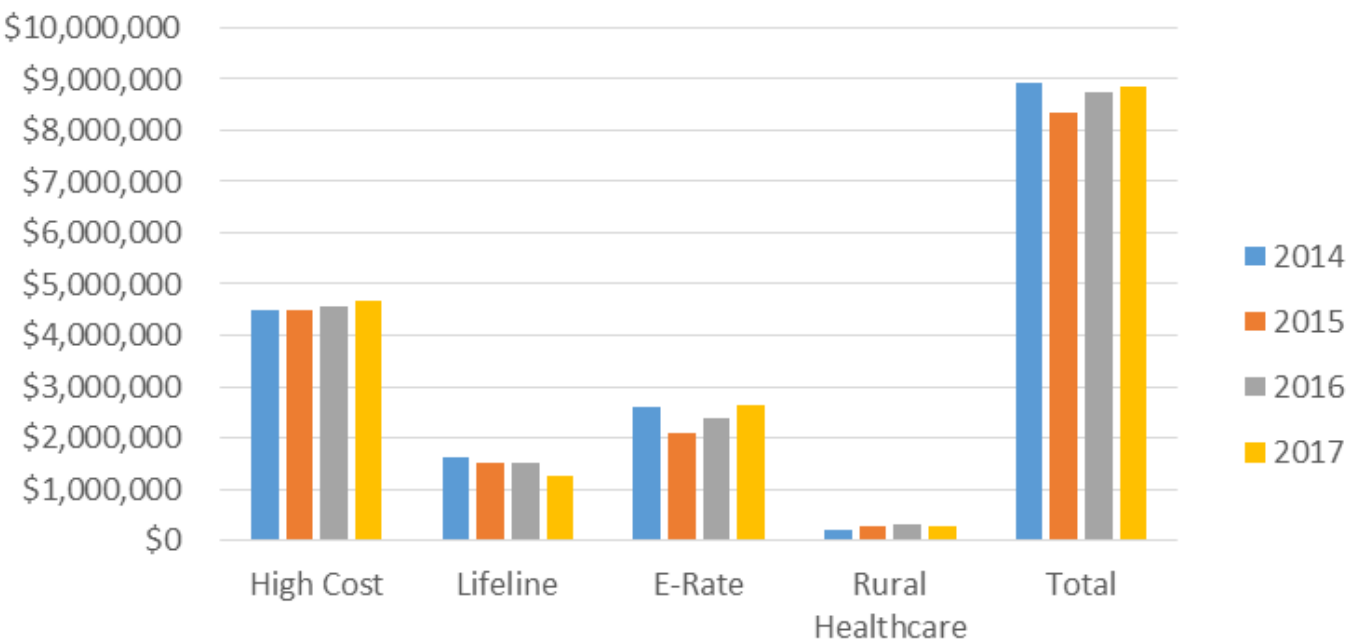
<sup>18</sup> Universal Service Administrative Co., 2017 Annual Report, available at <https://www.usac.org/res/documents/about/pdf/annual-reports/usac-annual-report-2017.pdf>.

<sup>19</sup> The FCC ordered a gradual phase-out of voice-only Lifeline support in 2016. Beginning in December 2019, recipients on voice-only plans will receive only \$7.25 monthly. That amount will fall to \$5.25 per month in December 2020, with voice-only support phased out completely by December 2021. This change will put additional pressure on the state funds.



Figure 2 shows changes in Federal USF disbursements between 2013 and 2017.

Figure 2: Federal USF Support 2013-2017  
(\$ in thousands)



The federal USF program is funded by a percentage of end user revenues for interstate and international telecommunications services provided by wireline, wireless, and interconnected VoIP carriers that provide the “supported telecommunications services” defined in Section 254 of the Act.<sup>20</sup> The Communications Act requires that the Federal USF provide a “predictable level of support,” which requires the adjustment of the contribution level on a quarterly basis. USF charges are paid by carriers and recouped through a surcharge on consumer bills. This surcharge is generally not assessed on the local service provided to Lifeline subscribers, but may be assessed on ancillary services such as interstate long distance.<sup>21</sup>

The federal USF assesses net interstate revenues from all providers at the same flat percentage rate, 20 percent for 1Q2019, an increase of nearly 3 percent from the 17.4 percent assessed in 2Q2015. The federal contribution rate is adjusted quarterly based on projected expenditures from the fund and has risen steadily year after year.<sup>22</sup>

Connect America Fund recipients must be Eligible Telecommunications Carriers (ETCs) and provide service in areas without unsubsidized competitors. Lifeline and other providers must also be ETCs and follow the rules established by the FCC in the orders governing those services. The USF Transformation Order requires that these providers, including Lifeline providers, include broadband in the services that they offer, although based on the FCC’s categorization of broadband as a Title I information service, it is possible that USF contributions may be assessed solely on the telecommunications/voice portion of the service.<sup>23</sup> This question remains open.

20 The addition of new fund recipients such as satellite and cooperative companies as a result of the CAF II auctions may add new payers to the fund, potentially increasing its viability. We discuss this question in Section V.

21 FCC, Understanding Your Telephone Bill, available at <https://transition.fcc.gov/cgb/consumerfacts/understanding.pdf>.

22 See Federal Communications Commission, *In the Matter of the Universal Service Contribution Methodology, Further Notice of Proposed Rulemaking*, April 27, 2012, WC Docket No. 06-122.

23 USF/ICC Transformation Order and FNPRM, 26 FCC Rcd.

Increases in bundled offerings that include both voice and broadband, the increase in wireless adoption, and the shift to broadband-enabled products such as cable voice and over the top VoIP have reduced the interstate revenue assessed for universal service support, resulting in the need to increase the contribution rate to maintain support at existing levels, let alone increase it to cover broadband deployment and availability. Contribution rates have risen steadily over the last 15 years and show no sign of moderating. The USF contribution rate was 6 percent in 2000 and has increased yearly since that time. When NRRI issued its 2014 State USF report, the 4Q2014 federal contribution rate was 16.1 percent. By 4Q2018, the rate had increased to 20.1 percent, due primarily to increased demand and a smaller contribution base.<sup>24</sup> This rate dropped to 20 percent in 1Q2019. In 2012, the FCC opened a rulemaking to revise the contribution methodology by potentially broadening the contribution base to include more services and providers. This rulemaking remains open over six years later, with no end in sight.<sup>25</sup>

The increases in the Universal Service Fund contribution rate will increase the pressure on the consumers who ultimately pay for universal service support, potentially driving them to carriers that do not support the fund. This has the “unintended consequence” of adding pressure to the state USF funds to “shore up” the carriers they support, particularly in high-cost insular and rural areas. This paper focuses on the way in which the states are meeting the challenge of supplementing the federal funds through explicit state subsidies, including, in a number of states, passing legislation and completing rulemakings that will create a larger contribution base.

### III. State Universal Service Funds

State Universal Service funds (SUSF) supplement and extend the funding provided by the federal Universal Service Fund. These funds provide additional support for the four areas covered by the federal fund, as well as targeted support to meet specific state needs. Depending on the specific state’s needs, SUSF funds may provide high cost support for rural carriers in areas without unsubsidized competitors, reduce the impact of changes to the federal access charge regime through interstate access support (IAS), increase funding for Lifeline, support broadband deployment, provide equipment and connectivity for schools and libraries, provide support for the deaf and disabled through programs such as the Telecommunications Relay Service (TRS) and equipment (TEP) funds, as well as provide specialized funding mandated by the state legislature to support particular classes of consumers. For example, Rhode Island funds reading for the blind; Maryland funds a senior call check program; and Alaska and Maine provide public interest payphones.<sup>26</sup>

Forty-three states had state USF funds in 2017, compared to 45 states reporting funds in 2014. Eight states, Alabama, Delaware,<sup>27</sup> Florida, Hawaii, Massachusetts, New Jersey, Tennessee, and Virginia, do not have state universal service funds.<sup>28</sup> Delaware’s broadband fund sunset in 2016, although the remaining monies in the fund will be distributed until they are exhausted.

State USF subsidies totaled \$1,742,231,010 in 2017, an increase of approximately 13 percent from the \$1,506,521,774 provided in 2014. The increase in fund size comes primarily from increases in broadband, Lifeline, E-Rate, and TRS funding. This increase was tempered by a reduction in the size of the Texas fund from \$336,000,000 in 2014 to \$216,000,000 in 2017 and a slight reduction (3 percent) in high-cost funding across the states. In addition, some states have terminated or reduced some of the components of their state USF programs. For example, Delaware and West Virginia terminated their broadband funds, and Wyoming ended its Lifeline program.

24 FCC Public Notice, *Office of Managing Director announces that the proposed universal service contribution factor for the fourth quarter of 2018 will be 0.201 or 20.1 percent*, available at <https://www.fcc.gov/document/fourth-quarter-usf-contribution-factor-201-percent>.

25 FCC, *In the Matter of Universal Service Contribution Methodology A National Broadband Plan For Our Future*, WC Docket No. 06-122, Further Notice of Proposed Rulemaking, April 27, 2012, 27 FCC Rcd 5357 (6), available at <https://www.fcc.gov/document/commission-adopts-nprm-reform-and-modernize-contribution-system>.

26 This NRRI report reviews all of the funds supported by state USF subsidies. Where possible, these funds are identified separately. The Alaska program sunset in 2018.

27 Legislation in Delaware in 2013 created TRS and broadband funds managed by the Department of Technology and Information rather than the PUC. The legislation required telecommunications companies to pay the equivalent of their 2011 Commission assessment into the Broadband fund for 3 years, beginning in 2011 and sun-setting in 2016. The Fund is collected and administered by the Department of Technology and Information (DTI). See Bill 96, 6/15/13; <https://legiscan.com/DE/text/HB96/id/863588/Delaware-2013-HB96-Engrossed.html>.

28 Hawaii did not respond to the 2018 survey but a review of the Commission website shows no state universal service funds.



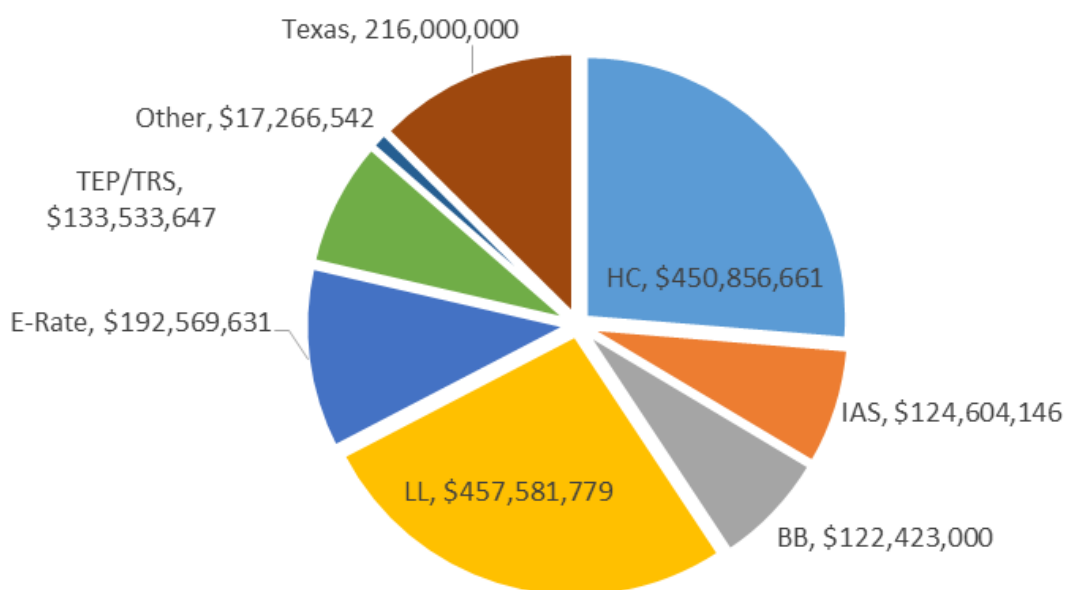
These reductions will increase in 2018 as Lifeline distributions continue to decline, states modify their assessment processes, and some states, like Alaska, rethink their USF programs and requirements.<sup>29</sup>

Decreases in high-cost funding were offset by increases in Lifeline and broadband funding in California and the addition of a broadband program in Wisconsin.

The key changes to the SUSF program by state are discussed in detail later in this paper.

**Figure 3** shows the distribution of funding among state programs for 2017. The telecommunications equipment and telecommunications relay programs have been combined to reflect the results of the 2017 survey, which showed that a number of states do not report these programs individually. The Texas fund is shown separately because it is not divided by program, but approves funding on a case-by-case basis.

**Figure 3: 2017 State USF Funding by Category**

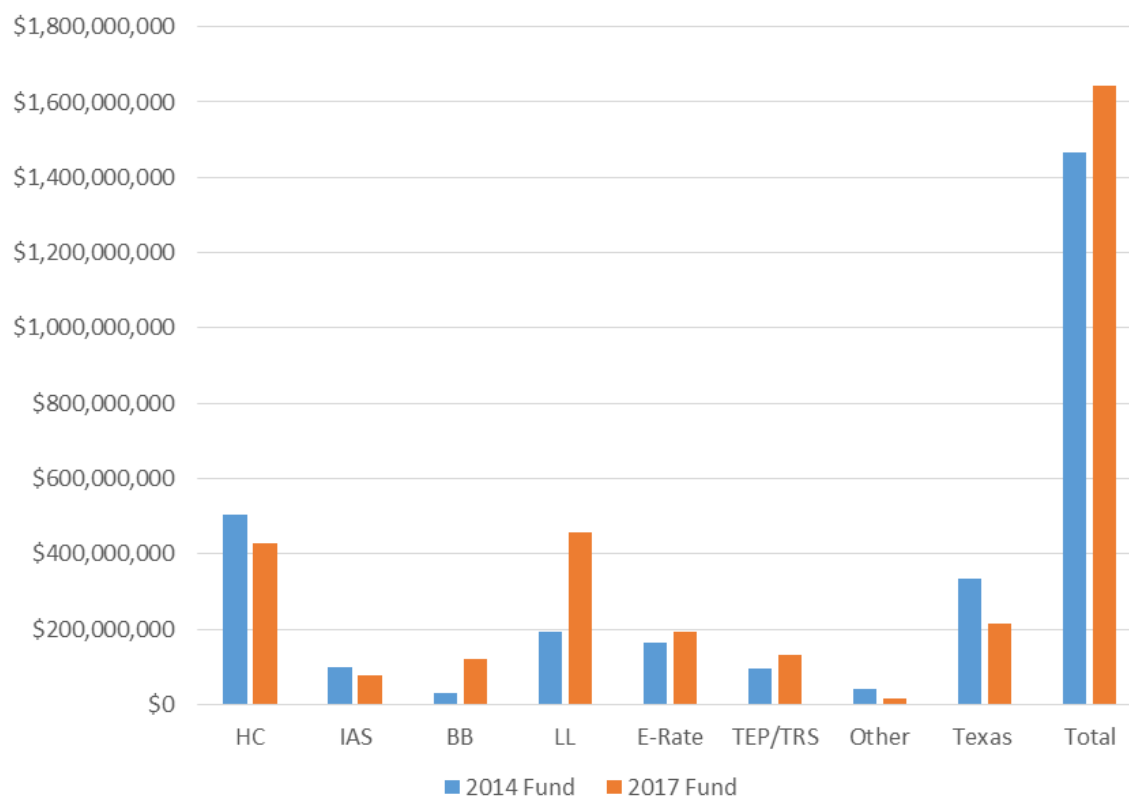


Note: Texas funds as a single amount, not by program.

<sup>29</sup> Alaska sunset its Lifeline and public access payphone programs in 2018.

**Figure 4** shows the changes in state USF funding from 2014 to 2017. The changes in funding by fund type are discussed in Section III.A.

**Figure 4: State USF Fund Size Comparison 2014-2017**



Note: Data from state survey results.

State universal programs remain a key part of the way in which state public service commissions ensure ongoing support for their citizens. We explore the state funds in more detail in the following paragraphs.

## A. Types of State Funds

Together, the 43 states that provide state universal service support fund a total of 131 programs, with the largest categories being support for high-cost service in rural and underserved areas, telecommunications relay (and equipment) service, and Lifeline. The types and numbers of funds supported by the SUSF have remained relatively constant since NRRI's first State USF report in 2012, although as we noted in 2014, the focus of these funds is increasingly turning to supporting broadband deployment as a means of ensuring high-speed data connectivity for all citizens. To that end, Arizona added funding for schools and libraries (E-rate) to its SUSF in 2017,<sup>30</sup> and Wisconsin Act 59 added broadband grants funded by State USF monies to its SUSF funds in 2017.<sup>31</sup>

On the opposite end of the spectrum, Delaware and West Virginia sunset their broadband funds, and other states, including Alaska and Michigan, have moved to modify their funds by reducing or recalculating high-cost funding or by making changes to Lifeline and other state funds.

Telecommunications relay service (TRS) remains the largest category of state-supported USF funds with 60 percent of the states (33) providing support.

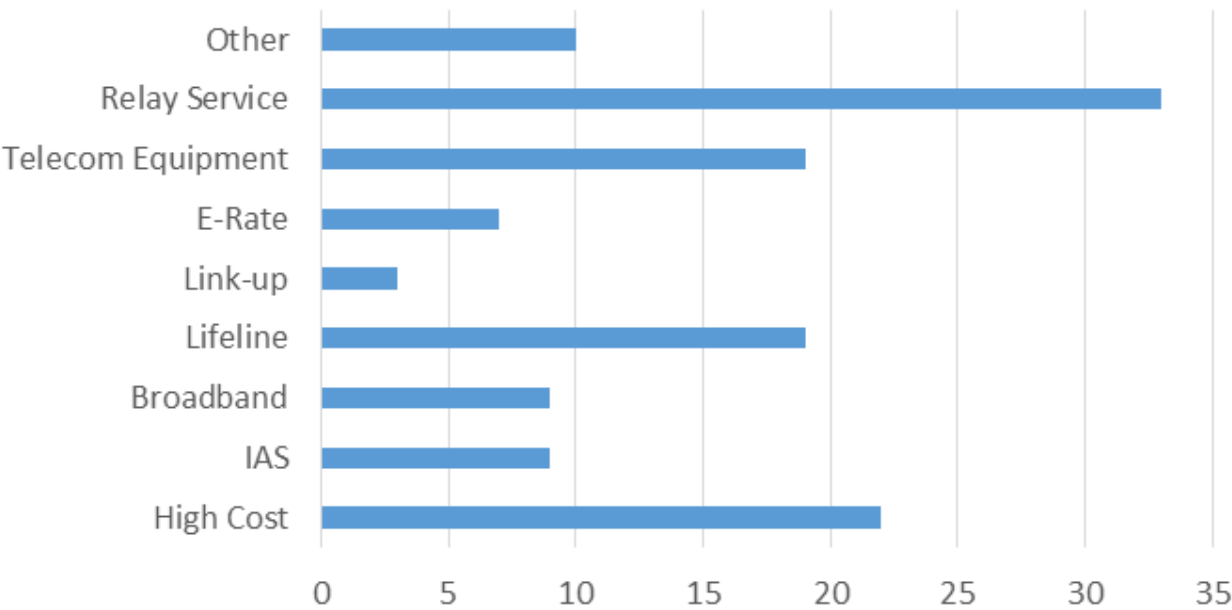
30 See Arizona Corporation Commission, *Opinion and Order In the Matter of the Notice of Proposed Amendments to the Arizona Universal Service Fund*, Docket No. RT-00000H-97-0137, Decision 76376, 9/19/2017, available at <http://images.edocket.azcc.gov/docketpdf/0000182799.pdf>.

31 See 2017 Wisconsin Act 59, 9/21/2017, available at <https://docs.legis.wisconsin.gov/2017/related/acts/59>.

High-cost support, including intrastate access (IAS) support, remains the largest financial component of the SUSF. Twenty-two states reported that they continue to provide high-cost funding to small carriers serving rural areas, whereas an additional nine reported that they have separate IAS funds. These funds are discussed separately where possible.

Figure 5 shows the types of funds supported and the number of states providing support for each type of fund.

Figure 5: State Funds by Fund Type



- Thirty-three states have funds that support telecommunications relay service for the deaf and hard of hearing. In addition, 19 states provide support for the equipment necessary to use relay service, including TTYs, captioned telephone equipment, and other support equipment. Kentucky and Wyoming house their TRS funds outside the state USF. Maryland’s fund includes a “senior call check” program to check on the health and welfare of the state’s senior citizens. Minnesota, Nevada, Oklahoma, and Washington include equipment funds in the state TRS fund. For this reason, we report the value of these funds as a single number.
- Twenty-two states have funds that specifically support High-Cost service. This number is unchanged from 2014, although expenditures for this program have dropped.
- Nine states (Alaska, Georgia, Indiana, Kansas, Michigan, New Mexico, Oklahoma, and Pennsylvania) reported that they have dedicated Intrastate Access Support (IAS) funds.<sup>32</sup> Oklahoma will phase out its IAS fund by 2022. IAS funding provides support for rural carriers as they transition to the bill and keep method for recouping access charges ordered in the 2011 FCC Access Reform Order.<sup>33</sup>

32 NRRI reported five dedicated IAS funds in 2014, compared to the nine reported here. Because the states reported USF and IAS funds in multiple ways, the total value of HC and IAS funds are reported in this review. Texas is not included in the High-Cost Funding total, since the single Texas fund supports multiple activities.

33 See *In the Matter of Developing a Unified Inter-carrier Compensation Regime*, CC Docket No. 01-92, FCC-33, available at [http://transition.fcc.gov/Bureaus/Common\\_Carrier/Notices/2001/fcc01132.doc](http://transition.fcc.gov/Bureaus/Common_Carrier/Notices/2001/fcc01132.doc).

- Nineteen states provide state Lifeline support in addition to the federal Lifeline program.<sup>34</sup> Three states, California, Illinois, and New York, continue to provide Link-up support to defray the cost of service installation.
- Eight states reported dedicated state broadband funds, although some of these funds reside outside the purview of the state commission. New Mexico, Vermont, and Wisconsin added broadband funds during the study period.<sup>35</sup> West Virginia and Delaware sunset their funds, although disbursements will continue until the remaining monies are expended.
- Seven states provide funding for broadband connectivity for Schools and Libraries (E-Rate funds).
- Two states, Nebraska and Oklahoma, provide Telehealth funding. This number is expected to grow in the future, as the expansion of broadband connectivity allows more states to offer remote medical care.
- Ten states use State USF to provide support for state-specific programs. Maine and Alaska provide public interest payphones.<sup>36</sup> Missouri reduces landline prices for the disabled. New York and Vermont collect funding for emergency services (E-911) through the SUSF. Rhode Island uses USF funding upon request to provide a news service for the blind and emergency access notifications for the deaf and hard of hearing.

These specialized funds are an important part of the state universal service funds and show the importance of the federal–state telecommunications partnership.

## B. Changes in Fund Size 2014 - 2017

With the exception of Lifeline and special additions to the fund from the Connect America program, the federal USF fund size is static, whereas state USF funding increases or decreases depending on need. State funding changes to meet the changing needs of state citizens, allowing the states to create new funds when new needs arise or reduce existing funding to address other changes. During 2017, the states also examined the need for changes to the state contribution model to ensure that funding remains sufficient and predictable.

Total state USF funding increased approximately 13 percent between 2014 and 2017, driven largely by changes in Lifeline and broadband funding, primarily in California, as well as increases in Telecommunications Relay and equipment program funding and the addition of new broadband funds in Wisconsin and Vermont. We discuss these funds in detail in the following paragraphs.

### 1. High-Cost Support

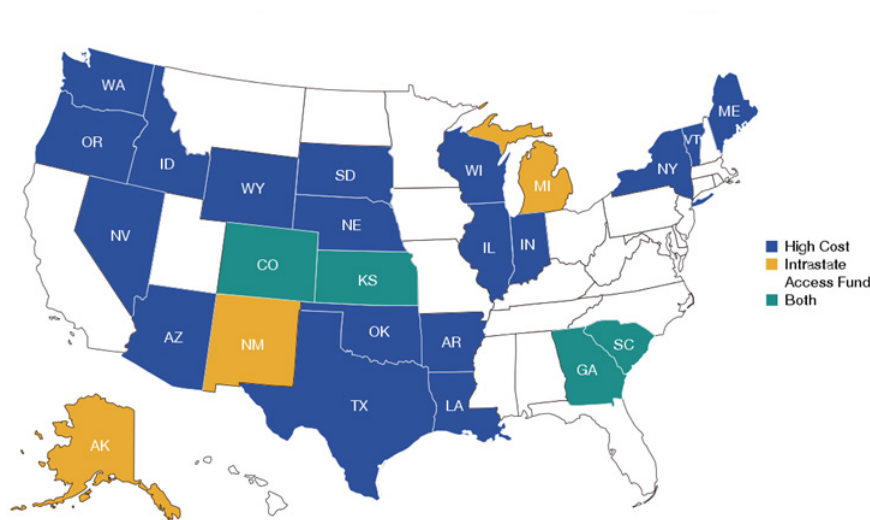
Twenty-two states provide support to cover the high cost of providing service in rural and hard to serve areas. Funding is provided primarily to rural rate of return carriers and requires them to continue to provide voice service, even as they move to a more broadband-focused service. The number of states providing high-cost support is unchanged from 2014. The states providing high-cost support are shown in **Figure 6**.

<sup>34</sup> This number dropped to 18 in 2018, as Alaska discontinued its state Lifeline program. See Regulatory Commission of Alaska, *In the Matter of the Consideration of Repeal of Alaska Universal Service Fund Regulations*, R-18-001, Order No. 5, Order Adopting Regulations, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f0162588-1f65-4cc4-ae36-4a38caa42886>.

<sup>35</sup> Nebraska provides broadband grants but did not provide a value for 2017, so the state is not included in this discussion.

<sup>36</sup> Alaska is phasing out payphone funding. Ibid. USF Order No. 5.

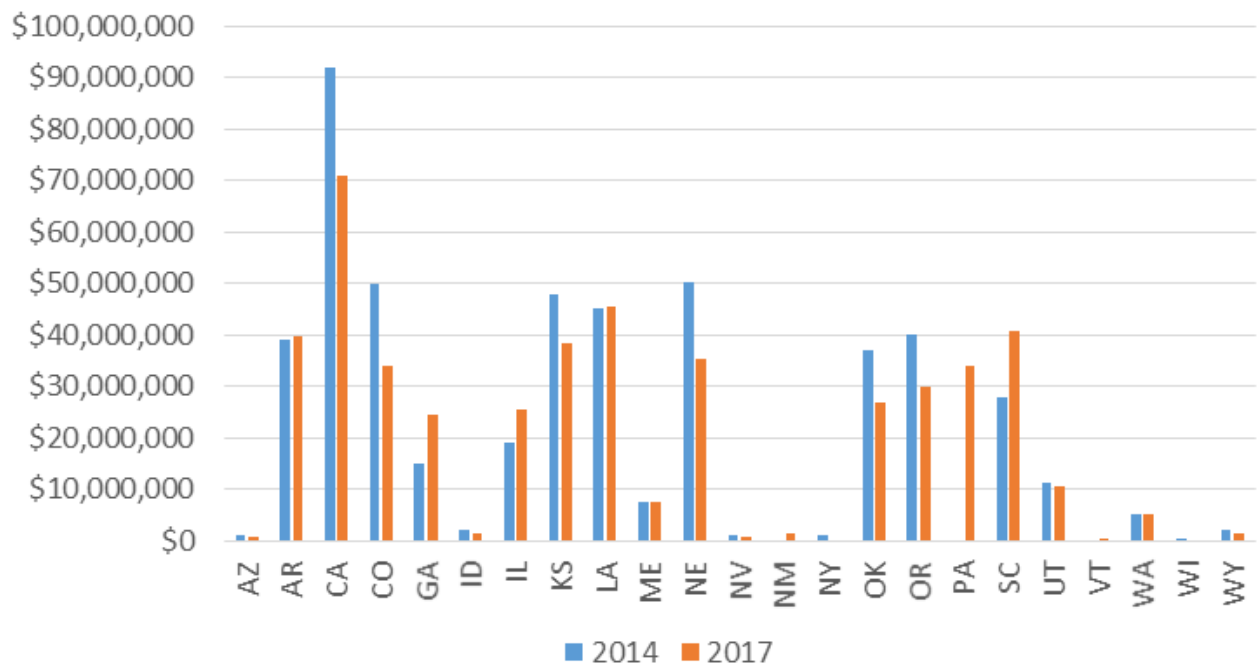
Figure 6: States with High Cost and Intrastate Access Support Funds



Overall high-cost funding has remained fairly constant since 2014, decreasing by only 3 percent (\$15.7M) over the period. Georgia, Illinois, New York, and South Carolina increased high-cost funding as a result of legislative changes and agreements among contributors. California, Colorado, Kansas, Nebraska, Oklahoma, and Oregon reduced high-cost funding during the same time period, whereas Alaska moved to freeze its fund at its current level. In general, changes to high-cost funding are the result of reallocating high-cost monies from areas with effective competition to other funds (for example, in Colorado), as well as reductions in the amount of funding collected due to changes in the mix of services purchased by customers.

Figure 7 shows the overall changes to the state High-Cost Funds between 2014 and 2017.

Figure 7: High-Cost Funds by State 2014-2017



Data from survey. Does not include Texas or IAS funds.

## A. Increases in high-cost funding

The Georgia High-Cost Fund increased from \$15M in 2014 to \$24.4M in 2017 based on an increase in the contribution rate from 2.5 percent in 2014 to 4.9 percent in 2017. Changes to the contribution formula were made by agreement among the companies that contribute to the fund to ensure that it remains viable on an ongoing basis despite reductions in intrastate revenues. High-cost funding is distributed only to those ILECs that have remained under rate of return (RoR) regulation, although these carriers no longer need to offer carrier of last resort service to qualify for high-cost support. Nineteen rural ILECs continue to receive high-cost support. This number is unchanged from 2014, but may be reduced as more rural companies choose to move away from RoR regulation to take advantage of the FCC rural ACAM program. Georgia has a separate fund to provide Intrastate Access support. This fund is reviewed in section 3.2.

The Illinois High-Cost Fund increased from \$19M to \$25.5M in 2017 due to changes in the size of assessments and the reallocation of funding. Illinois adjusts assessments on a yearly basis to ensure that funding is sufficient to meet the needs of recipients. The Illinois Commerce Commission (ICC) ordered an increase in the fund size in 2017 and reallocated funds among qualified recipients.

The updated fund size of \$25,500,000 shall remain in effect without adjustment until the Commission has completed its subsequent review of the IUSF, and that an increase (if any) in the fund size supported by the results of that review shall not occur prior to July 31, 2023 . . . the supported services [of the fund] shall be the voice telephony services as defined in 47 C.F.R. § 54.101(a)(1) . . . [and] . . . all local exchange carriers and interexchange carriers certificated in Illinois shall contribute to the Long-Term Fund on the basis of their intrastate retail revenues.<sup>37</sup>

New York increased its High-Cost Fund from \$1.1M in 2014 to \$4.2M in 2017. Eleven rural ILECs currently receive support from the New York fund, an increase from five rural carriers in 2014.

Carriers eligible to receive funding from the New York State Universal Service Fund (SUSF) must first seek to meet their revenue requirements through increases to their basic residential rates to the level of the \$23 per line State Benchmark rate. Once rate increases to the benchmark are exhausted as a means of revenue increase, eligible carriers are then required to employ a standard rate case process to determine the need for supplemental relief from the SUSF.<sup>38</sup>

The South Carolina High-Cost Fund also increased in size over the study period, growing from \$27M in 2014 to \$40.7M in 2017. South Carolina Act 181 (2016) increased the size of the fund by cancelling the Interim LEC universal service fund and transferring the fund balance to the SUSF, as well as requiring “all telecommunications companies providing telecommunications services within South Carolina to contribute.”<sup>39</sup> This expanded the pool of contributors to include wireless and VoIP providers. Only Carriers of Last Resort (COLR) may receive funding from the South Carolina High-Cost Fund.

## B. Funding decreases

Five states (California, Colorado, Kansas, Nebraska, and Oklahoma) saw significant decreases in their High-Cost Funds over the study period.

The California High-Cost Fund was reduced from \$92M in 2014 to \$71M in 2017, based on a reduction in the contribution rate from 4.0 percent of net intrastate telecommunications revenues to 3.5 percent of net intrastate telecommunications revenues.

---

37 Illinois Commerce Commission, Order 16-0378, Petition to update the Section 13-301(1)(d) Illinois Universal Service Fund and for other relief, available at <https://www.icc.illinois.gov/docket/files.aspx?no=16-0378&docId=252434>.

38 Chromik, Paul, New York Department of Public Service (DPS), Response to SUSF Survey, 4/23/2018.

39 South Carolina Act 181, *State Telecom Equity in Funding Act* (5/25/2016), available at [https://www.scstatehouse.gov/sess121\\_2015-2016/bills/277.htm](https://www.scstatehouse.gov/sess121_2015-2016/bills/277.htm).

California has reoriented its two High-Cost Funds, the HCF-A for rural rate of return ILECs and the HCF-B for large ILECs, to focus on broadband rather than voice communications. The HCF-A supports 10 rural rate-of-return ILECs. The fund makes up any earnings loss level below a 10 percent earnings benchmark. The HCF-B provides a subsidy to large carriers providing service in high-cost areas. Three large landline carriers, AT&T-CA, Verizon, and Frontier receive support from the fund.<sup>40</sup> All carriers receiving support must provide COLR service.

Colorado House Bill 1328 (2014) eliminated high-cost funding for carriers operating in those areas of the state where voice competition, regardless of technology, makes subsidizing basic local service unnecessary.<sup>41</sup> Implementation of the bill resulted in a 10 percent decrease in High-Cost Funding between 2012 and 2014 (from \$56M to \$50M), as the first 35 areas of the state were deemed “fully competitive.” These decreases have continued as more areas of the state have been found to be fully competitive. To date, the “Commission has allocated over \$12M for broadband deployment and found approximately 102 wire center serving areas have effective competition.”<sup>42</sup> Based on those designations, Colorado further reduced its High-Cost Fund to \$34M in 2017, moving the funds previously provided for high-cost support to the state broadband fund.

Nebraska’s High-Cost Fund distributions were also reduced over the study period, from \$50M in 2014 to \$35.3M in 2017. Nebraska modified its USF distributions to take into account monies provided to price cap carriers under the FCC CAF program. Carriers receiving CAF funding will not receive state funding for the same areas. The Commission has opened a proceeding to apply this change to rate of return carriers in the future.

As with other states, the intrastate telecommunications revenues that can be assessed for the state High-Cost Fund in Nebraska are dropping. This is based on changes in the mix of services provided, the adoption of new technologies, and a reduction in the number of discrete lines that can be assessed. To resolve that problem and ensure the ongoing viability of the state USF, the Nebraska Commission revised the contribution methodology associated with its High-Cost Fund in 2017, creating a new hybrid contribution methodology based on connections for residential and small business customers and maintaining the current methodology for large business. We discuss this change and other changes to the USF contribution model in Part IV.

Finally, Oklahoma’s High-Cost Fund dropped from \$37M in 2014 to \$26.4M in 2017, based on reductions in the landline services funding the program. The Oklahoma High-Cost Fund was established in 1998 to ensure that rural wireline customers received service comparable to that received by urban customers. With the change in the mix of telecommunications services from landline to VoIP and other services, the contribution rate required has grown significantly, ultimately requiring a 150 percent surcharge on landline service. To that end, in February, 2018, the Commission ordered the phase-out of the High-Cost Fund over four years, beginning in 2018. Companies may continue to request funds from the HCF based on a showing of actual need.

The Oklahoma HCF no longer serves the public interest and should be abolished. In order to allow the Oklahoma HCF recipients time to make operational adjustments and to avoid cuts to service as well as public safety, the Commission finds that the Oklahoma HCF, created by Commission Order No. 399040, should be abolished, effective February 28, 2022. . .<sup>43</sup>

Subsequently, the Commission opened a proceeding to review the state USF in its entirety and determine how to modify it in light of changes to the mix of services provided.<sup>44</sup>

40 Four carriers, AT&T, Verizon, Frontier, and Cox in those territories where it is a COLR, received support from the CHCF-B in 2014.

41 Colorado House Bill 1328, *Connect Colorado Broadband Act*, 5/10/2014, available at <https://legiscan.com/CO/text/HB1328/2014>.

42 Colorado Public Utilities Commission, Proceeding No. 18M-0432T, *In the Matter of Allocation of Colorado High Cost Support Mechanism Monies to the Broadband Deployment Board*, Decision No. C18-0591, Decision Granting Intervention, Allocating \$10.8 Million to Rural Broadband Deployment, and Closing Proceeding, 7/19/2018, available at [https://www.dora.state.co.us/pls/efi/efi\\_p2\\_v2\\_demo.show\\_document?p\\_dms\\_document\\_id=889550&p\\_session\\_id=](https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=889550&p_session_id=)

43 Application of the Applicants As Set Forth in the Application for an Order of the Commission Abolishing the Oklahoma High Cost Fund Created By Order 399040 and Approval of a Stream-Lined Revenue Requirements Methodology Hearing, Cause No. PUD 201200040, Order No. 673325, 2/8/2018, available at <http://imaging.occeweb.com/AP/Orders/occ30036590.pdf>.

44 Oklahoma Corporation Commission, In Re: Inquiry of the Oklahoma Corporation Commission To Identify And Resolve Issues Related To The Oklahoma Universal Service Fund, Lifeline Service, Oklahoma High Cost Fund, Broadband Support, VoIP Service and other Telecommunications Matters, Cause No. PUD 201800066, 10/2018, available at <https://www.occeweb.com/pu/RegUtilities/PUD18-066Final2018TelecomNOI.DOCX>.



## 2. Intrastate Access Support (IAS)

Four states, Alaska, Georgia, Michigan, and New Mexico, continue to have separate funds to support rural companies impacted by the FCC's access reform changes. These funds provide support for rural companies serving high-cost (primarily rural) areas that have lost revenue due to the requirement that they equalize interstate and intrastate access charges.<sup>45</sup> The 2017 access support totaled \$86,341,142, an increase of just under 7 percent from 2014's total of \$80,314,744.

Alaska provides IAS support in two tranches, support for carriers of last resort and common line support. Carriers are eligible for COLR support to offset the shortfall in carrier common line revenue (CCL).<sup>46</sup> Only carriers in competitive study areas receive COLR support. The state raised its USF assessment from 10.4 percent in 2015 to 14.2 percent in 2016 and 2017. The Commission initially eliminated COLR support in areas deemed to be competitive, but this decision was overturned in State Court. Based on this decision, Alaska's IAS funding decreased slightly (from \$25.7M to \$24.9M) in 2017. The changes in IAS funding reflect the impact of this decision.<sup>47</sup>

Michigan's IAS fund was set at \$19M, when it was established in 2010. Disbursements were \$11M in 2014, decreasing to \$9M in 2017. This reduction was anticipated in the Michigan Telecommunications Act (Public Act 52), which required the Commission to recalculate the fund on a regular basis and to adjust it to reduce the amount disbursed to carriers that discontinue service in an exchange on a pro rata basis and to report any double recovery of access restructuring funds from federal programs such as the Connect America Fund or other modifications to the access recovery methodology. There have been no double recoveries to date. Based on the reductions in disbursements from the fund, the Commission ordered a recalculation of the fund requirements in February 2018, decreasing the contribution percentage from 0.98 percent to 0.51 percent, effective March 14, 2018.

This recalculation has resulted in a significant decrease in the size of the restructuring mechanism and the majority of eligible providers will be receiving smaller disbursements from the fund, with a few providers no longer receiving any disbursement. However, this was anticipated, as the Legislature intended the restructuring mechanism to operate for a limited time and to decrease during that time.<sup>48</sup>

New Mexico's IAS fund also decreased over the period, from \$24,000,000 in 2014 to \$19,700,000 in 2017.

South Carolina merged its IAS Fund (Interim LEC fund) into its High Cost USF fund in 2016. Other states provide access support as part of its general High-Cost funds. 2014 IAS funding totaled \$79,314,744 (not including South Carolina). IAS funding decreased approximately 4 percent in 2017, to \$76,341,142, as a result of decreases in four of the five states providing this support.

---

<sup>45</sup> Other states include IAS in their High-Cost Funds.

<sup>46</sup> Carrier common line charge (CCL) is a per-minute charge assessed on carriers for providing service. Local exchange carriers may recover this charge from interexchange carriers or through the state USF where applicable. See 47 CFR § 69.154.

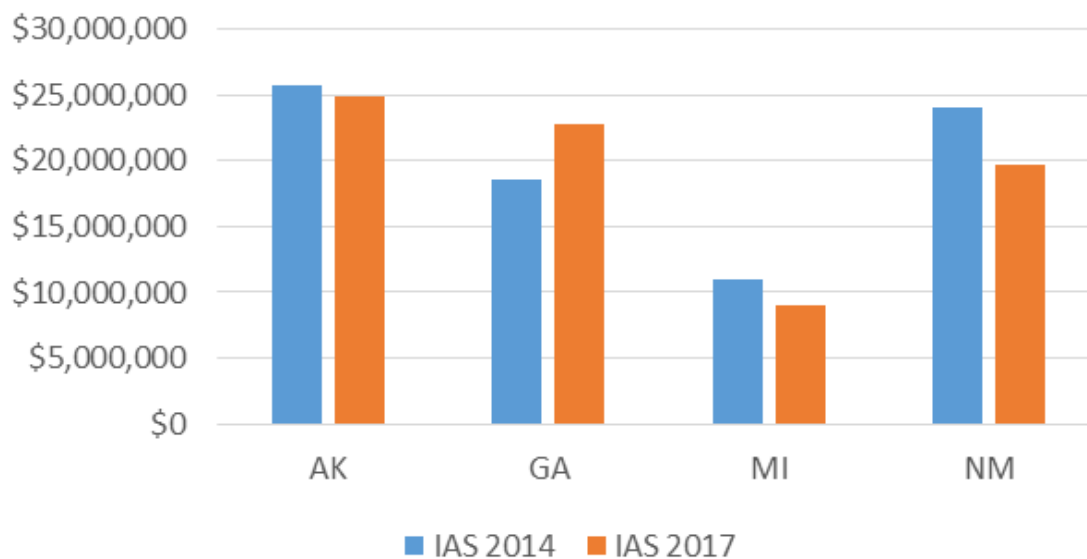
<sup>47</sup> In the Matter of the Tariff Revision Designated as TA205-251 Filed by ACS of Alaska, LLC D/B/A Alaska Communications Systems, Alaska Communications, ACS Local Service, and ACS, U-16-07, Order No. 1 By the Commission: Order Suspending TA205-251, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f3bbfab7-0741-4954-b78d-0d342d10ee8d>.

<sup>48</sup> Michigan Public Service Commission, In the matter, on the Commission's own motion, to implement 2009 PA 182, MCL 484.2310, Case No. U-16183, February 22, 2018, available at <https://mi-psc.force.com/sfc/servlet/shepherd/version/download/068t00000016XjLAAU>.



Figure 8 shows these changes.

Figure 8: Intrastate Access Reduction Support (IAS) 2014-2017



### 3. Broadband Funds

Broadband funding is a key issue across the states, as more state and federal services move online, and the need for connectivity increases. The FCC funds broadband deployment in unsubsidized areas through the Connect America Fund (CAF). The states' fund increases in broadband availability (and to some extent adoption) through a variety of mechanisms, from standalone programs based on direct budget grants to joint industry-state alliances. Although the majority of these programs are administered by agencies other than the public utility commission, eight states fund broadband through their universal service funds. These states are California, Colorado, Maine, Minnesota, New Mexico, Vermont, and Wisconsin.

State USF broadband funding grew by 124 percent between 2014 and 2017, from \$47,748,324 in 2014 to \$106,923,000 in 2017. Growth in the state broadband funding came from significant increases in the California funds and the creation of new funds in New Mexico, Vermont, and Wisconsin. On the other side of the equation, Delaware and West Virginia sunset their funds over the study period, although disbursements will continue until the funds are exhausted.

State broadband funding is managed in a number of different ways. Colorado transfers High-Cost Funding no longer required in areas with effective competition from the state USF to the separately managed state broadband fund. Maine provides broadband funding through an independent fund, ConnectMe. Minnesota broadband funding is determined by the state legislature on a yearly basis and transferred from the SUSF to the state broadband fund. Like Colorado, the contribution to the Minnesota broadband fund is additive to other state-provided broadband funding.

California increased broadband funding significantly as part of the changes to the state High-Cost Fund and the legislative direction to extend broadband to 98 percent of the population. California's broadband funding more than tripled in size over the study period, increasing from \$22M in 2014 to \$76M in 2017.

New Mexico, Vermont, and Wisconsin created new broadband funds during the study period.

New Mexico passed SB 308 (Chapter 89) in 2017 to facilitate broadband deployment in rural areas of the state.

The commission shall implement and maintain a “state rural universal service fund” to maintain and support universal service that is provided by eligible telecommunications carriers, including commercial mobile radio services carriers, as are determined by the commission. As used in this section, “universal service” means basic local exchange service, comparable retail alternative services at affordable rates, service pursuant to a low-income telephone assistance plan and **broadband internet access service to unserved and underserved areas as determined by the commission.**<sup>49</sup> (Emphasis added.)

The broadband fund was established to provide a minimum of \$5M per year to finance state broadband projects.

Vermont Act 41 (2015) created the Division for Telecommunications and Connectivity in the Department of Public Service to promote

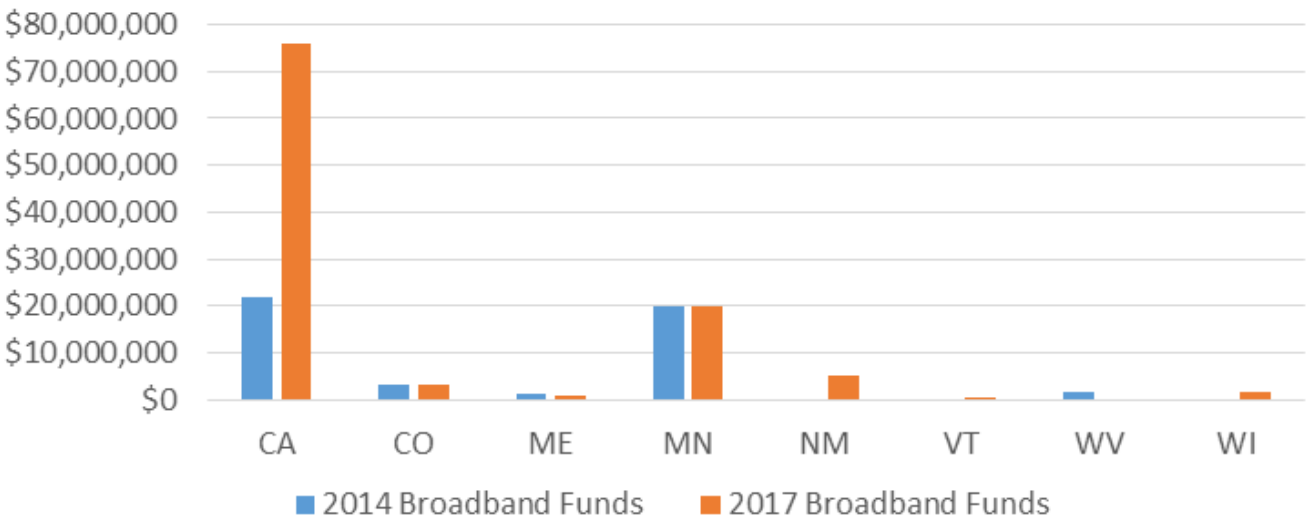
(1) Access to affordable broadband service to all residences and businesses . . . (2) universal availability of mobile telecommunication services, including voice and high-speed data . . . (3) investment in telecommunications infrastructure . . . that creates or completes the network . . . to create last-mile connection[s] . . . (4) the continuous upgrading of telecommunications and broadband infrastructure in all areas of the State.<sup>50</sup>

The Vermont USF provided \$423,000 in broadband funding in 2017.

Wisconsin Act 59 (2017) added broadband grants as fundable from the state USF and designated the amount of that funding under the state budget bill.<sup>51</sup> The 2017 budget provided \$1.5M.

Figure 9 shows the changes in broadband funding over the period.

Figure 9: State USF Broadband Funds 2014-2017



49 New Mexico Bill SB 308 (2017), Chapter 89. Amending a Section of the Rural Telecommunications Act of New Mexico, available at <https://legiscan.com/NM/text/SB308/2017>. The legislation also provided for changing the contribution methodology from a revenue percentage to a connections charge. That proposal is discussed in Part IV.

50 Vermont Act 41, An Act relating to telecommunications, 6/1/2015, available at <https://legislature.vermont.gov/assets/Documents/2016/Docs/ACTS/ACT041/ACT041%20As%20Enacted.pdf>.

51 Wisconsin Act 59, An Act relating to: state finances and appropriations, constituting the executive budget act of the 2017 legislature, 9/21/2017, available at <https://docs.legis.wisconsin.gov/2017/related/acts/59>. The ordering language appears in Wis. Stat. § 196.218(5)(a)10.

## 4. Lifeline

States provide Lifeline support in addition to the federal subsidy to ensure that their citizens have access to both voice and broadband services at rates they can afford. Lifeline will continue to be an important part of the state universal service funds in future years, particularly as the federal Lifeline program transitions support from voice to broadband and reduces the number of social service programs that make consumers eligible for this support.<sup>52</sup>

Changes in the type of carriers eligible for Lifeline funding in California caused the overall state funding amount to grow significantly between 2014 and 2018. This growth was moderated by reductions in Alaska, Kansas, Minnesota, Missouri, New Mexico, and New York. State Lifeline funding totaled \$457,281,779 in 2018, compared to \$199,257,711 in 2014.

Seventeen states provide funding for Lifeline in addition to the federal subsidy. Wyoming discontinued its state Lifeline fund in 2015, reducing the number from the 18 states with funds in 2014. Oklahoma, Texas, and Washington include Lifeline in their overall state funds, and do not account for the amounts separately. Alaska eliminated its Lifeline fund in 2018, as a result of changes to its overall Universal Service program. Alaska's 2017 funding is included in the totals presented here.

As noted earlier, California increased its Lifeline funding (including support for equipment and initial installation fees under the Link-up equipment program) from \$150M in 2014 to \$416M in 2017. The program was expanded to include wireless service in 2014, which resulted in a rapid and significant increase in both program participation and expenditures. The program had 1.04 million participants in June 2014 and had increased to 2.2 million by June 2015. In July 2017, the program had 1.68 million participants. Because of the rapid increase in program expenditures, the CPUC increased the surcharge rate three times between 2014 and 2017, from 1.15 percent up to 5.5 percent, with the current rate set at 4.75 percent.

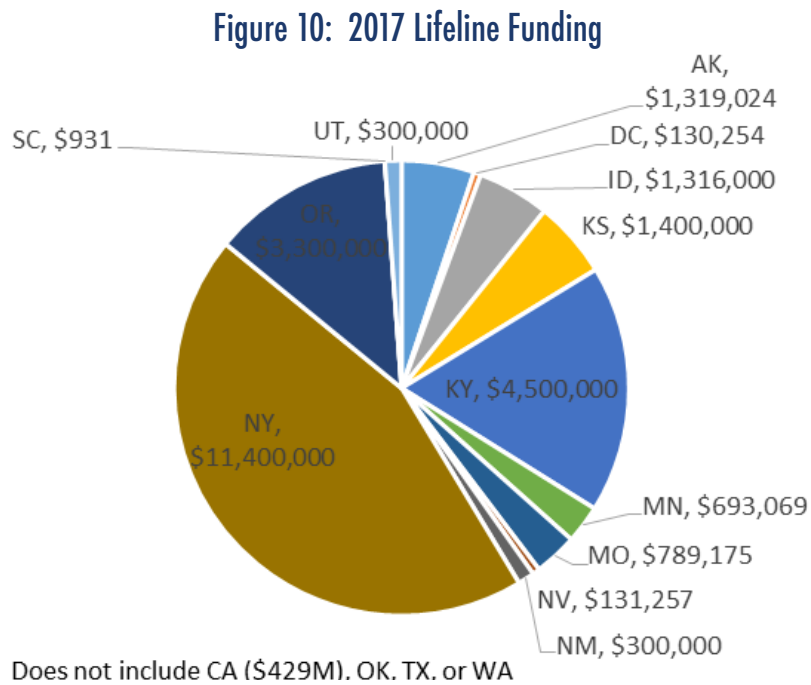
On the opposite end of the spectrum, Kansas, New Mexico, New York, and Wisconsin saw significant decreases in Lifeline disbursements between 2014 and 2017. Funding in Kansas dropped from \$3.9M in 2014 to \$1.4M in 2017 as a result of reduced funding requirements due to lower program participation. Disbursements in New York dropped from \$22M in 2014 to \$11.4M in 2017, as a result of the changes in the mix of retail telecommunications revenues and reductions in program participation. Wisconsin's disbursements dropped from \$2.5M in 2014 to \$1.25M in 2017 for similar reasons.

The reduction in Lifeline funding shows that participation in the program is trending downward. Based on this finding, states may wish to review their Lifeline outreach methods, as well as the impact of changes to the program going forward.

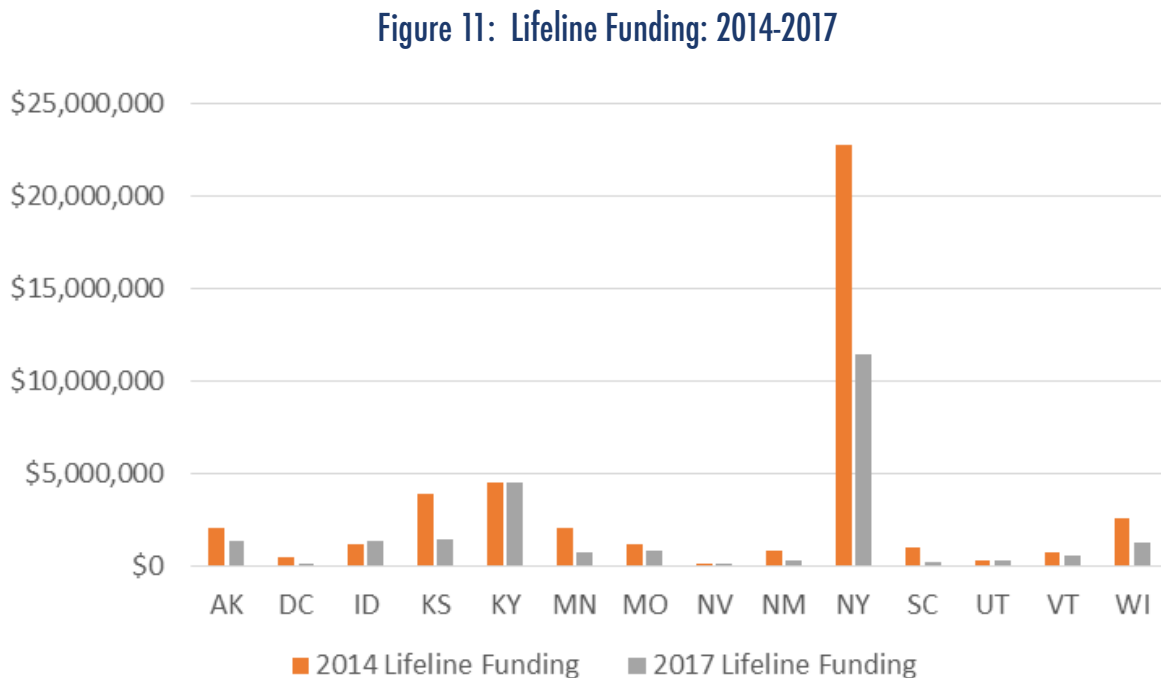
---

<sup>52</sup> See Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund*, WC Docket No. 11-42, WC Docket No. 09-197, WC Docket No. 10-90 Third Report And Order, Further Report And Order, And Order On Reconsideration, March 31, 2016. The FCC will begin to phase out support for standalone Lifeline voice at the end of 2019. : Beginning in December 2019, recipients on voice-only plans will receive only \$7.25 monthly, and that figure will fall to \$5.25 per month in December 2020. On December 1, 2021, the program will no longer support voice-only service: Lifeline-eligible plans can include voice service only if they also include broadband service as well.

**Figure 10** shows the 2017 state Lifeline funding, not including California, or the joint funds in Oklahoma, Texas, and Washington.



**Figure 11** provides a comparison of funding over the study period.<sup>53</sup>



<sup>53</sup> California is not included, because the size of the California fund dwarfs the other funds.

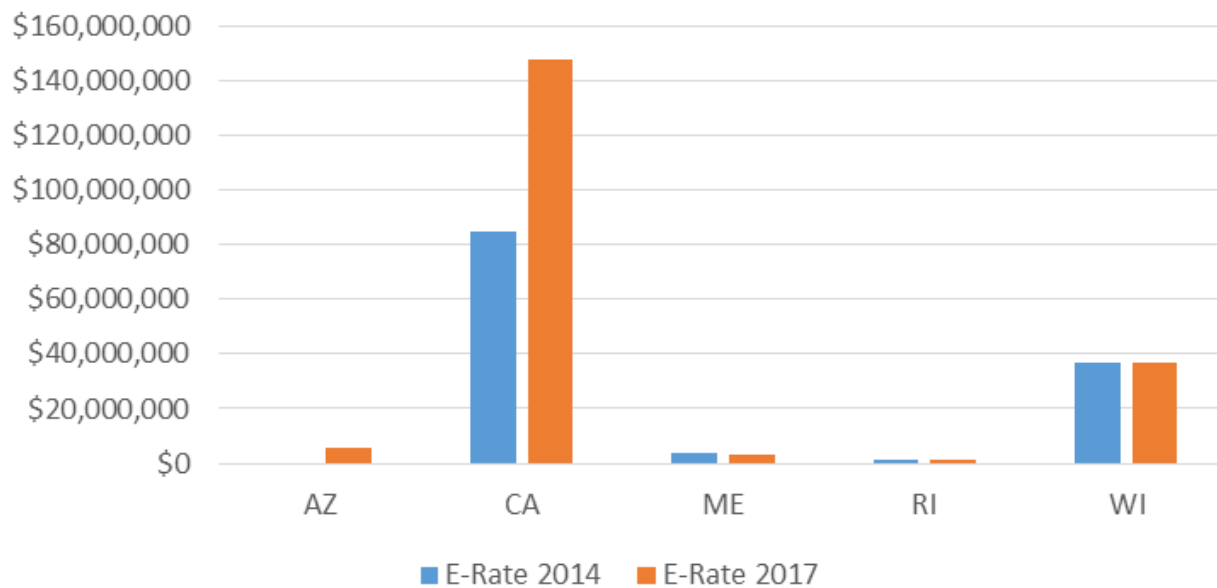
## 5. Funding for Schools and Libraries

The federal Schools and Libraries program was created in 1997 to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary schools and libraries.

Five states, Arizona, California, Maine, Rhode Island, and Wisconsin, provide state funding to support telecommunications and broadband services for schools and libraries. This funding is particularly important in areas where home-based broadband service is limited or not available. These funds totaled \$194,969,631 in 2018, an increase of \$68M during the study period.<sup>54</sup>

**Figure 12** shows Schools and Libraries funding across the study period.

**Figure 12: Schools and Libraries Funding 2014-2017**



California saw the largest increase in Schools and Libraries funding based on the state's 2017 fiscal budget. California funding increased from \$85M in 2014 to \$148M in 2017. Funding for schools and libraries comes from the California Teleconnect Fund (CTF). Established in 1996, the CTF provides a 25 percent discount for voice services and a 50 percent discount for broadband communications services to schools, libraries, hospitals, and other non-profit organizations.<sup>55</sup> The CPUC increased funding for the CTF in 2015, raising the CTF funding cap to \$148,800,000. The fund currently provides \$145,065,000 for Local Assistance, \$3,658,000 for State Operations, \$76,000 for a Financial Information System for California and \$1,000 for the State Controller.<sup>56</sup> The fund supports educational institutions, including, public schools, hospitals, and the California community college system.

Arizona established a new State Universal Service program in 2017 to provide funding for broadband construction projects for schools and libraries to obtain federal matching dollars from the Federal USF Schools and Libraries fund. The Arizona commission established the funding for the program at \$5.66M.

Funding for the other states with state E-Rate programs stayed relatively constant over the study period.

<sup>54</sup> *Modernizing the E-Rate Program, Schools and Libraries*, WC Docket No.13-184, Report and Order and Further Notice of Proposed Rulemaking 29 FCC Rcd 8870 (July 2014)

<sup>55</sup> California Teleconnect Fund brochure, available at <http://www.cpuc.ca.gov/ctf/>.

<sup>56</sup> CPUC Communications Division Resolution T-17496, *Approval of the California Teleconnect Fund Administrative Committee Budget for Fiscal Year 2016-17* (July 1, 2016 through June 30, 2017) to Comply with the Requirements of Public Utilities Code Section 273(a), available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M154/K639/154639700.PDF>.

## 6. Telecommunications Relay Service and Equipment Programs

### A. Telecommunications Relay Service

Telecommunications Relay Service (TRS) allows persons with hearing or speech disabilities to place and receive telephone calls using an array of technologies, including text to voice (TTY), speech to speech using a live hearing “translator,” captioned phone service, and video relay service. TRS is supported by both federal and state funding.

Thirty-three states provide funding for TRS. This number is unchanged from 2014. California and Wisconsin fund TRS and equipment for the deaf and hard of hearing in a single fund. Utah moved TRS funding into the state USF in 2017. Oklahoma funds TRS but does not report the amount separately.

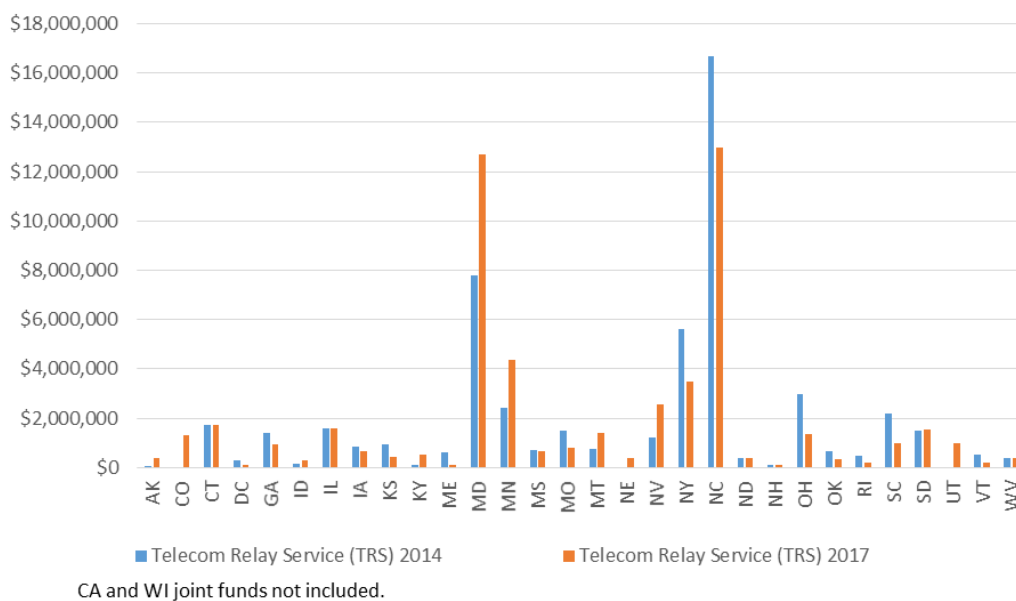
Overall TRS funding stayed flat over the study period, despite significant growth in the California fund. The California fund grew from \$28M in 2014 to \$68M in 2017 as part of the overall growth in the state’s public participation programs. Utah increased its TRS funding by \$1M in 2017.

At the same time, North Carolina decreased its TRS surcharge from \$0.14 in 2014 to \$0.10/access line in 2015. South Carolina saw a similar funding decrease, as consumers that previously used traditional TTY services funded by the state’s dual party relay service moved to new services, including IP-enabled service, texting, and video relay services. This change in customer behavior has reduced the demand on the fund and allowed South Carolina to reduce its surcharge from \$0.25 per line per month for traditional wireline carriers in 2014 to \$0.06 per line per month in 2016. This assessment will drop to \$0.03 per line per month in 2019.

The New Hampshire TRS program is budgeted at \$96,000/year. In addition to a charge on intrastate revenues, New Hampshire requires Consolidated Telecommunications, the successor to the state’s ILEC, FairPoint, to contribute monies from failures to meet the state’s wholesale performance metrics to the TRS fund. This requirement may provide a way for other states to support their TRS funds as well.

**Figure 13** shows the changes in TRS funding over the study period. Because California and Wisconsin fund TRS and equipment together, they are not included in this chart.<sup>57</sup>

**Figure 13: TRS Funding 2014-2017**



<sup>57</sup> New Mexico also has a TRS fund, but it is not managed through the New Mexico USF and therefore is not included here. The New Mexico TRS is funded through a thirty-three one hundredths percent surcharge on intrastate retail revenues on customers’ bills. See NMSA 63-9F.

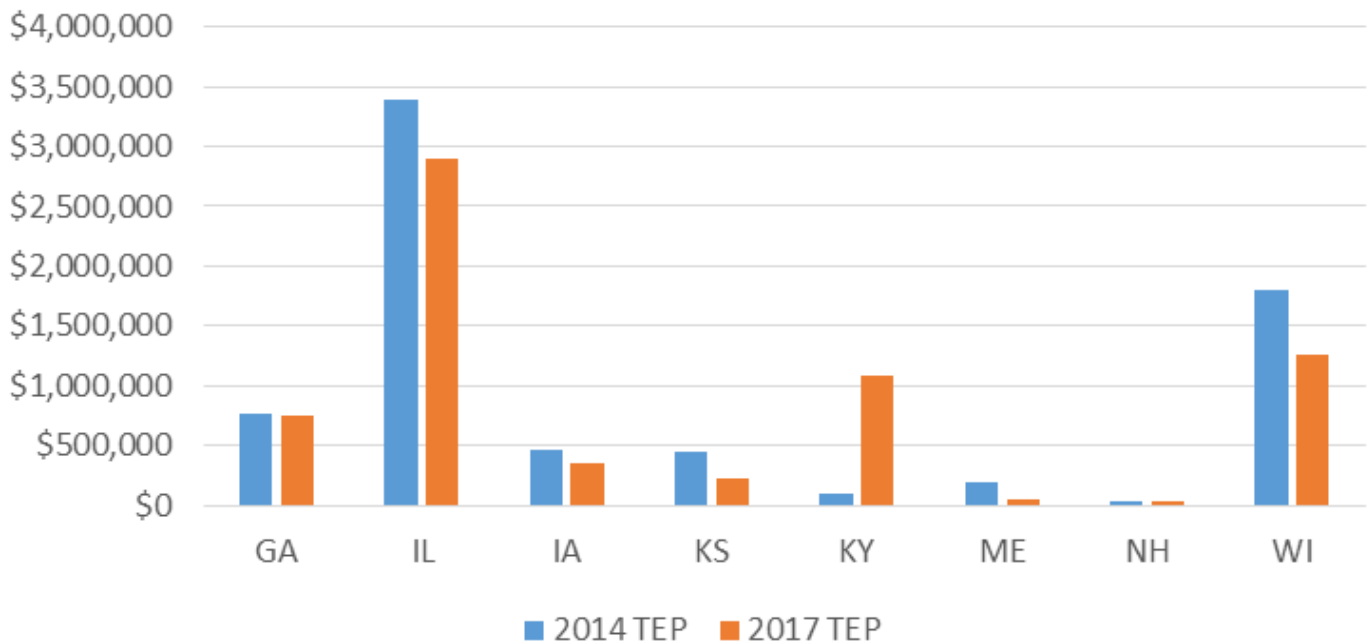
## B. Telecommunications Equipment Programs

Nineteen states (CA, GA, IL, IA, KS, KY, ME, MD, MN, MO, MT, NY, NE, NV, OR, RI, TX, VT, and WI) provide support for telecommunications equipment for the deaf and hearing impaired. California, Texas, and Wisconsin include monies for both equipment and access in a single fund. Total funding for telecommunications equipment programs dropped slightly between 2014 and 2018, from \$7.175M in 2014 to \$6.24M in 2017, primarily due to decreased expenditures in Iowa, Kansas, and Maine.

Changes in the type of equipment customers' use, from purpose-designed equipment such as teletypewriters for the deaf (TTY equipment) to mobile phones and tablets, have reduced the number of customers needing support from the fund. To address this issue, states like California, Kansas, and New Hampshire added mobile phones and tablets to their telecommunications equipment offerings.

**Figure 14** summarizes changes to the telecommunications program.

**Figure 14: Telecommunications Equipment Funds 2014-2017**



## 7. Other funds

Nine states, Alaska, Maine, Maryland, Missouri, New York, Nebraska, Oklahoma, Rhode Island, Vermont, and Wisconsin provide specialized funds to meet the specific needs of their citizens. These funds are summarized in **Table 1**.

**Table 1. Specialized State USF Funds**

State	Fund	2017 Funding
Alaska	Dial Equipment Minute (DEM) Weighting; Public Interest Payphones	\$1,455,280
Maine	Public Interest Payphones; Emergency alerts for the deaf and hard of hearing	\$8,934
Maryland	Senior Call Check	Included in TRS funding
Missouri	Reduced landline prices for the disabled	Included in Lifeline and TRS
Nebraska	Wireless Tower Fund, Telehealth	Included in High-Cost Funding
New York	E911	\$143,000,000
Oklahoma	Telemedicine	Single USF fund
Rhode Island	News Service for the Blind; Emergency Communications Access Program for Deaf and Hard of Hearing	\$120,000
Vermont	E911	Not reported
Wisconsin	High Rate Assistance	Not reported

Alaska and Maine provide payphones in accessible locations to provide telecommunications service for customers who would otherwise be unable to access it. The state pays for the actual placement and monthly rental of the payphone equipment. Customers pay the cost of the calls. Alaska terminated its program by Commission order in 2018; the Maine program remains a highly used state offering.

Maine, Missouri, and Rhode Island provide special assistance for the handicapped and visually and hearing impaired. Maine provides an emergency alerting service for the deaf and hard of hearing. Missouri requires carriers to offer reduced landline prices for the disabled. Rhode Island provides a special program for the blind that allows them to access verbal reports of local and national news via their telecommunications devices. In addition, Wisconsin offers high rate assistance where necessary to ensure that all customers have access to voice service.

Nebraska and Oklahoma fund Telehealth programs that bring medical support to remote areas via broadband service. Programs of this type may increase as federal and state broadband initiatives extend service to additional areas. Other states may add similar programs in the future.



State universal service programs are structured to support the specific needs of the state's citizens. Maryland added a "senior call check" program to its USF in 2014. This program provides wellness checks to senior citizens living alone. Nebraska provides support for wireless cell towers to increase the availability of mobile voice and data service for state citizens.

Two states, New York and Vermont, collect and manage funding for their emergency services (911 and Enhanced 911) through the state USF fund.

## IV. State Fund Contributors and Recipients

State Universal Service Funds (SUSF) ensure that state residents have access to the programs that both support the general goal of providing universal communications service, including broadband, and meet specific state needs. The state funds supplement and expand the federal USF by focusing on programs such as Lifeline, Telecommunications Relay Service (TRS), and special programs for the visually impaired and hard of hearing, as well as providing support for rural providers as they transition away from the traditional access charge regime and towards bill and keep. Through state High-Cost Funds, the SUSF ensures that rural companies are given the time and support necessary to meet the challenges of a changing telecommunications landscape, including increasing access to broadband in unserved areas.

Service providers collect USF charges from end users via surcharges on their retail bills.<sup>58</sup> For this reason, a stable contribution plan that includes as many types of providers as possible is a key factor in the success of universal service support. Contribution levels that are too high penalize consumers for using traditional services and thus may drive them to alternative services (e.g., texting or non-traditional services such as WhatsApp or FaceTime) that do not pay into the fund, thereby reducing the revenue that may be assessed to provide support and causing costs to rise still again. At the same time, contribution levels that are too low reduce the funds available to support key public interest programs, creating the need to identify a contribution methodology that meets the goals of universal service while balancing cost against need.

As noted previously, the federal USF relies on funds contributed by wireline, wireless, and interconnected VoIP carriers that provide the "supported telecommunications services" defined in Section 254 of the Act.<sup>59</sup>

Unlike the fixed set of contributors to the federal fund, State USF funding includes a broad range of contributors, including, in some cases, over the top VoIP carriers, cable providers, and others.<sup>60</sup> NRRI's 2014 study recognized that the move from traditional landline telephones and reductions in interstate revenues would challenge the fund and place additional support requirements on the states. This has proven to be the case, as the federal contribution rate continues to rise, and the states seek new ways to ensure the adequacy of their funds.<sup>61</sup> We discuss state fund contributors and recipients are discussed in the paragraphs that follow.

### A. State USF Contributors

State USF contributors are defined by state statute and generally differ by state. All states require traditional wireline providers to contribute, whereas others include wireless, VoIP, paging, and cable providers in the state USF.

---

<sup>58</sup> USF charges are generally not passed on to Lifeline recipients. TRS charges are passed on to end users and used to pay the state's TRS provider.

<sup>59</sup> The addition of new fund recipients such as satellite and cooperative companies as a result of the CAF II auctions may add new payers to the fund, potentially increasing its viability. This question is discussed in Section V.

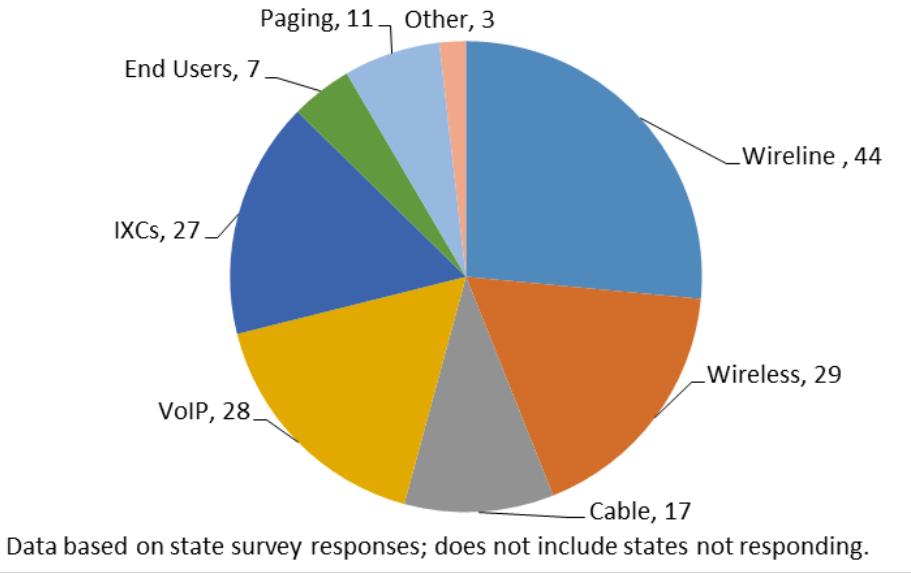
<sup>60</sup> At this time, no state assesses standalone broadband internet service providers or texting revenues.

<sup>61</sup> See Lichtenberg, Sherry, Ph.D., et al., *Survey of State Universal Service Funds 2012*, National Regulatory Research Institute, Report 12-10, July 2012, available at <http://communities.nrri.org/documents/317330/e1fce638-ef22-48bc-adc4-21cc49c8718d>, and Lichtenberg, Sherry, Ph.D., *State Universal Service Funds 2014*, National Regulatory Research Institute, Report No. 15-05, June 2015, available at [www.nrri.org](http://www.nrri.org).

The contribution rate also differs across states, depending on the states’ needs and the type of funds that must be supported. For example, states generally assess providers a percentage of their net or gross intrastate revenues for contributions to the high cost and intrastate access reduction funds and a per line charge for TRS and Lifeline funds. The ability for states to vary the way in which they assess providers allows them to experiment with new funding paradigms, including, as we discuss later, the idea of a “connections” (lines or telephone numbers) based system.

**Figure 15** shows contributors to the state funds by service type. The information in this table is based on responses to the 2018 USF Survey.

**Figure 15: Contribution by Service Type**



All of the states with state USF funds that responded to the 2018 NRRI State USF survey assess traditional wireline service provided by ILECs and CLECs. Twenty-seven states also assess standalone long distance providers (IXCs), although the number of these providers is shrinking as more companies offer service that bundles intra- and interstate long distance with local service.<sup>62</sup>

Twenty-nine states assess wireless providers. South Carolina added wireless providers to its assessment base in 2016 and further expanded the base in 2018 by adding VoIP providers as a result of South Carolina Act 181, State Telecom Equity in Funding Act.<sup>63</sup> Act 181 requires all carriers with a certificate of convenience and necessity (CPCN) to provide service in the state, including pre-paid wireless providers, to contribute to the state fund.

Twenty-eight states assess interconnected VoIP providers that have sought a CPCN in the state. This number has increased from the 13 states that responded that they assessed VoIP providers in 2014. Seventeen states assess the voice portion of the service provided by cable providers. One cable company in Oregon contributes voluntarily. The number of states that assess cable companies is unchanged from 2014.

Seven states assess end users directly, primarily to collect funds for TRS and E911 service. Eleven states continue to assess paging providers, although this revenue stream is diminishing as users switch from paging to wireless service.

<sup>62</sup> NRRI's 2015 survey results showed 32 states as assessing IXCs.  
<sup>63</sup> South Carolina Act 181, State Telecom Equity in Funding Act (5/25/2016), available at [https://www.scstatehouse.gov/sess121\\_2015-2016/bills/277.htm](https://www.scstatehouse.gov/sess121_2015-2016/bills/277.htm).

Three states assess other types of providers. Oklahoma assesses payphone and operator services providers. Pennsylvania assesses “certain CATV providers that are CLEC affiliates and may offer VoIP service.”<sup>64</sup>

Kansas assesses satellite service providers. This number will grow as satellite providers like ViaSat and Hughes begin to implement service as a result of the Connect America Fund (CAF) II auctions.

**Table 2** provides details of the contributors to the SUSF by state.

**Table 2. SUSF Contributors by Provider Type**

Provider Type	# States	States
Wireline (ILECs, CLECs)	44	All states with funds (No fund in AL, DE, FL, HI, MA, TN, VA)
Wireless	29	Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Oklahoma, South Carolina, South Dakota, Texas, Utah, Wisconsin, Wyoming
Cable	17	California, Indiana, Kansas, Louisiana, Maine, Minnesota, Nebraska, Nevada, New Hampshire, New Mexico, Ohio, Oklahoma, Oregon (voluntary), South Carolina, Utah, Wisconsin, Wyoming
Interconnected VoIP	28	Alaska, Arkansas, Arizona, California, DC, Georgia, Illinois, Indiana, Kansas, Louisiana, Maine, Maryland, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Mexico, New York (voluntary), North Carolina, Ohio, Oklahoma, Oregon (voluntary), Rhode Island, South Carolina, Utah, Wisconsin, Wyoming
IXCs	27	Alaska, Arkansas, Arizona, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Michigan, Missouri, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Utah, Vermont, Wisconsin, Wyoming
End Users	7	Alaska, Montana, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina
Paging	11	Alaska, Arizona, Colorado, Indiana, Kansas, Nebraska, New Mexico, Ohio, South Dakota, Texas, Wyoming
Other	3	Kansas (satellite providers), Oklahoma (Payphone, Operator Services) Pennsylvania

<sup>64</sup> Pilalis, Labros, Pennsylvania response to 2017 USF survey.

## B. Basis for Contribution

The Federal USF assesses wireline, wireless, and interconnected VoIP carriers based on a percentage of interstate and international revenues. The federal assessment makes no adjustment for the type of service the carrier offers or the change in revenues from traditional wireline service to wireless and broadband service. The federal assessment rate is adjusted quarterly to meet the fund requirements based on the projected disbursements from the fund.

In contrast to the federal scheme, the states assess providers on a per fund basis to meet the needs of their citizens. Thus, states with TRS funds generally assess providers on a per line basis, while states with High-Cost Funds assess providers on a percentage of revenue. Some states, like Wisconsin, assess providers differently for each of the funds to which they are required to contribute. The states also have differing requirements for carriers wishing to qualify for funding, for example, meeting state cost benchmarks or providing carrier of last resort (COLR) service in areas without competitive providers.

The state funds assess carriers based on four primary intrastate revenue sources: gross retail revenues, net retail revenues, charge per access line/trunk (for services like TRS and Lifeline), and per connection/per working number charges. In addition, Washington funds its state USF from an appropriation from the state budget.<sup>65</sup>

**Table 3** shows the assessment methodologies used by state.

**Table 3. Revenues Assessed by State**

Revenues Assessed	# States	States
Gross intrastate retail revenues	15	Alaska, Arizona, Arkansas, Colorado, Connecticut, DC, Georgia, Indiana, Oklahoma, Oregon, Texas, Utah, Vermont, Wisconsin, Wyoming
Net intrastate retail revenues	12	California, Illinois, Kansas, Louisiana, Maine, Michigan, Missouri, Nevada, New Mexico, New York, Pennsylvania, South Carolina
Charge per access line/trunk	16*	Arizona,* Idaho, Illinois,* Iowa,* Kentucky,* Maryland, Minnesota, Mississippi, New Hampshire, North Carolina, North Dakota,* Ohio, Oregon, Rhode Island, South Dakota, West Virginia
Connections	4	Maine, Montana, Nebraska, New Mexico
Direct state funding	1	Washington

\*Note: TRS and Lifeline assessments are per line.

## C. Contribution Rates by Fund

Unlike the federal fund, the states use a variety of rate structures to fund universal service. Seventeen states use a single rate for all funds. This number is reduced from 21 in 2015 and represents a change in contribution methodology from a percentage of revenue to a charge per connection/working telephone number in Maine, Nebraska, and New Mexico. We discuss that change later in this section. Sixteen states collect contributions depending on the type of fund supported; for example, assessing one rate for the High-Cost Fund and a different rate/rate basis for TRS. Three states, Arizona, Iowa, and Rhode Island base their assessments on categories of revenue.

<sup>65</sup> The Washington state fund is currently set to expire at the end of the 2019. HB 1373 would extend this date to 2029. See Washington House Bill 1373, AN ACT Relating to the universal communications services program; available at <https://legiscan.com/WA/text/HB1373/id/1862581/Washington-2019-HB1373-Introduced.pdf>.

**Table 4** shows the four predominate contribution formulas used for State Universal Service Funds.

**Table 4. Contribution Formulas**

Contribution Formula	# States	States
Single rate for all funds	18	Alaska, Arkansas, Connecticut, Indiana, Kansas, Louisiana, Maryland, Michigan, New Hampshire, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Vermont, West Virginia, Wyoming
Fund-specific rate	16	California, Colorado, DC, Georgia, Idaho, Illinois, Kentucky, Minnesota, Mississippi, Missouri, Nevada, Oklahoma, Oregon, Rhode Island, South Carolina, Wyoming
Rate by provider type	2	Arizona, Iowa
Rate per connection	4	Maine, Nebraska, New Mexico, Utah
Other	1	Washington

## 1. Single Rate for All Funds

Eighteen states have a single contribution rate for all of the state funds. These states fund the programs they support based on those programs' specific needs. TRS and Lifeline receive a fixed rate per line (which differs by state), but are included here based on the predominant method for fund collection.

For example, the Alaska Universal Service Fund (AUSF) includes several programs but has only one rate. The assessment was 10.4 percent for 2015, and 14.2 percent for 2016 and 2017. The Regulatory Commission of Alaska (RCA) attempted to control the growth of the fund by limiting high-cost payments to carriers serving markets without unsubsidized carriers, but was challenged in state court. The elimination of those payments was stayed, resulting in an increase in the surcharge to 19 percent for 2018 due to the reissuance of COLR support payments to those companies.<sup>66</sup> Alaska reduced its SUSF contribution rate to 10 percent in late 2018 by eliminating the requirement for supporting Lifeline and Public Interest Payphones.<sup>67</sup>

Kansas also assesses a single rate for its funds. This rate has risen steadily since 2015, from 6.05 percent of intrastate net retail revenues in 2015 to 7.5 percent in 2018.

Michigan assesses a single rate for all providers contributing to the Intrastate Access Support (IAS) Fund. The Michigan Telecommunications Act required the MPSC to recalculate the amounts received by eligible providers at the beginning of 2018. Based on this recalculation, the contribution rate dropped from 0.68 percent of net intrastate retail revenues in 2015 to 0.51 percent in 2018.<sup>68</sup>

Oklahoma has a single rate for all assessable revenue. This rate declined from 2.16 percent in 2015 to 1.20 percent beginning in July 2018. Oklahoma does not require fund contributors to pass the contribution on to end users, but allows them to do so.

<sup>66</sup> See *In the Matter of the Tariff Revision Designated as TA205-251 Filed by ACS of Alaska, LLC D/B/A Alaska Communications Systems, Alaska Communications, ACS Local Service, and ACS, U-16-07*, Order No. 1 By The Commission: Order Suspending TA205-251, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f3bbfab7-0741-4954-b78d-0d342d10ee8d>. Until the elimination of these programs, Alaska charged a different rate for TRS and the Public Interest Payphone program.

<sup>67</sup> See Regulatory Commission of Alaska, *In the Matter of the Consideration of Repeal of Alaska Universal Service Fund Regulations, R-18-001, Order No. 5, Order Adopting Regulations*, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f0162588-1f65-4cc4-ae36-4a38caa42886>.

<sup>68</sup> See Michigan Public Service Commission, *In the matter, on the Commission's own motion, to implement 2009 PA 182, MCL 484.2310, Case No. U-16183, 2/22/2018*, available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t00000016XJLAU>.

## 2. Fund-specific Rate

Sixteen states collect differently depending on the type of fund supported. Generally, TRS and TEP programs are funded by a per line charge, whereas there is a specific assessment rate for the High-Cost Fund and IAS funds. In addition, in some states, the charge per line is different for residential and business lines. Surcharges for defined programs such as TRS also vary depending on the amount required to provide support. Contribution rates for these programs are generally set on a per line basis, a methodology that has been extended to all programs in those states moving to a connections-based funding process.

California, Colorado, the District of Columbia, Georgia, Illinois, Kentucky, Minnesota, Mississippi, Missouri, Montana, Nevada, Oregon, South Carolina, Utah, and Wyoming fund their high-cost and other revenue-based programs on a percentage of revenue basis. Other states, such as Rhode Island, base provider contributions on both the type of program being funded and the type of service assessed. Rhode Island assesses charges for the state Telecommunications Relay Service (TRS) and Schools & Libraries funds on each residence and business telephone access line or trunk in the state, including PBX trunks and Centrex equivalent trunks. Rhode Island also assesses each user interface number or extension number or similarly identifiable line, trunk, or path to or from a digital network. The contribution rate for the Schools and Libraries program is \$.026 per line. The TRS rate is \$.09 per line.

## 3. Rate by Provider Type

Arizona and Iowa assess providers depending on the type of service they offer.

Arizona divides its high-cost funding requirement between two types of providers. One-half of the High-Cost Fund funding requirement is collected through a surcharge paid by providers of basic local exchange service, wireless service, paging service, and other Commercial Mobile Radio Service Providers that interconnect with the public switched network. These entities are known as Category One providers. The second half of the High-Cost Fund funding requirement is collected from providers of intrastate toll service. These entities are known as Category Two providers.<sup>69</sup>

Category One providers are assessed \$0.016328 per access line and \$.0163280 per interconnecting trunk. Category Two providers are assessed 0.3418 percent of intrastate toll revenue. Contributions to the Schools and Libraries fund are assessed at \$0.117032 per access line and \$1.170321 per interconnecting trunk for Category One providers and 3.0735 percent of intrastate toll revenues for Category Two providers.

Idaho assesses local and intrastate residential and business lines at different rates, \$0.25 per residential line, and \$0.44 per business line. The fund assesses a charge of \$0.009 for each minute of Message Telephone Service (MTS) and Wide Area Telephone Service (WATS) use. These rates have increased from the \$0.16/residential line; \$0.25/business line; and \$0.006/intrastate billed LD minute noted in the 2015 survey. The Idaho Commission suspended the TRS surcharge in 2017 and 2018, since the fund has enough money on hand to cover the estimated outlays for at least the next two years.<sup>70</sup>

## 4. Rate per Connection

As noted earlier in this paper, ensuring that contributions to the state and federal universal service programs are sufficient to support universal service, although not so high as to drive users away is a critical issue facing regulators across the nation. As telecommunications revenues shrink due to the transition to new services that either do not contribute or contribute less to the fund, as well as reductions in the price of service based on the addition of new bundled plans, the contribution rate has been forced to increase, with the federal rate for 1Q2019 at 20 percent.

---

<sup>69</sup> Arizona Universal Service Fund—High-Cost Fund Description, available at <https://www.azcc.gov/divisions/utilities/telecom/ausf-faqs.asp>.

<sup>70</sup> Klein, Daniel, Response to 2017 USF Survey, October 4, 2018.



One potential solution to this problem is assessing services on a per-connection or per number basis. As the FCC noted in its 2012 Contribution Notice of Proposed Rulemaking,

A connection-based assessment may address the difficulty of applying regulatory distinctions inherent in the existing system to newer services and technologies. By harmonizing the contribution system with the telecommunications marketplace, a connection based assessment approach may help to ensure the stability and- sufficiency of the universal service contribution base over time. Such an approach also may provide contributors with greater certainty, reduce administrative costs, and avoid marketplace distortions, ultimately benefiting consumers.<sup>71</sup>

Whereas the FCC continues to review the potential for a new contribution model to ensure the availability of a predictable revenue stream for universal service, Maine, Nebraska, New Mexico, and Utah have implemented per connection charges as a means of stabilizing their state funds. A discussion of these plans follow.

In 2017, the Maine Legislature approved a change to the funding methodology for the State's Telecommunications Education Access Fund (MTEAF), which provides funding to the State's schools and libraries for high-speed Internet access, content databases and search capabilities, content filtering, and training. The Legislature changed the collection methodology from a percentage of intrastate retail revenue to a fixed monthly fee of \$0.21 per line or number. The contribution is capped at 25 lines per account. The change took effect in July 2018. The change to the MTEAF fee closely tracks the historical fee methodology used by the state's E-9-1-1 system.

Shortly after the change to the MTEAF, the Maine Public Utilities Commission made a similar change to the state's Universal Service Fund (MUSF) contribution methodology, moving from a revenue-based assessment to a connections-based fee. The MUSF provides "high cost" support for those mostly rural, local exchange telephone companies in Maine that are not able to maintain affordable and reasonably comparable local service rates without that support. The MUSF also funds certain programs for the deaf and hard of hearing, as well as provides funding for "public interest payphones" in rural areas of the state. The MPUC has not yet opened a proceeding to determine the amount of the per-line or number fee for the MUSF, but expects to do so later in 2019.

Nebraska opened a docket in 2014 to determine the appropriate methodology for reforming the state USF contribution mechanism to ensure lasting support for the fund and those it serves.

Since 1999, the Commission has funded its universal service programs through a surcharge based on revenues. However, significant changes in [the] telecommunications market have taken place since 1999 when the Commission's NUSF contribution mechanism was established. The Commission previously noted that the assessable base for NUSF contributions has eroded as customers continue to migrate to services not subject to NUSF surcharge remittance requirements. Competitive distortions permitted by the federal USF mechanism have also resulted in differing contribution obligations largely driven by the bundling of services subject to NUSF assessments with services which are not subject to assessment . . . Since 2005, NUSF remittances have declined by more than 34%. Current forecasts estimate that remittances will decline by 16% between 2016 and 2017 and then by 23% in 2018.<sup>72</sup>

To resolve this issue and ensure the ongoing health of the state fund, after proposing multiple methodologies, soliciting comments, and holding a hearing, the PUC approved a hybrid connections based methodology in November 2017. The new methodology applies a flat rate per connection charge to each residential line/small business line, while retaining the percentage of intrastate revenue for large customers. The per-connection assessment for 2019 is \$1.75. The commission will continue to collect data over the next year, with the goal of potentially moving business services to a connections-based methodology as well.<sup>73</sup>

71 *In the Matter of Universal Service Contribution Methodology A National Broadband Plan For Our Future*, WC Docket No. 06-122, Further Notice of Proposed Rulemaking, April 27, 2012, 27 FCC Rcd 5357 (6), available at <https://www.fcc.gov/document/commission-adopts-nprm-reform-and-modernize-contribution-system>.

72 Nebraska Public Service Commission, *In the Matter of the Nebraska Public Service Commission, on its own motion, to consider revisions to the universal service fund contribution methodology*. Application No. NUSF 100, ORDER Entered: October 31, 2017.

73 Additional data provided by Cullen Robbins, Director, Communications/NUSF.

New Mexico has also moved from a revenue-based contribution methodology to a connections-based methodology. On August 16, 2018, the New Mexico Commission issued an order in Case No. 17-00202-UT adopting a per-connection methodology to fund the New Mexico State Rural Universal Service Fund (NMRUSF) and setting a per-connection rate of \$1.17 per line for residential and business services, including wireline, wireless, and voice-over-Internet services. The per-connection methodology replaced a 6.06 percent of intrastate revenue surcharge on customer bills set earlier in the year.

Historically, state statute required the NMRUSF be funded via a percentage of intrastate revenue. This changed in early 2018, when legislation amended the state statute to allow either a percentage surcharge or a per-connection methodology for the funding of the NMRUSF. Based on that legislation, the New Mexico Commission moved to adopt a per-connection surcharge methodology to provide a more stable mechanism for the funding of the NMRUSF. The change responded to a continuous decline in the intrastate revenues on which the assessment was based. For example, the revenue based surcharge set by the Commission for calendar year 2007 was 3 percent on projected intrastate revenues of \$769,631,558.00 resulting in a projected fund size of \$21,006,485.00 for that year. In contrast, for calendar year 2018 the Commission set a 6.06 percent surcharge rate on projected intrastate revenues of \$469,637,537.28 for a projected fund size of \$28,863,924.25. The change to a connections-based methodology is expected to provide a firm basis for the fund without sharp year over year increases in the assessment.

On December 5, 2019, the Commission revised the per-connection surcharge from \$1.17 to \$1.24 for calendar year 2019 to meet an anticipated fund demand of \$29,211,663.36. Along with a small increase in fund demand, the increase in the per-connection surcharge was also based upon a lower than anticipated line count reported after implementation of the NMRUSF per-connection surcharge in 2018. Although initially lower than anticipated, line count reporting has stabilized and the per-connection funding methodology has proven to be a reliable NMRUSF funding support mechanism for New Mexico.<sup>74</sup>

Utah moved collections for its state fund to a connections-based methodology in 2017. Utah Rule 746-8-301, Calculation and Application of UUSF Surcharge, provides that “providers shall remit to the Commission \$0.36 per month per access line.”<sup>75</sup> This charge was increased to \$0.60 per month per access line in February 2019 to ensure that the fund has a balance sufficient to meet its needs.<sup>76</sup>

## D. Fund Distribution Requirements

Federal funds are distributed to providers based on their status as ETCs, awards of financial support through the Connect America Fund, including auction awards, and applications for support for specific expenditures through the Schools and Libraries fund.

The states have also created requirements for distribution from their state universal service funds. These requirements include meeting or exceeding pricing benchmarks for local service, serving high-cost areas, and areas with no unsubsidized competitors, meeting reductions in access charges, serving as a carrier of last resort, and providing broadband in designated parts of their territories.

---

74 New Mexico Public Regulation Commission, *In The Matter of The State Rural Universal Service Fund 2019 Per- Connection Charge Calculation And Fund Size, Case No. 18-00252-UT, Order Setting State Rural Universal Service Fund Size And Per-Communication Connection Charge For 2019*, available at <https://www.gvnuwusf.com/Portals/4/Documents/Orders/18-00252-UT.pdf?ver=2018-12-14-080936-183>.

75 Utah Public Service Commission, *In the Matter of the Utah Administrative Code R746-8, Docket No. 17-R008-01, Calculation and Application of UUSF Surcharge*, available at <https://psc.utah.gov/2017/07/06/docket-no-17-r008-01>.

76 Utah PSC Docket 18-999-15.



**Table 5** summarizes these distribution requirements, which are discussed in more detail in the following paragraphs.

**Table 5. SUSF Distribution Requirements**

Distribution Requirement	State
COLR	Alaska, California, Colorado, Maine, Nevada, Pennsylvania, South Carolina
Service in a High Cost Area	Arizona, Arkansas, Illinois, Indiana, Kansas, Louisiana, <sup>(1)</sup> Oregon, <sup>(1)</sup> Texas, Utah, Washington, Wyoming
Service in Areas with no Unsubsidized Competitors	Colorado
Rate Case/Support Model	New Mexico, New York, Oklahoma, Texas
Access Charge Reductions	Michigan, New Mexico
Broadband	Vermont
Meet or Exceed Price Benchmark	Arizona, Colorado, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Nebraska, Nevada, New Mexico, New York, Oregon, Pennsylvania, South Carolina, Utah, Washington

(1) Carrier must also be a COLR.

## 1. Carrier of Last Resort

Seven states, Alaska, California, Colorado, Maine, Nevada, Pennsylvania, and South Carolina, require that carriers receiving support for the high-cost program provide service throughout their territories. These carriers must provide service to all who request it, but may generally do so using any technology, including VoIP or wireless. Support is provided primarily to rural ILECs serving high-cost areas. COLR requirements do not apply to the Lifeline or Telecommunications Relay Service (TRS) programs.

Alaska provides support to Carriers of Last Resort to offset the shortfall in carrier common line (CCL) revenue below the COLR's supported revenue requirement. To qualify for COLR support, a carrier must be designated as a COLR in a competitive study area. COLRs in non-competitive areas do not qualify for COLR support. In August, 2018, the Commission renamed CCL and COLR support as "Essential Network Support" and capped that support at 2016 levels. In addition, the Commission eliminated support from areas with local competition and adopted the FCC's definition of "remote" areas for calculating the COLR portion of the Essential Network Support subsidy, resulting in lower support amounts for carriers serving Anchorage, Juneau, and portions of Fairbanks.

California provides support from its two high cost programs only to carriers that provide COLR service. The Commission reviews and approves applicants based on the rules set forth in Assembly Bill 1665. This bill requires the CPUC to approve funding by December 31, 2022, for infrastructure projects that will provide broadband access to no less than 98 percent of California households in each region.<sup>77</sup>

Nevada provides high-cost support to COLR in non-competitive, high-cost areas. This support is provided only after the carrier meets the state rate benchmark for local service.

<sup>77</sup> California Assembly Bill 1665, Chapter 851, An act to amend Sections 281, 912.2, and 914.7 of the Public Utilities Code, relating to communications, 10/15/2017, available at [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB1665](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1665).

## 2. Provide Service in High-Cost Areas

Twelve states, Arizona, Arkansas, Illinois, Indiana, Kansas, Louisiana, Oregon, Pennsylvania, Texas, Utah, Washington, and Wyoming, condition SUSF high-cost support on providing service in high-cost areas. Carriers in these states primarily receive funds to compensate for reduced intrastate access revenues as a result of the FCC's 2011 USF/ICC Transformation Order.<sup>78</sup>

In Illinois, high-cost support is provided only to those small ILECs that historically received funding for serving high-cost areas. In Indiana, support is provided to small rural ILECs whose earnings do not exceed a commission-set 11.5 percent rate of return averaged over three years. In Kansas, small, rural rate of return LECs receive support from the state USF to compensate for the access revenue lost due to the requirement that rate of return carriers match their intrastate and interstate access rates. The rural LECs adjust intrastate originating access rates to parity with interstate rates each July 1 in odd-numbered years and receive recovery from the State USF. CenturyLink receives recovery of intrastate access rates March 1 of each year.

Oregon provides high-cost support to both ILECs and CLECs based on a stipulation reached with the commission. ILECs receive support at the company level. CLECs receive per-line support for the high-cost wire centers where they are providing service.

Texas provides support only to ETCs. Carriers must petition the commission for support and provide a business case defining the requirement. The PUCT modified its rules in 2018 to require larger companies to show a financial need for continued high cost support. AT&T Texas and Frontier Communications are deregulated in Texas and are, therefore, ineligible for such support. The PUCT continues to review the rules for high-cost support for small ILECs (ILECs under 31,000 access lines).

Washington follows a similar process. Companies providing service in high-cost support areas may petition the commission to receive funds. Eligibility is determined by analyzing the company's submission to determine the amount of funding required. Currently, 17 rural companies receive support.

In Wyoming, carriers receive support for high-cost areas that exceed the statewide benchmark of \$30.00 for voice-only service. Not all carriers eligible for this funding elect to take it.

## 3. Serve Areas without Unsubsidized Competition

Colorado revised its High-Cost Fund in 2015 to provide support only in areas deemed "non-competitive" after a proceeding by the state commission. Monies originally designated for high-cost support in these areas are swept into the broadband fund on a yearly basis. Legislation in 2014 defined two goals for the High-Cost Fund.

[First] to provide financial assistance for basic service - i.e., traditional voice telephone service - in rural, high cost geographic support areas. [And] second is to provide access to broadband service through broadband networks in unserved areas. . . .Senate Bill 17-306 . . . enables the PUC to allocate HCSM funds for deployment of broadband service in unserved areas of the state. These HCSM funds are monies that were collected at the surcharge rate in effect on May 10, 2014, and that the Commission determines are no longer needed to support basic service in Colorado through the Commission's findings of effective competition.<sup>79</sup>

Between 2014 and the end of 2018, the Commission transferred \$12.45 million from the high-cost fund to the broadband fund.

<sup>78</sup> *ICC Transformation Order*, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, WT Docket No. 10-208, REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING, October 27, 2011, available at <https://docs.fcc.gov/public/attachments/FCC-11-161A1.pdf>.

<sup>79</sup> Colorado Department of Regulatory Agencies, Annual Report of the Colorado High Cost Support Mechanism To the General Assembly December 1, 2017, available at <http://www2.cde.state.co.us/artemis/regserials/reg763internet/reg7632017internet.pdf>.

## 4. Rate Case-Based Funding

New Mexico, New York, Oklahoma, and Texas require carriers to submit financial data to show the amount of high-cost funding they require.

In New York, carriers eligible to receive funding from the New York State Universal Service Fund (SUSF) must first seek to meet their revenue requirements through increases in their basic residential rates to the \$23 per line state benchmark. Once they meet this benchmark, eligible carriers may file a standard rate case to determine the need for supplemental relief from the SUSF.

In Oklahoma and Texas, carriers must prove their need for funding support. In New Mexico, one provider receives support based on a showing of a “need” for funds to provide universal service.<sup>80</sup>

## 5. Access Charge Reductions

Michigan and New Mexico provide support for carriers to bring their intrastate access charges into parity with interstate charges. These intrastate access service (IAS) funds provide carriers with funding to cover the loss from reductions in access charges.

In Michigan, all ILECs receive support based on matching intrastate originating and/or terminating switched access rates to interstate levels based on their rates as of December 31, 2017. This value is calculated on a yearly basis and will eventually be phased out as the transition to matching rates is completed.

New Mexico follows a similar pattern. All carriers in New Mexico receive support based on matching intrastate originating and/or terminating switched access rates to interstate levels as of 2006.

## 6. Broadband

Vermont conditions support for high cost areas on an eligible carrier providing both voice and broadband to all customers within its designated territory.

A designated VETC must provide . . . voice telephony services, as defined by the FCC, and broadband Internet access, directly or through an affiliate. A VETC receiving support under this section shall use that support for capital improvements in high-cost areas . . . to build broadband capable networks.<sup>81</sup>

---

<sup>80</sup> See NMAC 17.11.10.25 <http://164.64.110.134/parts/title17/17.011.0010.html>.

<sup>81</sup> Vermont Statutes Online, 30 V.S.A. § 7515, High Cost Program, available at <https://legislature.vermont.gov/statutes/section/30/088/07515Commission>.

## 7. Provide service at benchmark rates

One of the key tenets of universal service is ensuring that rates are “comparable” across the country, regardless of where the customer resides (i.e., urban versus rural).<sup>82</sup> The FCC has moved to ensure this comparability by creating “benchmark” rates for basic local service. Carriers must charge at least the federal benchmark rate for standalone voice services of \$18.00<sup>83</sup> to receive support from the Connect America (high cost) fund.<sup>84</sup> The majority of the states that provide high-cost support have also adopted the requirement that carriers charge customers at or above a specified benchmark rate to qualify for those funds. This requirement generally applies only to those smaller, primarily rural, carriers that remain rate regulated. Large carriers that have been rate deregulated and those carriers operating under Alternative Rate plans (AFORs) do not receive high-cost support and are not required to meet a state benchmark. In states where VoIP carriers have been granted a CPCN, these carriers must also meet the state benchmark rate.

Nineteen of the states that responded to the 2018 survey require providers seeking high-cost funding to meet a rate benchmark.<sup>85</sup> Of these, seven states use the FCC benchmark rate and 12 use a state-developed rate. Twenty-four states do not have benchmark rates. These states either have no High-Cost Fund or require that carriers provide data to establish their need for universal service support. Eight states have no state USF fund.

Arizona requires carriers seeking high-cost support to meet or exceed a local service benchmark rate. This rate has increased from \$14 in 2013 to \$20 in 2017, based on the requirements of the FCC USF/ICC Transformation Order. Georgia also uses a state-specific formula to set a benchmark rate: statewide average residential basic service rate times 110 percent. This rate is adjusted annually and currently stands at \$20.62. Idaho requires carriers seeking high-cost support to charge 125 percent of the statewide residential average for basic local residential service.

The Illinois fund provides support to small carriers that have historically served high-cost areas. The current benchmark is \$20.39. Illinois adjusts funding for high-cost carriers to reflect any support received from the federal High-Cost Fund.

Indiana requires carriers receiving high cost support to charge at least \$17.15/month for residential customers and \$23.60/month for single line business customers. “In a 2004 settlement agreement approved by the IURC (Cause No. 42144), these rates were determined to be the minimum level recipient carriers should recover from their customers before they can receive support from the Indiana Universal Service Fund.”<sup>86</sup>

All of the 36 rural ILECs in Kansas are eligible for high-cost funding once their local rates meet or exceed a benchmark of \$17.25 for residential service and \$20.25 for single line businesses, based on the company’s intrastate revenue requirement. These rates are adjusted in odd numbered years.<sup>87</sup>

Maine statutes require that the basic service rate for rural providers of last resort (POLRs) not exceed the rate the POLR charged on January 1, 2012. Carriers may request an increase in these rates via a rate case, but no carrier has done so to date. The statutory rate for the state’s single ILEC, Consolidated Telecommunications (formerly FairPoint), is \$20. The statute allows the company to increase this rate by 5 percent annually, but it has not requested to do so.<sup>88</sup>

<sup>82</sup> Although the Communications Act uses the term “comparable” in numerous areas, no specific definition is provided. Generally, the term has been used to mean that rates are “reasonably alike” in all areas of the country, although not necessarily always the same.

<sup>83</sup> The benchmark rate was frozen in 2018, but is expected to increase at the completion of the current proceeding. See *Wireline Competition Bureau Announces Results of 2019 Urban Rate Survey For Fixed Voice and Broadband Services, Posting Of Survey Data and Explanatory Notes, and Required Minimum Usage Allowance for ETCs Subject to Broadband Public Interest Obligations for All United States Carriers, Including Carriers in Alaska*, WC Docket No. 10-90, 12/20/2018, available at <https://www.fcc.gov/document/wcb-announces-results-2019-urban-rate-survey>.

<sup>84</sup> Ibid. The USF/ICC Transformation Order defined the average urban rate to include local end-user rates plus state regulated fees (specifically, state subscriber line charges (SLCs), state universal service, and mandatory extended area service charges). USF/ICC Transformation Order, 26 FCC Rcd at 17751, para. 238. The rate floor and reasonable comparability benchmark for voice services apply to mainland providers and those in Alaska. Carriers providing fixed voice service may not exceed the average urban rate.

<sup>85</sup> In 2014, 17 states responded that providers were required to meet rate floor benchmarks to qualify for high-cost support.

<sup>86</sup> Getz, Sally, Response to 2017 NRRI USF Survey.

<sup>87</sup> Kansas Corporation Commission, Docket No. 17-GIMT-008-GIT, Jan. 19, 2017, available at <http://estar.kcc.ks.gov/estar/ViewFile.aspx/17-008-GIT%20-%20Order%20Adopting%20USF%20Assessment.pdf?Id=3c01e90a-a86a-4703-bd3b-5df0334657d1>.

<sup>88</sup> Kania, Richard, Sr. Utility Analyst, response to NRRI survey. The benchmark rate was set in 2012 and may no longer be relevant, given the changes to the Maine POLR requirements.

Nebraska has set a local benchmark rate of \$17.95 for urban areas and \$19.95 for rural areas. Nevada sets a similar benchmark, but requires basic local service providers to charge the lower of the Nevada rate and the FCC rate. Currently, the FCC rate is the lower charge. New York established a local service benchmark rate of \$23.00 in 2006 for its largest ILECs, Verizon and Frontier of Rochester. This benchmark was expanded to the other local exchange companies offering service in the state in 2008. There is no benchmark rate for business services in New York, but carriers may not charge less than their residential rate for basic business service.

Oregon has a rate benchmark that was used to establish the support per line when the Oregon USF was first created. This benchmark was based on an average model cost for the two non-rural companies receiving support in the state. The benchmark is used in the periodic reallocation of support on a total company basis. The rate benchmark applies only to high-cost funding, not to the Lifeline and TRS funds, which assess carriers on a per line basis.<sup>89</sup>

**Table 6** summarizes these statistics.

**Table 6. Benchmark Rates**

Benchmark	# States	States
States with no state USF fund	8	Alabama, Delaware, Florida, Hawaii, Massachusetts, New Jersey, Tennessee, Virginia
States with state-developed benchmark rate	12	Arizona, Colorado, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Nebraska, Nevada, <sup>(1)</sup> New York, Oregon
States using FCC benchmark	7	Kentucky, Louisiana, New Mexico, Pennsylvania, South Carolina, Utah, Washington
States with no benchmark rate	24	Alaska, Arkansas, California, Connecticut, <sup>(2)</sup> District of Columbia, <sup>(2)</sup> Iowa, Maryland, Michigan, <sup>(3)</sup> Minnesota, Mississippi, Missouri, Montana, New Hampshire, <sup>(2)</sup> North Carolina, <sup>(2)</sup> North Dakota, <sup>(2)</sup> Ohio, <sup>(2)</sup> Oklahoma, Rhode Island, <sup>(2)</sup> South Dakota, <sup>(2)</sup> Texas, Vermont, West Virginia, <sup>(2)</sup> Wisconsin, Wyoming

(1) FCC rate or statewide average of urban rates, whichever is lower.

(2) TRS or Lifeline only, benchmark not applicable.

(3) IAS only, benchmark not applicable.

<sup>89</sup> The Oregon Residential Service Protection Fund (RSPF) is separate from the OUSF. It is treated as part of the overall OUSF here to simplify survey results.

## V. Conclusions

Ensuring full access to voice and broadband services continues to be an important goal for both the FCC and the states. Whereas the FCC has focused on expanding broadband through direct grants from the Connect America Fund, the states have explored other options for supporting the needs of their citizens through the state universal service funds. Funding from the SUSF ensures that all state residents are able to receive critical services, including voice and broadband, Lifeline, and specialized services for the deaf, hard of hearing, and other disadvantaged populations. SUSF funds also support rural and small carriers by providing the funding necessary to maintain and grow their networks and increase the ability of schools and libraries to provide state citizens with those key state services that are accessible only via a broadband connection.

Most importantly, the 43 states that provide state universal service support continue to function as laboratories for determining what services their citizens require and how those services should be provided. Whereas the size of the state funds has remained fairly constant over the study period, the states have reviewed and adopted a number of significant changes to their funds to ensure that the SUSF remains viable, despite changes in type of services customers adopt. Key changes from the 2014 NRRI USF report include a growing focus on broadband, reductions in support in some states in an attempt to moderate the rapid growth of end user contributions to the fund, the addition of new types of providers to the fund, and changes in the methodology for assessing and collecting funding to maintain amount of money provided without raising the assessment so high that users abandon service altogether.

For example, between 2014 and 2017, South Carolina broadened the base for fund contributions by including wireless providers, as intermodal telecommunications competition becomes the norm for residential consumers. Alaska moved in the opposite direction, eliminating its Lifeline and public payphone programs and freezing contribution rates at 10 percent. The states have continued to make changes to their funds to increase the focus on ensuring state-wide access to broadband. For example, Colorado continued to focus its high cost resources only in those areas where there is no unsubsidized voice and broadband competition, resulting in driving additional funding to the state broadband fund. California increased broadband funding significantly as part of changes to the state High-Cost Fund and in response to the legislative direction to extend broadband to 98 percent of the population. New Mexico, Vermont, and Wisconsin also increased their focus on broadband by creating new state USF funds to increase the availability of broadband service to their constituents by supporting carriers in building facilities to offer these services in both rural and urban areas.

Finally, Maine, Nebraska, New Mexico, and Utah have used their state funds to experiment with new contribution methods. Each of these states is testing the potential for ensuring the viability of the state fund by assessing each telecommunications and broadband connection regardless of the type of provider and type of service. The majority of the states have always used this method to fund Lifeline and Telecommunications Relay Services, so applying a connections methodology to all contributions appears to be a logical step forward in the assessment process. Over the next year, these states and others will review the outcome of this new methodology to determine if this creates a path forward for the state and, ultimately, the federal fund.

New questions regarding universal service funding and distribution may arise as the transition from traditional wireline service to new, intermodal communications carriers becomes more prevalent. As the FCC moves forward with disbursements from the Connect America Fund, the states must determine how this funding will (or should) impact their state USF funds. For example, the CAF II Reverse Auction has added a number of non-traditional USF recipients, including satellite providers, fixed wireless providers, and electric cooperatives to the recipients of federal funds. As part of the state ETC approval process for these companies, state commissions may want to review and monitor the way in which these companies do (or should) contribute to the state USF.

As the FCC moves forward with changes to the Lifeline program, including removing support for standalone voice products, the states will also need to examine the impact of these changes on their citizens and the state Lifeline programs. Should the states amend their programs to match the federal program, or should they continue to support voice-only services? If so, to what extent should they provide this support? Should the states expand their Lifeline programs to make up for the reduction in federal support, and, if so, how?

The NRRI USF study provides state regulators and legislators with information that they may use to assess and, where appropriate, modify their state funds to address changes in the way in which customers obtain and use communications services. As with our 2014 study, we provide a number of options for doing this.

- States that have state funds may use the 2018 findings, and particularly the changes in funding over the period, to benchmark their funds against states with similar topographies and populations. They may also use the data to help their legislatures, the FCC, and others understand how their state fund compares to others.
- States that are considering changes to their state funds may use the information provided here to review options for managing the fund, determining who should contribute, and studying contribution levels.
- States may use the data provided on the changes in contribution methodology for Maine, Nebraska, New Mexico, and Utah to evaluate the contribution methodologies in their own states.
- States may use the fund data provided here to examine areas where their funds may need to be extended or limited.

Universal service remains an important goal for telecommunications regulators and the industry. Continuing to study and review information on how various states meet this goal will remain an important public utility commission activity, now and in the future. To that end, NRRI will continue to follow the outcome of these changes and provide updates as they become available.



# Bibliography

- Arizona Corporation Commission, Opinion and Order In the Matter of the Notice of Proposed Amendments to the Arizona Universal Service Fund, Docket No. RT-00000H-97-0137, Decision 76376, September 19, 2017, available at <http://images.edocket.azcc.gov/docketpdf/0000182799.pdf>.
- Arizona Universal Service Fund—High-Cost Fund Description, available at <https://www.azcc.gov/divisions/utilities/telecom/ausf-faqs.asp>.
- California Assembly Bill 1665, Chapter 851, An act to amend Sections 281, 912.2, and 914.7 of the Public Utilities Code, relating to communications, November 15, 2017, available at [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB1665](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1665).
- ConnectMe Authority Financial Report, 2017, available at <https://www.maine.gov/connectme/sites/maine.gov.connectme/files/inline-files/ConnectME%20Authority%20Government%20Auditing%20Standards%20Report%206-30-17final110117.pdf>.
- California Public Utilities Commission, Proposed Decision, Rulemaking 17-06-023, Order Instituting Rulemaking to Consider Whether Text Messaging Services are Subject to Public Purpose Program Surcharges, November 9, 2018, available at <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M238/K227/238227359.PDF>.
- Rulemaking 11-11-007, Order Instituting Rulemaking into the Review of the California High-Cost Fund-A Program, November 10, 2011, Third Amended Scoping Memo and Ruling of Assigned Commissioner, available at <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M182/K363/182363479.PDF>.
- California Teleconnect Fund brochure, available at <http://www.cpuc.ca.gov/ctf/>.
- Communications Division Resolution T-17496, Approval of the California Teleconnect Fund Administrative Committee Budget for Fiscal Year 2016-17 (July 1, 2016, through June 30, 2017) to Comply with the Requirements of Public Utilities Code Section 273(a), available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M154/K639/154639700.PDF>.
- Colorado House Bill 1328, Connect Colorado Broadband Act, May 10, 2014, available at <https://legiscan.com/CO/text/HB1328/2014>.
- Colorado Public Utilities Commission, Proceeding No. 18M-0432T, In the Matter of Allocation of Colorado High Cost Support Mechanism Moneys to the Broadband Deployment Board, Decision No. C18-0591, Decision Granting Intervention, Allocating \$10.8 Million to Rural Broadband Deployment, and Closing Proceeding, July 19, 2018, available at [https://www.dora.state.co.us/pls/efi/efi\\_p2\\_v2\\_demo.show\\_document?p\\_dms\\_document\\_id=889550&p\\_session\\_id=](https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=889550&p_session_id=).
- Colorado Department of Regulatory Agencies, Annual Report of the Colorado High Cost Support Mechanism To the General Assembly December 1, 2017, available at <http://www2.cde.state.co.us/artemis/regserials/reg763internet/reg7632017internet.pdf>.
- Communications Act of 1934, 47 U.S.C. §151 et. seq.
- Delaware Code § 709 (2017) Subchapter VII-A Telecommunications Technology Investment Act, Delaware Broadband Fund, available at <https://law.justia.com/codes/delaware/2017/title-26/chapter-1/subchapter-vii-a/section-709/>.

Federal Communications Commission (FCC) Connect America Fund Phase II Auction (Auction 903) Overview, available at <https://www.fcc.gov/auction/903>.

CAF Phase II Auction Report and Order and Order on Reconsideration, 32 FCC Rcd 1624 (2), available at <https://www.fcc.gov/document/caf-phase-ii-auction-report-and-order-and-order-reconsideration>.

Public Notice, Office of Managing Director announces that the proposed universal service contribution factor for the fourth quarter of 2018 will be 0.201 or 20.1 percent, available at <https://www.fcc.gov/document/fourth-quarter-usf-contribution-factor-201-percent>.

In the Matter of Universal Service Contribution Methodology A National Broadband Plan For Our Future, WC Docket No. 06-122, Further Notice of Proposed Rulemaking, April 27, 2012, 27 FCC Rcd 5357 (6), available at <https://www.fcc.gov/document/commission-adopts-nprm-reform-and-modernize-contribution-system>.

In the Matter of Developing a Unified Intercarrier Compensation Regime, CC Docket No. 01-92, FCC-33, available at [http://transition.fcc.gov/Bureaus/Common\\_Carrier/Notices/2001/fcc01132.doc](http://transition.fcc.gov/Bureaus/Common_Carrier/Notices/2001/fcc01132.doc).

USF/ICC Transformation Order and FNPRM, 26 FCC Rcd.

In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund, WC Docket No. 11-42, WC Docket No. 09-197. WC Docket No. 10-90 Third Report And Order, Further Report And Order, And Order On Reconsideration, March 31, 2016.

In the Matter of Lifeline and Link Up Reform and Modernization et al., WC Dkt Nos. 11-42, 09-197, 17-287 Fourth Report and Order, Order on Reconsideration, Memorandum Opinion and Order, Notice of Proposed Rulemaking, and Notice of Inquiry (NPRM/NOI), FCC 17-155 (rel. December 1, 2017).

Modernizing the E-Rate Program, Schools and Libraries, WC Docket No. 13-184, Report and Order and Further Notice of Proposed Rulemaking 29 FCC Rcd 8870 (July 2014).

In the Matter of the Universal Service Contribution Methodology, Further Notice of Proposed Rulemaking, April 27, 2012, WC Docket No. 06-122.

In the Matter of Connect America Fund, A National Broadband Plan for Our Future, Establishing Just and Reasonable Rates for Local Exchange Carriers, High-Cost Universal Service Support, Developing an Unified Intercarrier Compensation Regime, Federal-State Joint Board on Universal Service, Lifeline and Link-Up, Universal Service Reform – Mobility Fund, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, WT Docket No. 10-208, REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING, October 27, 2011, available at <https://docs.fcc.gov/public/attachments/FCC-11-161A1.pdf>.

Wireline Competition Bureau Announces Results of 2019 Urban Rate Survey For Fixed Voice and Broadband Services, Posting Of Survey Data and Explanatory Notes, and Required Minimum Usage Allowance for ETCs Subject to Broadband Public Interest Obligations for All United States Carriers, Including Carriers in Alaska, WC Docket No. 10-90, 12/20/2018, available at <https://www.fcc.gov/document/wcb-announces-results-2019-urban-rate-survey>.

Illinois Commerce Commission, Order 16-0378, Petition to update the Section 13-301(1)(d) Illinois Universal Service Fund and for other relief, available at <https://www.icc.illinois.gov/docket/files.aspx?no=16-0378&docId=252434>.

Kansas Corporation Commission, Docket No. 17-GIMT-008-GIT, January 19, 2017, available at <http://estar.kcc.ks.gov/estar/ViewFile.aspx/17-008-GIT%20-%20Order%20Adopting%20KUSF%20Assessment.pdf?Id=3c01e90a-a86a-4703-bd3b-5df0334657d1>.

Lichtenberg, Sherry, Ph.D., State Universal Service Funds 2014, National Regulatory Research Institute, Report No. 15-05, June 2015, available at [www.nrri.org](http://www.nrri.org).

Broadband Availability and Adoption: A State Perspective, National Regulatory Research Institute, Report No. 17-03, June 2017, available at [www.nrri.org](http://www.nrri.org).

Lifeline and the States: Designating and Monitoring Eligible Telecommunications Carriers, National Regulatory Research Institute, Report No. 13-12, November 2013, available at <http://nrri.org/download/nrri-13-12-lifeline-and-the-states/>.

Lyons, Daniel, Ph.D., Overcoming Lifeline's paternalism to empower low-income consumers, AEIdeas, October 31, 2018, available at [https://www.aei.org/publication/overcoming-lifelines-paternalism-to-empower-low-income-consumers/?mkt\\_tok=eyJpIjoiTkRZelkyTTPVVGNS5TXpFMClslInQiOiJLU2pZcDdqG\\_NvUGxTYjdlb0hEd0tvTkVPbFpyMUxVaTU2VjZhbKxpRHNWQmlVdUJ0d3h3NDZxMUhoMGpHUmxUMXQrXC\\_9QQ3FTK3JWXC9oSmVXb2ZcL2E4WUNIVkFFS0pCZjRXRkxY25wV0RWWUZrZjR3TDJTYnRna2JwSytuQk\\_92biJ9](https://www.aei.org/publication/overcoming-lifelines-paternalism-to-empower-low-income-consumers/?mkt_tok=eyJpIjoiTkRZelkyTTPVVGNS5TXpFMClslInQiOiJLU2pZcDdqG_NvUGxTYjdlb0hEd0tvTkVPbFpyMUxVaTU2VjZhbKxpRHNWQmlVdUJ0d3h3NDZxMUhoMGpHUmxUMXQrXC_9QQ3FTK3JWXC9oSmVXb2ZcL2E4WUNIVkFFS0pCZjRXRkxY25wV0RWWUZrZjR3TDJTYnRna2JwSytuQk_92biJ9).

Maine Public Utilities Commission Docket No. 2018-00200, Notice of Rulemaking, Amendment of Chapter 288 of the Commission's Rules – Maine Universal Service Fund, August 16, 2018, available at <https://mpuc-cms.maine.gov/CQM.Public.WebUI/MatterManagement/MatterFilingItem.aspx?FilingSeq=99088&CaseNumber=2018-00200>.

Maine Public Law 422, An Act To Ensure That Low-income Residents of the State Have Access to Telephone Services, June 25, 2018, available at <https://legiscan.com/ME/text/LD1746/2017>.

Mackey, Scott; Bishop-Henchman, Joseph; and Drinkard, Scott, Wireless Taxes and Fees in 2017, Tax Foundation Fiscal Fact No. 567, November 2, 2017, available at <https://taxfoundation.org/cell-phone-taxes-2017/>.

Michigan Public Service Commission, In the matter, on the Commission's own motion, to implement 2009 PA 182, MCL 484.2310, Case No. U-16183, February 22, 2018, available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t00000016XjLAAU>.

Nebraska Public Service Commission, In the Matter of the Nebraska Public Service Commission, on its own motion, to consider revisions to the universal service fund contribution methodology. Application No. NUSF 100, ORDER Entered: October 31, 2017.

New Mexico Bill SB 308 (2017), Chapter 89. Amending a Section of the Rural Telecommunications Act of New Mexico, available at <https://legiscan.com/NM/text/SB308/2017>.

New Mexico Public Regulation Commission, In The Matter Of The State Rural Universal Service Fund 2019 Per- Connection Charge Calculation And Fund Size, Case No. 18-00252-UT, Order Setting State Rural Universal Service Fund Size And Per-Communication Connection Charge For 2019.

New York Public Service Commission, Case 17-C-0171 – Proceeding on Motion of the Commission to Review the Targeted Accessibility Fund. Order Directing Tariff Filings Regarding Lifeline Eligibility (Issued and Effective April 19, 2018), available at

[https://www.tafny.org/resources/psc\\_orders/PSC%20Order%20in%20Case%2017-C-0171.pdf](https://www.tafny.org/resources/psc_orders/PSC%20Order%20in%20Case%2017-C-0171.pdf).

Case 15-M-0742 - Proceeding on Motion of the Commission to Review the State Universal Service Fund, Order Initiating Proceeding to Review the State Universal Service Fund and Seeking Comments (January 22, 2016), available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=15-M-0742&submit=Search>.

Case 18-C-0335 Notice of Election of Virgin Mobile USA L.P. Pursuant to Public Service Law 92-h to Participate in New York State Targeted Accessibility Fund and Petition for Establishment of Distribution, available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-C-0335&submit=Search>.

Oklahoma House Bill 2616, An Act relating to telecommunications, May 9, 2016, available at <https://legiscan.com/OK/text/HB2616/id/1399158/Oklahoma-2016-HB2616-Enrolled.pdf>.

Oklahoma Corporation Commission, In Re: Inquiry of the Oklahoma Corporation Commission To Identify And Resolve Issues Related To The Oklahoma Universal Service Fund, Lifeline Service, Oklahoma High-Cost Fund, Broadband Support, VoIP Service and other Telecommunications Matters, Cause No. PUD 201800066, October 2018, available at <https://www.occeweb.com/pu/RegUtilities/PUD18-066Final2018TelecomNOI.DOCX>.

Application of the Applicants As Set Forth in the Application for an Order of the Commission Abolishing the Oklahoma High-Cost Fund Created By Order 399040 and Approval of a Stream-Lined Revenue Requirements Methodology Hearing, Cause No. PUD 201200040, Order No. 673325, February 8, 2018, available at <http://imaging.occeweb.com/AP/Orders/occ30036590.pdf>.

Regulatory Commission of Alaska, In the Matter of the Consideration of Repeal of Alaska Universal Service Fund Regulations, R-18-001, Order No. 5, Order Adopting Regulations, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f0162588-1f65-4cc4-ae36-4a38caa42886>.

Summary of USF Changes, 11/28/2018, available at <http://rca.alaska.gov/RCAWeb/NewsItems/NewsItemDetails.aspx?id=144d777e-518a-4966-9c72-507a7e94a34a>.

In the Matter of the Tariff Revision Designated as TA205-251 Filed by ACS of Alaska, LLC D/B/A Alaska Communications Systems, Alaska Communications, ACS Local Service, and ACS, U-16-07, Order No. 1 By The Commission: Order Suspending TA205-251, available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=f3bbfab7-0741-4954-b78d-0d342d10ee8d>.

Rosenberg, Edwin, Perez-Chavolla, Lilia, Liu, Zing, Commission Primer, National Regulatory Research Institute, Report 06-08, May 2006, available at [nrri.org](http://nrri.org).

Rosston, Gregory, and Wimmer, Bradley, The State of Universal Service, Stanford University 1999, available at [https://siepr.stanford.edu/sites/default/files/publications/99-18\\_0.pdf](https://siepr.stanford.edu/sites/default/files/publications/99-18_0.pdf).

South Carolina Act 181, State Telecom Equity in Funding Act (May 25, 2016), available at [https://www.scstatehouse.gov/sess121\\_2015-2016/bills/277.htm](https://www.scstatehouse.gov/sess121_2015-2016/bills/277.htm).

Universal Service Administrative Co., 2017 Annual Report, available at <https://www.usac.org/res/documents/about/pdf/annual-reports/usac-annual-report-2017.pdf>.

Utah Public Service Commission, In the Matter of the Utah Administrative Code R746-8, Docket No. 17-R008-01, Calculation and Application of UUSF Surcharge, available at <https://psc.utah.gov/2017/07/06/docket-no-17-r008-01>.

Vermont Act 41, An Act relating to telecommunications, June 1, 2015, available at <https://legislature.vermont.gov/assets/Documents/2016/Docs/ACTS/ACT041/ACT041%20As%20Enacted.pdf>.

Vermont Statutes Online, 30 V.S.A. § 7515, High Cost Program, available at <https://legislature.vermont.gov/statutes/section/30/088/07515Commission>.

Washington House Bill 1373, AN ACT Relating to the universal communications services program; available at <https://legiscan.com/WA/text/HB1373/id/1862581/Washington-2019-HB1373-Introduced.pdf>.

Wisconsin Act 59, An Act relating to: state finances and appropriations, constituting the executive budget act of the 2017 legislature, September 21, 2017, available at <https://docs.legis.wisconsin.gov/2017/related/acts/59>.