



UNIVERSAL SERVICE MONITORING REPORT

CC Docket No. 96-45
WC Docket No. 02-6
WC Docket No. 02-60
WC Docket No. 06-122
WC Docket No. 10-90
WC Docket No. 11-42
WC Docket No. 13-184
WC Docket No. 14-58

2017

(Data Received Through September 2017)

Prepared by Federal and State Staff for the
Federal-State Joint Board on Universal Service

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Universal Service Monitoring Report

2017

Introduction and Summary

This is the twentieth report in a series prepared by federal and state staff members for the Federal-State Joint Board on Universal Service (Universal Service Joint Board).¹ Unless otherwise noted, this report is generally based on information available to us as of September 2017. These reports contain information designed to monitor the impact of various universal service support mechanisms and the method used to finance them. These reports are part of a monitoring program created by the Federal Communications Commission in 1997 in CC Docket No. 96-45 to replace a similar program in CC Docket No. 87-339 that previously resulted in a series of nineteen *Monitoring Reports*.²

The *Monitoring Report* incorporates data from several sources, including the National Exchange Carrier Association (NECA) and the Universal Service Administrative Company (USAC). USAC collects information from both contributors and beneficiaries of the Universal Service Fund, including incumbent local exchange carriers (ILECs), competitive eligible telecommunications carriers (CETCs), schools, libraries and health care providers. NECA, at the direction of the Commission, provides information to USAC that is utilized in administering certain aspects of the high-cost program.

The following is the organization of this report: Section 1 provides an update on industry revenues, universal service program funding requirements, and contribution factors. Sections 2 through 5 provide the latest data on the low-income, high-cost, schools and libraries, and rural health care support mechanisms. Section 6 presents recent Census and Bureau of Labor Statistics data on voice telephony subscribership and expenses taken from the Current Population Survey, the American Community Survey and the Consumer Expenditure Survey as well as data on telephone penetration by income by state. It also includes data on residential Internet subscribership and expenses. Section 7 includes updated Consumer Price Index data.

This entire report is available electronically in page image (.pdf) format through the FCC's Federal-State Joint Board Monitoring Reports website, located at <http://www.fcc.gov/encyclopedia/federal-state-joint-board-monitoring-reports>. The tables of the report are also available separately as spreadsheet files in a single compressed (.zip) format file at this site. The *Monitoring Report* is published once a year. Information received well in advance of the next *Monitoring Report* will be made available on an interim basis in separate staff reports or in raw data files (such as most NECA filings used in the *Monitoring Report*) on the Wireline Competition Bureau Statistical Reports Internet site.

Supplementary material is available in a single compressed (.zip) format file at <http://www.fcc.gov/encyclopedia/federal-state-joint-board-monitoring-reports>. The supplementary material includes tables too extensive to be practical for a printed report. A table listing the files available when this file is unzipped is provided at the end of this introduction.

¹ The last report was released in December 2016. *Universal Service Monitoring Report*, 2016, CC Docket No. 96-45 et al. (Data Received Through September 2016) available at <https://www.fcc.gov/general/federal-state-joint-board-monitoring-reports>.

² In 1997, the Commission adopted rules to implement section 254 largely based on the recommendations of the Universal Service Joint Board and delegated to the Common Carrier Bureau (the predecessor to the Wireline Competition Bureau), in consultation with the state staff, the creation of a new monitoring program. *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 9218, para. 869 (1997) (*Universal Service First Report and Order*). See 47 C.F.R. § 54.702(i).

We continue to look for ways to present universal service data in a way that is useful for the public. We have revised the tables in Section 3 to provide a clearer overview of high-cost support fund history by carrier types. Section 6 now includes two additional tables that provide fixed broadband deployment and subscription information for ILECs.

We invite questions or comments on this report via email at IATDreports@fcc.gov with subject: December 2017 Monitoring Report.

2017 Monitoring Report Supplementary Material

This list provides the names of files provided in the 2017 Monitoring Report Supplementary Material zip file available at <http://www.fcc.gov/encyclopedia/federal-state-joint-board-monitoring-reports>. Underlined names are folders containing those files after unzipping the file.

<u>Revenues and Contributions</u>	S.1.1. Detailed Telecommunications Revenue - 2016 S.1.2. Estimating End-User Revenue by State - 2015 Technical Appendix S.1.3. Estimating End-User Revenue by State - 2015 Tables S.1.4. Contribution Base Revenues by Program
<u>Low Income</u>	S.2.1. LI Support - by State S.2.2. LI Support - by Study Area S.2.3. LI Subscribers and Beneficiaries - by State S.2.4. ETCs Receiving Lifeline Support 2016
<u>High Cost</u>	<u>Claims</u> S.3.1. HC Claims - by State S.3.2. HC Claims - by Study Area S.3.3. HC RoR Claims per Line - by Study Area S.3.4. HC Support Study Areas - 2016 S.3.5. 2017 Rate Floor Report S.3.6. Support Reduction Waiver Requests S.3.7. HC Rate Floor Reductions – by Study Area S.3.8. HC Reductions due to \$250 Cap - by Study Area <u>Disbursements</u> S.3.9. HC Disbursements - by State S.3.10. HC Disbursements - by Study Area S.3.11. HC RoR Disbursements per Line - by Study Area S.3.12. HC Penalties
<u>Schools and Libraries</u>	S.4.1. SL Funds - by Service Type, State, and Funding Year S.4.2. SL Cumulative Funds - by Service Type and State S.4.3. SL Disbursements - by Service Provider Type S.4.4. SL Funds per Student - by State S.4.5. SL Funds - by Applicant Type, State, and Funding Year
<u>Rural Health Care</u>	S.5.1. RHC Funds - by State, Program, and Year S.5.2. RHC Disbursements - by Speed, Year, and State S.5.3. RHC Disbursements - by Speed, Year, and HCP Type S.5.4. RHC Disbursements per Person - by State S.5.5. RHC Funds - by HCP Type, Program, and Year
<u>Subscribership, Penetration, and Minutes of Use</u>	S.6.1. Broadband Penetration by County and Congressional District S.6.2. ILEC Interstate Switched Access Minutes of Use - by Study Area S.6.3. ILEC Interstate Switched Access Minutes of Use - by Tier S.6.4. ILEC Interstate Switched Access Minutes of Use - by State S.6.5. NECA Pool Results

Section 1 - Revenues and Contributions

Overview – Revenues and Contributions

In response to the Telecommunications Act of 1996, the Commission established several universal service mechanisms to help ensure that all Americans have access to affordable telecommunications service. Congress mandated that these programs be supported by contributions from every telecommunications carrier that provides interstate telecommunications, and other providers of telecommunication services if the Commission finds contributions from such providers to be in the public interest. The tables in this section provide a general overview of the revenues of the U.S. telecommunications industry and the associated contributions to the universal service support mechanisms. The tables are based on information filed with the Commission in FCC Forms 499-A and 499-Q. To the extent that certain telecommunications industry revenues are not subject to contributions, such revenues may not be fully captured in these tables.

Additional information about the revenues collected to support universal service can be found on the Commission's website at <http://www.fcc.gov/encyclopedia/contribution-methodology-administrative-filings> and on USAC's website at <http://www.usac.org/cont/default.aspx>. Please note that the information provided in this report is based upon Commission rules in effect in 2017.

Table 1.1
Filer Revenues by Service Type: 2006 - 2016
(in Millions of Dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Local Service and Payphone Revenues	Local Exchange and Federal/State USF Support ¹	\$63,264	\$62,790	\$60,721	\$56,839	\$56,993	\$52,718	\$50,598	\$49,016	\$47,495	\$46,515	\$46,314
	Pay Telephone ²	659	470	379	268	197	136	362	359	327	286	271
	Local Private Line ³	25,448	24,307	26,314	27,098	26,809	28,243	29,101	29,632	31,194	32,191	30,472
	Other Local ⁴	3,884	3,227	3,321	3,531	3,032	3,145	2,408	1,746	1,456	1,493	1,510
	Subscriber Line Charges ⁵	10,827	10,141	9,283	8,363	7,481	6,703	6,195	5,968	5,507	5,175	4,787
	Access ⁶	11,392	10,543	9,776	8,778	8,336	7,368	6,759	6,384	5,016	4,836	3,809
	Total Local Service and Payphone Revenues	115,474	111,478	109,795	104,876	102,847	98,313	95,422	93,105	90,994	90,495	87,162
Mobile Revenues	Total Mobile Service Revenues⁷	112,442	117,939	120,934	114,625	111,643	107,393	105,183	98,160	86,998	75,263	65,636
Toll Service Revenues	Operator ⁸	5,577	5,874	5,444	4,340	3,585	3,162	3,092	3,064	2,785	2,351	1,876
	Non-Operator Switched Toll ⁹	41,570	42,518	39,329	34,943	27,132	27,557	25,340	23,345	22,518	21,499	18,297
	Long Distance Private Line ¹⁰	12,739	12,080	11,683	11,649	14,344	11,443	12,262	12,542	12,362	12,778	13,353
	Other Long Distance ¹¹	2,154	1,661	2,071	2,708	4,945	4,186	3,929	3,886	3,891	3,050	2,816
	Total Toll Service Revenues	62,039	62,133	58,527	53,640	50,006	46,347	44,624	42,837	41,555	39,678	36,342
Total Local, Mobile, and Toll Revenues		289,954	291,549	289,255	273,141	264,496	252,052	245,229	234,102	219,547	205,436	189,141
	Universal Service Surcharges ^{12,13}	7,314	7,902	8,110	7,911	8,662	8,986	10,012	8,986	9,084	9,041	9,135
Total Telecommunications Revenues¹⁴		297,269	299,451	297,365	281,052	273,158	261,038	255,242	243,088	228,631	214,477	198,276
	Total Non-Telecommunications Revenues ¹⁵	101,061	131,615	151,494	158,859	173,228	214,538	224,487	251,892	268,260	301,121	311,404
Total Reported Revenues		\$398,329	\$431,066	\$448,860	\$439,911	\$446,386	\$475,576	\$479,729	\$494,981	\$496,892	\$515,598	\$509,679

Footnotes to Table 1.1

¹ Dollar amounts are calculated using the sum of Lines 303a, 308a (Federal and State USF Support Revenues), and Line 404a from Form 499-A.

² Dollar amounts are calculated using the sum of Lines 306a and 407a from Form 499-A.

³ Dollar amounts are calculated using the sum of Lines 305a and 406a from Form 499-A.

⁴ Dollar amounts are calculated using the sum of Lines 307a and 408a from Form 499-A.

⁵ Dollar amounts are calculated using Line 405a from Form 499-A. As of 2012, includes Access Recovery Charge (ARC).

⁶ Dollar amounts are calculated using Line 304a from Form 499-A.

⁷ Dollar amounts are calculated using the sum of Lines 309a, 409a, and 410a from Form 499-A.

⁸ Dollar amounts are calculated using the sum of Lines 310a, 411a, 412a, and 413a from Form 499-A.

⁹ Dollar amounts are calculated using the sum of Lines 311a and 414a from Form 499-A.

¹⁰ Dollar amounts are calculated using the sum of Lines 312a and 415a from Form 499-A.

¹¹ Dollar amounts are calculated using the sum of Lines 313a, 314a, 416a, and 417a from Form 499-A.

¹² The surcharge figure indicates only surcharges that have been explicitly reported as such in Form 499-A and does not account for implicit surcharge revenues where carriers collect the surcharge through higher prices.

¹³ Dollar amounts are calculated using Line 403a from Form 499-A.

¹⁴ Subtotal includes surcharge.

¹⁵ Dollar amounts are calculated using Line 418a from Form 499-A.

Note : Detail may not add to totals due to rounding.

Source : FCC Form 499-A based on filings as of September 7, 2017.

Table 1.2
Filer Revenues,¹ Wholesale vs. Retail: 2006 - 2016
(in Millions of Dollars)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Wholesale (Carrier's Carrier) Telecommunications Revenues²	Local Service ^{3,4}	\$39,392	\$38,383	\$39,200	\$38,285	\$37,955	\$39,807	\$39,783	\$39,101	\$37,974	\$38,976	\$36,180
	Mobile Service ⁵	5,187	5,360	5,630	4,284	5,006	5,512	5,587	5,384	5,334	5,025	4,601
	Toll Service ⁶	15,101	16,093	13,843	13,003	15,549	11,921	11,425	10,911	10,472	9,955	9,714
	Total Wholesale Revenues	59,679	59,836	58,672	55,571	58,510	57,240	56,796	55,396	53,780	53,955	50,496
	Intrastate ⁷	24,848	22,566	21,836	20,173	22,484	20,379	18,860	17,236	16,182	15,775	13,749
	Interstate and International ^{8,9}	34,831	37,270	36,837	35,399	36,026	36,861	37,936	38,160	37,598	38,180	36,747
Percentage Interstate/International	58%	62%	63%	64%	62%	64%	67%	69%	70%	71%	73%	
Retail (End User) Telecommunications Revenues	Local Service ^{3,10}	\$76,082	\$73,095	\$70,598	\$66,591	\$64,892	\$58,506	\$55,639	\$54,004	\$53,020	\$51,519	\$50,982
	Mobile Service ¹¹	107,255	112,579	115,304	110,341	106,637	101,881	99,596	92,776	81,664	70,238	61,035
	Toll Service ¹²	46,938	46,040	44,681	40,637	34,457	34,426	33,198	31,927	31,083	29,724	26,628
	Universal Service Surcharges ¹³	7,314	7,902	8,110	7,911	8,662	8,986	10,012	8,986	9,084	9,041	9,135
	Total Retail Revenues	\$237,589	\$239,615	\$238,693	\$225,481	\$214,648	\$203,798	\$198,446	\$187,693	\$174,851	\$160,522	\$147,780
	Intrastate ¹⁴	157,653	158,380	157,737	149,493	142,356	133,475	128,409	119,294	107,909	96,592	87,598
Interstate and International ^{1,8,15}	79,937	81,235	80,956	75,988	72,292	70,323	70,037	68,399	66,942	63,930	60,181	
Percentage Interstate/International	34%	34%	34%	34%	34%	35%	35%	36%	38%	40%	41%	
Total Telecommunications Revenues (Wholesale + Retail)	Local Service ³	\$115,474	\$111,478	\$109,798	\$104,876	\$102,847	\$98,313	\$95,422	\$93,105	\$90,994	\$90,495	\$87,162
	Mobile Service	112,442	117,939	120,934	114,625	111,643	107,393	105,183	98,160	86,998	75,263	65,636
	Toll Service	62,039	62,133	58,523	53,640	50,006	46,347	44,624	42,837	41,555	39,678	36,342
	Universal Service Surcharges ¹³	7,314	7,902	8,110	7,911	8,662	8,986	10,012	8,986	9,084	9,041	9,135
	Total Telecommunications Revenues	\$297,268	\$299,451	\$297,365	\$281,052	\$273,158	\$261,038	\$255,242	\$243,088	\$228,631	\$214,477	\$198,276
	Intrastate	182,501	180,946	179,573	169,666	164,840	153,854	147,269	136,530	124,091	112,367	101,347
Interstate and International ⁸	114,768	118,505	117,793	111,387	108,318	107,184	107,972	106,559	104,540	102,110	96,929	
Percentage Interstate/International	39%	40%	40%	40%	40%	41%	42%	44%	46%	48%	49%	
Total Non-Telecommunications Revenues	\$101,061	\$131,615	\$151,494	\$158,859	\$173,228	\$214,538	\$224,487	\$251,892	\$268,260	\$301,121	\$311,404	
Total Reported Revenues	\$398,329	\$431,066	\$448,859	\$439,911	\$446,386	\$475,576	\$479,729	\$494,981	\$496,892	\$515,598	\$509,679	

Footnotes to Table 1.2

¹ Data include revenues for *de minimis* filers, as well as for other carriers that are exempt from universal service contribution requirements.

² Wholesale revenues are reported on the FCC Form 499-A as sales to other universal service contributors for resale. This includes, for example, access services that local exchange carriers provide to toll carriers. Sales to *de minimis* resellers, end-user customers, government-only providers, international-only providers, and any other non-contributors are treated as end-user revenues. Filers contribute to the universal service funding mechanisms based on their end-user interstate and international revenues. *See* Table 1.5 for further details on the USF contribution base.

³ Payphone revenues and interconnected Voice over Internet Protocol (VoIP) revenues are included with local service revenues in this table.

⁴ Dollar amounts are calculated using the sum of Lines 303a to 308a from Form 499-A.

⁵ Dollar amounts are calculated using Line 309a from Form 499-A.

⁶ Dollar amounts are calculated using the sum of Lines 310a to 314a from Form 499-A.

⁷ Dollar amounts are calculated using the sum of Lines 303a to 314a, minus the sum of Lines 303d to 314d, minus the sum of Lines 303e to 314e from Form 499-A.

⁸ Revenues from calls that both originate and terminate in foreign points are reported as end-user revenues and are included in this table, but are not included in the universal service contribution base. This line best represents the USF contribution base, which is further described in Table 1.5.

⁹ Dollar amounts are calculated using the sum of Lines 303d to 314d, plus the sum of Lines 303e to 314e from Form 499-A.

¹⁰ Dollar amounts are calculated using the sum of Lines 404a to 408a from Form 499-A.

¹¹ Dollar amounts are calculated using the sum of Lines 409a and 410a from Form 499-A.

¹² Dollar amounts are calculated using the sum of Lines 411a to 417a from Form 499-A.

¹³ Dollar amounts are calculated using Line 403a from Form 499-A. Surcharges are contribution amounts passed through to end users.

¹⁴ Dollar amounts are calculated using the sum of Lines 403a to 417a, minus the sum of Lines 403d to 417d, minus the sum of Lines 403e to 417e from Form 499-A.

¹⁵ This line best represents the USF contribution base, which is further described in Table 1.5. Dollar amounts are calculated using the sum
Note : Detail may not add to totals due to rounding.

Source : FCC Form 499-A based on filings as of September 7, 2017.

Table 1.3
2016 Filer Revenues by Service Type: Top 5 Affiliated Entities vs. Other Companies
(in Millions of Dollars)

		Top 5 Affiliated Entities¹	Other Companies	Total
Local Service and Payphone Revenues	Local Exchange ²	\$20,202	\$20,096	\$40,298
	Pay Telephone ³	5	266	271
	Local Private Line ⁴	20,551	9,921	30,472
	Other Local ⁵	881	629	1,510
	Federal and State USF Support ⁶	1,419	4,597	6,016
	Subscriber Line Charges ⁷	2,465	2,322	4,787
	Access ⁸	1,952	1,857	3,809
	Total Local Service and Payphone Revenues	47,474	39,688	87,162
Mobile Revenues	Total Mobile Service Revenues⁹	58,447	7,189	65,636
Toll Service Revenues	Operator ¹⁰	110	1,766	1,876
	Non-Operator Switched Toll ¹¹	8,124	10,174	18,297
	Long Distance Private Line ¹²	7,459	5,894	13,353
	Other Long Distance ¹³	482	2,334	2,816
	Total Toll Service Revenues	16,175	20,167	36,342
Total Local, Mobile, and Toll Revenues		122,096	67,045	189,141
	Universal Service Surcharges ¹⁴	6,489	2,646	9,135
Total Telecommunications Revenues		128,586	69,690	198,276
	Total Non-Telecommunications Revenues ¹⁵	208,897	102,507	311,404
Total Reported Revenues		\$337,482	\$172,197	\$509,679

¹ The "Top 5 Affiliated Entities" are those with the greatest revenues as defined by Line 419a, which includes Lines 303a to 314a and Lines 403a to 418a on Form 499-A. These companies are (in alphabetical order): AT&T Inc., CenturyLink, Deutsche Telekom AG, SoftBank Corporation, and Verizon Communications. The affiliated entity structure is current as of year-end 2016.

² Dollar amounts are calculated using the sum of Lines 303a and 404a from Form 499-A.

³ Dollar amounts are calculated using the sum of Lines 306a and 407a from Form 499-A.

⁴ Dollar amounts are calculated using the sum of Lines 305a and 406a from Form 499-A.

⁵ Dollar amounts are calculated using the sum of Lines 307a and 408a from Form 499-A.

⁶ Dollar amounts are calculated using Line 308a from Form 499-A.

⁷ Dollar amounts are calculated using Line 405a from Form 499-A. As of 2012, this amount also includes the Access Recovery Charge.

⁸ Dollar amounts are calculated using Line 304a from Form 499-A.

⁹ Dollar amounts are calculated using the sum of Lines 309a, 409a, and 410a from Form 499-A.

¹⁰ Dollar amounts are calculated using the sum of Lines 310a, 411a, 412a, and 413a from Form 499-A.

¹¹ Dollar amounts are calculated using the sum of Lines 311a and 414a from Form 499-A.

¹² Dollar amounts are calculated using the sum of Lines 312a and 415a from Form 499-A.

¹³ Dollar amounts are calculated using the sum of Lines 313a, 314a, 416a, and 417a from Form 499-A.

¹⁴ Dollar amounts are calculated using Line 403a from Form 499-A.

¹⁵ Dollar amounts are calculated using Line 418a from Form 499-A.

Note : Detail may not add to totals due to rounding.

Source : FCC Form 499-A, based on filings as of September 7, 2017.

Table 1.4
Telecommunications Revenue Reported on FCC Form 499-Q: 2015-2017
(in Millions of Dollars)

Data from FCC Form 499-Q			All Filers	LIRE Exemption ¹	Total Less LIRE
Projected Revenues for 2015	Interstate and International ²	Retail (End User) Billed ³	\$64,691		
		Retail Net of Uncollectibles ⁴	64,066	(2,881)	61,185
		Implied Uncollectible Rate	1.0%		
Historical Revenues Reported for 2015	Intrastate, Interstate, and International	Wholesale (Carrier's Carrier) Billed ⁵	52,382		
		Retail (End User) Billed	160,970		
		Total Revenue	213,352		
	Interstate and International	Retail (End User) Billed	63,447		
Projected Revenues for 2016	Interstate and International	Retail (End User) Billed	61,506		
		Retail Net of Uncollectibles	60,955	(2,446)	58,509
		Implied Uncollectible Rate	0.9%		
Historical Revenues Reported for 2016	Intrastate, Interstate, and International	Wholesale (Carrier's Carrier) Billed	50,246		
		Retail (End User) Billed	148,259		
		Total Revenue	198,505		
	Interstate and International	Retail (End User) Billed	60,071		
Projected Revenues for 2017	Interstate and International	Retail (End User) Billed ⁶	56,323		
		Retail Net of Uncollectibles ^{7,8}	55,765	(2,019)	53,656
		Implied Uncollectible Rate	0.99%		
Historical Revenues Reported for First Half of 2017	Intrastate, Interstate, and International	Wholesale (Carrier's Carrier) Billed ⁹	23,522		
		Retail (End User) Billed ¹⁰	69,827		
		Total Revenue	93,348		
	Interstate and International	Retail (End User) Billed ¹¹	28,354		

¹ A provider receives the Limited International Revenue Exemption (LIRE) and its international revenues are excluded from the contribution base if the total amount of interstate end-user revenues for the filing entity, consolidated with all affiliates, is less than 12% of the total of interstate and international end-user revenues for the filing entity consolidated with all affiliates. Affiliated filer entities who do not pass the 12% rule, but whose USF obligation exceeds its interstate revenue, may be considered for the LIRE exemption on a case by case basis. See 47 C.F.R. § 54.706(c). In addition, filers that provide only international services are exempt regardless of services offered by affiliates.

² Projected intrastate revenues are not reported on FCC Form 499-Q.

³ Prior to 2014, this line was referred to as "Billed to End Users."

⁴ Prior to 2014, this line was referred to as "Collected from End Users."

⁵ Prior to 2014, this line was referred to as "Billed to Resellers."

⁶ Dollar amounts for projected revenues billed to end users are calculated using the sum of Lines 119b and 119c from Form 499-Q.

⁷ Dollar amounts for projected revenues collected from end users are calculated using the sum of Lines 120b and 120c from Form 499-Q.

⁸ Dollar amounts for projected LIRE exempt revenues are calculated using the sum of Lines 120b and 120c in the Form 499Q filings from those filers who are LIRE-exempt.

⁹ Dollar amounts for historical revenues billed to wholesaler is calculated using Line 115a from Form 499-Q.

¹⁰ Dollar amounts for historical revenues billed to retail is calculated using Line 116a from Form 499-Q.

¹¹ Dollar amounts for interstate and international historical revenues billed to end users is calculated using the sum of Lines 116b and 116c from Form 499-Q.

Note: Detail may not add to totals due to rounding.

Source: FCC Form 499-Q.

Table 1.5
USF Contribution Base by Year¹: 2006-2016
(in Millions of Dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenues Subject to USF Contribution											
Billed interstate and international retail (end-user) revenues (includes Universal Service Surcharge) [Line 403 to Line 417, parts (d) and (e)]	\$79,937	\$81,235	\$80,956	\$75,988	\$72,292	\$70,323	\$70,037	\$68,399	\$66,942	\$63,930	\$60,181
less revenues for international-to-international services [Line 412(e)]	708	886	862	576	469	452	444	589	673	362	174
less international revenues of international-only filers and international revenues that were excluded because of the LIRE Exemption ²	3,598	3,978	4,148	3,393	3,326	3,079	2,653	3,086	2,827	2,616	1,960
less interstate and other international revenues for filers who are de minimis or otherwise exempt from universal service support requirements	57	50	51	49	34	31	28	31	31	31	31
less uncollectible contribution base revenues [Line 422(d) + Line 422(e)] ³	1,073	1,301	1,131	1,075	960	787	709	610	527	470	427
equals	\$74,499	\$75,020	\$74,764	\$70,895	\$67,503	\$65,971	\$66,203	\$64,083	\$62,884	\$60,451	\$57,590

¹ This table shows the contribution base for the Universal Service Fund (USF), but the actual amounts used for determining contributions may differ due to the following factors: (1) Adjustments are made by the Administrator to account for additional and corrected filings received; (2) Exempt amounts were based on revenues and the filer type (i.e., principal business activity) information contained in the FCC Form 499-A filings; (3) The Administrator may use carrier type, revenue type, Line 603 exemption certifications, and additional information requested from filers to determine which filers are required to contribute; (4) The Administrator bills delinquent filers based on estimated revenues and may, in some instances, include estimated revenue amounts in contribution base amounts; (5) The universal service contribution factors are set quarterly based on FCC Form 499-Q filings; and (6) FCC Form 499-A data are used for true-up and auditing purposes. As a result of these factors, actual contribution bases have been based on different amounts than those shown.

² A provider receives the Limited International Revenue Exemption (LIRE) and its international revenues are excluded from the contribution base if the total amount of interstate end-user revenues for the filing entity consolidated with all affiliates is less than 12% of the total of interstate and international end-user revenues for the filing entity consolidated with all affiliates. Affiliated filer entities who do not pass the 12% rule, but whose USF obligation exceeds its interstate revenue may request to be considered for the LIRE exemption on a case by case basis. See 47 C.F.R. § 54.706(c). In addition, filers that provide only international services are exempt regardless of services offered by affiliates.

³ Does not include uncollectible amounts associated with filers who are de minimis or LIRE exempt.

Note : Detail may not add to totals due to rounding. Revisions have been made for 2007.

Source : FCC Form 499-A based on filings as of September 7, 2017.

Table 1.6
Universal Service Fund Contribution Factor¹

Year	Quarter	Factor
2006	First Quarter	10.2
	Second Quarter	10.9
	Third Quarter	10.5
	Fourth Quarter	9.1
2007	First Quarter	9.7
	Second Quarter	11.7
	Third Quarter	11.3
	Fourth Quarter	11.0
2008	First Quarter	10.2
	Second Quarter	11.3
	Third Quarter	11.4
	Fourth Quarter	11.4
2009	First Quarter	9.5
	Second Quarter	11.3
	Third Quarter	12.9
	Fourth Quarter	12.3
2010	First Quarter	14.1
	Second Quarter	15.3
	Third Quarter	13.6
	Fourth Quarter	12.9
2011	First Quarter	15.5
	Second Quarter	14.9
	Third Quarter	14.4
	Fourth Quarter	15.3
2012	First Quarter	17.9
	Second Quarter	17.4
	Third Quarter	15.7
	Fourth Quarter	17.4
2013	First Quarter	16.1
	Second Quarter	15.5
	Third Quarter	15.1
	Fourth Quarter	15.6
2014	First Quarter	16.4
	Second Quarter	16.6
	Third Quarter	15.7
	Fourth Quarter	16.1
2015	First Quarter	16.8
	Second Quarter	17.4
	Third Quarter	17.1
	Fourth Quarter	16.7
2016	First Quarter	18.2
	Second Quarter	17.9
	Third Quarter	17.9
	Fourth Quarter	17.4
2017	First Quarter	16.7
	Second Quarter	17.4
	Third Quarter	17.1
	Fourth Quarter	18.8

¹ Carriers contribute based on projected, collected, end-user interstate and international telecommunications revenues.

Source : Quarterly Public Notices on universal service contribution factors are in CC Docket 96-45. See <http://www.fcc.gov/encyclopedia/contribution-factor-quarterly-filings-universal-service-fund-usf-management-support>.

Table 1.7
Billed Interstate and International Retail Telecommunications Revenues¹ by
Top 5 Affiliated Entities vs. Other Companies: 2009 - First Half 2017
(in Millions of Dollars)

	Top 5 Affiliated Entities²	Other Companies	Total	Top 5 Share
2009	\$54,503	\$21,485	\$75,988	72 %
2010	51,655	20,637	72,292	71
2011	50,412	19,911	70,323	72
2012	49,795	20,242	70,037	71
2013	48,530	19,870	68,399	71
2014	46,870	20,072	66,942	70
2015	43,682	20,247	63,930	68
2016	40,013	20,169	60,182	66
First Half 2017 ³	18,721	9,633	28,354	66

¹ Revenues for 2011 - 2017 are calculated as the sum of Lines 403d to 417d (interstate end user revenue) and 403e to 417e (international end user revenue) from Form 499-A. Previous years were calculated as the sum of Lines 403d to 417d (interstate end user revenue) and 403e to 417e (international end user revenue), minus Lines 412e, 422d, and 422e.

² The "Top 5 Affiliated Entities" are the five affiliated entities with the greatest revenues as defined by Line 419a, which is the sum of Lines 303a to 314a and Lines 403a to 418a, and is determined as of each year-end affiliate structure. These companies for 2009 and 2010 are (in alphabetical order): AT&T Inc., Deutsche Telekom AG, Qwest Services Corp., Sprint Nextel Corporation, and Verizon Communications. These companies for 2011 to 2012 are (in alphabetical order): AT&T Inc., CenturyLink, Deutsche Telekom AG, Sprint Nextel Corporation, and Verizon Communications. These companies for 2013 - 2017 are (in alphabetical order): AT&T Inc., CenturyLink, Deutsche Telekom AG, SoftBank Corporation (which acquired Sprint Nextel Corporation in June 2013), and Verizon Communications.

³ Preliminary revenues are calculated using Line 116b plus Line 116c for each quarter in FCC Form 499-Q.

Note : Detail may not add to totals due to rounding.

Source : Data for 2009 through 2015 are based on Form 499-A. Revenues for 2016 are based on Form 499-A filings as of September 7, 2017. Data for 2017 are based on FCC Form 499-Q.

Table 1.8
End User Telecommunications Revenue by State: 2015
(in Millions of Dollars)

	Intrastate	Interstate and International	Total	% Intrastate	% Interstate and International	% Total
Alabama	\$1,343	\$880	\$2,223	1.39 %	1.38 %	1.38 %
Alaska	221	163	385	0.23	0.26	0.24
American Samoa	8	6	13	0.01	0.01	0.01
Arizona	1,826	1,303	3,129	1.89	2.04	1.95
Arkansas	804	548	1,352	0.83	0.86	0.84
California	11,983	7,029	19,012	12.41	10.99	11.84
Colorado	1,608	1,202	2,810	1.66	1.88	1.75
Connecticut	1,200	859	2,059	1.24	1.34	1.28
Delaware	319	251	570	0.33	0.39	0.36
District of Columbia	493	375	868	0.51	0.59	0.54
Florida	5,913	3,883	9,796	6.12	6.07	6.10
Georgia	2,932	1,965	4,897	3.04	3.07	3.05
Guam	39	31	70	0.04	0.05	0.04
Hawaii	401	284	685	0.41	0.44	0.43
Idaho	413	303	716	0.43	0.47	0.45
Illinois	3,914	2,551	6,466	4.05	3.99	4.03
Indiana	1,796	1,202	2,998	1.86	1.88	1.87
Iowa	856	624	1,481	0.89	0.98	0.92
Kansas	834	545	1,379	0.86	0.85	0.86
Kentucky	1,215	852	2,067	1.26	1.33	1.29
Louisiana	1,376	842	2,219	1.42	1.32	1.38
Maine	396	284	681	0.41	0.44	0.42
Maryland	2,044	1,530	3,574	2.12	2.39	2.23
Massachusetts	2,326	1,483	3,809	2.41	2.32	2.37
Michigan	2,797	1,742	4,539	2.90	2.73	2.83
Minnesota	1,705	1,174	2,879	1.76	1.84	1.79
Mississippi	739	486	1,224	0.76	0.76	0.76
Missouri	1,700	1,189	2,889	1.76	1.86	1.80
Montana	296	227	524	0.31	0.36	0.33
Nebraska	561	425	986	0.58	0.66	0.61
Nevada	843	560	1,402	0.87	0.88	0.87
New Hampshire	420	315	735	0.43	0.49	0.46
New Jersey	3,149	2,222	5,371	3.26	3.48	3.35
New Mexico	554	411	965	0.57	0.64	0.60
New York	6,814	4,196	11,011	7.05	6.56	6.86
North Carolina	2,909	1,970	4,879	3.01	3.08	3.04
North Dakota	219	163	382	0.23	0.26	0.24
N. Mariana Islands	9	6	15	0.01	0.01	0.01
Ohio	3,421	2,192	5,613	3.54	3.43	3.50
Oklahoma	1,041	665	1,707	1.08	1.04	1.06
Oregon	1,111	774	1,886	1.15	1.21	1.17
Pennsylvania	4,116	2,808	6,924	4.26	4.39	4.31
Puerto Rico	807	663	1,470	0.83	1.04	0.92
Rhode Island	326	205	531	0.34	0.32	0.33
South Carolina	1,279	902	2,181	1.32	1.41	1.36
South Dakota	249	178	426	0.26	0.28	0.27
Tennessee	1,909	1,227	3,135	1.98	1.92	1.95
Texas	7,308	4,504	11,812	7.57	7.05	7.36
Utah	722	508	1,230	0.75	0.79	0.77
Vermont	209	165	374	0.22	0.26	0.23
Virgin Islands	42	51	93	0.04	0.08	0.06
Virginia	2,669	1,919	4,588	2.76	3.00	2.86
Washington	2,041	1,377	3,419	2.11	2.15	2.13
West Virginia	524	431	955	0.54	0.67	0.59
Wisconsin	1,670	1,148	2,818	1.73	1.80	1.76
Wyoming	171	128	299	0.18	0.20	0.19
Total	\$96,592	\$63,930	\$160,522	100.00 %	100.00 %	100.00 %

Note: Figures may not add to totals due to rounding.

Source: FCC/WCB staff estimates. For methodology end-user revenue per state, see the Technical Appendix at <http://www.fcc.gov/encyclopedia/federal-state-joint-board-monitoring-reports>.

Table 1.9
Universal Service Support Mechanisms by State: 2016
(Annual Payments and Contributions in Thousands of Dollars)

	Payments from USF to Providers						Estimated Contributions ³		Estimated Net Dollar Flow ⁴
	High-Cost Support ²	Low-Income Support	Schools & Libraries	Rural Health Care	Total		Amount	% of Total	
					Amount	% of Total			
Alabama	\$32,982	\$20,157	\$51,552	\$3,024	\$107,715	1.24 %	\$122,348	1.38 %	-\$14,633
Alaska	179,057	13,498	85,225	100,858	378,637	4.35	22,701	0.26	355,937
American Samoa	3,266	21	1,065	0	4,352	0.05	764	0.01	3,588
Arizona	71,524	47,174	58,566	7,053	184,317	2.12	181,100	2.04	3,217
Arkansas	113,361	11,158	41,477	8,419	174,415	2.00	76,180	0.86	98,235
California	168,924	233,797	293,804	17,491	714,016	8.20	976,777	10.99	-262,761
Colorado	59,392	9,756	21,769	4,869	95,786	1.10	167,028	1.88	-71,242
Connecticut	454	13,164	19,024	289	32,931	0.38	119,429	1.34	-86,498
Delaware	228	4,128	5,425	0	9,781	0.11	34,848	0.39	-25,068
District of Columbia	0	5,106	6,401	0	11,507	0.13	52,128	0.59	-40,620
Florida	60,719	97,382	96,709	4,466	259,276	2.98	539,589	6.07	-280,312
Georgia	113,940	51,038	88,799	8,421	262,198	3.01	273,110	3.07	-10,912
Guam	12,383	157	679	42	13,261	0.15	4,253	0.05	9,008
Hawaii	8,297	2,775	8,424	21	19,517	0.22	39,533	0.44	-20,016
Idaho	42,915	1,529	9,080	2,015	55,540	0.64	42,080	0.47	13,460
Illinois	111,370	49,194	80,778	4,620	245,962	2.82	354,549	3.99	-108,587
Indiana	112,270	23,940	61,266	4,397	201,873	2.32	166,992	1.88	34,881
Iowa	179,571	7,021	15,606	2,511	204,710	2.35	86,758	0.98	117,952
Kansas	169,021	6,664	21,467	3,780	200,932	2.31	75,706	0.85	125,226
Kentucky	149,860	28,831	43,607	5,011	227,309	2.61	118,381	1.33	108,929
Louisiana	88,078	26,744	60,690	2,887	178,400	2.05	117,059	1.32	61,340
Maine	30,789	4,297	7,182	1,041	43,308	0.50	39,488	0.44	3,820
Maryland	3,629	23,651	21,659	197	49,135	0.56	212,613	2.39	-163,477
Massachusetts	2,392	23,796	36,382	491	63,061	0.72	206,090	2.32	-143,029
Michigan	84,718	61,828	51,332	3,482	201,359	2.31	242,099	2.73	-40,739
Minnesota	169,575	12,013	31,750	4,188	217,526	2.50	163,183	1.84	54,343
Mississippi	180,155	16,816	33,234	9,503	239,709	2.75	67,491	0.76	172,218
Missouri	164,861	15,734	46,736	5,500	232,831	2.67	165,255	1.86	67,576
Montana	101,649	1,488	4,950	1,965	110,052	1.26	31,590	0.36	78,463
Nebraska	90,655	899	11,957	3,455	106,966	1.23	59,032	0.66	47,934
Nevada	25,319	13,082	10,674	883	49,958	0.57	77,804	0.88	-27,846
New Hampshire	13,414	1,915	4,171	551	20,052	0.23	43,789	0.49	-23,737
New Jersey	927	28,178	58,674	0	87,779	1.01	308,828	3.48	-221,049
New Mexico	79,001	20,657	29,544	5,104	134,306	1.54	57,129	0.64	77,177
New York	50,790	102,236	90,111	5,418	248,554	2.85	583,162	6.56	-334,608
North Carolina	85,968	37,314	91,434	6,622	221,338	2.54	273,805	3.08	-52,467
North Dakota	116,939	1,989	2,837	2,395	124,160	1.43	22,656	0.26	101,503
N. Mariana Islands	3,403	189	1,307	0	4,900	0.06	815	0.01	4,084
Ohio	83,413	62,186	77,423	2,551	225,573	2.59	304,626	3.43	-79,052
Oklahoma	131,694	89,897	57,224	10,762	289,577	3.32	92,474	1.04	197,103
Oregon	76,252	7,224	18,975	4,440	106,892	1.23	107,619	1.21	-728
Pennsylvania	72,398	57,562	58,842	4,440	193,242	2.22	390,161	4.39	-196,919
Puerto Rico	115,237	65,965	43,160	33	224,395	2.58	92,133	1.04	132,263
Rhode Island	30	5,828	3,780	0	9,639	0.11	28,484	0.32	-18,846
South Carolina	110,224	23,528	49,583	2,146	185,480	2.13	125,326	1.41	60,154
South Dakota	98,757	1,138	5,749	1,602	107,246	1.23	24,694	0.28	82,552
Tennessee	90,299	34,298	57,494	5,021	187,112	2.15	170,451	1.92	16,661
Texas	296,301	95,466	244,014	12,188	647,969	7.44	625,888	7.05	22,081
Utah	31,467	3,624	23,363	1,346	59,800	0.69	70,605	0.79	-10,805
Vermont	21,043	1,428	4,090	346	26,907	0.31	22,890	0.26	4,016
Virgin Islands	16,428	407	2,992	0	19,827	0.23	7,104	0.08	12,723
Virginia	87,189	19,792	44,212	7,987	159,179	1.83	266,621	3.00	-107,442
Washington	80,129	18,973	37,389	1,450	137,941	1.58	191,410	2.15	-53,469
West Virginia	60,230	10,319	15,417	1,395	87,361	1.00	59,917	0.67	27,443
Wisconsin	193,929	20,369	31,178	10,999	256,475	2.94	159,572	1.80	96,902
Wyoming	43,211	88	6,528	403	50,230	0.58	17,819	0.20	32,411
Total	\$4,490,029	\$1,537,409	\$2,386,757	\$298,076	\$8,712,276	100.00 %	\$8,883,939	100.00 %	-\$171,663

Notes: Figures may not add due to rounding.

¹ Data are from USAC.

² High-cost support excludes penalties from Mobility Fund and includes recovered forfeited funds for CAF-Phase I Support.

³ Contributions include administrative cost of approximately \$172 million, as shown in USAC's Annual Report. Allocation of contributions among states is an FCC staff estimate. See the Technical Appendix at <http://www.fcc.gov/encyclopedia/federal-state-joint-board-monitoring-reports>.

⁴ Net dollar flow is positive when payments from USF to carriers exceed contributions to USF. Total is negative because of administrative expenses.

Table 1.10
Universal Service Disbursements 2001-2016
(in Millions of Dollars)

Year	High-Cost Support	Low-Income Support	Rural Health Care	Schools and Libraries	Total
2001	\$2,602	\$584	\$8	\$1,464	\$4,659
2002	2,978	673	16	1,683	5,350
2003	3,273	713	3	1,644	5,633
2004	3,488	759	1	1,076	5,324
2005	3,824	809	26	1,862	6,520
2006	4,096	820	41	1,669	6,626
2007	4,287	823	37	1,808	6,955
2008	4,478	819	49	1,760	7,106
2009	4,292	1,025	72	1,878	7,268
2010	4,268	1,316	110	2,282	7,976
2011	4,031	1,751	141	2,233	8,156
2012	4,147	2,189	155	2,218	8,710
2013	4,165	1,798	159	2,204	8,326
2014	3,733	1,660	193	2,269	7,855
2015	4,499	1,514	279	2,080	8,372
2016	4,490	1,537	298	2,387	8,712

Notes : Figures may not add due to rounding. The figures used in this table are for the calendar year and include disbursements that were committed over several years but paid out in the respective calendar year. In Sections 4 and 5, figures for the Schools and Libraries program and the Rural Health Care program are reported based on fiscal year rather than calendar year. High-cost support excludes penalties for Mobility Fund and includes recovered forfeited funds for CAF-Phase I Support.

Source : Universal Service Administration Company (USAC).

Table 1.11
Universal Service Program Requirements and Contribution Factors for 2017
(in Millions of Dollars)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
High Cost					
High Cost Loop Support	\$158.95	\$155.34	\$125.65	\$125.65	\$565.59
Broadband Loop Support	\$240.94	\$233.97	\$186.12	\$186.12	\$847.15
CAF - Phase I Frozen Support ¹	\$41.69	\$36.75	\$36.73	\$36.75	\$151.92
Frozen Competitive ETC Support ²	\$144.63	\$124.59	\$124.60	\$123.80	\$517.62
CAF - Intercarrier Compensation Support	\$107.72	\$107.96	\$106.84	\$102.83	\$425.35
CAF - Phase II Cost Model	\$397.22	\$402.14	\$394.56	\$390.78	\$1,584.70
Rural Broadband Experiments	\$0.77	\$0.83	\$0.83	\$0.83	\$3.26
Alternative Connect America Cost Model			\$138.95	\$138.95	\$277.90
Alaska Plan Support		\$32.08	\$32.08	\$32.08	\$96.24
Change to High-Cost Account ³	\$33.08	\$31.34	-\$21.36	-\$12.79	\$30.27
Prior Period Adjustment	-\$9.85	-\$3.86	-\$15.07	\$15.67	-\$13.11
USAC Administrative Costs	\$11.61	\$13.36	\$9.58	\$10.14	\$44.69
Interest Income ⁴	-\$4.14	-\$4.39	-\$4.26	-\$4.74	-\$17.53
Program Total	\$1,122.62	\$1,130.11	\$1,115.25	\$1,146.07	\$4,514.05
Low Income					
Lifeline Assistance	\$381.11	\$373.83	\$330.26	\$319.85	\$1,405.05
Link-Up	\$0.12	\$0.07	\$0.09	\$0.04	\$0.32
Prior Period Adjustment	-\$26.13	-\$27.03	-\$54.67	-\$44.46	-\$152.29
USAC Administrative Costs	\$7.36	\$11.40	\$8.49	\$14.69	\$41.94
Interest Income ⁴	-\$0.15	-\$0.14	-\$0.17	-\$0.28	-\$0.74
Program Total	\$362.31	\$358.13	\$284.00	\$289.84	\$1,294.28
Rural Health					
Rural Health Care Support	\$89.80	\$98.90	-\$2.45	\$104.81	\$291.06
Prior Period Adjustment	-\$1.41	-\$0.35	-\$1.10	\$1.69	-\$1.17
USAC Administrative Costs	\$3.35	\$3.33	\$3.17	\$2.47	\$12.32
Interest Income ⁴	-\$0.70	-\$0.81	-\$0.85	-\$1.17	-\$3.53
Program Total	\$91.04	\$101.07	-\$1.23	\$107.80	\$298.68
Schools & Libraries					
Schools and Libraries Support	\$380.03	\$380.03	\$486.57	\$486.57	\$1,733.20
Prior Period Adjustment	-\$10.58	-\$1.93	-\$6.08	\$5.77	-\$12.82
Interest Income ⁴	-\$10.08	-\$10.56	-\$10.12	-\$10.33	-\$41.09
USAC Administrative Costs	\$41.50	\$34.70	\$27.72	\$17.46	\$121.38
Program Total	\$400.87	\$402.24	\$498.09	\$499.47	\$1,800.67
Grand Total	\$1,976.84	\$1,991.55	\$1,896.11	\$2,043.18	\$7,907.68
Applicable interstate and international end-user revenues					
Reported contribution base revenues	\$13,971.51	\$13,615.14	\$13,110.46	\$13,025.59	
Circulatory Adjustment					
Amount carriers will contribute to USF in this quarter	-\$1,976.84	-\$1,991.55	-\$1,896.11	-\$2,043.18	
Subtotal	\$11,994.67	\$11,623.59	\$11,214.35	\$10,982.41	
Adjustment factor for uncollectibles	1.0%	1.0%	1.0%	1.0%	
Contribution base at the time the factor was calculated	\$11,874.72	\$11,507.35	\$11,102.21	\$10,872.59	
Contribution factor	16.7%	17.4%	17.1%	18.8%	
Contribution factor times contribution base	\$1,983.08	\$2,002.28	\$1,898.48	\$2,044.05	

¹ In the *USF/ICC Transformation Order*, the Commission converted support received by price cap carriers and their rate-of-return affiliates, including: IAS, HCMS, ICLS, LSS, and HCLS, to CAF Phase I Frozen Support. *USF/ICC Transformation Order*, paras. 128-157.

² In the *USF/ICC Transformation Order*, the Commission froze support received by competitive ETCs, including IAS, HCMS, ICLS, LSS, and HCLS at 2011 levels, effective January 1, 2012, and began phasing the frozen support down effective July 1, 2012. *USF/ICC Transformation Order*, paras. 498-532.

³ In the *USF/ICC Transformation Order*, the Commission created the Connect America reserve to be used to manage fluctuations in high-cost demand. *USF/ICC Transformation Order*, paras. 547-556. Subsequently, in 2016, in the *Rate-of-Return Reform Order*, the Commission directed USAC to eliminate the CAF reserve and to combine those funds with the high-cost account. *Connect America Fund et al.*, WC Docket No. 10-90 et al., Report and Order, Order and Order on Reconsideration and Further Notice of Proposed Rulemaking, 31 FCC Rcd 3087, 3111, paras. 17-79, n.130 (2016) (*Rate-of-Return Reform Order*).

⁴ Interest income is shown as negative because it is subtracted from expenses to yield the total.

Source : Support mechanism data are from USAC Appendix M02 from pertinent filings as shown at <http://www.usac.org/about/tools/fcc/filings/default.aspx>. Contribution factor information is available at <https://www.fcc.gov/encyclopedia/contribution-factor-quarterly-filings-universal-service-fund-usf-management-support>.

Table 1.12
Monthly Universal Service Contributions per Household
Inflation Adjusted 2015 Dollars

	Total Contributions					Residential Contributions	
	High-Cost Support	Low-Income Support	Rural Health Care	Schools and Libraries	Total	Per-Household Low Estimate	Per-Household High Estimate
2011	\$3.34	\$1.25	\$0.07	\$1.75	\$6.41	\$2.88	\$3.52
2012	3.28	1.74	0.09	1.74	6.85	3.08	3.77
2013	3.12	1.12	0.12	1.62	5.98	2.69	3.29
2014	3.05	1.13	0.16	1.60	5.94	2.67	3.26
2015	2.99	0.98	0.18	1.61	5.76	2.59	3.17
2016	2.96	1.02	0.24	1.48	5.70	2.56	3.13
2017	2.88	0.82	0.19	1.15	5.04	2.27	2.77

Notes : Performance measures reported pursuant to the *USF/ICC Transformation Order* and *Lifeline Reform Order* . Figures do not represent the average amount individual households see on their bills because universal service contribution data do not separate business from residential contributions. The Commission does not currently collect data that would allow the residential amount to be calculated accurately. FCC staff, using data from FCC Forms 477 and 499, Access filings with the FCC and a third party report, estimates that contributions based on services typically sold to residential users represent roughly one-half of overall contributions; the third party data source used in creating these estimates is the 2015 Telecommunications Industry Association (TIA) Market Forecast and Review. FCC staff believe that the residential portion of the total contribution is between 45% (low estimate) and 55% (high estimate).

Source : Universal service contributions in 2011 from Table 1.10 of the 2011 *Monitoring Report*, 2012 from Table 1.9 of the 2012 *Monitoring Report*, 2013 from Table 1.9 of the 2013 *Monitoring Report* , and for 2014 - 2017, Table 1.11 of the *Monitoring Report* for the respective year. Inflation adjusted using CPI values reported for July of each year in Table 7.3. Household data as reported in Table 6.1 were used to calculate per household amount.

Section 2 – Lifeline (Low Income)

Overview – Lifeline and Link Up Programs for Low-Income Consumers

Since 1985, the Universal Service Lifeline program has provided a discount on phone service for qualifying low-income consumers to ensure that all Americans have the opportunities and security that phone service brings, including being able to connect to jobs, family and emergency services. Recently, the Commission has made ensuring the availability of broadband service for low-income Americans a goal of the Lifeline program. In 2016, the Commission adopted an order to comprehensively reform the Lifeline program. Among other things, the Commission included broadband as a supported service in the Lifeline program, set out minimum service standards for Lifeline-supported services, and directed USAC to establish a National Eligibility Verifier to make independent subscriber eligibility determinations. Many of the reforms took effect on December 2, 2016. The initial National Verifier states are set to launch in early 2018. In 2017, the Commission adopted an order focusing enhanced Tribal lands support to facilities-based providers serving rural Tribal lands.

The Lifeline program is available to eligible low-income consumers in every state, territory, commonwealth, and on Tribal lands. The Link Up program offsets the cost of service activation to qualifying low-income households. Since 2013, Link Up has been available only on Tribal lands. Consumers with proper proof of eligibility may be qualified to enroll. To participate in the program, consumers must have an income that is at or below 135% of the federal Poverty Guidelines or participate in a qualifying assistance program. The Lifeline program is administered by the Universal Service Administrative Company (USAC).

Additional information about the Lifeline program can be found on the Commission's website at <http://www.fcc.gov/lifeline> and on USAC's website at <http://www.usac.org/li/>. Please note that the information provided in this report is based upon the program rules through June 2017.

Table 2.1
Lifeline Subscribers and Link Up Beneficiaries
(in Thousands)

Year	Lifeline			Link Up		
	Non-Tribal	Tribal	Total	Non-Tribal	Tribal	Total
1987			1,063			8
1988			1,829			106
1989			2,115			207
1990			2,467			513
1991			2,984			640
1992			3,440			743
1993			3,972			737
1994			4,423			838
1995			4,914			824
1996			5,233			808
1997 ¹			5,111			
1998	5,376	0	5,376	2,195	0	2,195
1999	5,638	0	5,638	1,835	0	1,835
2000	5,856	4	5,861	1,690	2	1,692
2001	6,088	53	6,140	1,670	23	1,694
2002	6,393	111	6,504	1,657	30	1,687
2003	6,352	146	6,498	1,662	23	1,685
2004	6,612	176	6,788	1,670	42	1,712
2005	6,829	234	7,063	1,672	90	1,762
2006	6,634	287	6,921	1,553	101	1,654
2007	6,615	328	6,943	1,382	112	1,494
2008	6,382	350	6,732	1,510	118	1,627
2009	7,661	371	8,032	1,751	111	1,862
2010	9,883	382	10,265	2,509	126	2,635
2011	13,301	463	13,764	4,014	285	4,300
2012	16,405	761	17,166	1,228	180	1,408
2013	13,834	650	14,483	0	17	17
2014	12,943	502	13,446	0	29	29
2015	12,117	418	12,535	0	20	20
2016	12,408	361	12,769	0	21	21

Note : The Lifeline subscribers and Link Up beneficiaries represent USAC data for the time period January through December, including true-ups reported through August 2017. Data for 2010-2015 were revised because carriers can revise their filings. When carriers revise their line counts up, they receive more support and when carriers revise their line counts down, they receive less support.

¹ Subscriber data were not collected in 1997. Lifeline subscribership data were estimated by USAC. Link up data were not estimated.

Source : Universal Service Administrative Company.

Table 2.2
Low-Income Claims
(in Thousands of Dollars)

Year	Lifeline					Link Up			Total
	General	Additional Tribal ²	TLS ³	PICC ⁴	Total	Non-Tribal	Tribal	Total	
1988	\$31,952	\$0	\$0	\$0	\$31,952	\$1,991	\$0	\$1,991	\$33,943
1989	50,878	0	0	0	50,878	4,480	0	4,480	55,358
1990	62,464	0	0	0	62,464	11,351	0	11,351	73,815
1991	79,104	0	0	0	79,104	13,705	0	13,705	92,809
1992	93,766	0	0	0	93,766	15,342	0	15,342	109,108
1993	109,083	0	0	0	109,083	17,019	0	17,019	126,102
1994	123,284	0	0	0	123,284	18,573	0	18,573	141,857
1995	137,277	0	0	0	137,277	18,392	0	18,392	155,670
1996	148,186	0	0	0	148,186	18,247	0	18,247	166,433
1997	147,579	0	0	0	147,579	13,711	0	13,711	161,290
1998 ¹	416,504	0	2,700	2,802	422,006	42,461	0	42,461	464,467
1999	438,578	0	3,134	4,450	446,162	33,988	0	33,988	480,150
2000	482,052	522	2,846	3,168	488,588	30,411	30	30,441	519,029
2001	548,419	6,960	3,195	0	558,574	30,314	475	30,788	589,362
2002	623,350	17,955	3,779	0	645,083	30,323	700	31,022	676,106
2003	657,095	24,167	4,425	0	685,687	30,170	515	30,686	716,373
2004	695,188	30,502	5,111	0	730,800	30,898	1,230	32,129	762,929
2005	716,133	45,124	6,215	0	767,472	31,715	2,788	34,503	801,975
2006	703,958	61,524	8,885	0	774,367	29,832	2,869	32,701	807,068
2007	710,180	73,145	8,514	0	791,839	27,816	3,575	31,391	823,230
2008	695,015	80,914	8,634	0	784,563	30,682	6,578	37,260	821,823
2009	867,541	88,061	8,959	0	964,561	40,807	7,485	48,291	1,012,852
2010	1,125,599	92,877	22,197	0	1,240,674	67,268	9,798	77,066	1,317,740
2011	1,521,902	118,119	10,871	0	1,650,892	108,577	21,528	130,104	1,780,997
2012	1,919,834	210,390	6,646	0	2,136,870	34,770	11,940	46,710	2,183,580
2013	1,607,165	179,888	2,690	0	1,789,743	0	567	567	1,790,310
2014	1,492,205	137,358	0	0	1,629,563	0	640	640	1,630,203
2015	1,391,344	119,041	0	0	1,510,385	0	447	447	1,510,832
2016	1,417,308	103,575	0	0	1,520,883	0	486	486	1,521,369

Note: Data for 2010-2015 were updated to account for true-ups.

¹ Effective in 1998, the federal Lifeline support mechanism was expanded so that a basic level of assistance would be provided in all states. Further, the basic level of federal support was increased in 1998.

² Tribal Lifeline subscribers also receive General support which is currently \$9.25 per subscriber. This amount is not included in Additional Tribal support.

³ TLS is an abbreviation for toll limitation service.

⁴ Carriers no longer charge a residential Presubscribed Interexchange Carrier Charge (PICC) as of July 1, 2000.

Source: Universal Service Administrative Company.

Table 2.3
Low-Income Claims by State: 2016
(in Thousands of Dollars)

State or Jurisdiction	Lifeline		Link Up		TLS	Total
	General	Additional Tribal	Non-Tribal	Tribal		
Alabama	\$19,822	\$196	\$0	\$0	\$0	\$20,018
Alaska	3,844	9,542	0	13	0	13,399
American Samoa	54	0	0	0	0	54
Arizona	29,559	16,182	0	249	0	45,990
Arkansas	11,090	2	0	0	0	11,092
California	232,292	23	0	0	0	232,316
Colorado	9,695	0	0	0	0	9,695
Connecticut	13,151	0	0	0	0	13,151
Delaware	4,163	0	0	0	0	4,163
District Of Columbia	5,114	0	0	0	0	5,114
Florida	93,402	0	0	0	0	93,402
Georgia	50,820	0	0	0	0	50,820
Guam	155	0	0	0	0	155
Hawaii	2,150	623	0	0	0	2,774
Idaho	1,468	57	0	0	0	1,525
Illinois	48,667	0	0	0	0	48,667
Indiana	23,845	0	0	0	0	23,845
Iowa	7,146	5	0	0	0	7,151
Kansas	6,661	9	0	0	0	6,670
Kentucky	28,718	0	0	0	0	28,718
Louisiana	26,747	0	0	0	0	26,747
Maine	4,233	11	0	0	0	4,244
Maryland	23,319	0	0	0	0	23,319
Massachusetts	23,643	0	0	0	0	23,643
Michigan	60,327	107	0	0	0	60,434
Minnesota	10,847	1,063	0	0	0	11,910
Mississippi	16,152	767	0	0	0	16,920
Missouri	15,441	2	0	0	0	15,443
Montana	604	858	0	12	0	1,475
Nebraska	854	60	0	0	0	914
Nevada	12,436	267	0	0	0	12,703
New Hampshire	1,902	0	0	0	0	1,902
New Jersey	28,037	0	0	0	0	28,037
New Mexico	10,590	9,709	0	153	0	20,452
New York	101,920	0	0	0	0	101,921
North Carolina	37,498	24	0	0	0	37,522
North Dakota	982	965	0	10	0	1,956
Northern Mariana Islands	264	0	0	0	0	264
Ohio	61,672	0	0	0	0	61,672
Oklahoma	27,067	59,801	0	31	0	86,900
Oregon	7,207	36	0	0	0	7,243
Pennsylvania	57,821	0	0	0	0	57,821
Puerto Rico	65,696	0	0	0	0	65,696
Rhode Island	5,806	0	0	0	0	5,806
South Carolina	23,306	9	0	0	0	23,315
South Dakota	866	472	0	7	0	1,344
Tennessee	34,364	0	0	0	0	34,364
Texas	93,776	0	0	0	0	93,776
Utah	3,133	459	0	9	0	3,601
Vermont	1,442	0	0	0	0	1,442
Virgin Islands	354	0	0	0	0	354
Virginia	19,796	0	0	0	0	19,796
Washington	17,549	1,258	0	0	0	18,807
West Virginia	10,399	0	0	0	0	10,399
Wisconsin	19,358	1,062	0	1	0	20,421
Wyoming	83	6	0	0	0	89
Total	\$1,417,308	\$103,575	\$0	\$486	\$0	\$1,521,369

Notes : These dollars represent submitted claims to USAC for the time period January 2016 through December 2016, including true-ups reported through August 2017. Tribal Lifeline subscribers also receive General support which is currently \$9.25 per subscriber. This amount is not included in Tribal support. For Link Up, the payments and subscribers for the two categories of recipients are kept separate.

Source : Universal Service Administrative Company.

Table 2.4
Low-Income Claims Received by ILECs and CETCs
(in Thousands of Dollars)

	ILECs	CETCs	Total	Percent CETCs
1998	\$464,207	\$260	\$464,467	0.1 %
1999	479,353	796	480,150	0.2
2000	517,901	1,128	519,029	0.2
2001	585,790	3,572	589,362	0.6
2002	663,009	13,097	676,106	1.9
2003	693,378	22,994	716,373	3.2
2004	723,580	39,349	762,929	5.2
2005	734,344	67,631	801,975	8.4
2006	707,135	99,933	807,068	12.4
2007	701,990	121,240	823,230	14.7
2008	674,805	147,017	821,823	17.9
2009	642,644	370,208	1,012,852	36.6
2010	595,604	722,136	1,317,740	54.8
2011	532,226	1,248,771	1,780,997	70.1
2012	450,652	1,732,928	2,183,580	79.4
2013	296,038	1,494,273	1,790,310	83.5
2014	224,016	1,406,187	1,630,203	86.3
2015	165,731	1,345,101	1,510,832	89.0
2016	134,170	1,387,198	1,521,369	91.2

Notes: CETCs include both wireless and wireline carriers. Data for 2010-2015 were updated to account for true-ups.

Source: Universal Service Administrative Company.

Table 2.5
Low-Income Claims by Program and by Affiliated Entities: 2016
(in Thousands of Dollars)

Rank Affiliated Entity Name ¹	Lifeline Support	Link Up Support	Total Low-Income Support	Percent of Total	Cumulative Percent of Total
1 América Móvil ²	\$490,279	\$0	\$490,279	32.2%	32.2%
2 SoftBank Corp. ³	249,047	0	249,047	16.4	48.6
3 Telrite Corporation	95,446	0	95,446	6.3	54.9
4 I-Wireless, LLC	89,092	0	89,092	5.9	60.7
5 Quadrant Holdings Group LLC	84,623	0	84,623	5.6	66.3
6 Budget PrePay, Inc.	70,855	0	70,855	4.7	70.9
7 AT&T Inc.	61,157	0	61,157	4.0	75.0
8 American Broadband and Telecommunications Co.	34,170	0	34,170	2.2	77.2
9 Assist Wireless, LLC	29,320	0	29,320	1.9	79.1
10 Smith Bagley, Inc.	26,601	390	26,991	1.8	80.9
11 Blue Jay Wireless, LLC	23,859	0	23,859	1.6	82.5
12 Boomerang Wireless, LLC	23,233	0	23,233	1.5	84.0
13 TSC Acquisition Corporation	23,144	0	23,144	1.5	85.5
14 Frontier Communications Corporation	19,331	0	19,331	1.3	86.8
15 Telecom Service Bureau, Inc.	17,103	0	17,103	1.1	87.9
16 Verizon Communications Inc.	14,632	0	14,632	1.0	88.9
17 KDDI America, Inc.	14,577	0	14,577	1.0	89.8
18 TerraCom/YourTel America	13,964	0	13,964	0.9	90.8
19 CenturyLink, Inc.	12,968	0	12,968	0.9	91.6
20 True Wireless, LLC	11,896	0	11,896	0.8	92.4
21 General Communication, Inc.	11,884	3	11,887	0.8	93.2
22 Amerimex Communications Corporation	10,962	0	10,962	0.7	93.9
23 ATN International, Inc.	8,631	0	8,631	0.6	94.5
24 Amvensys Telecom Holdings	8,148	0	8,148	0.5	95.0
25 PR Wireless LLC	7,207	0	7,207	0.5	95.5
26 Cox Communications, Inc.	6,445	0	6,445	0.4	95.9
27 Nexus Communications, Inc.	4,353	0	4,353	0.3	96.2
28 Head Start Telecom, Inc.	3,929	0	3,929	0.3	96.4
29 Global Connection Inc. of America	3,794	0	3,794	0.2	96.7
30 Windstream Holdings, Inc.	3,605	0	3,605	0.2	96.9
Other Carriers	46,629	93	46,722	3.1	100.0
All Affiliated Entities	\$1,520,883	\$486	\$1,521,369	100.0%	100.0%

¹ Affiliated entities include all commonly-controlled or commonly-owned affiliates as of year-end 2016.

² América Móvil owns TracFone Wireless.

³ SoftBank Corp. owns Sprint and Virgin Mobile USA.

Source: Universal Service Administrative Company.

Table 2.6
Total Monthly Lifeline Subscribers Since January 2013

Month	Tribal Lifeline Subscribers	Non-Tribal Lifeline Subscribers	Total Lifeline Subscribers
January-13	687,479	13,303,577	13,991,056
February-13	717,843	12,944,936	13,662,779
March-13	740,931	13,107,781	13,848,712
April-13	717,844	13,230,164	13,948,008
May-13	708,079	13,602,484	14,310,563
June-13	695,675	14,016,409	14,712,084
July-13	628,270	14,220,074	14,848,344
August-13	611,174	14,445,144	15,056,318
September-13	576,349	14,522,804	15,099,153
October-13	578,015	14,497,346	15,075,361
November-13	577,565	14,290,330	14,867,895
December-13	555,205	13,824,438	14,379,643
January-14	534,278	13,438,191	13,972,469
February-14	534,495	13,498,435	14,032,930
March-14	521,032	13,449,619	13,970,651
April-14	518,174	13,351,505	13,869,679
May-14	496,103	13,193,997	13,690,100
June-14	497,044	12,959,268	13,456,312
July-14	501,147	12,767,197	13,268,344
August-14	499,482	12,759,930	13,259,412
September-14	491,773	12,849,360	13,341,133
October-14	490,847	12,737,761	13,228,608
November-14	481,791	12,376,070	12,857,861
December-14	463,668	11,936,299	12,399,967
January-15	435,030	11,183,971	11,619,001
February-15	428,878	11,231,148	11,660,026
March-15	426,301	11,364,309	11,790,610
April-15	421,292	11,526,779	11,948,071
May-15	412,394	11,804,892	12,217,286
June-15	417,345	12,021,290	12,438,635
July-15	421,841	12,321,392	12,743,233
August-15	415,063	12,573,385	12,988,448
September-15	416,886	12,781,917	13,198,803
October-15	411,379	12,890,747	13,302,126
November-15	405,288	12,864,058	13,269,346
December-15	407,188	12,836,095	13,243,283
January-16	390,973	12,395,760	12,786,733
February-16	391,762	12,363,107	12,754,869
March-16	397,601	12,435,458	12,833,059
April-16	402,272	12,566,944	12,969,216
May-16	405,493	12,637,285	13,042,778
June-16	349,277	12,723,139	13,072,416
July-16	338,467	12,787,396	13,125,863
August-16	332,773	12,433,730	12,766,503
September-16	333,456	12,447,817	12,781,273
October-16	334,714	12,330,333	12,665,047
November-16	331,315	12,151,180	12,482,495
December-16	318,624	11,623,988	11,942,612
January-17	272,898	10,986,541	11,259,439
February-17	273,754	10,834,858	11,108,612
March-17	273,329	10,671,017	10,944,346
April-17	264,467	10,457,574	10,722,041
May-17	266,564	10,403,921	10,670,485
June-17	265,292	10,365,781	10,631,073

Source : Univeral Service Administration Company.

Table 2.7
Lifeline De-Enrollments or Scheduled to be De-Enrolled by State in 2016
(in Thousands)

State	As a result of ETC recertification attempt ¹	As a result of attempt by State Administrator, ETC Access to Eligibility Data, or USAC ²	Total
Alabama	20	1	20
Alaska	8	1	9
American Samoa	0	0	0
Arizona	25	5	29
Arkansas	10	2	11
California	0	744	744
Colorado	9	1	10
Connecticut	7	1	8
Delaware	1	1	2
District of Columbia	2	1	4
Florida	25	21	46
Georgia	13	8	21
Guam	0	0	0
Hawaii	3	0	3
Idaho	0	1	2
Illinois	12	8	20
Indiana	14	5	19
Iowa	3	2	5
Kansas	6	1	7
Kentucky	13	4	16
Louisiana	14	5	19
Maine	4	0	4
Maryland	4	6	11
Massachusetts	10	8	18
Michigan	26	8	34
Minnesota	10	1	11
Mississippi	4	10	13
Missouri	23	1	23
Montana	0	1	2
Nebraska	0	0	0
Nevada	12	4	16
New Hampshire	1	1	1
New Jersey	2	7	9
New Mexico	7	4	11
New York	16	23	38
North Carolina	12	12	25
North Dakota	2	0	2
Northern Mariana Isl	1	0	1
Ohio	34	13	47
Oklahoma	48	5	53
Oregon	0	2	3
Pennsylvania	20	4	24
Puerto Rico	71	1	72
Rhode Island	6	2	8
South Carolina	19	6	25
South Dakota	1	0	1
Tennessee	6	6	12
Texas	26	30	56
Utah	1	1	2
Vermont	0	0	0
Virgin Islands	1	0	1
Virginia	5	7	12
Washington	3	13	16
West Virginia	5	3	8
Wisconsin	6	2	8
Wyoming	0	0	0
Total	572	993	1,566

¹ Column J of FCC Form 555.

² Column L of FCC Form 555.

Source: Universal Service Administrative Company.

Table 2.8
Low-Income Subscribers by State in 2016 by Facilities Type of Carrier
(in Thousands)

State	Non-Tribal			Tribal			All		
	Facilities-Based		Total	Facilities-Based		Total	Facilities-Based		Total
	No	Yes		No	Yes		No	Yes	
Alabama	122	55	178	1	#	1	123	55	179
Alaska	0	0	0	0	35	35	0	35	35
American Samoa	0	#	#	0	0	0	0	#	#
Arizona	177	34	211	3	53	56	179	87	266
Arkansas	77	23	100	0	#	#	77	23	100
California	1,075	1,018	2,093	0	#	#	1,075	1,018	2,093
Colorado	61	26	87	#	0	#	61	26	87
Connecticut	82	36	118	0	0	0	82	36	118
Delaware	25	12	38	0	0	0	25	12	38
District of Columbia	42	4	46	0	0	0	42	4	46
Florida	581	261	841	0	0	0	581	261	841
Georgia	402	56	458	0	0	0	402	56	458
Guam	0	1	1	0	0	0	0	1	1
Hawaii	15	2	17	2	#	2	17	2	19
Idaho	6	7	13	0	#	#	6	8	13
Illinois	418	20	438	0	0	0	418	20	438
Indiana	174	41	215	0	0	0	174	41	215
Iowa	46	18	64	#	0	#	46	18	64
Kansas	47	13	60	#	#	#	47	13	60
Kentucky	224	35	259	0	0	0	224	35	259
Louisiana	202	39	241	0	0	0	202	39	241
Maine	26	12	38	0	#	#	26	12	38
Maryland	154	56	210	0	0	0	154	56	210
Massachusetts	117	96	213	0	0	0	117	96	213
Michigan	437	106	543	#	#	#	437	107	543
Minnesota	58	37	94	3	#	4	61	37	98
Mississippi	113	29	143	3	#	3	116	29	146
Missouri	119	20	139	0	#	#	119	20	139
Montana	0	2	2	0	3	3	0	5	5
Nebraska	1	7	7	0	#	#	1	7	8
Nevada	79	32	111	#	1	1	79	33	112
New Hampshire	13	4	17	0	0	0	13	4	17
New Jersey	140	112	253	0	0	0	140	112	253
New Mexico	34	28	62	0	34	34	34	61	95
New York	544	374	918	0	#	#	544	374	918
North Carolina	244	94	338	0	#	#	244	94	338
North Dakota	1	4	5	2	2	4	3	6	9
Northern Mariana Islands	0	2	2	0	0	0	0	2	2
Ohio	429	126	556	0	0	0	429	126	556
Oklahoma	32	6	38	180	26	206	212	32	244
Oregon	25	40	65	#	#	#	25	40	65
Pennsylvania	421	100	521	0	0	0	421	100	521
Puerto Rico	450	142	592	0	0	0	450	142	592
Rhode Island	32	21	52	0	0	0	32	21	52
South Carolina	171	39	210	#	#	#	171	39	210
South Dakota	2	3	6	0	2	2	2	5	8
Tennessee	240	70	310	0	0	0	240	70	310
Texas	651	194	845	0	#	#	651	194	845
Utah	19	8	27	#	2	2	19	9	28
Vermont	2	11	13	0	0	0	2	11	13
Virgin Islands	1	2	3	0	0	0	1	2	3
Virginia	128	51	178	0	0	0	128	51	178
Washington	96	58	154	3	1	4	99	59	158
West Virginia	86	8	94	0	0	0	86	8	94
Wisconsin	145	26	171	1	3	4	145	29	174
Wyoming	#	1	1	#	#	#	#	1	1
Total	8,785	3,623	12,408	197	164	361	8,982	3,787	12,769

Notes : # Indicates > 0 subscribers and less than 500

Non-facilities based carriers have either submitted a compliance plan with the FCC that they are not a facilities-based provider or have been approved to be a non-facilities-based provider by the FCC. Other carriers are assumed to be facilities-based.

Source : Universal Service Administrative Company.

Section 3 – Connect America Fund (High Cost)

Overview – Connect America Fund Program

The federal universal service Connect America Fund program (formerly High-Cost Support) is designed to ensure that consumers in rural, insular, and high-cost areas have access to modern communications networks capable of providing voice and broadband service, both fixed and mobile, at rates that are reasonably comparable to those in urban areas. The program fulfills this universal service goal by allowing eligible carriers who serve these areas to recover some of their costs from the federal USF. As in the 2016 Report, all support dollar values in these tables reflect claims¹ as opposed to disbursements.² These claim dollars are subject to true-ups. For example, claims for support in 2012 may be true-up in 2014; such a true-up is reflected in the year supported (2012), not in the year the true-up was made (2014). Data on changes in local exchange carriers and High-Cost ILEC support data by study area are available at <http://www.fcc.gov/encyclopedia/neca-usac-data-0>. Please note that the information provided in this report is based upon the program rules through June 30, 2017.

¹ A “claim” is the distribution of funds *in support of a specified time period*. These funds were distributed in that period and possibly a later time period. The disbursements in later time periods are the result of true-ups to resolve differences between initial payments and disbursements necessitated by revisions to supporting data made at that later date. Claims are positive values with the possible exceptions of CAF Inter-carrier Compensation (CAF ICC) support and Connect America Cost Model (CACM) support. CAF ICC claims can be negative when a study area’s actual access recovery charge revenues in the prior two years substantially exceed the forecasted amount. Some CACM initial claims were negative as a result of true-ups when Frozen High Cost support exceeded CACM support.

² A “disbursement” is the distribution of funds in a specified time period. These funds were distributed in support of high-cost mechanisms in that period and possibly in support of earlier time periods. The disbursements in support of earlier time periods are the result of true-ups to resolve differences between initial payments and disbursements necessitated by revisions to supporting data. It is possible for disbursements to be negative, thus requiring the recipient to return dollars to the high-cost fund. Some negative disbursements are penalties (see the file “HC Penalties” in the Supplementary Material). Penalties are not included in claims.

Table 3.1
High-Cost Support Fund Claim History
(in Millions of Dollars)

Year	Rate-of-Return Carriers	Price Cap Carriers	ILEC Total	CETC Total	Total Support
2009	\$ 1,850	\$ 1,278	\$ 3,128	\$ 1,203	\$ 4,332
2010	1,928	1,165	3,093	1,185	4,278
2011	1,957	1,030	2,987	1,154	4,142
2012	1,970	1,189	3,158	967	4,126
2013	2,020	1,356	3,376	782	4,158
2014	2,047	1,115	3,161	608	3,769
2015	2,043	1,845	3,889	615	4,504
2016	2,040	1,845	3,885	676	4,560
2017*	2,248	1,787	4,035	624	4,659

Notes : Details may not appear to add up to totals due to rounding.

* Estimates for 2017 extrapolated from claims through June 2017.

Source : Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Table 3.2
High-Cost Support Fund Claim History - Rate of Return
(in Millions of Dollars)

Year	High-Cost Loop Support	Safety Net Additive Support	Safety Valve Support	Local Switching Support	Intercarrier Compensation	Broadband Loop Support¹	Alternative Connect America Model	Alaska Plan	Total Support
2009	\$ 798	\$ 29	\$ 5	\$ 240	\$ 0	\$ 777	\$ 0	\$ 0	\$ 1,850
2010	817	50	6	228	0	827	0	0	1,928
2011	806	66	6	220	0	859	0	0	1,957
2012	791	48	6	110	169	845	0	0	1,970
2013	767	31	6	0	345	871	0	0	2,020
2014	745	28	5	0	359	909	0	0	2,047
2015	718	20	5	0	377	923	0	0	2,043
2016	691	12	5	0	395	937	0	0	2,040
2017*	525	4	5	0	396	710	556	54	2,250

Note : Details may not appear to add up to totals due to rounding.

* Estimates for 2017 extrapolated from claims through June 2017.

¹ Interstate Common Line Support was expanded to include standalone broadband in January 2017 and became Connect America Fund Broadband Loop Support (CAF BLS).

Source : Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Table 3.3
High-Cost Support Fund Claim History - Price Cap
(in Millions of Dollars)

Year	High Cost Loop Support	Safety Net Additive Support	High Cost Model Support	Interstate Access Support	Local Switching Support	Frozen High Cost Support	Intercarrier Compensation Support	Connect America Cost Model	Incremental Support	Interstate Common Line Support	Total Support
2009	\$ 248	\$ 11	\$ 170	\$ 461	\$ 58	\$ 0	\$ 0	\$ 0	\$ 0	\$ 329	\$ 1,278
2010	168	12	157	457	66	0	0	0	0	306	1,165
2011	100	11	145	441	61	0	0	0	0	274	1,030
2012	0	0	0	0	0	1,037	44	0	107	0	1,189
2013	0	0	0	0	0	1,034	86	0	236	0	1,356
2014	0	0	0	0	0	1,035	69	0	11	0	1,115
2015	0	0	0	0	0	641	45	1,159	0	0	1,845
2016	0	0	0	0	0	162	35	1,648	0	0	1,845
2017*	0	0	0	0	0	147	32	1,609	0	0	1,787

Note : Details may not appear to add up to totals due to rounding.

* Estimates for 2017 extrapolated from claims through June 2017.

Source : Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Table 3.4
High-Cost Support Fund Claim History - Competitive Eligible Telecommunications Carriers
(in Millions of Dollars)

Year	High Cost Loop Support	Safety Net Additive Support	Safety Valve Support	High Cost Model	Interstate Access Support	Local Switching Support	Frozen High Cost Support	Remote Alaska Support	Mobility Fund Phase I Support	Rural Broadband Experiments	Interstate Common Line Support	Alaska Plan	Total Support
2009	\$ 352	\$ 11	\$ 0	\$ 158	\$ 104	\$ 90	\$ 0	\$ 0	\$ 0	\$ 0	\$ 488	\$ 0	\$ 1,203
2010	336	15	1	154	92	89	0	0	0	0	498	0	1,185
2011	307	21	2	146	80	89	0	0	0	0	507	0	1,154
2012	7	0	0	0	0	1	889	62	0	0	8	0	967
2013	7	0	0	0	0	1	629	62	74	0	8	0	782
2014	7	0	0	0	0	1	525	63	4	0	8	0	608
2015	2	0	0	0	0	0	513	74	16	8	2	0	615
2016	0	0	0	0	0	0	508	78	85	4	0	0	676
2017*	0	0	0	0	0	0	500	0	47	3	0	74	624

Notes : Details may not appear to add up to totals due to rounding.

* Estimates for 2017 extrapolated from claims through June 2017.

Source : Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Table 3.5
High-Cost Support Fund Claims - States: 2016
(in Thousands of Dollars)

State	Rate-of-Return Carriers	Price-Cap Carriers	ILEC Total	CETC Total	Total Support	CETC's Share
Alabama	\$ 35,327	\$ 46,258	\$ 81,585	\$ 11,294	\$ 92,880	12 %
Alaska	55,424	19,694	75,118	106,817	181,936	59
American Samoa	1,574	0	1,574	1,619	3,193	51
Arizona	43,291	23,534	66,825	6,245	73,070	9
Arkansas	43,924	65,533	109,457	2,951	112,408	3
California	47,404	121,834	169,238	38	169,276	0
Colorado	21,926	34,538	56,465	6,449	62,914	10
Connecticut	0	454	454	0	454	0
Delaware	0	228	228	0	228	0
Florida	9,713	48,494	58,207	3,143	61,350	5
Georgia	57,909	55,757	113,666	242	113,908	0
Guam	6,101	0	6,101	5,405	11,506	47
Hawaii	0	4,424	4,424	3,873	8,297	47
Idaho	23,903	15,982	39,886	3,250	43,136	8
Illinois	48,133	51,089	99,222	11,277	110,499	10
Indiana	61,555	51,128	112,683	61	112,745	0
Iowa	90,301	55,527	145,827	31,972	177,799	18
Kansas	111,559	35,949	147,508	20,509	168,016	12
Kentucky	71,568	59,069	130,637	18,519	149,156	12
Louisiana	20,300	44,596	64,896	26,737	91,633	29
Maine	9,979	13,315	23,294	7,605	30,898	25
Maryland	1,314	2,303	3,617	0	3,617	0
Massachusetts	913	1,467	2,380	0	2,380	0
Michigan	20,335	60,513	80,847	4,486	85,334	5
Minnesota	81,882	90,611	172,494	2,783	175,277	2
Mississippi	17,350	74,349	91,699	88,526	180,225	49
Missouri	62,242	92,701	154,943	10,065	165,008	6
Montana	76,478	16,310	92,788	8,043	100,831	8
Nebraska	54,830	23,934	78,764	11,162	89,926	12
Nevada	11,489	5,008	16,497	12,430	28,927	43
New Hampshire	8,783	4,377	13,159	131	13,291	1
New Jersey	633	450	1,083	0	1,083	0
New Mexico	54,658	20,283	74,941	7,203	82,144	9
New York	18,394	30,394	48,788	1,464	50,253	3
North Carolina	40,270	32,372	72,642	12,102	84,744	14
North Dakota	81,444	5,657	87,101	27,198	114,299	24
Northern Mariana Islands	0	2,627	2,627	776	3,403	23
Ohio	22,352	61,566	83,918	0	83,918	0
Oklahoma	88,596	10,844	99,440	31,641	131,081	24
Oregon	41,869	23,794	65,663	11,524	77,187	15
Pennsylvania	13,876	59,016	72,891	23	72,915	0
Puerto Rico	0	36,054	36,054	79,183	115,237	69
Rhode Island	0	30	30	0	30	0
South Carolina	89,189	18,113	107,303	1,579	108,881	1
South Dakota	83,409	9,117	92,526	2,015	94,541	2
Tennessee	54,568	33,633	88,201	2,126	90,327	2
Texas	156,711	116,876	273,587	20,872	294,459	7
Utah	25,630	4,442	30,072	99	30,171	0
Vermont	11,397	8,789	20,187	110	20,297	1
Virgin Islands	0	16,361	16,361	67	16,428	0
Virginia	28,466	51,035	79,501	8,637	88,138	10
Washington	21,106	38,113	59,219	21,783	81,002	27
West Virginia	7,175	38,068	45,243	14,861	60,105	25
Wisconsin	79,695	95,439	175,133	20,840	195,973	11
Wyoming	24,656	12,901	37,556	5,818	43,375	13
United States	2,039,601	1,844,950	3,884,551	675,557	4,560,108	15

Notes : Details may not appear to add up to totals due to rounding.

Source : Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Table 3.6
Annual High-Cost Fund Support Claims - Affiliates: 2014 - 2016
(in Millions of Dollars)

Rank	Affiliate's Name ¹	2014	2015	2016	Total	CETC's Share ²
1	AT&T Inc.	\$ 342	\$ 615	\$ 606	\$ 1,563	31 %
2	CenturyLink, Inc.	348	573	559	1,481	0
3	Frontier Communications Corporation	216	355	398	970	0
4	Windstream Holdings, Inc.	163	232	217	612	0
5	Telephone and Data Systems, Inc.	178	179	199	555	56
6	Verizon Communications Inc. ³	80	80	80	239	27
7	General Communication, Inc.	54	83	74	212	90
8	América Móvil	63	63	63	189	43
9	Telapex, Inc. ⁴	52	52	52	155	89
10	FairPoint Communications, Inc.	44	53	51	147	0
11	Deutsche Telekom AG	21	21	36	78	100
12	Consolidated Communications, Inc.	38	37	31	106	0
13	ATN International, Inc.	18	18	31	67	27
14	Golden West Telecommunications Cooperative	25	25	30	80	0
15	Rural Telephone Service/Golden Belt	32	28	26	85	40

¹ This column refers to "affiliate name" rather than "holding company" so as to include all entities under common ownership or control, to the extent this information is readily available to the Commission. In most cases, the "affiliate name" is reported by the entity or entities in FCC Form 477. Affiliate groups appear on this list if they are in the top 10 for any of the presented years.

² In the *USF/ICC Transformation Order*, the Commission eliminated the rule providing identical support to CETCs, determining the rule did not provide an "appropriate level of support for the efficient deployment of mobile services in areas that do not support a private business case for mobile voice and broadband." *Connect America Fund et al., WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking*, 26 FCC Rcd 17666, 17851-59, para. 502 (2011), aff'd In re: FCC 11-161, 753 F.3d 1015 (10th Cir. 2014). The Commission, however, transitioned the elimination of that support over five years, beginning on July 1, 2012. *See USF/ICC Transformation Order*, 26 FCC Rcd at 17853, para. 513. This phase down of support for competitive ETCs was halted at 40 percent on June 30, 2014 under the terms adopted in the *USF/ICC Transformation Order* because the Mobility Fund Phase II is not yet operational. *See id.* at 17832, para. 519.

³ Verizon Wireless and Sprint Nextel, in separate transactions in 2008, each committed to phase down their CETC high-cost universal service support in 20 percent increments over five years, beginning in 2009. These commitments were not implemented until the Commission released an Order on August 31, 2010 providing guidance to the Universal Service Administrative Company regarding the methodology to achieve those commitments. *See High-Cost Universal Service Support, Federal-State Joint Board on Universal Service, Request for Review of Decision of Universal Service Administrator by Corr Wireless Communications, LLC, WC Docket No. 05-337, CC Docket No. 96-45, Order and Notice of Proposed Rulemaking*, 25 FCC Rcd 12854 (2010). To the extent that Verizon Wireless received support prior to the August 31, 2010 Order that should have been surrendered under its commitment, USAC reclaimed that support in 2010 and 2011.

⁴ Telapex, Inc. owns C Spire Wireless.

Source: Universal Service Administrative Company.

Table 3.7
High-Cost Support Fund Claims - Affiliates: 2016
(in Millions of Dollars)

Rank	Affiliate's Name ¹	Rate-of-Return Carriers	Price-Cap Carriers	ILEC Support	CETC Support	Total Support	CETC's Share ²
1	AT&T Inc.	\$ 0	\$ 445	\$ 445	\$ 161	\$ 606	26 %
2	CenturyLink, Inc.	0	559	559	0	559	0
3	Frontier Communications Corporation	0	398	398	0	398	0
4	Windstream Holdings, Inc.	0	217	217	0	217	0
5	Telephone and Data Systems, Inc.	82	0	82	117	199	59
6	Verizon Communications Inc.	0	58	58	22	80	27
7	General Communication, Inc.	7	0	7	67	74	91
8	América Móvil	0	36	36	27	63	43
9	Telapex, Inc.	6	0	6	46	52	89
10	FairPoint Communications, Inc.	0	51	51	0	51	0
11	Deutsche Telekom AG	0	0	0	36	36	100
12	Consolidated Communications, Inc.	0	31	31	0	31	0
13	ATN International, Inc.	0	16	16	14	31	47
14	Golden West Telecommunications Cooperative, Inc.	30	0	30	0	30	0
15	Rural Telephone Service/Golden Belt	15	0	15	11	26	43
16	Triangle Telephone Cooperative Assn., Inc.	25	0	25	0	26	1
17	Nemont Telephone Cooperative, Inc.	17	0	17	6	23	26
18	Alaska Communications Systems Holdings, Inc.	0	20	20	0	20	0
19	Smithville Holding Company, Inc.	19	0	19	0	19	0
20	Pioneer Telephone Cooperative (OK)	10	0	10	9	19	46
21	Hargray Communications Group, Inc.	19	0	19	0	19	0
22	Copper Valley Telephone Cooperative	10	0	10	9	19	49
23	Farmers Telephone Cooperative, Inc. (SC)	17	0	17	2	19	8
24	Comporium, Inc.	19	0	19	0	19	0
25	Lumos Networks Corp.	17	0	17	1	17	4

Notes: Details may not add up due to rounding.

¹ This column refers to “affiliate name” rather than “holding company” so as to include all entities under common ownership or control, to the extent this information is readily available to the Commission. In most cases, the “affiliate name” is reported by the entity or entities in FCC Form 477.

² See Table 3.6 n.2.

Source: Universal Service Administrative Company filings to the FCC with prior-period adjustments through June 2017.

Section 4 – E-rate (Schools and Libraries)

Overview – Schools and Libraries Program

The Schools and Libraries universal service support program, commonly known as the E-rate program, helps schools and libraries obtain affordable broadband Internet access, internal network connections, and telecommunications services.

Eligible schools, school districts and libraries may apply individually or as part of a consortium. Funding may be requested under two categories of eligible services: category one services to a school or library (e.g., data transmission services and Internet access), and category two services that deliver Internet access within schools and libraries (e.g., internal connections, basic maintenance of internal connections, and managed internal broadband services). Discounts for support depend on the level of poverty, as calculated by eligibility for a free or reduced price lunch or other a federally-approved alternative mechanism, and whether the school or library is located in an urban or rural area. The discounts range from 20 percent to 90 percent of the costs of eligible services. E-rate program funding is based on demand up to an annual Commission-established cap, which is \$4.16 billion for 2018 and is adjusted annually for inflation.

The E-rate program is administered by the Universal Service Administrative Company (USAC) under the direction of the FCC. Specifically, USAC is responsible for processing the applications for support, confirming eligibility, and reimbursing service providers and eligible schools and libraries for the discounted services. USAC also ensures that the applicants and service providers comply with the E-rate rules and procedures established by the FCC.

Additional information about the Schools and Library program can be found on the Commission's website at <http://www.fcc.gov/encyclopedia/e-rate-schools-libraries-usf-program> and on USAC's website at <http://www.usac.org/sl/>.

Table 4.1
Schools and Libraries Funding Commitments and Disbursements
by Applicant Type and Year
(in Thousands of Dollars)

Year	Funding Commitments						Funding Disbursements					
	Total Commitments	Libraries ¹	Schools	School Districts	Statewide Contract ²	Other Consortia	Total Disbursements	Libraries ¹	Schools	School Districts	Statewide Contract ²	Other Consortia
1998	\$1,699,124	\$65,988	\$110,701	\$1,288,420	\$0	\$234,015	\$1,399,098	\$49,883	\$83,343	\$1,069,783	\$0	\$196,090
1999	2,147,998	66,172	180,741	1,598,383	0	302,701	1,650,004	47,457	140,130	1,265,896	0	196,521
2000	2,078,759	65,879	110,839	1,692,230	0	209,810	1,647,014	43,566	88,514	1,384,108	0	130,821
2001	2,176,364	57,824	164,576	1,739,474	0	214,490	1,695,758	41,940	117,486	1,400,520	0	135,668
2002	2,114,538	62,941	165,760	1,635,902	0	249,935	1,598,198	42,697	106,197	1,287,085	0	162,599
2003	2,522,102	63,302	199,599	1,998,150	0	261,051	1,940,112	44,325	136,108	1,587,207	0	172,475
2004	2,033,456	54,296	158,672	1,566,377	0	254,111	1,536,420	39,723	107,113	1,210,105	0	179,532
2005	2,006,549	54,498	152,505	1,584,615	0	214,932	1,625,555	48,598	111,854	1,287,977	0	177,840
2006	1,947,903	59,711	129,477	1,498,051	0	260,664	1,568,995	46,138	96,193	1,223,096	0	203,587
2007	2,355,442	60,628	174,811	1,876,010	0	243,993	1,955,781	47,964	135,925	1,563,676	0	208,268
2008	2,374,198	75,771	150,719	1,888,317	0	259,391	1,915,581	58,108	113,552	1,527,084	0	221,436
2009	2,812,847	84,709	195,225	2,262,903	0	270,010	2,305,057	69,208	154,012	1,862,136	0	226,490
2010	3,005,816	91,253	211,174	2,414,155	0	289,235	2,419,868	71,887	156,930	1,964,771	0	240,118
2011	2,677,002	95,122	218,156	2,043,507	0	320,217	2,119,954	73,130	162,136	1,647,735	0	248,974
2012	2,961,499	96,432	288,412	2,270,028	12,130	294,498	2,244,959	77,685	205,501	1,765,604	8,835	237,828
2013	2,199,568	91,576	134,824	1,667,833	20,209	285,126	1,716,412	75,164	97,581	1,332,770	10,809	227,574
2014	2,311,203	93,715	157,812	1,740,525	38,370	280,780	1,788,693	78,644	114,215	1,388,257	26,466	222,916
2015	3,266,239	109,730	184,676	2,623,176	24,848	323,809	1,350,063	90,040	131,573	2,159,200	23,767	252,429
2016	2,770,153	102,822	125,276	2,221,740	0	320,315	1,037,406	41,167	55,556	870,094	0	70,589

Note : Activity through June 30, 2017. Funding Year 2017 commitment and disbursement information have not been displayed because only a small fraction of commitments (and no disbursements) have been made for that funding year. A substantial amount of commitments and disbursements for funding year 2017 will be made. Also, because of the appeals process, funding commitments and disbursements can be made after the end of the program year. Disbursements may also continue beyond the end of the program year in the event of delayed internal connections installation. Other adjustments and corrections may also be made.

¹ Starting in fund year 2016, Libraries includes both Library and Library System applicants.

Source : Universal Service Administrative Company

² Starting January 2011, applicants could designate their consortium as a statewide entity if the application encompassed all public schools, private schools and/or all public libraries in the state. See http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-10-2218A1.pdf. In 2016, applicants filing as a consortium, school district, and library system could designate their sub-type as a statewide entity. These applicant's commitments and disbursements are included within their primary applicant type column and are not included in the Statewide Contract column.

Table 4.2
Schools and Libraries Funding Commitments and Disbursements from Program Inception through June 30, 2017
by State and Applicant Type
(in Thousands of Dollars)

State/Territory	Library/Library Consortium		Schools		School Districts		Statewide Contracts		Other Consortium		Totals	
	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed
Alabama	\$14,494	\$11,631	\$20,711	\$15,328	\$640,551	\$540,818	\$86	\$1	\$109,055	\$81,590	\$784,898	\$649,369
Alaska	10,777	8,474	4,970	3,912	597,861	498,208	0	0	21,077	16,395	634,685	526,988
American Samoa	0	0	0	0	1,487	166	0	0	38,344	31,121	39,832	31,287
Arizona	23,281	24,227	154,216	105,991	962,158	714,821	0	0	28,660	17,860	1,168,315	862,899
Arkansas	6,684	5,619	9,012	7,455	279,901	213,395	25,836	16,027	152,994	97,823	474,428	340,319
California	116,390	78,111	295,239	209,398	6,029,094	4,485,583	106	51	268,777	177,037	6,709,606	4,950,180
Colorado	15,130	10,874	22,460	16,372	383,982	293,757	0	0	24,527	17,449	446,100	338,451
Connecticut	6,747	4,016	50,389	36,126	289,991	235,604	0	0	114,392	96,024	461,519	371,770
Delaware	1,386	1,185	3,602	2,530	19,313	15,571	2,246	2,246	20,016	16,455	46,563	37,986
District of Columbia	9,549	5,713	28,272	18,236	175,465	115,914	0	0	17,947	8,599	231,233	148,461
Florida	61,709	47,564	166,366	124,295	1,269,576	1,015,615	0	0	105,633	83,371	1,603,284	1,270,844
Georgia	91,296	77,886	39,201	31,639	1,218,289	976,025	4,411	4,328	188,114	161,877	1,541,311	1,251,754
Guam	153	41	263	138	27,846	20,411	0	0	0	0	28,262	20,591
Hawaii	2,760	1,594	59,980	30,118	42,937	26,095	3,128	2,503	1,223	731	110,028	61,041
Idaho	4,911	3,946	8,014	5,216	110,552	85,106	0	0	23,479	13,850	146,955	108,118
Illinois	42,523	32,146	147,630	109,878	1,727,087	1,306,760	0	0	75,350	54,561	1,992,590	1,503,346
Indiana	60,636	47,554	39,639	28,964	530,647	414,697	0	0	95,533	43,583	726,455	534,798
Iowa	4,737	3,215	15,357	11,154	168,533	122,578	0	0	77,563	65,941	266,190	202,887
Kansas	12,385	10,036	10,583	7,712	281,294	226,691	0	0	24,114	19,495	328,376	263,935
Kentucky	18,555	14,142	7,219	4,869	585,256	434,711	0	0	129,099	100,026	740,128	553,748
Louisiana	67,746	56,600	57,091	42,810	796,335	665,767	0	0	34,315	25,625	955,487	790,802
Maine	1,614	1,207	16,009	11,797	65,232	46,279	0	0	61,912	53,665	144,767	112,949
Maryland	19,033	13,987	29,636	20,066	349,593	273,007	0	0	32,850	24,668	431,111	331,728
Massachusetts	43,338	30,533	64,881	48,670	484,052	383,001	11	0	52,640	27,106	644,923	489,310
Michigan	37,391	29,388	61,531	41,705	861,758	653,080	0	0	153,473	115,602	1,114,152	839,775
Minnesota	29,726	23,445	44,441	30,255	321,716	244,167	0	0	134,045	115,510	529,928	413,376
Mississippi	35,878	25,632	20,459	14,811	491,498	380,167	144	105	106,116	77,109	654,095	497,824
Missouri	22,728	19,118	47,478	35,525	535,710	424,414	0	0	213,009	142,109	818,925	621,166
Montana	1,668	1,185	4,953	3,727	82,479	67,707	0	0	609	448	89,709	73,067
Nebraska	4,495	3,557	8,362	6,629	130,561	114,058	0	0	33,261	30,068	176,679	154,311
Nevada	4,391	2,994	7,272	5,279	126,925	88,929	0	0	0	0	138,587	97,202
New Hampshire	394	219	8,702	5,841	41,082	30,575	0	0	1,721	1,310	51,899	37,944
New Jersey	30,665	21,776	143,989	101,355	969,264	714,223	0	0	17,947	12,002	1,161,865	849,355
New Mexico	6,352	3,902	81,542	57,295	530,301	404,580	0	0	124,633	51,839	742,827	517,615
New York	206,350	145,337	604,681	441,908	2,395,178	2,048,586	0	0	590,093	437,448	3,796,302	3,073,278
North Carolina	32,076	26,589	45,855	35,778	1,024,480	863,908	23,594	22,755	67,192	43,263	1,193,197	992,295
North Dakota	205	155	10,019	7,512	27,643	21,111	0	0	42,322	35,439	80,189	64,217
Northern Mariana Isl.	232	167	172	146	19,314	15,709	0	0	0	0	19,718	16,021
Ohio	56,657	46,146	141,951	104,373	1,170,170	925,476	0	0	90,167	73,198	1,458,944	1,149,192
Oklahoma	40,072	32,627	48,851	34,912	899,054	713,136	0	0	13,925	5,140	1,001,902	785,814
Oregon	6,398	4,202	12,233	8,786	256,481	194,479	0	0	42,884	25,165	317,996	232,632
Pennsylvania	47,103	38,957	174,223	118,838	1,062,428	886,000	0	0	157,431	132,441	1,441,186	1,176,236
Puerto Rico	73,870	40,909	94,045	66,590	252,638	163,660	0	0	115,877	58,416	536,430	329,574
Rhode Island	2,147	1,793	8,808	6,653	77,174	59,278	19	19	44,786	40,171	132,934	107,914
South Carolina	7,519	5,227	26,628	17,918	531,319	408,117	0	0	290,561	243,502	856,028	674,764
South Dakota	555	197	21,977	16,349	45,673	33,031	2,745	2,553	38,740	25,419	109,690	77,550
Tennessee	20,142	14,826	18,653	15,212	831,201	618,326	0	0	230,839	189,401	1,100,835	837,765
Texas	59,569	39,960	189,214	143,830	4,133,819	3,229,524	0	0	200,583	132,752	4,583,184	3,546,067
Utah	2,372	1,125	4,959	3,058	100,259	80,815	0	0	255,457	145,822	363,047	230,819
Vermont	1,090	665	14,391	9,286	32,743	24,124	0	0	2,158	1,562	50,382	35,637
Virgin Islands	401	184	14,121	10,821	10,665	9,412	3,429	2,922	60,023	54,682	88,639	78,020
Virginia	33,191	26,632	26,981	21,563	586,594	481,769	0	0	14,416	12,603	661,181	542,567
Washington	31,588	24,522	19,989	15,449	439,142	339,750	78	78	88,680	68,158	579,477	447,958
West Virginia	4,381	3,393	3,848	2,234	192,714	140,721	19,735	9,892	58,086	44,845	278,763	201,086
Wisconsin	16,262	11,741	48,108	34,120	364,942	287,390	0	0	169,539	137,672	598,851	470,923
Wyoming	666	458	4,784	3,488	27,840	20,301	9,990	6,395	32,895	23,809	76,175	54,452
Totals	\$1,452,368	\$1,087,326	\$3,213,956	\$2,313,918	\$35,609,796	\$27,797,102	\$95,557	\$69,877	\$5,089,084	\$3,711,755	\$45,460,761	\$34,979,977

Note: Activity through June 30, 2017. Unlike in Table 4.1, all commitments and disbursements have been included, including those in funding year 2017. Because of the appeals process, funding commitments and disbursements can be made after the end of the program year. Also, disbursements may continue beyond the end of the program year in the event of delayed internal connections installation. Other adjustments and corrections may also be made.

Source: Universal Service Administrative Company

Section 5 – Rural Health Care

Overview – Rural Health Care Program

The Rural Health Care Program provides funding to eligible health care providers for broadband and telecommunications services necessary for the provision of health care. The goal of the program is to improve the quality of health care available to patients in rural communities by ensuring that eligible health care providers have access to broadband and telecommunications services. Funding for the Rural Health Care Program is capped at \$400 million annually and is administered by USAC under the direction of the FCC.

During the time period reported upon in this report, the Rural Health Care Program provided funding through three programs: the Healthcare Connect Fund, the Rural Health Care Pilot Program, and the Telecommunications Program. In 2012, the Commission created the new Healthcare Connect Fund to reform, expand, and modernize the Rural Health Care Program. The Healthcare Connect Fund provides support for high-capacity broadband connectivity to eligible health care providers, and encourages the formation of state and regional broadband health care provider networks. The Commission established the Rural Health Care Pilot Program in September 2006 to provide funding for state or regional broadband networks designed to bring the benefits of telehealth and telemedicine services to areas of the country where the need for those benefits was most acute. Many of the lessons learned during the Pilot Program were used in establishing the Healthcare Connect Fund. While new participants are no longer accepted into the Pilot Program, there is some remaining funding already committed that existing participants are using.

Additional information about the Rural Health Care Program can be found on the Commission's website at <http://www.fcc.gov/encyclopedia/rural-health-care> and on USAC's website at <http://www.usac.org/rhc/>.

Table 5.1
Rural Health Care Funding Commitments and Disbursements by Program and Year
(in Thousands of Dollars)

Funding year	Telecommunications		Pilot		Healthcare Connect		Totals	
	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed
1998	\$ 3,388	\$ 3,369	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,388	\$ 3,369
1999	4,653	4,291	0	0	0	0	4,653	4,291
2000	10,711	10,196	0	0	0	0	10,711	10,196
2001	19,582	18,477	0	0	0	0	19,582	18,477
2002	23,344	21,366	0	0	0	0	23,344	21,366
2003	27,908	25,726	0	0	0	0	27,908	25,726
2004	32,128	30,962	0	0	0	0	32,128	30,962
2005	40,742	39,999	0	0	0	0	40,742	39,999
2006	45,989	45,092	0	0	0	0	45,989	45,092
2007	56,210	54,818	467	467	0	0	56,677	55,285
2008	67,765	66,661	14,734	14,300	0	0	82,499	80,961
2009	72,828	71,439	350,702	280,126	0	0	423,531	351,564
2010	92,053	87,326	0	0	0	0	92,053	87,326
2011	104,360	101,291	0	0	0	0	104,360	101,291
2012	117,236	116,940	0	0	0	0	117,236	116,940
2013	133,412	128,591	0	0	49,908	45,664	183,320	174,255
2014	137,167	135,221	0	0	101,169	81,459	238,336	216,680
2015	184,547	167,906	0	0	117,494	77,390	302,042	245,296
2016	197,133	101,213	0	0	152,032	21,621	349,165	122,834

Note: Activity through June 30, 2017. Funding Year 2017 commitment and disbursement information has not been displayed because by June 30, the data cutoff date for this report, no commitments or disbursements for funding year 2017 were made during that time. However, we anticipate that a substantial amount of commitments and disbursements for funding year 2017 will be made. Also, because of the appeals process, funding commitments and disbursements can be made after the end of the program year. Disbursements may also continue beyond the end of the program year in the event of delayed internal connections installation. Other adjustments and corrections may also be made.

Source: USAC data.

Table 5.2
Rural Health Care Funding Commitments and Disbursements from Program Inception through June 30, 2017
by State and Program
(in Thousands of Dollars)

State	Telecommunications and		Pilot		Healthcare Connect		Totals	
	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed
Alabama	\$ 9,881	\$ 8,487	\$ 2,749	\$ 2,746	\$ 3,854	\$ 2,251	\$ 16,484	\$ 13,484
Alaska	728,725	649,695	1,882	209	879	518	731,486	650,422
American Samoa	1,512	1,422	0	0	0	0	1,512	1,422
Arizona	27,563	24,944	7,506	5,625	4,921	2,884	39,990	33,453
Arkansas	18,070	16,604	4,218	4,132	27,290	13,964	49,577	34,700
California	47,518	45,085	22,903	11,136	44,336	25,408	114,758	81,629
Colorado	3,829	3,517	10,870	10,702	26,890	13,658	41,589	27,877
Connecticut	12	12	0	0	960	424	972	436
Delaware	1	5	0	0	0	0	1	5
District of Columbia	18	8	0	0	0	0	18	8
Florida	5,722	5,202	63	58	8,590	5,338	14,376	10,598
Georgia	37,219	34,269	2,233	2,166	11,580	7,497	51,032	43,931
Guam	767	762	89	83	140	87	996	932
Hawaii	2,435	2,378	4,653	2,100	123	40	7,211	4,517
Idaho	6,708	6,079	0	0	2,852	1,665	9,560	7,744
Illinois	18,747	17,383	21,071	21,070	10,715	5,704	50,532	44,158
Indiana	9,573	7,321	15,458	12,800	23,194	8,307	48,225	28,428
Iowa	6,985	6,470	17,368	17,291	11,155	5,583	35,509	29,344
Kansas	9,528	8,937	0	0	7,967	4,404	17,495	13,341
Kentucky	14,915	13,302	2,945	913	11,608	6,135	29,467	20,349
Louisiana	7,481	6,595	15,570	375	3,168	2,089	26,220	9,059
Maine	592	493	12,957	12,639	3,553	1,084	17,103	14,217
Maryland	195	134	0	0	792	512	987	646
Massachusetts	941	949	0	0	1,729	1,355	2,670	2,305
Michigan	20,709	19,095	19,449	19,230	10,168	5,173	50,326	43,498
Minnesota	33,640	31,647	5,714	5,297	6,442	3,606	45,796	40,549
Mississippi	27,486	24,445	0	0	5,962	3,065	33,448	27,510
Missouri	14,933	13,069	2,538	2,193	8,458	5,720	25,929	20,982
Montana	10,979	10,694	15,413	14,756	2,623	1,385	29,015	26,835
Nebraska	21,497	20,127	18,010	18,010	7,852	4,628	47,359	42,765
Nevada	2,755	2,674	0	0	609	438	3,364	3,111
New Hampshire	234	224	6,400	6,335	2,724	875	9,358	7,434
New Jersey	0	0	0	0	0	0	0	0
New Mexico	10,759	9,707	11,770	10,567	4,675	3,225	27,204	23,500
New York	2,108	1,730	15,492	14,681	12,273	6,949	29,874	23,360
North Carolina	7,750	6,866	12,169	12,115	18,508	9,955	38,427	28,936
North Dakota	14,901	14,114	912	835	3,363	1,821	19,176	16,771
Northern Mariana Islands	43	21	46	44	6	0	94	65
Ohio	7,611	6,550	27,209	26,478	7,880	4,388	42,701	37,417
Oklahoma	30,890	26,564	0	0	14,931	9,954	45,822	36,518
Oregon	3,556	3,371	18,130	17,129	13,813	9,647	35,499	30,146
Pennsylvania	1,509	1,392	6,793	6,035	9,690	7,109	17,992	14,537
Puerto Rico	0	0	0	0	45	43	45	43
Rhode Island	0	4	0	0	0	0	0	4
South Carolina	1,024	935	8,763	8,282	12,431	5,911	22,218	15,128
South Dakota	10,710	10,417	4,585	4,482	4,846	3,171	20,142	18,070
Tennessee	13,091	11,847	6,834	0	3,956	2,037	23,881	13,884
Texas	60,212	50,749	15,250	0	28,664	7,131	104,126	57,881
Utah	9,041	8,315	8,815	8,176	2,797	934	20,653	17,425
Vermont	811	771	6,078	6,047	1,540	450	8,430	7,268
Virgin Islands	852	846	0	0	0	0	852	846
Virginia	23,169	20,116	2,698	1,198	5,999	4,508	31,867	25,821
Washington	2,790	2,450	118	117	3,440	2,233	6,349	4,800
West Virginia	4,104	3,416	7,070	5,751	2,833	1,546	14,007	10,714
Wisconsin	71,872	65,601	2,312	2,303	16,849	10,630	91,033	78,533
Wyoming	3,180	3,075	797	784	931	696	4,908	4,556
Totals	\$ 1,371,156	\$ 1,230,884	\$ 365,903	\$ 294,893	\$ 420,603	\$ 226,134	\$ 2,157,663	\$ 1,751,911

Note : Disbursements through June 30, 2017. Unlike in Table 5.1, all commitments and disbursements (if any) have been included, including those in funding year 2017. Because of the appeals process, funding commitments and disbursements may be made after the program year ended.

Source : USAC data.

Section 6 – Subscribership & Penetration

Overview – Subscribership & Penetration: Voice & Internet

Continuing analysis of telephone penetration statistics allows one to examine the aggregate effects of Commission actions and industry evolution on households' decisions to maintain, acquire or drop telephone service. In addition to telephone penetration statistics, recent surveys by the Census Bureau now also provide information about the penetration of high-speed Internet services. Starting in 2016, this section also includes telephone and internet expense statistics for lower income households. Starting in 2017, this section also includes fixed broadband deployment and subscription information for ILECs. This chapter presents comprehensive data on telephone penetration and expense statistics and information collected by the Bureau of the Census, the Bureau of Labor Statistics, and the FCC primarily through the American Community Survey (ACS), the Current Population Survey (CPS), the Consumer Expenditures Survey (CE), and the FCC Form 477. The chapter also provides national and state-level estimates of high-speed Internet adoption based on the ACS. Along with telephone and high-speed Internet penetration statistics for the nation and each of the states, data are provided on penetration for various demographic characteristics. For telephone service, particular attention is given to penetration rates and expenses for lower income households given the Commission's various low-income programs such as Lifeline.

To provide regular, high-quality data on telephone penetration, the Commission requested that the Census Bureau include questions on telephone availability as part of its CPS, which monitors demographic trends between decennial censuses. The CPS is a staggered panel survey in which the people residing at particular addresses are included in the survey for four consecutive months in one year and the same four months in the following year. Use of the CPS has several advantages: it is conducted every month by an independent and expert agency, the sample is large, and the questions are consistent. Thus, changes in the results can be compared over time with a reasonable degree of confidence.

In addition to the CPS, the ACS also provides data for calculating a measure of telephone penetration. The ACS has replaced the decennial census long form and thus also provides a wealth of data and large sample sizes, though on a less frequent basis than the CPS. Whereas the CPS reports household penetration, the ACS follows the design of past decennial censuses and reports telephone penetration for occupied housing units. In this chapter, penetration measures from the CPS, the ACS, and decennial censuses (prior to the ACS) are reported as complements to each other.¹

While the ACS provides telephone penetration data, the ACS now also provides data for calculating high-speed Internet penetration rates. Specifically, the ACS for the first time in 2013 asked whether households have access to the Internet. The ACS asks, "At this house, apartment, or mobile home – do you or any member of this household access the Internet?" Statistics based on 2016 data from the ACS on high-speed Internet penetration has been incorporated into this report. Since the ACS is conducted throughout the year, a 1-year average is calculated using the data.

¹ Penetration statistics derived from the CPS cannot be directly compared with the penetration estimates based on the responses to the long forms of the 1990 and 2000 decennial censuses or the ACS. This is due to differences in sampling techniques and survey methodologies as well as differences in the context in which the questions are asked. For example, the 2013 ACS reported 97.7% of all occupied housing units in the United States had telephone service available, whereas the March 2013 CPS data showed a household penetration rate of 96.0%. This difference is statistically significant and may indicate that the CPS value is on the low side and the ACS value is on the high side, with the most probable value lying somewhere in between.

The specific questions regarding telephone availability asked in the CPS are: “Does this house, apartment, or mobile home have telephone service from which you can both make and receive calls? Please include cell phones, regular phones, and any other type of telephone.” And, if the answer to the first question is “no,” this is followed up with: “Is there a telephone elsewhere on which people in this household can be called?” If the answer to the first question is “yes,” the household is counted as having a telephone “in unit.” If the answer to either the first or second question is “yes,” the household is counted as having a telephone “available.” In contrast to the CPS, the ACS simply asks: “Does this house, apartment, or mobile home have telephone service from which you can both make and receive calls? Include cell phones.” Thus, the ACS question is most similar to the CPS’s “in unit” rather than “available” penetration rate.

Although the CPS is conducted every month, not all questions are asked every month. The telephone questions are asked once every four months. The changes in the CPS estimates reflect changes over the preceding four months. Aggregated summaries of the responses are reported to the Commission, based on the surveys conducted through March, July, and November of each year. The ACS provides annual telephone penetration statistics based on data collected monthly throughout the year.

The CPS data are based on a nationwide sample of about 50 to 60 thousand households in the 50 states and the District of Columbia. The CPS does not cover outlying areas that are not states, such as Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Northern Mariana Islands.² The ACS form is sent to approximately 250 thousand addresses per month, for a total of about 3 million addresses per year. The ACS covers the states, the District of Columbia, and Puerto Rico.

² Annual data for Puerto Rico have been available from the ACS starting with 2005. The percentage of occupied housing units with voice service for the last five years of available data are reported in Table 6.6.

Table 6.1
Household Voice Subscribership in the United States, 1983 - 2017

Month	Year	Households (millions)	Households with a Telephone in Unit (millions)	Percentage with Telephone in Unit	Households without a Telephone in Unit (millions)	Percentage without Telephone in Unit
November	1983	85.8	78.4	91.4	7.4	8.6
November	1984	87.4	79.9	91.4	7.5	8.6
November	1985	88.8	81.6	91.9	7.2	8.1
November	1986	89.9	83.1	92.4	6.8	7.6
November	1987	91.3	84.3	92.3	7.0	7.7
November	1988	92.6	85.7	92.5	6.9	7.5
November	1989	93.9	87.3	93.0	6.6	7.0
November	1990	94.7	88.4	93.3	6.3	6.7
November	1991	95.7	89.4	93.4	6.3	6.6
November	1992	97.0	91.0	93.8	6.0	6.2
November	1993	98.8	93.0	94.2	5.8	5.8
November	1994	99.8	93.7	93.8	6.2	6.2
November	1995	100.4	94.2	93.9	6.2	6.1
November	1996	101.3	95.1	93.9	6.2	6.1
November	1997	102.8	96.5	93.8	6.3	6.2
November	1998	104.1	98.0	94.2	6.1	5.8
November	1999	105.4	99.1	94.1	6.3	5.9
November	2000	106.5	100.2	94.1	6.3	5.9
November	2001	107.7	102.2	94.9	5.5	5.1
November	2002	109.0	104.0	95.3	5.1	4.7
November	2003	113.1	107.1	94.7	6.0	5.3
November	2004	113.8	106.4	93.5	7.4	6.5
November	2005	115.2	107.0	92.9	8.2	7.1
November	2006	116.4	108.8	93.4	7.6	6.6
November	2007	118.2	112.2	94.9	6.0	5.1
November	2008	118.6	112.7	95.0	5.9	5.0
March	2009	118.4	113.2	95.6	5.2	4.4
July	2009	118.4	113.3	95.7	5.1	4.3
November	2009	119.2	114.0	95.7	5.1	4.3
March	2010	118.3	113.6	96.0	4.7	4.0
July	2010	118.3	113.5	96.0	4.8	4.0
November	2010	119.4	114.0	95.5	5.4	4.5
March	2011	119.8	114.9	95.9	4.9	4.1
July	2011	119.3	114.1	95.6	5.2	4.4
November	2011	119.7	114.4	95.6	5.3	4.4
March	2012	121.9	117.0	96.0	4.9	4.0
July	2012	121.7	117.0	96.1	4.7	3.9
November	2012	122.0	116.9	95.8	5.1	4.2
March	2013	123.3	118.3	96.0	5.0	4.0
July	2013	123.1	118.3	96.1	4.8	3.9
November	2013	123.7	118.4	95.7	5.3	4.3
March	2014	124.2	119.5	96.3	4.7	3.7
July	2014	123.9	119.0	96.0	4.9	4.0
November	2014	124.8	119.9	96.1	4.9	3.9
March	2015	125.5	121.1	96.5	4.4	3.5
July	2015	125.8	121.7	96.3	4.1	3.5
November	2015	126.1	122.2	96.3	3.9	3.1
March	2016	127.2	122.7	96.5	4.5	3.5
July	2016	127.0	122.4	96.4	4.6	3.6
November	2016	127.3	122.6	96.3	4.7	3.7
March	2017	127.4	122.6	96.2	4.8	3.8
July	2017	127.5	122.9	96.4	4.6	3.6

Source : United States Census Bureau, Current Population Survey

Corrections: The reported March and July 2016 households with a telephone in unit, percentage with telephone in unit, household without a telephone in unit, and percentage without telephone in unit are corrections from the 2016 Monitoring Report.

Table 6.2
Household Voice Penetration by Income, 1997-2017
(in 1984 Dollars)

	\$9,999 or Less	\$10,000 - \$19,000	\$20,000 - \$29,999	\$30,000 - \$39,999	\$40,000 or Greater	All Households
1997	86.0	93.0	96.5	97.6	98.2	94.0
1998	85.7	93.7	96.1	97.4	98.2	94.1
1999	85.5	92.9	96.0	97.2	98.2	94.0
2000	87.5	93.3	96.1	97.3	98.0	94.5
2001	87.6	93.4	95.9	97.1	97.8	94.4
2002	89.1	94.3	96.9	98.1	98.8	95.5
2003	89.2	94.6	97.0	98.1	98.8	95.5
2004	88.0	93.2	95.3	96.7	97.7	94.2
2005	86.4	91.2	94.1	95.2	96.0	92.5
2006	86.3	91.8	94.4	95.4	96.5	92.9
2007	88.4	94.1	95.9	96.8	97.9	94.6
2008	89.7	94.3	96.2	97.4	98.3	95.2
2009	90.4	95.2	96.6	97.3	98.3	95.6
2010	91.9	95.8	96.9	97.7	98.6	96.1
2011	91.5	95.9	96.8	97.8	98.3	95.9
2012	92.0	95.3	96.9	97.8	98.3	95.9
2013	92.6	95.6	97.0	97.2	98.3	96.0
2014	93.1	95.9	96.7	97.9	98.2	96.3
2015	93.2	96.0	97.1	97.7	98.1	96.4
2016	93.2	96.4	97.0	97.6	98.0	96.4
2017	93.1	96.0	96.9	97.5	97.8	96.3

Note : Income groups classified by 1984 dollars. For a conversion to current-year dollars, consult Table 6.3. Total penetration rates may differ slightly from those in Table 6.1 due to sampling differences between the March CPS and the March CPS Supplement.

Source : U.S. Census Bureau, Current Population Survey (March CPS Supplement).

Table 6.3
Nominal Dollar Equivalents by Year

1984	\$10,000	\$20,000	\$30,000	\$40,000
1997	15,595	31,190	46,785	62,380
1998	15,809	31,618	47,427	63,236
1999	16,082	32,164	48,246	64,328
2000	16,686	33,372	50,058	66,744
2001	17,173	34,346	51,519	68,692
2002	17,427	34,854	52,281	69,708
2003	17,953	35,906	53,859	71,812
2004	18,265	36,530	54,795	73,060
2005	18,840	37,680	56,520	75,360
2006	19,474	38,948	58,422	77,896
2007	20,015	40,030	60,045	80,060
2008	20,812	41,624	62,436	83,248
2009	20,732	41,464	62,196	82,928
2010	21,212	42,423	63,635	84,846
2011	21,780	43,561	65,341	87,122
2012	22,358	44,716	67,074	89,432
2013	22,687	45,375	68,062	90,750
2014	23,031	46,061	69,092	92,122
2015	23,014	46,027	69,041	92,054
2016	23,210	46,419	69,629	92,839
2017	23,475	46,949	70,424	93,898

Note : All numbers based on CPI non-adjusted series, March 1984 base of 102.6

Table 6.4
Historical Voice Penetration Estimates

	Percentage of Occupied Housing Units with Telephone Service ¹	Percentage of Households with Telephone Service ²
1920	35.0	
1930	40.9	
1940	36.9	
1950	61.8	
1960	78.3	
1970	90.5	
1980	92.9	
1990	94.8	93.3
2000	97.6	94.4
2001	96.9	94.9
2002	96.6	95.3
2003	96.2	95.1
2004	95.7	93.8
2005	94.8	93.1
2006	94.1	93.6
2007	94.6	94.8
2008 ³	98.2	95.2
2009	97.7	95.7
2010	97.5	95.8
2011	97.4	95.7
2012	97.4	95.9
2013	97.7	95.9
2014	97.6	96.1
2015	97.4	96.3
2016	97.0	96.4
2017	NA ⁴	96.4

¹ Housing Unit penetration statistics are from the U.S. Census Bureau's *Historical Statistics of the United States, Colonial Times to 1970*, Part 2, page 783 (1920 - 1970); the decennial censuses (1980 - 2000); and the Census Bureau's American Community Survey (ACS) 1-year estimates (2001 - 2017).

² Household penetration data (1990 - 2016) are annual averages from the U.S. Census based on the Current Population Survey. For 2017, July CPS data are used.

³ Errata #53: released April 12, 2010, regarding 2008 ACS 1-year and 2006-2008 ACS 3-year estimates for household kitchen facilities and telephone service. Two errors were found affecting the 2008 ACS 1-year data and the 2006-2008 ACS 3-year data for telephone service. The errors involve the last two items in Question 8 on the housing section of the 2008 ACS questionnaire which asks whether the housing unit has telephone service (including cell phones). The error involved the incorrect capture of the responses to those items. It affected the estimates of householders who reported no telephone service, resulting in an underestimate of "no" responses and an increased imputation rate for both items. At the national level, the percent of households reporting no telephone service in 2008 was 1.8 percent; however, after correcting the data capture error, the percent reporting no telephone service is approximately 2.8 percent.

⁴ ACS statistics for 2017 are not available.

Table 6.5
Voice Penetration by Selected Demographic Characteristics
(Percentage of Households with Voice Service)

Characteristic	2013	2014	2015	2016	2017
Persons in Household					
1	94.0	94.2	94.6	94.6	94.6
2 - 3	96.7	96.8	96.9	97.0	97.0
4 - 5	96.8	97.1	97.4	97.3	97.4
6 +	95.8	96.4	96.9	96.2	96.7
Age of Householder					
15 - 24 Yrs Old	93.8	94.6	95.5	95.0	95.8
25 - 54 Yrs Old	95.6	95.9	96.2	96.3	96.2
55 - 59 Yrs Old	96.6	96.5	96.9	96.8	96.2
60 - 64 Yrs Old	96.4	96.4	96.7	96.7	96.9
65 - 69 Yrs Old	97.1	97.1	97.1	96.9	97.4
70 - 99 Yrs Old	96.6	96.6	96.2	96.4	96.4
Race of Householder					
White	96.4	96.6	96.8	96.7	96.7
Black	93.0	93.7	94.1	94.7	94.4
Hispanic Origin	93.1	93.5	94.7	94.7	94.6
Total United States	95.9	96.1	96.3	96.4	96.4

Note : 2013 to 2016 values are annual averages. For 2017, values are July 2017 figures since complete 2017 figures were unavailable at the time of publication.

Source : U.S. Census Bureau, Current Population Survey.

Table 6.6
Voice Penetration by State, 2011 - 2016
(Percentage of Occupied Housing Units with Voice Service)

	2011	2012	2013	2014	2015	2016
Alabama	97.2	97.3	97.4	97.4	97.2	96.9
Alaska	98.1	97.7	98.0	98.1	97.3	97.5
Arizona	97.0	97.2	97.3	97.5	97.4	96.4
Arkansas	96.6	96.2	97.2	97.3	96.4	96.3
California	97.9	97.9	98.0	97.9	97.8	97.4
Colorado	97.5	97.7	97.7	97.9	97.9	96.9
Connecticut	98.5	98.5	98.6	98.5	98.5	97.9
Delaware	98.2	97.8	98.1	97.9	98.3	97.4
District of Columbia	96.7	97.0	97.2	97.6	97.2	96.4
Florida	96.6	96.5	97.0	97.1	97.1	96.4
Georgia	96.4	96.0	97.6	97.3	97.3	97.0
Hawaii	97.4	97.4	97.7	97.7	97.7	97.0
Idaho	96.5	97.1	97.1	97.3	97.3	96.4
Illinois	97.7	97.7	97.7	97.4	97.6	96.9
Indiana	96.6	96.7	97.4	97.5	97.4	97.1
Iowa	96.9	97.4	97.9	97.6	97.5	96.9
Kansas	97.6	97.3	97.4	97.4	97.1	96.4
Kentucky	96.9	96.8	97.2	97.1	97.3	97.0
Louisiana	97.2	97.4	97.3	97.0	97.2	97.0
Maine	98.2	98.2	97.6	98.1	97.6	97.6
Maryland	97.5	97.8	98.1	97.6	97.7	97.4
Massachusetts	98.3	98.4	98.4	98.2	98.1	98.1
Michigan	97.0	97.2	97.4	97.6	97.4	97.0
Minnesota	98.0	98.0	98.1	97.9	97.3	97.5
Mississippi	96.9	97.2	96.8	97.2	97.0	96.7
Missouri	97.3	97.1	97.6	97.1	97.2	96.9
Montana	97.1	97.4	96.9	97.0	97.0	96.3
Nebraska	97.8	97.6	97.5	97.7	97.3	97.2
Nevada	97.8	97.5	97.9	96.5	97.2	96.5
New Hampshire	98.2	98.0	97.9	98.3	98.3	98.2
New Jersey	97.6	98.2	98.5	98.5	97.8	97.4
New Mexico	94.9	96.5	96.8	97.2	96.6	96.2
New York	97.2	97.5	98.0	97.8	97.9	97.3
North Carolina	97.5	97.6	97.8	97.7	97.6	96.6
North Dakota	98.1	97.3	97.8	98.1	96.9	97.6
Ohio	97.1	96.8	97.2	97.3	97.3	96.7
Oklahoma	97.5	97.7	97.5	97.1	97.0	96.6
Oregon	97.2	97.5	97.6	97.6	97.3	96.7
Pennsylvania	97.8	98.0	98.0	98.2	98.0	97.7
Rhode Island	97.5	97.9	98.3	97.8	98.1	97.5
South Carolina	97.2	97.3	97.7	97.6	97.0	96.1
South Dakota	97.3	97.2	97.5	97.2	96.7	96.4
Tennessee	97.1	97.3	97.6	97.5	97.6	97.1
Texas	97.2	97.4	97.7	97.7	97.4	96.3
Utah	97.6	97.6	97.9	98.0	97.7	97.2
Vermont	98.2	98.6	98.1	98.1	97.9	97.2
Virginia	97.5	97.6	98.2	98.1	97.6	97.5
Washington	97.9	97.4	97.9	97.6	97.5	97.0
West Virginia	96.0	96.5	97.0	96.9	97.3	96.9
Wisconsin	97.7	97.7	97.9	97.7	97.3	97.0
Wyoming	97.8	97.7	98.1	97.9	97.4	97.1
Total United States	97.4	97.4	97.7	97.6	97.4	97.0
Puerto Rico	93.8	94.2	93.8	94.3	95.5	96.0

Note: 'Total United States' does not include Puerto Rico.

Source: American Factfinder, Table S0201.

Table 6.7
Voice Penetration by State, Selected Years
(Percentage of Households with a Telephone in Unit)

	1984	1996	2000	2007	2016
Alabama	88.4	92.2	91.9	91.8	95.6
Alaska	86.5	94.4	94.3	96.5	98.3
Arizona	86.9	93.1	93.9	92.9	95.8
Arkansas	86.6	86.9	88.6	92.0	94.1
California	92.5	95.0	95.8	96.5	95.6
Colorado	93.2	95.5	96.3	96.8	97.9
Connecticut	95.5	97.5	96.4	96.6	98.8
Delaware	94.3	96.1	96.3	94.9	94.1
District of Columbia	94.9	93.0	93.2	91.6	96.4
Florida	88.7	93.1	92.1	93.6	95.3
Georgia	86.2	89.7	91.1	92.6	96.2
Hawaii	93.5	94.8	94.7	96.0	93.7
Idaho	90.7	92.9	93.9	96.4	97.2
Illinois	94.2	93.0	91.5	94.1	96.0
Indiana	91.6	93.7	94.5	90.4	95.6
Iowa	96.2	96.6	96.2	97.0	98.9
Kansas	94.3	93.9	94.8	96.2	96.7
Kentucky	88.1	92.3	93.3	94.4	97.4
Louisiana	89.7	91.1	92.6	94.9	96.7
Maine	93.4	96.5	97.9	96.6	98.7
Maryland	95.7	96.7	95.0	95.5	96.3
Massachusetts	95.9	95.7	94.6	96.3	98.0
Michigan	92.8	95.0	95.0	95.0	97.2
Minnesota	95.8	97.1	97.4	97.9	98.4
Mississippi	82.4	87.5	89.2	90.5	96.0
Missouri	91.5	95.3	95.8	96.1	97.0
Montana	91.0	94.3	94.6	95.4	97.3
Nebraska	95.7	96.0	97.3	93.7	97.9
Nevada	90.4	93.5	94.0	95.2	96.4
New Hampshire	94.3	96.1	97.7	96.8	98.3
New Jersey	94.8	93.6	94.6	95.7	93.9
New Mexico	82.0	86.2	91.2	91.6	90.1
New York	91.8	93.4	95.1	93.4	95.8
North Carolina	88.3	93.5	93.9	94.5	95.9
North Dakota	94.6	96.3	95.8	98.0	97.8
Ohio	92.4	94.5	94.8	95.9	96.6
Oklahoma	90.3	91.3	91.2	94.9	97.0
Oregon	90.6	96.0	94.8	96.7	97.6
Pennsylvania	94.9	96.9	96.6	97.0	98.3
Rhode Island	93.6	95.7	94.9	95.3	95.4
South Carolina	83.7	91.3	93.2	90.6	95.5
South Dakota	93.2	93.3	94.3	97.2	97.2
Tennessee	88.5	94.0	95.5	93.2	93.9
Texas	88.4	91.0	93.5	93.5	96.4
Utah	92.5	96.7	95.9	96.8	96.3
Vermont	92.3	95.9	95.6	97.4	98.2
Virginia	93.1	94.9	95.4	95.3	98.3
Washington	93.0	94.5	94.9	96.8	97.9
West Virginia	87.7	92.9	94.0	94.5	97.2
Wisconsin	95.2	97.0	94.8	96.8	98.6
Wyoming	89.9	95.0	94.7	96.1	95.1
Total United States	91.6	93.9	94.4	94.8	96.4

Source : U.S. Census Bureau, Current Population Survey.

Table 6.8
Household Voice Penetration by State and Income, 2017

	\$9,999 or Less	\$10,000 to \$19,999	\$19,999 to \$29,999	\$30,000 to \$39,999	\$40,000 or More	All Households
Alabama	91.2	93.8	98.8	98.1	98.3	95.4
Alaska	95.7	96.9	96.6	99.6	97.0	97.2
Arizona	95.8	97.9	98.1	97.8	98.2	97.6
Arkansas	86.8	91.4	95.1	94.3	94.2	91.7
California	90.4	94.2	94.3	95.8	97.5	94.9
Colorado	92.8	98.2	96.7	99.0	99.1	97.6
Connecticut	95.4	97.7	98.3	100.0	98.3	97.9
Delaware	84.5	91.9	93.6	97.7	97.0	93.0
District of Columbia	96.5	96.2	98.4	98.0	97.9	97.4
Florida	94.0	95.5	96.0	97.8	97.7	96.1
Georgia	94.6	95.4	98.3	99.3	95.4	96.2
Hawaii	89.4	91.7	94.8	93.3	96.2	93.6
Idaho	96.9	96.9	96.4	98.2	100.0	97.8
Illinois	93.7	96.2	96.8	97.2	97.8	96.5
Indiana	90.4	92.8	98.3	96.3	97.7	95.0
Iowa	94.5	97.9	96.6	98.5	98.6	97.4
Kansas	85.6	95.1	98.4	98.9	97.9	95.0
Kentucky	95.8	96.7	97.1	100.0	99.1	97.4
Louisiana	93.3	97.3	95.8	95.7	98.7	96.1
Maine	95.9	99.0	100.0	99.0	99.4	98.6
Maryland	88.5	96.7	96.2	96.2	98.2	96.0
Massachusetts	97.4	97.4	97.3	99.2	99.6	98.5
Michigan	94.8	99.2	99.1	98.6	98.9	98.2
Minnesota	95.6	99.3	97.9	98.4	99.8	98.5
Mississippi	94.3	96.8	98.3	99.3	97.8	96.7
Missouri	93.3	98.0	97.6	97.8	98.0	96.9
Montana	95.6	97.4	96.8	98.5	97.7	97.2
Nebraska	95.1	99.6	100.0	98.7	99.4	98.7
Nevada	91.7	96.8	98.0	99.5	97.5	96.7
New Hampshire	93.2	98.8	100.0	99.1	97.3	97.7
New Jersey	88.8	93.0	95.7	93.3	96.8	94.1
New Mexico	87.6	93.2	93.2	93.6	96.2	92.4
New York	93.9	95.4	95.7	95.3	96.1	95.4
North Carolina	92.9	95.5	96.3	95.9	96.2	95.3
North Dakota	98.5	98.8	99.0	99.2	99.5	99.0
Ohio	96.4	98.3	98.6	98.9	98.3	98.0
Oklahoma	93.4	96.2	95.9	99.6	99.8	96.8
Oregon	94.9	97.8	99.2	98.8	98.3	97.8
Pennsylvania	97.2	97.7	98.1	99.1	99.3	98.3
Rhode Island	89.8	92.9	98.5	98.6	97.5	95.4
South Carolina	87.6	95.4	94.8	99.0	97.9	94.8
South Dakota	93.8	96.2	98.7	98.6	99.0	97.1
Tennessee	90.9	93.2	94.3	96.5	93.7	93.4
Texas	94.0	95.4	97.0	97.7	98.3	96.5
Utah	89.4	96.5	92.6	93.9	97.7	94.8
Vermont	96.0	99.2	98.5	99.1	99.7	98.6
Virginia	94.9	96.4	99.0	96.8	99.0	97.5
Washington	89.4	97.8	97.6	98.5	98.3	96.8
West Virginia	94.3	98.4	98.1	97.7	98.8	97.2
Wisconsin	94.6	95.7	99.1	100.0	99.0	97.6
Wyoming	92.4	94.8	95.2	94.5	95.9	94.7
Total United States	93.1	96.0	96.9	97.5	97.8	96.3

Note : Income categories use 1984 dollars. For a conversion to current-year dollars, consult Table 6.3.
Source : U.S. Census Bureau, Current Population Survey (March CPS Supplement).

Table 6.9
Internet Use by Selected Characteristics, 2016

	Percent with some Internet subscription	Percent with high-speed Internet subscription ¹
All Households	81.9	81.4
Household Income²		
Less than \$20,000	56.5	56.1
\$20,000 - \$74,999	81.2	79.6
\$75,000 or more	94.5	94.3
Metropolitan Status³		
Metropolitan Area	NA	82.1
Nonmetropolitan Area	NA	70.1
Urban / Rural Area³		
Rural Area	NA	76.4
Urban Area	NA	82.6

All Individuals	85.5	85.2
Age⁴		
Under 18	88.7	88.6
18 - 64	87.7	87.4
65 +	72.0	71.1
Race and Hispanic Origin⁵		
White alone, non-Hispanic	86.6	86.3
Black alone, non-Hispanic	77.6	77.4
Asian alone, non-Hispanic	92.7	92.6
Hispanic (of any race)	81.3	81.1
American Indian	71.9	71.4

Note : Income categories are in nominal 2016 dollars.

¹ High-speed service includes all internet service other than dial-up.

² *Source* : American Factfinder, Table S2801

³ *Source* : American Factfinder, Table GCT2801

⁴ *Source* : American Factfinder, Table B28005

⁵ *Source* : American Factfinder, Table B28009

Corrections : The 2015 percent with high-speed internet subscription in rural area and in urban area was reversed in the 2016 Monitoring Report. The corrected numbers are 70.1 in rural area and 78.1 in urban area.

Table 6.10
High-Speed Internet Penetration for Households by State ¹

	2015		2016	
	Percent	Margin of Error	Percent	Margin of Error
Alabama	68.3	+/-0.5	74.7	+/- 0.5
Alaska	81.7	+/-1.3	85.7	+/- 1.1
Arizona	78.1	+/-0.4	83.1	+/- 0.4
Arkansas	64.2	+/-0.5	70.9	+/- 0.7
California	81.3	+/-0.2	85.4	+/- 0.1
Colorado	83.0	+/-0.4	86.9	+/- 0.3
Connecticut	82.0	+/-0.6	84.1	+/- 0.6
Delaware	77.4	+/-1.1	83.3	+/- 0.9
District of Columbia	76.8	+/-1.4	79.8	+/- 1.3
Florida	77.5	+/-0.2	81.2	+/- 0.2
Georgia	74.8	+/-0.4	80.7	+/- 0.4
Hawaii	82.2	+/-0.9	83.2	+/- 0.8
Idaho	76.7	+/-0.9	79.4	+/- 0.9
Illinois	76.9	+/-0.3	82.0	+/- 0.3
Indiana	73.3	+/-0.4	79.2	+/- 0.4
Iowa	75.0	+/-0.5	79.6	+/- 0.5
Kansas	76.2	+/-0.5	80.3	+/- 0.6
Kentucky	70.9	+/-0.6	77.3	+/- 0.5
Louisiana	68.7	+/-0.6	74.4	+/- 0.5
Maine	77.1	+/-0.7	80.7	+/- 0.8
Maryland	81.4	+/-0.4	85.8	+/- 0.4
Massachusetts	82.6	+/-0.4	85.5	+/- 0.3
Michigan	74.4	+/-0.3	80.5	+/- 0.3
Minnesota	79.5	+/-0.4	83.5	+/- 0.3
Mississippi	61.0	+/-0.8	70.7	+/- 0.7
Missouri	73.3	+/-0.4	79.3	+/- 0.4
Montana	75.0	+/-1.0	78.9	+/- 1.0
Nebraska	78.1	+/-0.5	81.6	+/- 0.7
Nevada	79.0	+/-0.6	80.9	+/- 0.7
New Hampshire	84.5	+/-0.7	86.4	+/- 0.8
New Jersey	81.6	+/-0.3	84.2	+/- 0.3
New Mexico	67.2	+/-0.9	73.7	+/- 0.8
New York	77.8	+/-0.2	81.7	+/- 0.2
North Carolina	74.1	+/-0.4	79.0	+/- 0.3
North Dakota	76.3	+/-1.0	81.4	+/- 1.0
Ohio	76.1	+/-0.2	80.9	+/- 0.3
Oklahoma	70.8	+/-0.5	77.2	+/- 0.4
Oregon	80.8	+/-0.4	84.9	+/- 0.5
Pennsylvania	75.7	+/-0.3	80.5	+/- 0.2
Rhode Island	78.2	+/-1.1	82.8	+/- 0.9
South Carolina	69.9	+/-0.5	77.0	+/- 0.5
South Dakota	75.3	+/-1.2	79.5	+/- 0.9
Tennessee	70.2	+/-0.4	76.7	+/- 0.4
Texas	74.3	+/-0.2	80.5	+/- 0.2
Utah	83.1	+/-0.7	85.4	+/- 0.5
Vermont	78.7	+/-1.1	81.1	+/- 0.9
Virginia	78.6	+/-0.4	83.4	+/- 0.4
Washington	83.9	+/-0.4	87.4	+/- 0.3
West Virginia	69.8	+/-0.8	74.2	+/- 0.8
Wisconsin	76.9	+/-0.4	81.3	+/- 0.3
Wyoming	77.8	+/-1.3	83.2	+/- 1.3
Total United States	76.7	+/-0.1	81.4	+/- 0.1
Puerto Rico	51.8	+/-0.7	59.3	+/- 0.7

¹ High-speed internet service includes all internet service other than dial-up.

Source : American Factfinder, Table GCT2801

Table 6.11
Residential Fixed Connections per Household by Speed Tier as of December 31, 2016
(Households and Subscribers in thousands)

	Households	At least 200 Kbps in any direction		10 Mbps Download 1 Mbps upload		25 Mbps Download 3 Mbps Upload		100 Mbps Download 10 Mbps Upload	
		Subscribers	Ratio	Subscribers	Ratio	Subscribers	Ratio	Subscribers	Ratio
Alabama	1,848	1,290	0.70	955	0.52	653	0.35	68	0.04
Alaska	251	204	0.81	146	0.58	*	*	*	*
American Samoa	10	*	*	0	0.00	0	0.00	0	0.00
Arizona	2,412	2,044	0.85	1,520	0.63	1,237	0.51	383	0.16
Arkansas	1,138	742	0.65	501	0.44	270	0.24	48	0.04
California	12,718	10,986	0.86	9,326	0.73	7,081	0.56	2,827	0.22
Colorado	2,024	1,802	0.89	1,333	0.66	1,223	0.60	*	*
Connecticut	1,353	1,185	0.88	1,035	0.77	837	0.62	252	0.19
Delaware	344	318	0.93	296	0.86	284	0.83	94	0.27
District of Columbia	273	234	0.86	211	0.77	200	0.73	*	*
Florida	7,300	6,864	0.94	5,902	0.81	4,564	0.63	1,192	0.16
Georgia	3,574	2,882	0.81	2,260	0.63	1,630	0.46	296	0.08
Guam	42	*	*	*	*	*	*	0	0.00
Hawaii	451	408	0.91	401	0.89	*	*	*	*
Idaho	589	473	0.80	255	0.43	191	0.32	14	0.02
Illinois	4,786	3,759	0.79	3,108	0.65	2,321	0.48	438	0.09
Indiana	2,502	1,893	0.76	1,443	0.58	992	0.40	228	0.09
Iowa	1,236	917	0.74	587	0.47	469	0.38	92	0.07
Kansas	1,113	881	0.79	658	0.59	404	0.36	174	0.16
Kentucky	1,708	1,297	0.76	892	0.52	465	0.27	230	0.13
Louisiana	1,728	1,212	0.70	949	0.55	620	0.36	136	0.08
Maine	553	486	0.88	343	0.62	154	0.28	10	0.02
Maryland	2,166	1,853	0.86	1,712	0.79	1,594	0.74	509	0.24
Massachusetts	2,550	2,288	0.90	2,111	0.83	2,015	0.79	709	0.28
Michigan	3,841	2,935	0.76	2,442	0.64	1,849	0.48	206	0.05
Minnesota	2,125	1,703	0.80	1,231	0.58	1,081	0.51	257	0.12
Mississippi	1,097	646	0.59	447	0.41	240	0.22	30	0.03
Missouri	2,365	1,781	0.75	1,295	0.55	870	0.37	228	0.10
Montana	409	325	0.79	211	0.51	181	0.44	7	0.02
Nebraska	737	575	0.78	406	0.55	283	0.38	49	0.07
Nevada	1,017	875	0.86	708	0.70	542	0.53	*	*
New Hampshire	520	479	0.92	403	0.77	359	0.69	139	0.27
New Jersey	3,189	2,903	0.91	2,735	0.86	2,639	0.83	810	0.25
New Mexico	764	538	0.70	306	0.40	269	0.35	71	0.09
New York	7,262	6,249	0.86	5,707	0.79	4,760	0.66	1,373	0.19
North Carolina	3,776	3,192	0.85	2,393	0.63	1,835	0.49	942	0.25
North Dakota	300	228	0.76	193	0.64	144	0.48	24	0.08
Northern Mariana Isl.	16	*	*	*	*	*	*	0	0.00
Ohio	4,585	3,791	0.83	2,959	0.65	1,388	0.30	76	0.02
Oklahoma	1,455	1,002	0.69	711	0.49	430	0.30	115	0.08
Oregon	1,533	1,289	0.84	1,011	0.66	886	0.58	262	0.17
Pennsylvania	4,959	3,998	0.81	3,226	0.65	2,868	0.58	944	0.19
Puerto Rico	1,244	*	*	*	*	*	*	*	*
Rhode Island	411	345	0.84	331	0.81	296	0.72	*	*
South Carolina	1,815	1,445	0.80	1,151	0.63	615	0.34	45	0.02
South Dakota	331	252	0.76	210	0.64	156	0.47	13	0.04
Tennessee	2,505	1,816	0.72	1,485	0.59	1,110	0.44	233	0.09
Texas	9,149	7,122	0.78	5,763	0.63	3,724	0.41	1,555	0.17
Utah	906	783	0.86	569	0.63	496	0.55	193	0.21
Vermont	257	239	0.93	165	0.64	131	0.51	52	0.20
Virgin Islands	43	22	0.51	*	*	*	*	*	*
Virginia	3,063	2,497	0.82	2,149	0.70	1,889	0.62	576	0.19
Washington	2,669	2,340	0.88	1,865	0.70	1,703	0.64	633	0.24
West Virginia	741	529	0.71	360	0.49	287	0.39	61	0.08
Wisconsin	2,299	1,856	0.81	1,426	0.62	816	0.35	20	0.01
Wyoming	227	175	0.77	123	0.54	102	0.45	1	0.00
Total	118,281	96,616	0.82	78,219	0.66	59,540	0.50	17,444	0.15

Mbps = megabits per second and kbps = kilobits per second. * = Data withheld to maintain firm confidentiality.

Note : Figures may not sum to totals due to rounding.

Sources : FCC Form 477 (Connections); 2011-2015 ACS 5 -Year Estimates (Households for the fifty states, District of Columbia and Puerto Rico) Census 2010 (Housing Units for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

Table 6.12
Comparison of Telephone Service, Internet Access, Telephone Expenses, and Internet Expenses
in Low-Income Households, 2016

Percent of Low-Income Households with Telephone/Internet Services		
	Low-Income Group 1	Low-Income Group 2
Telephone Service	95.4	97.0
Internet Access	61.3	70.4

Low-Income Household Expenses for Telephone/Cellular Phone/Internet Services as a Percent of Total Expenses		
	Low-Income Group 1	Low-Income Group 2
Telephone Expenses¹		
All	3.0	3.6
With Expenses Only	3.4	3.8
Cellular Phone Expenses		
All	2.3	2.6
With Expenses Only	2.6	2.8
Internet Expenses		
All	0.9	1.1
With Expenses Only	1.5	1.7

All statistics between group 1 and group 2 are statistically significantly different at a confidence level of 99.9%.

Note : Group 1 contains occupied housing units where the household income is less than or equal to 135% of the 2016 Federal Poverty Guideline for the household. Group 2 contains occupied housing units where household income is greater than 135% of the Federal Poverty Guideline, but less than or equal to 200% of the Federal Poverty Guideline for that Household.

Note : Expenses are calculated for everyone in the income groups (All) and for only those who have telephone or internet expenses in the income groups (With Expenses Only).

Note : The 2016 Lifeline Modernization Order included affordability of voice and broadband service as a component of the program's goals and directed WCB to measure the extent to which voice and broadband service expenditures exceed two percent of low income consumers' disposable household income as compared to the next highest income group. *Lifeline and Link Up Reform and Modernization, et al.* , WC Docket No. 11-42 et al., Third Report and Order, Further Report and Order, and Order on Reconsideration, 31 FCC Rcd 3962, 4112, para. 408 (2016).

¹ The telephone expenses include residential phone service, VOIP, phone cards, and cellular phone service.

Source : American Community Survey 2016 Public Use Microdata Sample (PUMS) data for telephone service and internet access and Consumer Expenditure Survey 2016 public-use microdata (PUMD) for telephone and internet expenses and after tax income.

Table 6.13
Fixed Connections for ILECs (in Thousands)

Rate-of-Return Carriers	Residential	Business	Total
At Least 4 Mbps			
December 2014	1,168	136	1,304
December 2015	1,354	146	1,500
December 2016	1,592	164	1,756
At Least 10 Mbps			
December 2014	644	71	715
December 2015	853	90	943
December 2016	1,115	114	1,229
At Least 25 Mbps			
December 2014	159	15	174
December 2015	264	22	286
December 2016	416	35	451

Price Cap Carriers	Residential	Business	Total
At Least 4 Mbps			
December 2014	17,315	2,566	19,881
December 2015	20,595	1,426	22,021
December 2016	20,692	1,602	22,293
At Least 10 Mbps			
December 2014	14,337	1,001	15,338
December 2015	16,430	1,211	17,641
December 2016	17,946	1,388	19,334
At Least 25 Mbps			
December 2014	5,162	414	5,576
December 2015	7,282	511	7,794
December 2016	8,904	596	9,500

Notes : ILEC stands for Incumbent Local Exchange Carrier. All connections below 25 Mbps have a minimum upstream speed of 1 Mbps. All connections with at least 25 Mbps have a minimum upstream of 3 Mbps.

Source : FCC Form 477 Submissions.

Table 6.14
Switched Access Lines and Interconnected VoIP Subscribers for ILECs (in Thousands)

	Rate-of-Return Carriers	Price Cap Carriers
December 2010	4,635	92,862
December 2011	4,495	84,932
December 2012	4,268	77,846
December 2013	4,123	70,959
December 2014	3,882	65,500
December 2015	3,747	59,930
December 2016	3,688	54,657

Note : ILEC stands for Incumbent Local Exchange Carrier.

Source : FCC Form 477 Submissions.

Section 7 – Price Indices

Overview – Price Indices

This section contains information on telephone price indices using data from the Consumer Price Index (CPI) maintained by the Bureau of Labor Statistics (BLS). The BLS collects information on telephone service as part of the CPI.¹ Monthly CPI data can be found on the Internet at www.bls.gov/cpi/. The monthly price indices represent prices sampled in the middle of the month.

The CPI for telephone services is based on a “market basket” intended to represent the telephone-related expenditures of a typical urban household. It includes both land-line telephone service and wireless telephone service. In January 2010, BLS discontinued collecting four land-line telephone indices, including local charges, long distance charges, interstate toll calls, and intrastate toll calls. These four indices were combined into a single land-line telephone service index, which began in December 2009.

The Producer Price Index (PPI), also published by BLS, continues to release sub-indices for telephone services. We no longer include them in this report because they have become less meaningful as the bundling of telephone services has become more common in the land-line telephone industry.²

¹ BLS publishes two sets of Consumer Price Indices. The CPI-U, used herein, is based on expenditures of all urban consumers. The CPI-W series is based on expenditures of urban wage earners and clerical workers.

² PPI data are available on the BLS website at www.bls.gov/ppi/.

Table 7.1
Long-Term Changes for Various Price Indices
(Compound Average Growth Rate)

	1969 - 2016	2006 - 2016
CPI All Items (SA0)	4.2	2.1
CPI All Services (SAS)	5.0	2.7
CPI Telephone Services (SEED)	1.6	0.2
CPI Major Categories:		
- Food & Beverages (SAF)	4.1	2.5
- Housing (SAH)	4.4	2.2
- Apparel (SAA)	1.7	0.4
- Transportation (SAT)	3.8	1.3
- Medical Care (SAM)	6.0	3.6
- Recreation (SAR)	*	0.6
- Other Goods & Services (SAG)	5.3	3.0
CPI Public Transportation (SETG)	4.7	1.7
CPI Utility (Piped) Gas Service (SEHF02)	4.8	-4.2
CPI Electricity (SEHF01)	4.1	2.9
CPI Water & Sewerage Maint. (SEHG01)	6.2	6.1
CPI Postage (SEEC01)	4.5	3.7

* Series not established until after 1969.

Note : The CPI Telephone Services index was revised in December of 1997. To calculate values in this table, Series MUUR0000SE270A is used for periods prior to this revision and CUUR0000SEED is used for periods after the revision. After each row, the series ID is provided and should be preceded by CUUR0000 when referencing the series.

Note : The Compound Annual Growth Rate is a smoothed rate of growth calculated in three steps. First, divide the ending value by the beginning value. Second, raise the result of that division to a power equal to one divided by the number of years in the period. Finally, subtract 1 from the result of the second step.

Source : Bureau of Labor Statistics.

Table 7.2
Annual Changes in CPI Telephone Services and All Items Indices

	All Goods and Services	Telephone Services	Land-line Telephone Services	Wireless Telephone Services
BLS Series ID	CUUR0000SA0	CUUR0000SEED	CUUR0000SEED04	CUUR0000SEED03
2000	3.4	-2.3	*	-12.3
2001	1.6	1.3	*	-5.5
2002	2.4	0.2	*	0.3
2003	1.9	-2.7	*	-1.3
2004	3.3	-2.5	*	-1.4
2005	3.4	0.4	*	-1.5
2006	2.5	1.7	*	0.0
2007	4.1	2.1	*	-0.9
2008	0.1	2.9	*	0.5
2009	2.7	1.0	*	-1.1
2010	1.5	-0.9	2.2	-3.6
2011	3.0	-0.3	1.9	-2.3
2012	1.7	0.3	1.9	-0.8
2013	1.5	0.0	3.0	-2.0
2014	0.8	-2.1	1.8	-4.0
2015	0.7	0.7	2.2	0.0
2016	2.1	-2.8	0.9	-4.2

* Series not established until December 2009.

Note : Values report the percent change from December of the previous year through December of the year shown.

Sources : Bureau of Labor Statistics.

Table 7.3
Monthly Consumer Price Indices
(December 2009 = 100)

	All Goods and Services	Telephone Services	Land-line Telephone Services	Wireless Telephone Services
BLS Series ID	CUUR0000SA0	CUUR0000SEED	CUUR0000SEED04	CUUR0000SEED03
2013 January	106.64	99.26	107.15	59.36
February	107.51	99.26	107.58	59.20
March	107.79	99.19	107.56	59.14
April	107.68	98.58	107.42	58.58
May	107.87	98.64	107.60	58.58
June	108.13	98.58	107.47	58.57
July	108.17	98.70	108.16	58.43
August	108.30	98.63	108.14	58.36
September	108.43	98.83	108.78	58.33
October	108.15	99.04	109.34	58.33
November	107.93	98.93	109.20	58.28
December	107.92	98.96	109.35	58.25
2014 January	108.32	99.35	111.11	58.14
February	108.72	98.94	110.81	57.85
March	109.42	98.85	110.82	57.78
April	109.78	98.95	110.78	57.87
May	110.16	98.87	111.14	57.71
June	110.37	98.79	111.00	57.68
July	110.33	98.82	111.09	57.68
August	110.14	98.79	111.09	57.65
September	110.23	98.78	111.25	57.60
October	109.95	97.51	111.20	56.51
November	109.35	97.09	111.04	56.18
December	108.73	96.86	111.37	55.89
2015 January	108.22	96.82	112.32	55.61
February	108.69	96.70	112.70	55.41
March	109.34	96.32	114.90	54.98
April	109.56	96.22	113.03	54.90
May	110.12	95.87	113.28	54.54
June	110.51	95.96	113.48	54.56
July	110.51	96.18	113.63	54.71
August	110.36	96.79	113.83	55.19
September	110.19	97.04	113.94	55.39
October	110.14	97.20	114.00	55.51
November	109.90	97.63	113.90	55.91
December	109.53	97.59	113.86	55.88
2016 January	109.71	97.73	114.60	55.85
February	109.80	97.13	115.14	55.27
March	110.27	97.08	114.90	55.28
April	110.80	97.10	114.88	55.29
May	111.25	96.69	114.88	54.97
June	111.62	96.56	114.23	54.99
July	111.43	96.33	114.02	54.85
August	111.53	96.42	114.71	54.79
September	111.80	95.25	113.78	54.03
October	111.94	94.89	113.78	53.74
November	111.76	94.84	114.42	53.58
December	111.80	94.87	114.84	53.52
2017 January	112.45	94.81	115.01	53.44
February	112.81	94.21	116.45	52.68
March	112.90	89.55	116.16	49.00
April	113.23	88.54	116.37	48.15
May	113.33	88.33	115.70	48.12
June	113.43	87.84	115.64	47.74
July	113.35	87.74	116.04	47.58

Note: Series values for All Goods and Services are converted from the 1982-1984 base index series reported by the Bureau of Labor Statistics (BLS). Series values for Telephone Services and Wireless Telephone Services are converted from the December 1997 base index series reported by BLS. Series are not seasonally adjusted. Series may be referenced via the BLS website with the Series ID listed at the top of each column.

Source: Bureau of Labor Statistics.