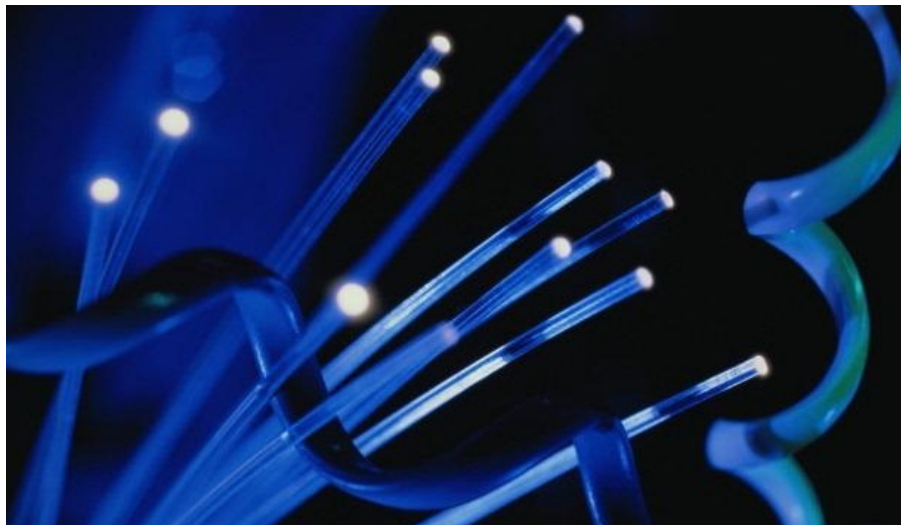


*Report on the Status of*

# Competition in the Telecommunications Industry



AS OF DECEMBER 31, 2017

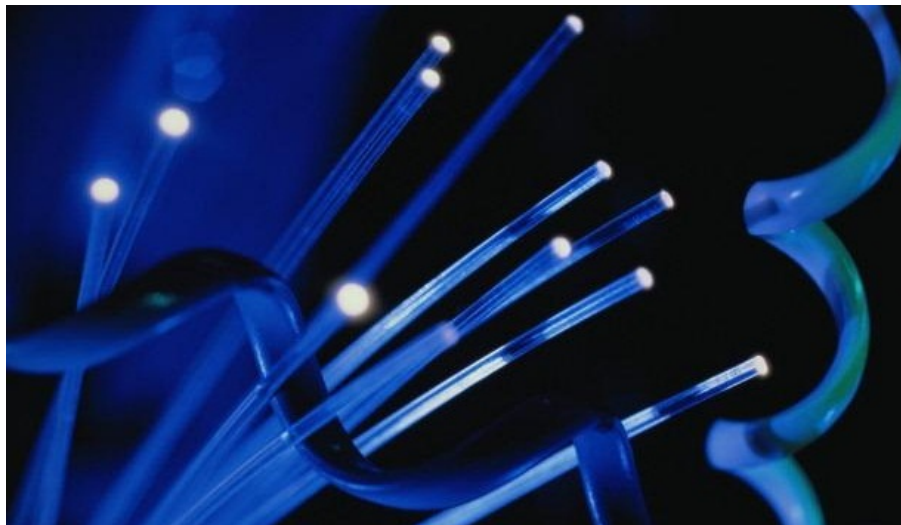


Florida Public Service Commission



*Report on the Status of*

# Competition in the Telecommunications Industry



AS OF DECEMBER 31, 2017



Florida Public Service Commission  
Office of Industry Development and Market Analysis



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## List of Acronyms

CDC	Centers for Disease Control and Prevention
CLEC	Competitive Local Exchange Company
FCC	Federal Communications Commission
FiOS	Verizon's trademark name for its fiber-to-the-home package of services
FPSC	Florida Public Service Commission, the Commission
FTRI	Florida Telecommunications Relay, Inc.
F.S.	Florida Statutes
ILEC	Incumbent Local Exchange Company
IP	Internet Protocol
kbps	kilobits per second
Mbps	Megabits per second
TASA	Telecommunications Access System Act of 1991
TDM	Time Division Multiplexing
USF	Universal Service Fund
USAC	Universal Service Administrative Company
VoIP	Voice over Internet Protocol



## Executive Summary

Section 364.386, Florida Statutes, requires the Florida Public Service Commission (FPSC or Commission) to report on the status of competition in the telecommunications industry to the Legislature by August 1 of each year. As of December 31, 2017, there were 10 incumbent local exchange companies and 268 competitive local exchange companies certificated by the Commission to operate in Florida.

In 2017, the Florida wireline market continued to follow the national trend with AT&T, CenturyLink and Frontier all experiencing access line losses. The local and national markets continued to consolidate with several mergers and acquisitions. Several intrastate issues were resolved or initiated in 2017. The Lifeline subscription rate in Florida decreased measurably, from 49.8 percent of eligible households in 2016 to 41.3 percent in 2017.

Consumers in Florida continue to migrate from traditional wireline service to wireless and cable/Voice over Internet Protocol (VoIP) services. The data indicates that residential migration may be increasing slightly. Business customers continue to migrate to Internet Protocol technology in large numbers. Carriers reported approximately two and a half million total wireline access lines in Florida for 2017, about 17 percent fewer than the previous year.

For the seventh year in a row, total wireline business access lines exceeded total residential lines. Wireline business and residential access lines experienced significant drops that were larger than those of the previous year. In 2017, business lines declined 12.2 percent, and residential lines declined 23.4 percent. Much of this decline can continue to be attributed to the transition to VoIP and wireless-only services. CenturyLink continues to be Florida's largest wireline residential provider, despite experiencing a 25.5 percent decline in residential access lines during 2017. AT&T declined 22.4 percent, and Frontier declined 24.8 percent in residential access lines for the same period. The wireline competitors maintained their 38 percent business market share in 2017. Competitors continued to largely ignore the wireline residential market, as their market share remained at one percent. AT&T's and Frontier's mix of residential and business lines continued their shift towards business lines, which now comprise about 53 percent of their total number of access lines. Competitors have nearly 99 percent of their accounts in the business sector.

As reported for the past several years, intermodal competition from wireless, VoIP, and broadband continued to drive the telecommunications markets in 2017. There are an estimated 21.5 million wireless subscriptions in Florida, and greater than 4.5 million VoIP connections.

Analysis of the telecommunications data obtained by the Commission produced the following conclusions:

- Many competitive local exchange companies reported offering a variety of services and packages comparable to those offered by incumbents. Subscribers to cable, wireless, and business VoIP services continued to increase. These factors contribute to the conclusion

that competitive providers are able to offer functionally equivalent services to both business and residential customers.

- The continued decrease in both business and residential incumbent local exchange carrier wireline access lines demonstrates customers are finding reasonable pricing packages and functionality with competitive local exchange companies, cable providers, and wireless providers, as well as VoIP services from the incumbent local exchange carriers.
- Based on the continued growth of interconnected VoIP services and wireless-only households, network reliability of non-incumbent providers is sufficient to satisfy customers. The Federal Communications Commission (FCC) reported telephone penetration rate of 94.4 percent for Florida suggests that the overwhelming majority of Florida residents are able to afford telephone service. The number and variety of competitive choices among all types of service providers suggest that competition is continuing to have a positive impact on the telecommunications market in Florida.

## Chapter I. Introduction and Background

Chapter 364, F.S., requires the Florida Public Service Commission (Commission or FPSC) to prepare and deliver a report on the status of competition in the telecommunications industry to the President of the Senate, the Speaker of the House of Representatives, and the majority and minority leaders of the Senate and the House of Representatives on August 1 of each year. Section 364.386, F.S., requires that the report address the following four elements:

1. The ability of competitive providers to make functionally equivalent local exchange services available to both residential and business customers at competitive rates, terms, and conditions.
2. The ability of customers to obtain functionally equivalent services at comparable rates, terms, and conditions.
3. The overall impact of competition on the maintenance of reasonably affordable and reliable high-quality telecommunications services.
4. A list and short description of any carrier disputes filed under Section 364.16, F.S.

The Commission is required to make an annual request to local exchange telecommunications providers each year for the data required to complete the report. The data request was mailed on February 20, 2018, and responses were due April 16, 2018. Data requests were mailed to 10 incumbent local exchange companies (ILECs) and 268 competitive local exchange companies (CLECs). The Commission continues its efforts to increase efficiency while gathering the data and information to produce this report. The data presented and the analyses that follow accurately reflect the information provided by the ILECs and the reporting CLECs.

The report also summarizes key events that may have a short-term or long-term effect on the Florida telecommunications market. National and state telecommunications issues, economic factors, mergers, universal service developments, FCC enforcement actions, and state actions are presented to provide a more comprehensive picture of the market in 2017.



## Chapter II. Wireline Market Overview

### A. Incumbent Carriers

AT&T, CenturyLink, and Frontier are the three largest ILECs in Florida providing wireline services.<sup>1</sup> These providers continued to face access line losses in the national wireline market in 2017, as customers disconnected traditional landline services and switched to alternative technologies such as wireless and VoIP.

AT&T reported losses of approximately 2.2 million switched access lines nationwide (16 percent) in 2017. In Florida, AT&T's total switched access lines declined by nearly 176,000 (17.3 percent), with residential access lines decreasing by nearly 95,000 lines (22.4 percent), and business access lines decreasing by nearly 81,000 lines (13.7 percent). This represented a slight moderation in the pace of the total line losses from 17.9 percent in 2016. In 2017, AT&T reported a decrease in operating revenues of around \$3.2 billion nationwide, a decline of two percent.<sup>2,3</sup>

CenturyLink continued to experience declines in its switched access lines nationwide, losing around 808,000 lines (7.3 percent) in 2017.<sup>4</sup> In Florida, CenturyLink's total switched access lines declined by around 160,000 (20.3 percent), with residential access lines decreasing 138,000 (25.5 percent), and business access lines decreasing 22,000 (8.9 percent). In 2017, CenturyLink reported a slight increase in operating revenues of approximately \$186 million nationwide, a gain of 1.1 percent.<sup>5</sup>

Frontier experienced a 10 percent loss of access lines nationwide compared to 2016, ending 2017 with approximately 4.4 million subscribers.<sup>6</sup> In Florida, Frontier's total switched access lines declined by around 58,000 (15.9 percent), with residential access lines decreasing nearly 34,000 (24.8 percent), and business lines decreasing by nearly 24,000 (10.5 percent). In 2017, Frontier reported a slight increase in revenue of \$232 million nationwide, a gain of 2.62 percent.<sup>7</sup>

The seven rural Florida ILECs experienced a modest contraction in the number of switched access lines in their respective wireline service areas.<sup>8</sup> In 2017, rural carriers in Florida saw their

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<sup>1</sup> Responses to Local Competition Data Request 2017.

<sup>2</sup> AT&T Inc., Form 10-K, December 31, 2017, Exhibit 13, p.1, <https://www.sec.gov/Archives/edgar/data/732717/000073271718000009/ex13.htm>, accessed April 10, 2018.

<sup>3</sup> Responses to Local Competition Data Request for 2017.

<sup>4</sup> CenturyLink Form 10-K, December 31, 2017, <https://www.sec.gov/Archives/edgar/data/18926/000001892618000012/ct12017123110k.htm#s8BA099BB78C85ED686DA46DE4B785401>, p. 6, accessed April 9, 2018.

<sup>5</sup> CenturyLink Form 10-K, December 31, 2017, <https://www.sec.gov/Archives/edgar/data/18926/000001892618000012/ct12017123110k.htm#s040A362F380259669A7BEBCCDD3759AE>, p. 49, accessed April 9, 2018.

<sup>6</sup> Frontier Communications Form 10-K, December 31, 2017, [https://www.sec.gov/Archives/edgar/data/20520/000002052018000007/fr-20171231x10k.htm#Managementss\\_Discussion\\_And\\_Analysis](https://www.sec.gov/Archives/edgar/data/20520/000002052018000007/fr-20171231x10k.htm#Managementss_Discussion_And_Analysis), p. 29, accessed April 9, 2018.

<sup>7</sup> Ibid, p. 27.

<sup>8</sup> Frontier Communications of the South data was reported with Frontier Florida figures.

total access lines decline by approximately 9,000 (7.5 percent), while residential lines decreased by 8,500 (10.1 percent) and business lines decreased by over 500 (1.5 percent).<sup>9</sup>

Windstream is the largest of the rural ILECs and operates in northeast Florida. Nationally, Windstream has approximately 1.4 million residential and small business customers, a decline of approximately 97,000 (6.5 percent). Windstream also experienced a nationwide 4.2 percent decrease in broadband subscribers.<sup>10</sup> By the end of 2017, Windstream's income from its ILEC segment decreased by \$85 million nationally, or 4.1 percent from 2016.<sup>11</sup> In Florida, Windstream experienced a decline in switched access lines of around 6,600 (9.5 percent) in total lines, 6,000 (10.9 percent) in residential lines and around 600 (4.3 percent) in business lines.<sup>12</sup>

In spite of the decline in wireline access lines, wireline telecommunications carriers continue to play a role in an evolving telecommunications market. Wireless carriers continue to be dependent on the wireline network. The majority of wireless call transport occurs over the wireline network, a function commonly referred to as "backhaul." While the number of access lines continues to decline, the wireline network remains a crucial element in the mix of communications technologies.

## **B. Mergers/Acquisitions**

Telecommunications carriers seeking to transfer assets or corporate control in mergers and acquisitions must first receive approval from the FCC, which examines the public interest impact of proposed mergers or acquisitions. In 2017, there were 52 telecommunications mergers and acquisitions in the U.S. Recent transactions of interest to Florida are described below.<sup>13,14,15</sup>

### **1. CenturyLink/Level 3**

In October 2016, CenturyLink Communications, Inc. (CenturyLink) announced that the company would acquire Level 3 Communications, Inc. (Level 3) in a cash and stock transaction valued at approximately \$34 billion. Under the terms of the merger agreement, Level 3 shareholders will receive \$26.50 per share in cash and a fixed exchange ratio of 1.4286 shares of CenturyLink stock for each Level 3 share they own. Upon the closing of the transaction, CenturyLink shareholders own approximately 51 percent and Level 3 shareholders will own approximately 49 percent of the combined company.<sup>16</sup>

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<sup>9</sup> Responses to Local Competition Data Request for 2017.

<sup>10</sup> Windstream, 10-K, December 31, 2017,

<https://www.sec.gov/Archives/edgar/data/1282266/000128226618000016/a201710k.htm>, Table. F-17, accessed April 10, 2018.

<sup>11</sup> Ibid, Table F-104, Footnote 58.

<sup>12</sup> Responses to Local Competition Data Request for 2017.

<sup>13</sup> Section 214 of the Communications Act of 1934, sections 63.03 and 63.04 of the FCC's rules govern the procedures for domestic transfer of control/asset applications.

<sup>14</sup> FCC, "2017 Completed Domestic Section 214 Transfer of Control Transactions,"

<https://www.fcc.gov/2017-completed-domestic-section-214-transfer-control-transactions#block-menu-block-4>, accessed April 24, 2018.

<sup>15</sup> FCC, "2016 Completed Domestic Section 214 Transfer of Control Transactions,"

<https://www.fcc.gov/general/2016-completed-domestic-section-214-transfer-control-transactions#block-menu-block-4>, accessed April 24, 2018.

<sup>16</sup> "CenturyLink to acquire Level 3 Communications," CenturyLink News Release, released October 31, 2016, <http://news.centurylink.com/news/centurylink-to-acquire-level-3-communications>, accessed April 20, 2017.

Both Level 3 and CenturyLink provide communications services in all 50 states, including Florida. Level 3 is a global communications company that provides primarily fiber-based communications services such as Internet backbone, broadband transport, collocation, voice, and IP-based services. CenturyLink offers local and long-distance voice, wholesale local network access, high-speed internet, and fiber transport services through copper and fiber networks. According to CenturyLink, the merger with Level 3 will significantly improve the company's global network capabilities, creating a company with one of the most robust fiber networks in the world. The CenturyLink/Level 3 merger closed on November 1, 2017.<sup>17</sup>

## **2. Windstream/EarthLink**

On November 7, 2016, Windstream announced a merger agreement with EarthLink Holdings Corp. (EarthLink) wherein EarthLink will ultimately become a wholly-owned subsidiary of Windstream.<sup>18</sup> The merger was completed on February 27, 2017. Under the terms of the agreement, EarthLink shareholders received 0.818 shares of Windstream common stock for each EarthLink share owned. As a result, Windstream shareholders will own approximately 51 percent and EarthLink shareholders will own approximately 49 percent of the combined company. The all-stock transaction is valued at approximately \$1.1 billion, including debt.<sup>19</sup> According to Windstream, the merger with EarthLink further advances Windstream's strategy by creating a stronger, more competitive business to serve its customers while increasing free cash flow and reducing leverage. It will also extend Windstream's national footprint spanning to approximately 145,000 fiber route miles and provide advanced network connectivity, managed services, voice, internet and other value-added services.<sup>20</sup>

Windstream provides an array of communications and technology services. The company also operates as an ILEC in multiple states, including Florida. Windstream provides local exchange and intrastate, interstate and international long distance telecommunications services to residential customers located in primarily rural areas. EarthLink operates as a CLEC and is authorized to provide services in 50 states, including Florida. The company provides data, voice, and managed network services to small- and medium-sized business, enterprise, and wholesale customers.

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<sup>17</sup> Cision PR Newswire, "CenturyLink completes acquisition of Level 3," CenturyLink, Inc. News Release, release November 1, 2017, <https://www.prnewswire.com/news-releases/centurylink-completes-acquisition-of-level-3-300547357.html>, accessed April 24, 2018.

<sup>18</sup> "Windstream and EarthLink to merge in \$1.1 billion transaction," Windstream News Release, released November 7, 2016, [http://news.windstream.com/article\\_display.cfm?article\\_id=1770](http://news.windstream.com/article_display.cfm?article_id=1770), accessed November 14, 2017.

<sup>19</sup> "Windstream completes merger with EarthLink," Windstream News Release, released February 27, 2017, [http://news.windstream.com/article\\_display.cfm?article\\_id=1791](http://news.windstream.com/article_display.cfm?article_id=1791), accessed April 24, 2018.

<sup>20</sup> "Windstream and EarthLink to merge in \$1.1 billion transaction," Windstream News Release, released November 7, 2016, [http://news.windstream.com/article\\_display.cfm?article\\_id=1770](http://news.windstream.com/article_display.cfm?article_id=1770), accessed April 24, 2018.

### **3. Consolidated/FairPoint**

In December 2016, Consolidated Communications Holdings, Inc. (Consolidated) signed an agreement to acquire FairPoint Communications, Inc. (FairPoint) in an all stock merger. On March 28, 2017, Consolidated's shareholders approved the issuance of the company's common stock pursuant to the merger agreement. Under the terms of the agreement, FairPoint shareholders will receive a fixed exchange ratio of 0.7300 shares of Consolidated's common stock for each share of FairPoint common stock. After closing, Consolidated's shareholders will own approximately 71.3 percent of the combined company and FairPoint's shareholders will own 28.7 percent. Consolidated secured financing to fund the acquisition and both Consolidated and FairPoint secured the necessary state and federal regulatory approvals to complete the merger. The merger closed on July 3, 2017.<sup>21</sup> The Fairpoint brand will be retired in favor of the Consolidated brand. Fairpoint has two subsidiaries operating in Florida: GTC Communications, Inc. and GTC, Inc.

### **4. Windstream/Broadview**

On April 13, 2017, Windstream signed a definitive agreement to acquire Broadview Networks for \$227.5 million in cash in an effort to improve its competitiveness in the unified communications market.<sup>22</sup> Broadview Networks specializes in cloud-based unified communications solutions targeting the small and medium business market (SMB). Therefore, the acquisition of Broadview Networks will add an additional footprint of unified communications and other business class services targeting SMBs to Windstream's reach, which has grown significantly due to Windstream's recent acquisition of EarthLink. Acquiring Broadview Networks will also help Windstream continue its diversification strategy of moving away from legacy telecom services towards business, cloud, and broadband focused services. The boards of both companies unanimously approved the acquisition and the transaction closed July 28, 2017. Both companies conduct business in Florida.<sup>23</sup>

### **5. Windstream/MassComm**

On March 27, 2018, Windstream Holdings, Inc. announced that it has acquired MASS Communications, a privately held New York-based telecommunications network management company, for approximately \$37.5 million in an all-cash transaction. MASS Communications serves a broad range of small to mid-sized global enterprises in the financial, legal, healthcare, technology, education and government sectors, providing custom engineered voice, data and networking solutions.

### **6. AT&T/Time Warner**

On October 22, 2016, AT&T Inc. announced that it intended to acquire Time Warner Inc. The new company would have a total equity value of \$85.4 billion and a total transaction value of

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<sup>21</sup> Vermontbiz, "Consolidated Communications completes FairPoint acquisition," published July 3, 2017, <https://vermontbiz.com/news/july/consolidated-communications-completes-fairpoint-acquisition>, accessed April 24, 2018.

<sup>22</sup> Windstream, "Windstream to acquire Broadview Networks," Windstream News Release, released April 13, 2017, [http://news.windstream.com/article\\_display.cfm?article\\_id=1804](http://news.windstream.com/article_display.cfm?article_id=1804), accessed April 24, 2018.

<sup>23</sup> Globenewswire, "Windstream completes acquisition of Broadview Networks," Windstream News Release, released July 28, 2017, <https://globenewswire.com/news-release/2017/07/28/1064084/0/en/Windstream-completes-acquisition-of-Broadview-Networks.html>, accessed April 23, 2018.



\$108.7 billion. Acquiring Time Warner would give AT&T control of a large portfolio of content creation and aggregation including: HBO, Harry Potter, DC Comics, TNT, TBS, CNN, Cartoon Network/Adult Swim, NBA, March Madness, MLB, Hulu, Bleacher Report, CNN.com, and Fandango. On November 20, 2017, the United States Department of Justice sued to block the merger on the grounds that AT&T could use control of Time Warner content to harm rivals and drive up prices. US District Judge Richard Leon of the United States District Court for the District of Columbia approved the merger on June 12, 2018.<sup>24, 25, 26</sup>

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<sup>24</sup> AT&T Press Release, “AT&T to Acquire Time Warner,” released October 22, 2016, [http://about.att.com/story/att\\_to\\_acquire\\_time\\_warner.html](http://about.att.com/story/att_to_acquire_time_warner.html), accessed May 1, 2018.

<sup>25</sup> The Hill, “Closing arguments made in AT&T-Time Warner merger trial,” published April 30, 2018, <http://thehill.com/policy/technology/385510-justice-makes-closing-argument-against-att-time-warner-deal>, accessed May 1, 2018.

<sup>26</sup> Telecompetitor, “[AT&T Time Warner Approval is Without Conditions](http://www.telecompetitor.com/att-time-warner-approval-is-without-conditions/),” published June 12, 2018, <http://www.telecompetitor.com/att-time-warner-approval-is-without-conditions/>, accessed June 20, 2018.



## **Chapter III. Status of Wireline Competition in Florida**

### ***A. Wireline Trends in Florida***

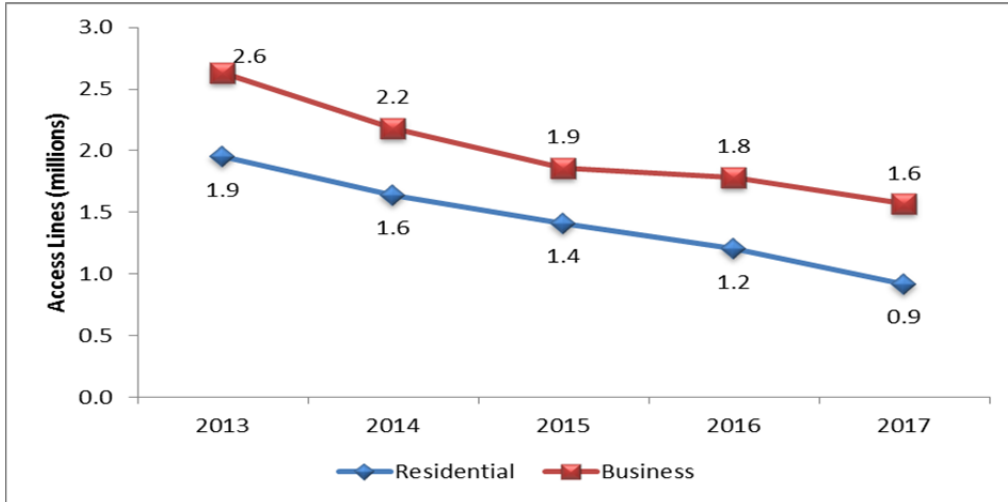
Total combined traditional wirelines for ILECs and CLECs declined nine percent, from approximately 3 million in December 2016 to 2.5 million as of December 2017. Most of the lost access lines resulted from lower demand by customers. VoIP lines reported by CLECs and cable companies are not included in wireline CLEC market share analyses.

Residential access lines, which totaled approximately 920,000 as of 2017, fell by 23 percent from the previous year. From 2005 through 2017, wireline residential access lines have declined by about six million. Florida CLECs, while representing relatively few residential access lines, reported a decrease in the number of residential customers served of about 6,000 lines, or 42 percent in 2017.

The number of wireline business connections declined as well. The total business access lines reported for ILECs and CLECs were nearly 1.6 million, a decrease of 12 percent from 2016 to 2017. The decline consisted of a decrease of approximately 127,000 ILEC business access lines versus a decrease of about 90,000 CLEC business access lines. Of the incumbent carriers, AT&T experienced the largest business access line losses of about 81,000, while CenturyLink and Frontier lost around 22,000 and 24,000 business lines respectively. Rural ILECs had a smaller loss at around 500 lines. These losses equate to an 11.9 percent decline in the combined line total of the three largest ILECs, versus a 1.5 percent decline in the combined line total of the rural ILECs.

Figure 3-1 illustrates the overall trend in Florida for both residential and business lines (not including VoIP connections). Based on current data, both residential and business lines appear to be declining at a similar rate.

**Figure 3-1  
Florida Wireline Access Line Trends**



Source: Responses to FPSC data requests (2012-2018)

## ***B. Wireline Market Mix, Market Share, and Access Lines***

### **1. Market Mix**

The composition of customers served by ILECs and CLECs has shifted over time. In general, both ILECs and CLECs have seen increased concentration of business customers as residential customers migrate to wireless and VoIP services. The business-to-residential customer mix for ILECs was about 30 percent business and 70 percent residential in 2004. By 2017, the mix for ILECs had shifted so much that the percentage of business lines exceeded the percentage of residential lines; ILECs held nearly 52 percent business lines versus 48 percent residential lines.

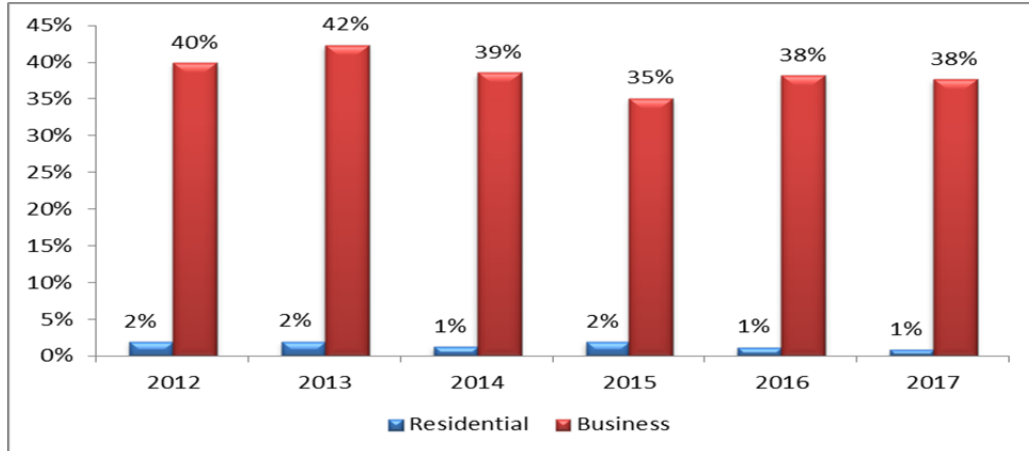
The shift in mix has been even more pronounced in the CLEC market. In 2004, the business to residential customer mix for CLECs was about 63 percent business and 37 percent residential. By 2017, the CLEC business-to-residential customer mix had shifted to close to 99 percent business and one percent residential. These changes, however, do not reflect gains or losses of residential or business customers served by VoIP technology.

### **2. Market Share**

CLECs have traditionally focused on business customers. Figure 3-2 illustrates the CLEC market share by business and residential customer classes. The inverse of this percentage would be market share for the ILECs in Florida. Overall, the CLEC residential market share has remained at one or two percent over the last six years, while ILECs retain the rest of the residential wireline market.

The CLEC business market share in 2017 remained at 38 percent. This percentage excludes VoIP services, which cable companies, and more recently ILECs and CLECs, have deployed.

**Figure 3- 2  
Florida Residential & Business CLEC Market Share**



Source: Responses to FPSC data requests (2013-2018)

The FCC also reports CLEC market share by state and for residential and business lines. For December 2016 (latest data available), the FCC reported Florida CLECs have one percent of the total residential market share and 34 percent of the business market share.<sup>27</sup> This is consistent with the Commission’s data represented in Figure 3-2.

### 3. Access Lines

Local exchange companies were serving approximately two and a half million lines in Florida as of December 31, 2017, a decline of nearly 17 percent from 2016 as illustrated in Table 3-1. In 2017, residential access lines provided by ILECs decreased by 23 percent, while ILEC business lines decreased by 12 percent. The largest residential line losses were experienced by CenturyLink and AT&T with declines of around 26 percent and 22 percent from last year, respectively, while the largest business line losses were experienced by AT&T and the CLECs with declines of 14 percent and 13 percent.

<sup>27</sup> FCC, “Voice Telephone Services Report as of December 31, 2016,” released March 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 11, 2018, State-Level Subscriptions (Excel).

**Table 3- 1  
Florida Wireline Access Line Comparison**

		<b>ILECs</b>	<b>CLECs</b>	<b>Both</b>
<b>2014</b>	Residential	1,614,926	21,651	1,636,577
	Business	1,340,699	841,880	2,182,579
	Total	2,955,625	863,531	3,819,156
<b>2015</b>	Residential	1,381,124	27,813	1,408,937
	Business	1,205,777	652,214	1,857,991
	Total	2,586,901	680,027	3,266,928
<b>2016</b>	Residential	1,187,615	14,415	1,202,030
	Business	1,104,197	681,398	1,785,595
	Total	2,291,812	695,813	2,987,625
<b>2017</b>	Residential	911,814	8,341	920,155
	Business	976,768	591,089	1,567,857
	Total	1,888,582	599,430	2,488,012
<b>Change 2016- 2017</b>	Residential	-23%	-42%	-23%
	Business	-12%	-13%	-12%
	Total	-18%	-14%	-17%

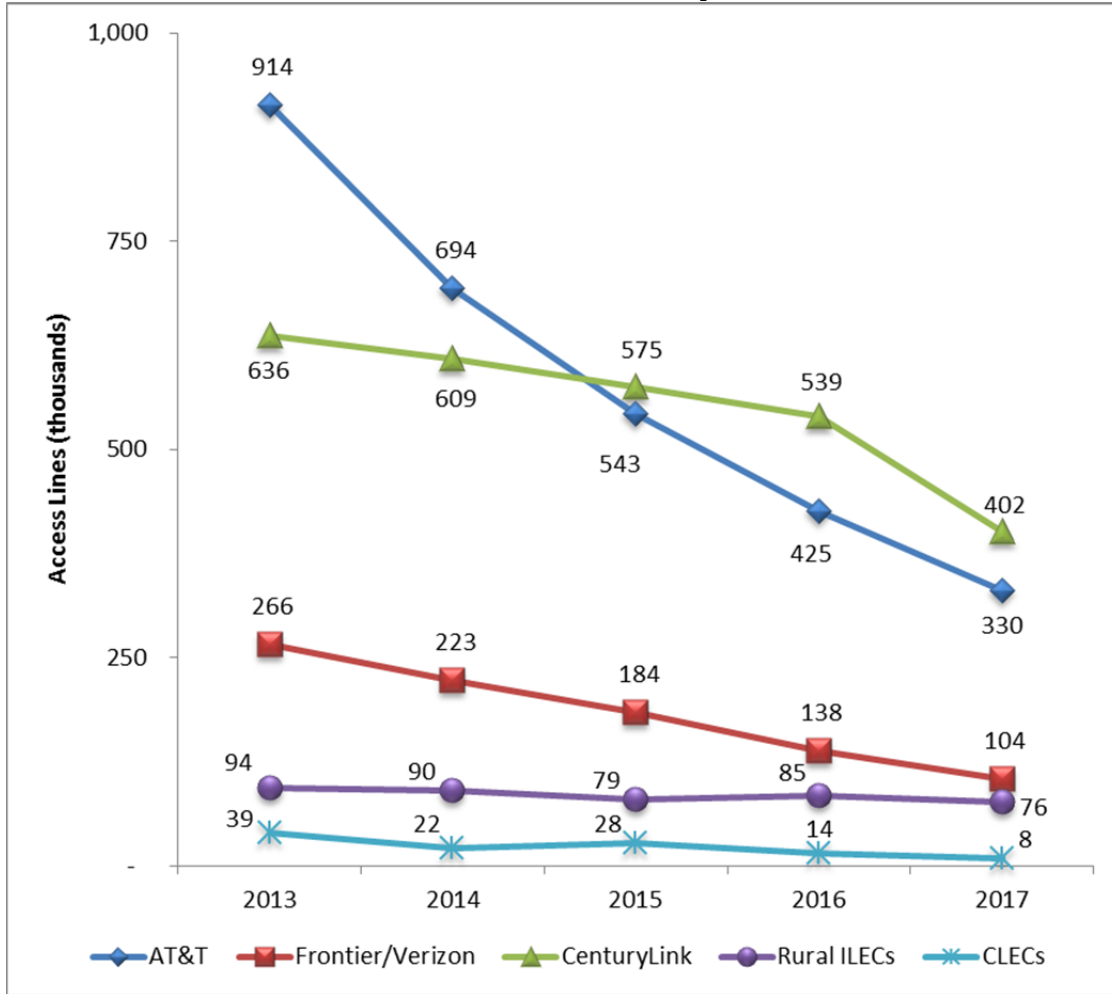
Source: Responses to FPSC data requests (2014-2018)

## **C. Competitive Market Trends**

### **1. Residential Wireline Access Line Trends**

Figure 3-3 displays the wireline residential access line trends separately for AT&T, Frontier, CenturyLink, aggregate rural ILECs, and aggregate CLECs. Over the past five years, AT&T and Frontier/Verizon have both averaged around 22 percent declines per year, while CenturyLink has experienced an average of about 10 percent decline per year in residential access lines. In 2015, CenturyLink became the largest provider of residential access lines in Florida.

**Figure 3-3  
Florida Residential Wireline Trends by ILECs and CLECs**



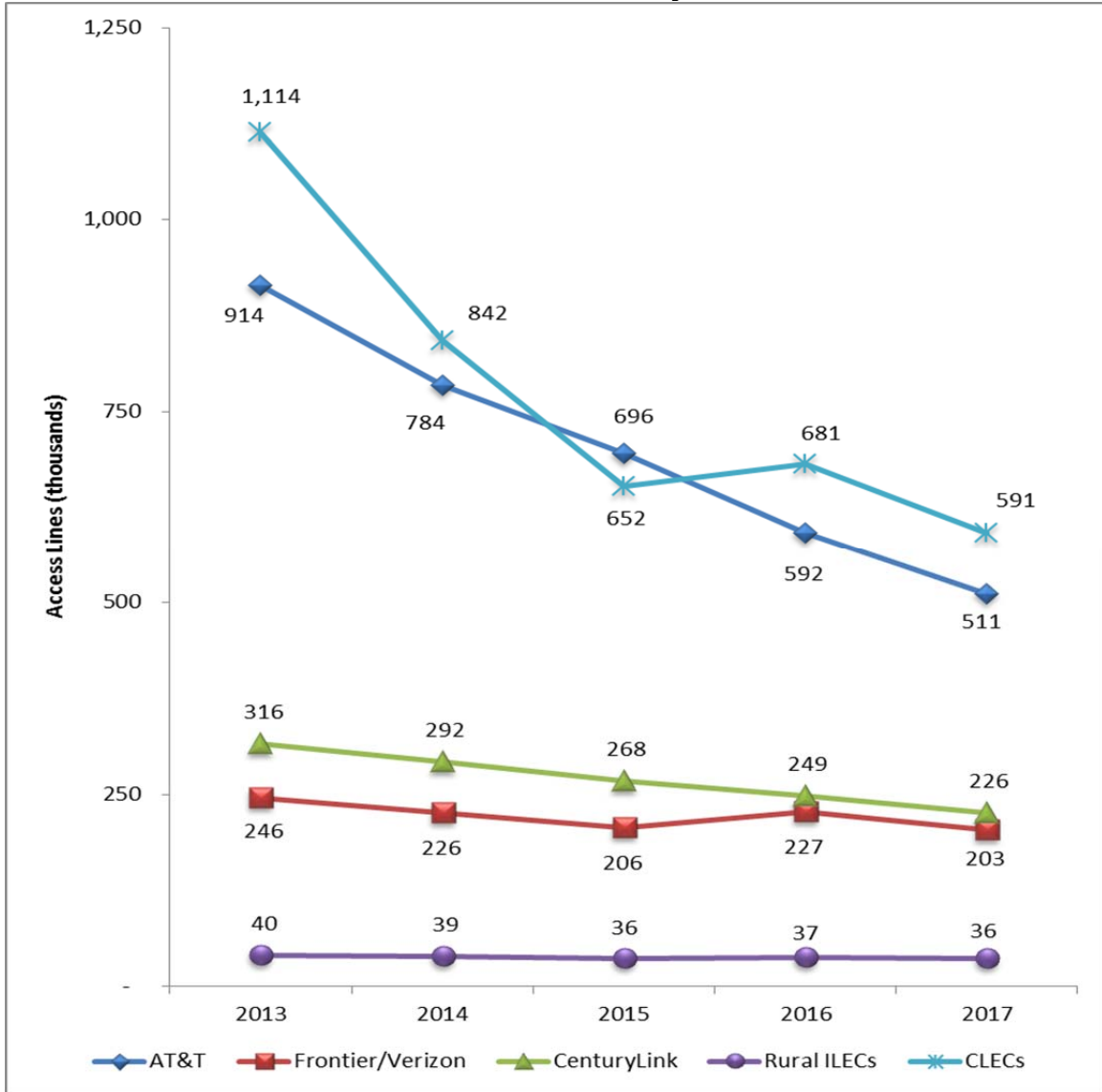
Source: Responses to FPSC data requests (2013-2018)

In 2017, Frontier’s rate of residential line losses stayed the same at about 25 percent. AT&T, CenturyLink, and the rural ILECs all experienced an acceleration in the rate of line losses ranging from a decline of 25.5 percent for CenturyLink to a decline of 10.1 percent for the rural ILECs. By comparison, CLECs reported a decline in residential access lines of around 42 percent in 2017, which was an improvement from the decline of 48 percent that they experienced in 2016.

## 2. Business Wireline Access Line Trends

Figure 3-4 displays the wireline business access line trends separately for AT&T, Frontier, CenturyLink, aggregate rural ILECs, and aggregate CLECs. Over the past five years, AT&T has experienced an average decline of about 13 percent per year, while Frontier/Verizon and CenturyLink have experienced average declines of about nine and eight percent, respectively.

**Figure 3-4  
Florida Business Wireline Trends by ILECs and CLECs**



Source: Responses to FPSC data requests (2013-2018)

In 2017, AT&T's losses decelerated to around 14 percent; all other parties experienced an acceleration of losses. Frontier's 2016 business line gains turned into 2017 losses of over 10 percent. CenturyLink's losses accelerated to nearly 9 percent. The rural ILECs declined over one percent, reversing a gain in 2016. The CLECs reported a decline in business access lines of greater than 13 percent in 2017.



## Chapter IV. Wireless, VoIP, and Broadband

### A. Wireless

Pew Research Center reported that 95 percent of Americans own a cellphone of some kind.<sup>28</sup> Smartphones are now owned by 77 percent of Americans.<sup>29</sup> Among men and women, 95 percent of men, and 94 percent of women, own a cellphone of any type. For smartphones specifically, the divide breaks down to 80 percent of men and 75 percent of women.<sup>30</sup>

A national wireless trade association, CTIA, reports that wireless subscriber connections have grown from 395.9 million in 2016 to an estimated 396 million by year-end 2017, representing a 2.5 percent increase over 2016.<sup>31</sup> In addition, wireless penetration has reached 121 percent, increasing .4 percent over 2016.<sup>32</sup>

#### 1. Wireless Substitution

By the end of 2017, wireless-only households in the United States rose from 50.8 percent to 53.9 percent. Substitution continued to increase while the number of households with both wireline and wireless service decreased 2.5 percent.<sup>33</sup> The number of wireline-only households decreased 0.7 percent to 5.8 percent.<sup>34</sup> Figure 4-1 shows national trends in the percentage of households with wireless only, wireline only, and dual household usage.

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<sup>28</sup> Demographics of Mobile Device Ownership and Adoption in the United States, Pew Research Center, published February 5, 2018, <http://www.pewinternet.org/fact-sheet/mobile/>, accessed April 3, 2018.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

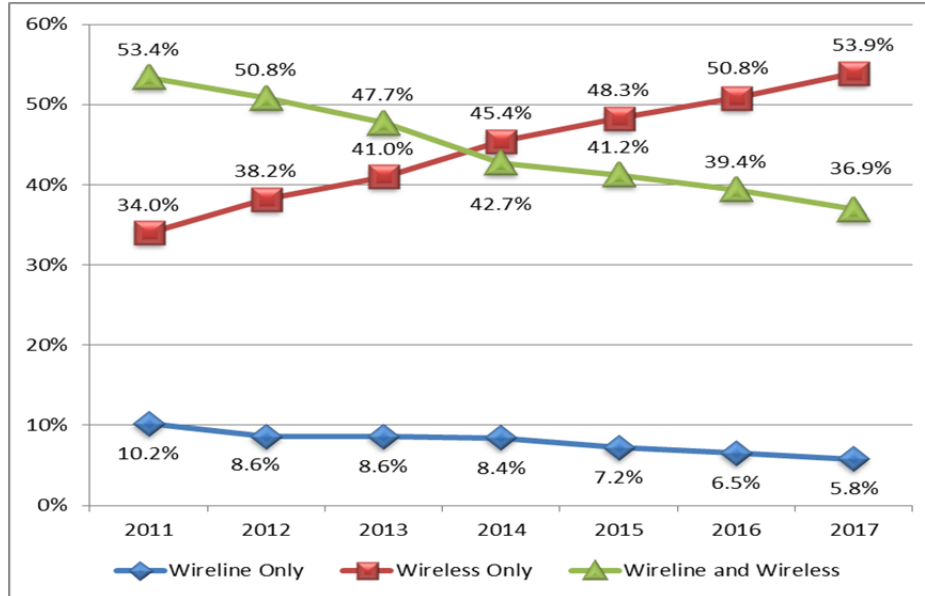
<sup>31</sup> CTIA, The Wireless Industry, Industry Data, <https://www.ctia.org/the-wireless-industry/infographics-library>, accessed April 23, 2018.

<sup>32</sup> Ibid.

<sup>33</sup> Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July – December 2017. National Center for Health Statistics, released June 2018, <https://www.cdc.gov/nchs/nhis/releases.htm#wireless>, accessed July 25, 2018.

<sup>34</sup> Ibid.

**Figure 4-1  
U.S. Wireless Substitution Rates**



Source: CDC/NCHS, National Health Interview Survey

## 2. Florida Trends

The United States Census Bureau estimated Florida’s population to be 20,984,400 on July 1, 2017, up from 20,612,439 in 2016.<sup>35</sup> Between 2011 and 2015, Florida’s wireless substitution rate grew an average of 4.7 percent per year.<sup>36</sup> During the same period, the national wireless substitution rate grew an average of 3.9 percent.

There is no reason to believe the Florida wireless-only substitution rate changed appreciably from 2016 to 2017. State-level data is not available for 2017, but a comparison of Florida data and national data for 2016<sup>37</sup> showed that Florida was outpacing national wireless-only substitution trends. Wireless-only homes in Florida increased to 54.6 percent, and during the same timeframe, the wireless-only substitution rate nationally was 52.5 percent.

## 3. Networks and Usage

Among wireless providers, Verizon continues to lead the market with a 35.5 percent market share. AT&T, T-Mobile, and Sprint follow with 33.4 percent, 17.1 percent, and 12.6 percent, respectively.<sup>38</sup> Current wireless market share is shown in Figure 4-2.

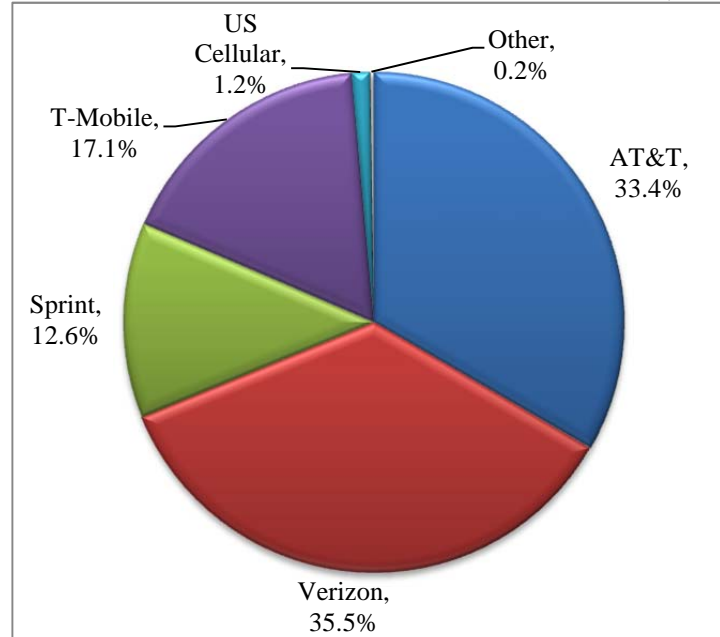
<sup>35</sup> United States Census Bureau, Florida QuickFacts from the US Census Bureau, Population estimates, July 1, 2017, <https://www.census.gov/quickfacts/fact/table/FL/PST045216>, accessed April 24, 2018.

<sup>36</sup> National Center for Health Statistics, Centers for Disease Control and Prevention, “Wireless Substitution State-Level Estimates from the National Health Interview Survey,” released June 2018, [http://www.cdc.gov/nchs/nhis/new\\_nhis.htm](http://www.cdc.gov/nchs/nhis/new_nhis.htm), accessed June 7, 2018.

<sup>37</sup> Ibid.

<sup>38</sup> Fierce Wireless, “How Verizon, AT&T, T-Mobile, Sprint and more stacked up in Q4 2017: The top 7 carriers,” March 6, 2018, <https://www.fiercewireless.com/wireless/how-verizon-at-t-t-mobile-sprint-and-more-stacked-up-q4-2017-top-7-carriers>, accessed April 30, 2018.

**Figure 4-2**  
**U.S. Wireless Market Share as of December 31, 2017**



Source: Fierce Wireless

#### 4. New Technology

Wireless technology continues to outpace innovations for wireline services. As discussed in last year's report, this is not an indication the switched access network is no longer necessary. These facilities are the backbone of the new generation of wireless tools available to consumers. The switched access network is instrumentally critical to wireless technology and that network will be vital in the advancement of 5G services.

- As reported in its February 23, 2018 Form 10-K,<sup>39</sup> Verizon Communications, Inc. announced in November 2017 that it “will commercially launch 5G wireless residential broadband in three to five U.S. markets in 2018.”<sup>40</sup>
- Sprint believes its “broad spectrum holdings allow us to introduce 5G in parallel with 4G service over the same 2.5 GHz spectrum band, supporting the early introduction of 5G devices without disrupting the capacity needed to support our 4G users.”<sup>41</sup>
- In its 2018 10-K filing, AT&T, Inc. announced they “expect to be the first U.S. company to introduce mobile 5G service in 12 markets by late 2018.”<sup>42</sup>

<sup>39</sup> Form 10 K is an annual report required by the U.S. Securities and Exchange Commission that reports the company's financial performance.

<sup>40</sup> Verizon Communications, Inc., Form 10-K filed 2/23/2018 for the Period Ending 12/31/2017, available at <https://www.verizon.com/about/investors/sec-filings>, accessed May 31, 2018.

<sup>41</sup> Sprint Corporation, Form 10-K for the fiscal year ended March 31, 2018, filed May 24, 2018, available at <http://investors.sprint.com/financials/sec-filings/sec-filings-details/default.aspx?FilingId=12776690>, accessed May 31, 2018.

- T-Mobile “will start building out its 5G network this year and plans to be in 30 cities by the end of 2018.”<sup>43</sup> However, the company has said “it wouldn’t be until ... next year that we’ll see the first phones announced that support 5G on T-Mobile’s network.”

In addition to the development of small cell technology and the advancements and deployment of 5G services, access to the public right of way to advance these technologies will be required. It will be dependent upon local jurisdictions and FCC action to maintain a competitive atmosphere of economic growth.<sup>44</sup>

## ***B. Voice over Internet Protocol (VoIP)***

The number of customers who subscribe to interconnected VoIP services has steadily increased each year while subscribership rates to traditional wired services have continued to decline. The FCC’s latest data, between 2013 and 2016, shows interconnected VoIP subscriptions continued a compound annual growth rate of 10 percent while subscribership to traditional wireline services decreased by 12 percent per year.<sup>45</sup> Figure 4-3 shows the number of traditional and interconnected VoIP subscriptions between 2013 and 2016.

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<sup>42</sup> AT&T, Inc. Form 10-K, filed February 20, 2018, available at

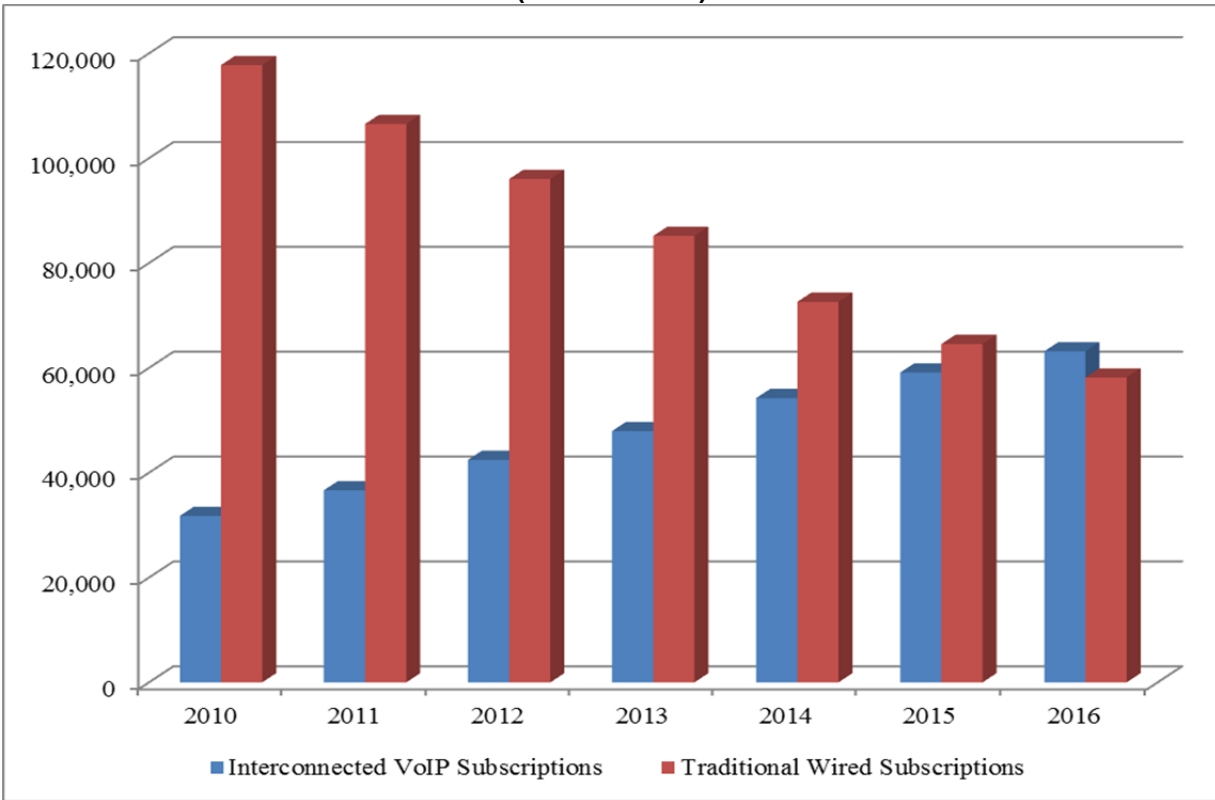
<https://otp.tools.investis.com/clients/us/atnt/SEC/sec-outline.aspx?FilingId=12564537&Cik=0000732717&PaperOnly=0&HasOriginal=1>, accessed May 31, 2018.

<sup>43</sup> T-Mobile to launch 5G in 30 cities this year, including New York and LA, Jacob Kastrenakes, The Verge, February 27, 2018, <https://www.theverge.com/2018/2/27/17058368/tmobile-5g-first-30-cities-2018-new-york-la-dallas-las-vegas>, accessed May 31, 2018.

<sup>44</sup> Petition for Declaratory Ruling, Mobilitie, LLC, Adopted/Filed November 15, 2016, <https://ecfsapi.fcc.gov/file/122306218885/mobilitie.pdf>, accessed June 20, 2017.

<sup>45</sup> FCC, Voice Telephone Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 1, 2018.

**Figure 4-3**  
**U.S. Retail Voice Telephone Subscriptions**  
 (in Thousands)



Source: FCC Voice Telephone Services Report Dec 2016

As of December 2016, the FCC reported that there were approximately 63 million interconnected VoIP subscribers in the U.S. This total includes roughly 7.4 million “over-the-top” or “bring your own broadband” VoIP subscribers.<sup>46</sup> Residential VoIP subscribers accounted for over 40 million of the total subscribers nationwide while business subscribers accounted for approximately 22.9 million.<sup>47</sup> Table 4-1 shows U.S. interconnected VoIP subscribership by customer type as of December 2016.<sup>48</sup> Data collected by the FPSC also shows an estimate of over 2.8 million interconnected VoIP residential subscribers in Florida as of December 2017.<sup>49</sup>

<sup>46</sup> In 2014, the FCC modified Form 477 to distinguish over-the-top interconnected VoIP subscriptions from other interconnected VoIP subscriptions. The phrase “over-the-top VoIP” refers to a VoIP service that requires a consumer to obtain broadband access from another company.

<sup>47</sup> FCC, Voice Telephone Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, Table 1, accessed May 11, 2018.

<sup>48</sup> Ibid, Figure 3.

<sup>49</sup> Responses to the FPSC Local Competition Data Request 2018.

**Table 4-1**  
**U.S. Interconnected VoIP Subscriberhip by Customer Type**  
(In Thousands)

<b>Total</b>	<b>Over-the-Top (OTT)</b>	<b>All Other VoIP</b>	<b>Total</b>
ILEC	41	13,043	13,084
Non-ILEC	7,375	42,703	50,080
<b>Total</b>	<b>7,416</b>	<b>55,746</b>	<b>63,165</b>
<b>Residential</b>			
ILEC	38	9,950	9,988
Non-ILEC	2,619	27,673	30,292
<b>Residential Total</b>	<b>2,658</b>	<b>37,622</b>	<b>40,280</b>
<b>Business</b>			
ILEC	3	3,093	3,096
Non-ILEC	4,755	15,031	19,788
<b>Business Total</b>	<b>4,758</b>	<b>18,124</b>	<b>22,885</b>

Source: FCC Voice Telephone Services Report December 2016<sup>50</sup>

## 1. National Market Analysis

The FCC reported that at year-end 2016, there were “463 million retail voice telephone service connections” across the United States.<sup>51</sup> Of these retail service connections, 121 million of them are provided over end-user switched access lines and interconnected VoIP subscriptions. Over half of these end use subscribers, 63 million, receive access via interconnected VoIP services.<sup>52</sup>

### a. Facilities-Based VoIP Providers

In the facilities-based residential interconnected VoIP market, cable companies accounted for nearly 30.3 million VoIP subscribers as of December 2016, compared to 9.9 million ILEC VoIP subscribers.<sup>53</sup> Comcast, the country’s largest cable provider, had an estimated 11.6 million VoIP subscribers at year-end 2017.<sup>54</sup> This represents a decrease of approximately 1.2 percent from year-end 2016. The second largest cable provider, Charter Communications, Inc., reported over 11.3 million VoIP subscribers at year-end 2017, a 2.1 percent increase from 2016.<sup>55</sup>

<sup>50</sup> FCC, Voice Telephone Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, Figure 3, accessed May 1, 2018. Note: totals in the table may not sum due to rounding.

<sup>51</sup> Ibid, Page 2.

<sup>52</sup> Ibid, Table 1.

<sup>53</sup> FCC, Voice Telephone Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, Table 1, accessed May 1, 2018.

<sup>54</sup> Comcast Corporation, Comcast Reports 4th Quarter and Year End 2017 Results, released January 24, 2018, <http://files.shareholder.com/downloads/CMCHttps://www.cmcsa.com/news-releases/news-release-details/comcast-reports-4th-quarter-and-year-end-2017-results?linkId=47304539>, accessed May 1, 2018.

<sup>55</sup> “Charter Announces Fourth Quarter and Full Year 2017 Results,” Charter Communications, Inc. News Release, released February 2, 2018, <https://newsroom.charter.com/press-releases/charter-announces-fourth-quarter-and-full-year-2017-results/>, accessed May 1, 2018.

AT&T reported approximately 5.2 million U-verse Consumer VoIP subscribers at year-end 2017.<sup>56</sup> This represents a 3.7 percent decrease from the previous year.

### **b. Over-the-Top VoIP Providers<sup>57</sup>**

According to the FCC, there were roughly 7.4 million over-the-top interconnected VoIP subscribers in the U.S. as of December 2016. This total included nearly 2.7 million residential subscribers and approximately 4.8 million business subscribers nationwide. The FCC's figures show a reduction of 4.7 percent in residential subscribers, and a 43.3 percent increase in business subscribers in 2016 over the same period in 2015.<sup>58</sup> The price advantage over the bundled services offered by facilities-based VoIP providers has allowed over-the-top VoIP providers to attract more customers.

Vonage, 8x8, Inc., MagicJack, Skype, and Google are a few of the leading over-the-top VoIP providers. Reliable data on subscribership is not widely available for over-the-top providers. However, at year-end 2017, Vonage reported 2.2 million subscriber lines, a decrease of roughly 4.3 percent from the previous year.<sup>59</sup> MagicJack reported 1.95 million subscribers in 2017, a decrease of approximately 9.3 percent since 2016.<sup>60</sup>

## **2. Florida Market**

The FPSC does not have jurisdiction over VoIP services. As a result, the ability to determine an accurate estimate of the total number of VoIP subscribers in Florida is limited. However, several ILECs and CLECs in Florida voluntarily responded to the Commission's data request and provided information on the number of residential VoIP subscribers. The Florida Internet and Television Association (formerly the Florida Cable Telecommunications Association) reported nearly 2.1 million residential VoIP subscribers for its five largest member providers, but it has not historically provided business line data. The FCC reported non-ILECs in Florida served approximately 1.2 million business subscribers by year-end 2015, and almost 1.4 million by year-end 2016.<sup>61</sup>

Based on the analysis of the available data, there are an estimated 2.8 million residential interconnected VoIP subscribers in Florida. Figure 4-4 shows the number of residential interconnected VoIP subscribers in Florida by provider type. Data for 2017 indicates a modest gain in the residential VoIP market. Growth should continue as network facilities transition to an IP-centric infrastructure.

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<sup>56</sup> AT&T Inc. 2017 Annual Report, <https://otp.tools.investis.com/clients/us/atnt/SEC/sec-show.aspx?Type=html&FilingId=12564537&CIK=0000732717&Index=10000>, accessed May 10, 2018.

<sup>57</sup> Over-the-top VoIP providers offer low-priced stand-alone interconnected VoIP service. The service quality of these providers varies because calls are transmitted over the public Internet rather than private managed IP-based networks.

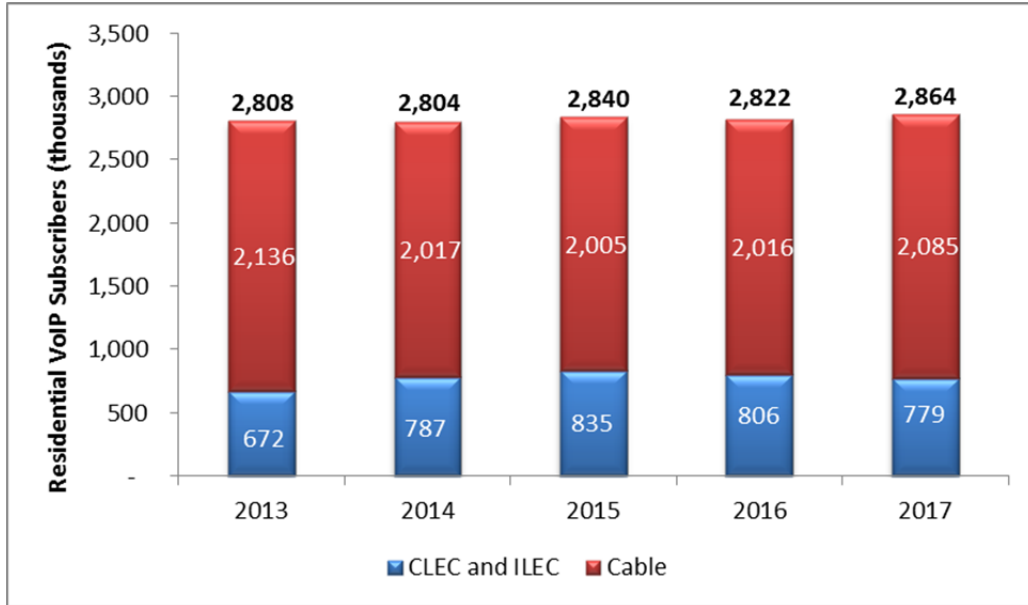
<sup>58</sup> FCC, Voice Telephone Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 2, 2018.

<sup>59</sup> Vonage Holding Corp. 2017 Annual Report, <https://ir.vonage.com/financials/sec-filings>, accessed May 2, 2018.

<sup>60</sup> "MagicJack Reports Fourth Quarter and Full Year 2017 Financial Results, Global News Wire, released March 16, 2018, <http://www.vocaltec.com/news-releases/news-release-details/magicjack-reports-fourth-quarter-and-full-year-2017-financial>, and "MagicJack Reports Fourth Quarter and Full Year 2016 Financial Results, Global News Wire, released March 15, 2017, <http://www.vocaltec.com/news-releases/news-release-details/magicjack-reports-fourth-quarter-and-full-year-2016-financial>, accessed May 2, 2018.

<sup>61</sup> FCC Voice Telephone Services Report, State-Level Subscriptions, Supplemental Table 1, Florida, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 1, 2018.

**Figure 4-4  
Florida Residential Interconnected VoIP Subscribers**

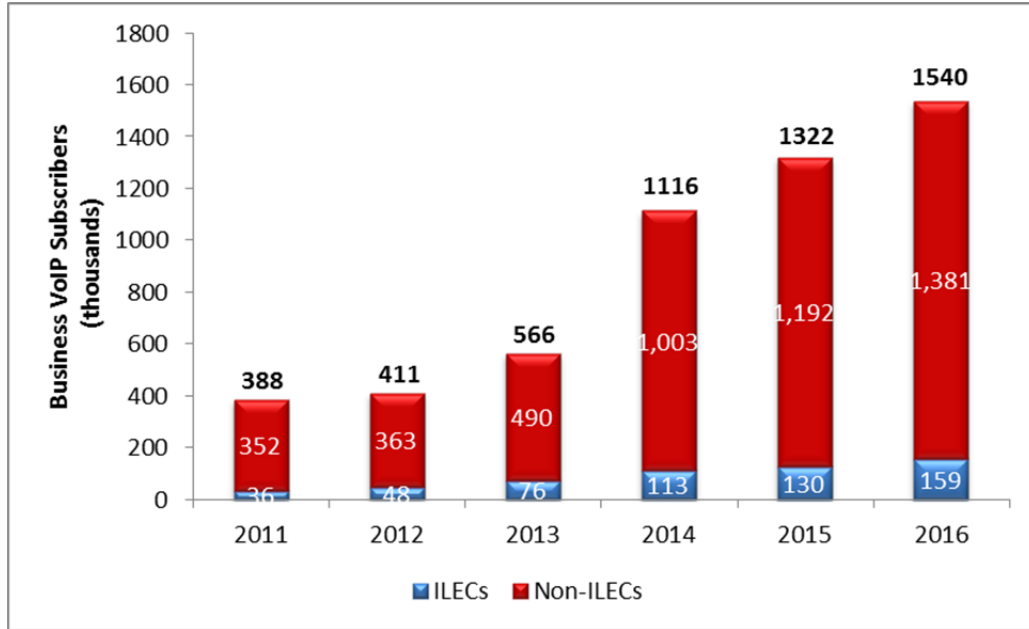


Source: Responses to FPSC data requests (2013-2018)

While the Commission received business VoIP data from telecommunications carriers, corresponding data was not made available from most cable companies as requested. Data is available from the FCC that provides VoIP business lines through December 2016. Figure 4-5 identifies the number of interconnected VoIP business subscribers by ILEC and non-ILEC carriers. Non-ILEC carriers include cable companies. From 2015 to 2016, non-ILECs experienced a nearly 16 percent increase in their number of interconnected business VoIP subscribers. By comparison, ILECs experienced an increase of more than 22 percent in interconnected business VoIP subscribers for the same time period. Based on the general trend of such interconnected business VoIP lines and the reduction in traditional switched access lines, it is likely that there will be further growth in this market segment.



**Figure 4-5**  
**Florida Business Interconnected VoIP Subscribers**



Source: FCC, Voice Telephone Services Report, and FPSC data request

### **C. Broadband**

The most recent report published by the FCC indicates that 82 percent of U.S. households had fixed broadband connections with download speeds of at least 200 kilobits per second (kbps) in 2015. Sixty-six percent of households had broadband connection speeds of at least 10 megabits per second (Mbps) while 50 percent of households had fixed broadband connections of at least 25 Mbps and 15 percent had connection speeds of at least 100 Mbps.<sup>62</sup>

According to the Pew Research Center, between 2015 and 2016 the number of Americans who had a high-speed Internet connection in their homes increased from 66 percent to 73 percent.<sup>63</sup> However, by the end of December 2017, the number of Americans reporting broadband in the home dropped to 65 percent.<sup>64</sup> This represents an eight percent reduction from 2016. This shift may be the result of increased smartphone and tablet use at home.<sup>65</sup> Figure 4-6 shows the percentage of U.S. households with in-home broadband connections between 2000 and 2017.

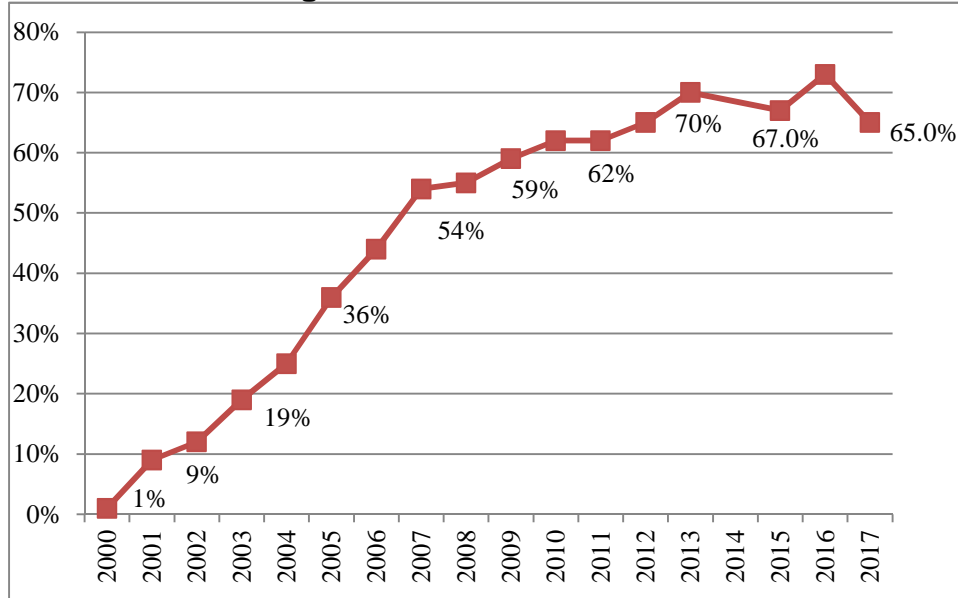
<sup>62</sup> FCC, Internet Access Services: Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/internet-access-services-reports>, Figure 32, accessed May 3, 2018.

<sup>63</sup> Pew Research Center, Internet/Broadband Fact Sheet, February 5, 2018, <http://www.pewinternet.org/fact-sheet/internet-broadband/>, accessed May 3, 2018, and June 11, 2018.

<sup>64</sup> One-in-five Americans own a smartphone, but do not have traditional broadband service, Pew Research Center Internet & Technology, April 27, 2018, [http://www.pewinternet.org/2018/04/30/declining-majority-of-online-adults-say-the-internet-has-been-good-for-society/pi\\_2018-04-30\\_internet-good-bad\\_0-02/](http://www.pewinternet.org/2018/04/30/declining-majority-of-online-adults-say-the-internet-has-been-good-for-society/pi_2018-04-30_internet-good-bad_0-02/), accessed June 11, 2018.

<sup>65</sup> Demographics of Mobile Device Ownership and Adoption in the United States, Pew Research Center, February 5, 2018, <http://www.pewinternet.org/fact-sheet/mobile/>, accessed April 3, 2018.

**Figure 4-6**  
**Percentage of Broadband U.S. Households**



Source: Pew Research Center

Even though the adoption of in-home broadband continues to increase, the rate of increase has slowed because a growing share of Americans using mobile devices such as smartphones and tablets as their primary means of accessing the Internet at home and while “on the go.”<sup>66</sup> According to the Pew Research Center, 77 percent of Americans own a smartphone.<sup>67</sup> In 2016, 12 percent of Americans indicated that they were “smartphone dependent” or “smartphone-only” Internet users, up from 7.75 percent in 2013.<sup>68</sup>

Despite the increases in broadband and Internet usage, 11 percent of U.S. adults did not use the Internet in 2017, compared to 13 percent in 2016 and 48 percent in 2000.<sup>69</sup> Lack of interest, difficulty of usage, and cost were the most cited reasons why people did not use the Internet. Other demographic variables, including age, educational attainment, household income and community type also affected Internet usage.<sup>70</sup>

For instance, seniors were the group most likely to say they never go online. About 34 percent of adults ages 65 and older reported that they do not use the Internet, compared with only two percent of 18- to 29-year-olds. Household income and education are also indicators of a person’s likelihood to be offline. Thirty-four percent of adults with less than a high school education do

<sup>66</sup> Demographics of Mobile Device Ownership and Adoption in the United States, Pew Research Center, February 5, 2018, <http://www.pewinternet.org/fact-sheet/mobile/>, accessed April 3, 2018.

<sup>67</sup> Ibid.

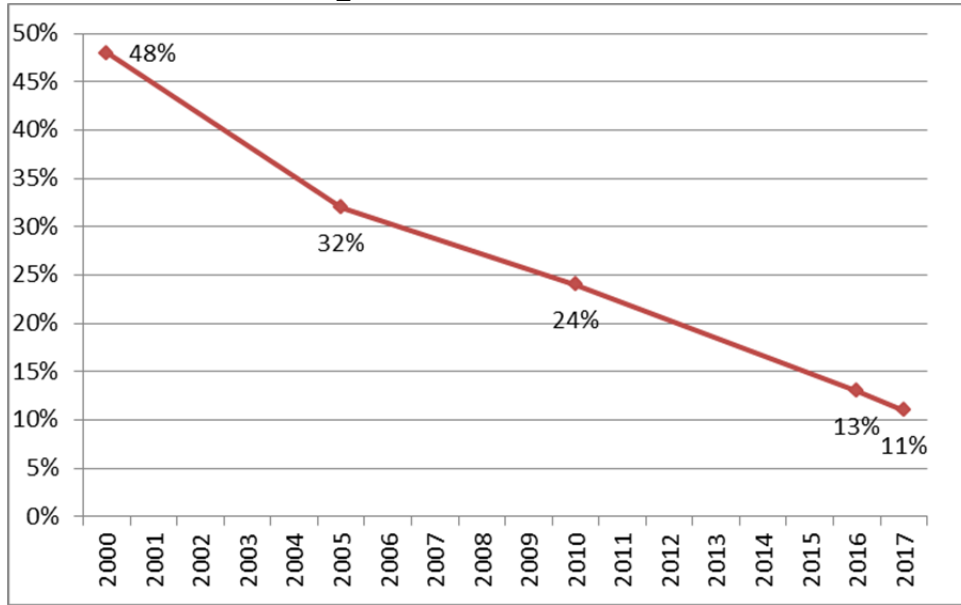
<sup>68</sup> Ibid.

<sup>69</sup> 11% of Americans don’t use the internet. Who are they?, Pew Research Center, published March 5, 2018, <http://www.pewresearch.org/fact-tank/2018/03/05/some-americans-dont-use-the-internet-who-are-they/>, accessed May 3, 2018.

<sup>70</sup> Ibid.

not use the Internet. Figure 4-7 shows the percentage of U.S. households who do not use the Internet.

**Figure 4-7**  
**Percentage of U.S. Non-Internet Users**



Source: Pew Research Center

### Florida Broadband Trends

According to the FCC, 94 percent of households in Florida had fixed broadband connections of at least 200 kbps at the end of 2016. Over 65 percent had speeds of at least 25 Mbps and 17 percent of households had broadband connections of at least 100 Mbps.<sup>71</sup> Cable modem services accounted for roughly 65 percent of non-mobile broadband connections in Florida with download speeds greater than 200 kbps. Mobile broadband connections accounted for almost 68 percent of all broadband connections in Florida with download speeds greater than 200 kbps.<sup>72</sup>

<sup>71</sup> Ibid.

<sup>72</sup> Ibid, Figure 34.



## Chapter V. Competitive Market Analysis & Statutory Issues

Section 364.386, F.S., requires the Commission to address four issues in its annual report on telecommunications competition: competitive providers, consumers, affordability and service quality, and carrier disputes. These issues emphasize analysis of the impact of competition and regulatory changes on the telecommunications market.

### ***A. Statutory Issue - Competitive Providers***

**The ability of competitive providers to make functionally equivalent local exchange services available to both residential and business customers at competitive rates, terms, and conditions.**

In 2017, the wireline residential and business markets in Florida declined for both ILECs and CLECs. The total number of access lines decreased by around 17 percent. CLEC lines decreased around 14 percent between December 2016 and December 2017, while ILEC lines decreased by around 18 percent. The lower rate of line loss increased the total CLEC wireline market share in Florida from 23 percent in 2016 to 24 percent in 2017.

Residential VoIP subscribership accounted for 2.9 million connections by December 2016, representing a decrease of less than one percent from the prior year.<sup>73</sup> Comparable 2016 end of year data was not available for wireless and business VoIP segments of the market. However, recently released data for 2016 from the FCC indicates that the number of business VoIP lines grew 16.5 percent from December 2015 through December 2016.<sup>74</sup> Continued growth in 2018 is likely.

Wireless carriers in Florida also experienced growth in 2016. The FCC reported that there were approximately 21.5 million handsets in service as of December 2016, an increase of 3.3 percent from 2015.<sup>75</sup> Figure 5-1 uses the FCC's data regarding the number of voice subscribers by technology for 2016 to illustrate the competitive nature of the industry in Florida. While the data does not reflect the market for the reporting period of this report, it does provide insight regarding how carriers are meeting the market demand for service.

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<sup>73</sup> Responses to FPSC data requests 2015-2017.

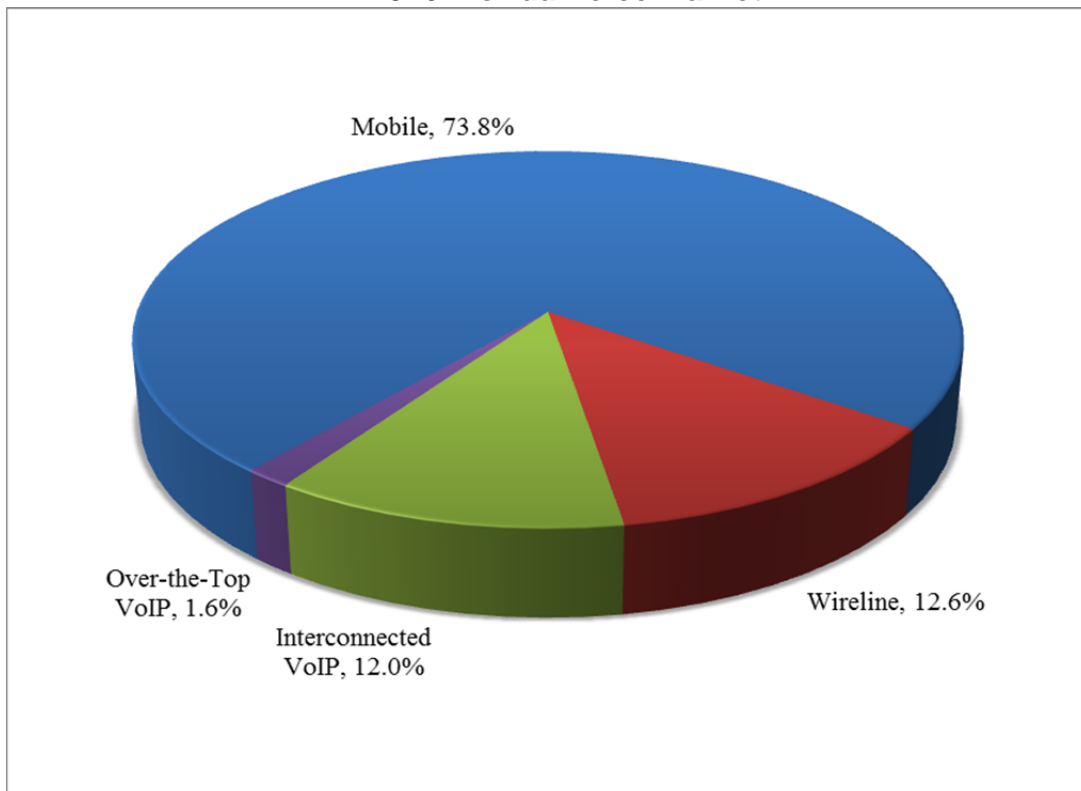
<sup>74</sup> FCC, "Voice Telephone Services as of December 31, 2016," State-Level Subscriptions spreadsheets, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 31, 2018.

<sup>75</sup> Ibid.

This data suggests that CLECs, VoIP, and wireless carriers are able to provide functionally equivalent services to residential and business customers at rates, terms and conditions acceptable to consumers. The number of CLECs offering a variety of services also indicates the availability of functionally equivalent services at comparable terms. Other services offered by CLECs that reported providing local service include:

- Bundled services (34 CLECs)
- VoIP (65 CLECs)
- Broadband Internet access (54 CLECs)
- Video service (10 CLECs)

**Figure 5-1  
2016 Florida Voice Market**



Source: FCC, Voice Telephone Services Report, Nationwide and State-Level Data for Dec 2016

The majority of CLECs reported no barriers to competition or elected not to respond in the comment portion of the FPSC data request. The companies that did indicate competitive concerns mentioned issues with ILEC pricing practices, responsiveness to trouble reports and lack of FCC support. More specifically, some concerns of the companies reported to the Commission include:

- Anticompetitive pricing by ILECs for last-mile access.<sup>76</sup>
- ILEC practice of passing through special construction charges to companies and lack of responsiveness to maintenance issues possibly leading to customers switching to incumbents.
- Excessively expensive wholesale pricing by ILECs potentially causing customers to switch away from competitive carriers to ILECs or wireless telephones.
- Lack of government support for telecom infrastructure in rural areas.

**Conclusion:** Subscribers to VoIP and wireless services continued to show signs of growth, reflecting the opportunity for customers to seek out services from providers other than traditional ILECs. Many CLECs reported offering a variety of services and packages comparable to those offered by ILECs. All of these factors contribute to the conclusion that competitive providers are able to offer functionally equivalent services to both business and residential customers. We note that the CLECs have not filed a petition with the FPSC to address the issues above. Some of these issues may be addressed by the FCC.

## ***B. Statutory Issue – Consumers***

**The ability of consumers to obtain functionally equivalent services at comparable rates, terms, and conditions.**

Functionally equivalent services are available to customers via wireline telephony, wireless telephony, or VoIP. The primary focus of this report is the provision of wireline telecommunications by ILECs and CLECs, which submit responses to the FPSC’s annual data request.

As of December 31, 2017, 104 CLECs provided data indicating that they provide local voice service in Florida. Though the responses indicate a reduction from 110 CLECs in 2016, it remains an increase over 2015 when 63 CLECs responded similarly.

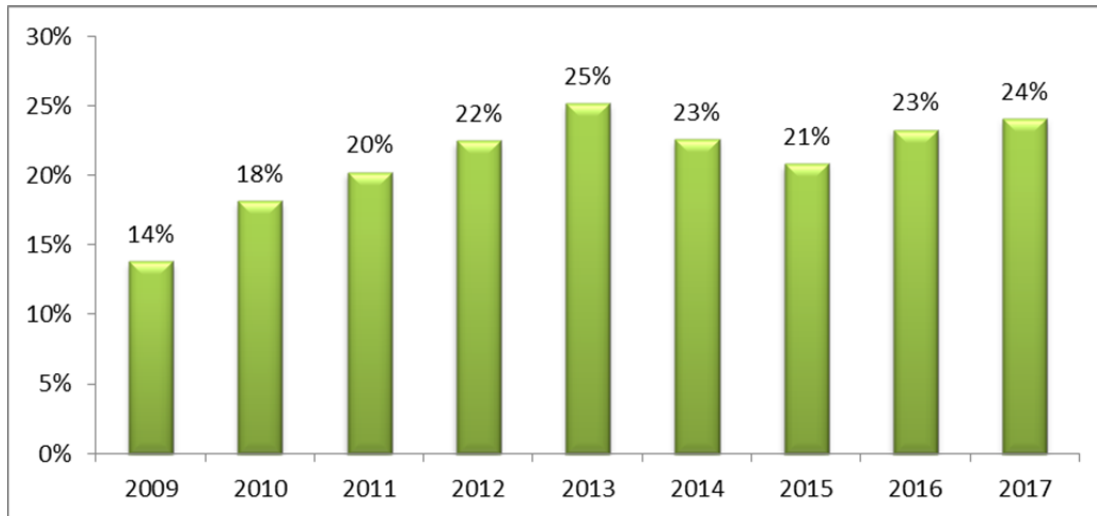
Competitive carriers can offer service through resale of ILEC or CLEC wholesale services, by using their own facilities, by leasing portions of their networks from an ILEC, or a combination of any of these methods. Figure 5-2 provides a historical view of CLEC market share in Florida

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<sup>76</sup> Windstream has documented these problems in a proceeding at the FCC. See Business Data Services in an Internet Protocol Environment, WC Docket No. 16-143; Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans, WC Docket No. 15-247; Special Access for Price Cap Local Exchange Carriers, WC Docket No. 05-25; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Service, RM-10593.

for the traditional wireline access line market. As of December 2017, 24 percent of total traditional wireline access lines in Florida are provided by companies other than ILECs.

**Figure 5-2  
Florida CLEC Market Share**



Source: Responses to FPSC data requests

Business lines from ILECs fell 12 percent in 2017, while business lines from competitive carriers decreased 13 percent. While business VoIP data was not provided by all segments of the industry for 2017, non-ILEC VoIP business lines grew nearly 16 percent from 2015 to 2016 according to data from the FCC.<sup>77</sup> This suggests that business customers have the ability to find reasonable pricing packages with CLECs and are taking advantage of these options. These options include CLEC cable companies and, in some cases, wireless providers. ILEC residential lines decreased 23 percent in Florida in 2017. CLEC residential lines decreased around 42 percent, but as those lines only comprise around one percent of the residential market, the impact was muted. Nationally, wireless-only households continued to grow, reaching 52.5 percent in the first half of 2017.<sup>78</sup>

As stated in Chapter IV of this report, there are nearly 2.9 million interconnected residential VoIP subscribers in Florida.<sup>79</sup> These and other factors demonstrate that customers are able to find comparable services at reasonable prices through wireless, CLEC, and VoIP providers.

**Conclusion:** Access lines for both residential and business customers have maintained a steady decline over the past several years (see Figure 3-1). This contrasts with the continued growth in

<sup>77</sup> FCC, Voice Telephone Services, Status as of December 31, 2016, released February 2018, <https://www.fcc.gov/voice-telephone-services-report>, accessed May 11, 2018.

<sup>78</sup> Stephen J. Blumberg, Ph.D., Julian V. Luke, “Wireless substitution: Early release of estimates from the National Health Interview Survey, January–June 2017,” National Center for Health Statistics, Centers for Disease Control and Prevention, released December 2017, <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201712.pdf>, accessed May 11, 2018.

<sup>79</sup> Responses to FPSC Local Competition Data Request for 2017.



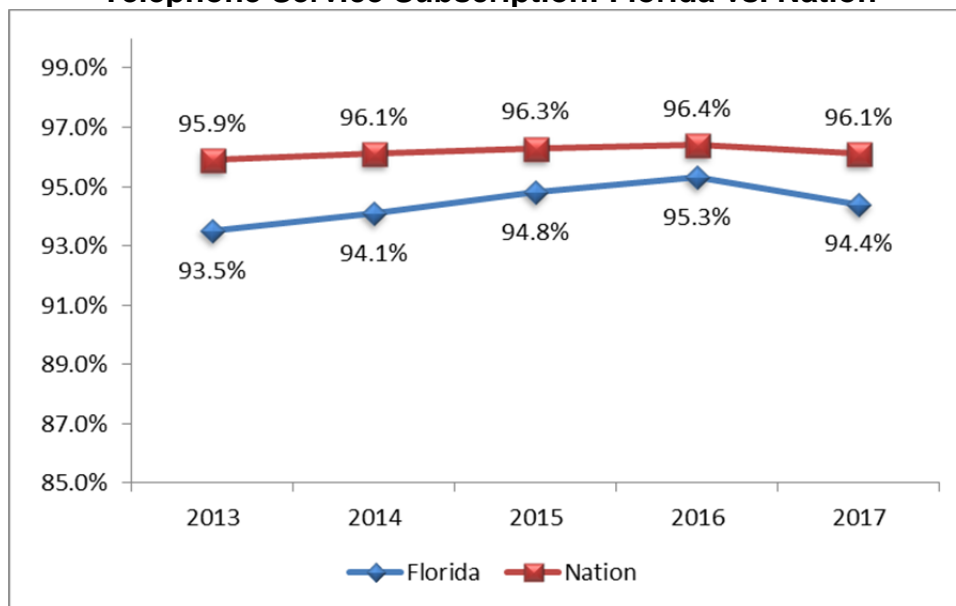
wireless-only households. While wireline declines have occurred in the business market, they are partially offset by significant growth in business VoIP lines. Carriers are managing the shifts in market conditions by bundling services and providing a variety of pricing plans in an attempt to meet consumer demand and expectations.

### **C. Statutory Issue – Affordability & Service Quality**

**The overall impact of competition on the maintenance of reasonably affordable and reliable high-quality telecommunications services.**

The telephone subscription rate in Florida for 2017 was 94.4 percent, according to the FCC. This is slightly lower than the national subscription rate of 96.1 percent.<sup>80</sup> The Florida telephone penetration rate has consistently been below the national penetration rate and the variance has varied little between 2013 and 2017, as shown in Figure 5-3.

**Figure 5-3  
Telephone Service Subscription: Florida vs. Nation**



Source: FCC, Telephone Subscribership & USF Monitoring Reports

**Conclusion:** Based on the continued growth of interconnected VoIP and wireless-only households and the ongoing decline of wireline access lines, network reliability of non-ILEC providers appears to be sufficient. The telephone penetration rate of 94.4 percent supports the conclusion that the vast majority of Florida residents are able to afford telephone service. The number and variety of competitive choices among all types of service providers suggest that competition is having a positive impact on the telecommunications market in Florida.

<sup>80</sup> FCC, “Universal Service Monitoring Report,” released January 13, 2018, [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-343025A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-343025A1.pdf), accessed June 21, 2018, Table 6.7, and interviews with FCC staff.

***D. Statutory Issue – Carrier Disputes***

**A listing and short description of any carrier disputes filed under Section 364.16, F.S.**

**Conclusion:** There were no carrier disputes filed with the FPSC under Section 364.16, F.S., in 2017.

## Chapter VI. State Activities

The Commission dealt with several intercarrier and compliance issues during the past year. The following is a summary of activities affecting local telecommunications competition in 2017.

### A. Intercarrier Matters

#### 1. Wholesale Performance Measurement Plans

Wholesale performance measurement plans provide a standard against which the Commission can monitor performance over time to detect and correct any degradation in the quality of service ILECs provide to CLECs. The Commission adopted performance measurements for AT&T in August 2001 (revised in 2010), for CenturyLink in January 2003 (revised in 2013), and for Verizon in June 2003 (revised in 2007). Trending analysis is applied to monthly performance measurement data provided by each ILEC.<sup>81</sup>

AT&T is the only ILEC that is required to make payments to CLECs when certain performance measures do not comply with established standards and benchmarks. AT&T's approved Performance Assessment Plan consists of 47 measurements, of which 24 measurements have remedies applied to them. For the calendar year 2017, AT&T paid approximately \$472,960 in remedies to CLECs, a decrease of 37.9 percent from 2016. The greatest cause of the decrease in remedies was the correction of an incident in 2016 that led to a number of blocked and redialed calls. No similar incidents occurred in 2017.

On October 15, 2015, CenturyLink filed proposed revisions to its Performance Measurement Plan as a result of a negotiated settlement in Nevada. The revisions included revising reporting requirements from monthly to quarterly, eliminating several performance measures from the plan, and amending two measures. The proposal was approved for Florida by the Commission in February of 2016.<sup>82</sup> For the 2017 calendar year, CenturyLink reported no non-compliances, versus an average of 0.167 non-compliances per month in 2016.

Frontier Communications completed its purchase of Verizon Florida's wireline operations in Florida in April 2016. In its new role as a large ILEC, Frontier's Performance Measurement Plan includes 29 measures. For the calendar year 2017, Frontier's monthly compliance with approved standards ranged from a low of 68.7 percent to a high of 85.4 percent. In 2017, Frontier's average compliance rate was 76.5 percent versus an average compliance rate of 73.7 percent over the last nine months of 2016.

#### 2. Other Matters

The Commission processed a number of other telecommunications-related items in 2017. The Commission processed 70 service schedule and tariff filings, 67 interconnection agreements and

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<sup>81</sup> FPSC Dockets: No. 20000121A-TP (AT&T), No. 20000121B-TP (CenturyLink), and No. 20000121C-TP (Frontier FL)

<sup>82</sup> Docket No. 000121B-TP, Investigation into the establishment of operations support systems permanent performance measures for incumbent local exchange telecommunications companies. (Centurylink Florida Track), Order No. PSC-16-0072-PAA-TP issued February 15, 2016, <http://www.floridapsc.com/library/filings/2016/00858-2016/00858-2016.pdf>, accessed May 25, 2017.

amendments, 4 carrier certifications, 2 certificate cancellations, one eligible telecommunications carrier (ETC) certificate relinquishment, and over 150 general inquiries/informal complaints.

## **B. Lifeline**

The FPSC allows consumers participating in the Supplemental Nutrition Assistance Program (SNAP) or Medicaid to apply to the Lifeline program online. When an application is completed, a Commission computer automatically makes a query to a Florida Department of Children and Families (DCF) Web services interface to confirm current participation in SNAP or Medicaid. The real-time response verifies participation in at least one of the programs, but does not identify the program. A positive response will generate an automatic email to the appropriate Lifeline provider advising that an approved Lifeline application is available for retrieval on the FPSC web site. A negative response will cause a letter to be sent to the applicant stating his/her participation in SNAP or Medicaid could not be confirmed and offering Commission staff assistance with any questions. Based upon June 2017 SNAP participants, the Lifeline eligible households decreased by 2.9 percent while the participation rate decreased by 8.5 percent from the prior year.<sup>83</sup> Table 6-1 shows the Lifeline eligibility and participation rate in Florida for the last seven years.<sup>84</sup>

**Table 6-1  
Florida Lifeline Eligibility and Participation Rate**

<b>Year</b>	<b>Lifeline Enrollment</b>	<b>Eligible Households</b>	<b>Participation Rate</b>
June 2011	943,854	1,690,512	55.8%
June 2012	1,035,858	1,864,183	55.6%
June 2013	918,245	1,952,890	47.0%
June 2014	957,792	1,930,106	49.6%
June 2015	831,612	2,011,166	41.4%
June 2016	852,255	1,712,005	49.8%
June 2017	685,864	1,662,374	41.3%

Source: U.S. Department of Agriculture data figures as of June 2017

If a program other than Medicaid or SNAP is used for certification, the customer must provide documentation of participation from the administering agency, which could be the Social Security Administration (Supplemental Security Income), Federal Public Housing Assistance (FPHA), Veterans Pension benefit, or the Bureau of Indian Affairs. If a Lifeline applicant chooses to apply for Lifeline directly with an ETC, the carrier can access the DCF web services to confirm program participation for Medicaid and SNAP. In Florida, certification and verification can be accomplished using this process if the applicant or existing Lifeline customer participates in the Medicaid or SNAP programs which are administered by the DCF.

<sup>83</sup> According to the US Department of Agriculture Report, “Supplemental Nutrition Assistance Program: Number of Households Participating, ending June 30, 2015,” over 2,011,156 Florida households participated SNAP.

<sup>84</sup> FPSC, “2017 Florida Lifeline Report,” released December 2017, <http://www.floridapsc.com/Publications/Reports#>, Figure 2, accessed June 5, 2018.

On April 27, 2016, the FCC released its Lifeline Modernization Order.<sup>85</sup> In this Order, the FCC established a National Lifeline Eligibility Verifier (National Verifier) for the purpose of transitioning from various carrier and state verification systems to a single system. The FCC envisions that the National Verifier will include electronic and manual methods to determine eligibility and will include a Lifeline Eligibility Database. In addition to determining eligibility for Lifeline, the National Verifier will allow access by authorized users, provide support payments to providers and conduct recertification of subscribers.

While the FCC intended for the National Verifier to be live in Colorado, Mississippi, Montana, New Mexico, Utah and Wyoming by December 31, 2017, that implementation date has been pushed back to sometime in 2018. The FCC intended to phase in additional states in 2018 and have all states using the National Verifier by 2019. However, delays in the initial implementation of the National Verifier will likely affect this timeline. As the National Verifier is deployed, the responsibility to verify eligibility will transition from ETCs or state administrators to the National Verifier. The Universal Service Administrative Company (USAC) will inform stakeholders of its deployment schedule in the states when it is ready to deploy the National Verifier.

### **C. Telephone Relay Service**

It is estimated that approximately 2.5 to 3 million of the estimated 20 million persons living in Florida have been diagnosed as having hearing loss.<sup>86</sup> Relay service in Florida provides telecommunication services for deaf, hard of hearing, deaf-blind, or speech impaired persons, functionally equivalent to the service provided to hearing persons.

Chapter 427, Part II of the Florida Statutes established the Telecommunications Access System Act of 1991 (TASA). TASA provides funding for the distribution of specialized telecommunications devices and intrastate relay service through the imposition of a surcharge of up to \$0.25 per landline access line per month, for up to 25 access lines per account. The surcharge billed per month per landline access line is \$0.10 for the 2017-2018 budget year.

Pursuant to TASA, the FPSC is responsible for establishing, implementing, promoting, and overseeing the administration of a statewide telecommunications access system to provide access to telecommunications relay services by people who are deaf, hard of hearing, deaf-blind or speech impaired. In accordance with TASA, the FPSC directed the local exchange companies (LECs) to form a not-for-profit corporation, known as Florida Telecommunications Relay, Inc. (FTRI) to directly administer basic relay service in Florida.

Minutes of use for traditional relay service have declined in recent years as evolving technology has caused many users to migrate to more advanced services. The current provider projects that traditional minutes will continue to decline.

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<sup>85</sup> FCC 16-38, WC Docket No. 11-42, Lifeline and Link Up Reform and Modernization, Third Report and Order, Further Report and Order, and Order on Reconsideration, released April 27, 2016, [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-16-38A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-38A1.pdf), access June 19, 2017.

<sup>86</sup> 2015 Florida Coordinating Council for the Deaf and Hard of Hearing Biennial Report to Governor Rick Scott, the Florida Legislature & the Supreme Court and “Demographics and Statistics,” Florida Telecommunications Relay, Inc., <http://ftri.org/index.cfm/go/public.view/page/12>, accessed April 21, 2016.

Basic relay service is provisioned in Florida under contract by a single service provider. Through a competitive bid evaluation process, the FPSC awarded the current relay provider contract to Sprint, effective March 1, 2018, for a period of three years. The contract contains options to extend the contract for four additional one-year periods, and requires mutual consent by both parties to extend the contract.

On July 10, 2018, the Commission approved FTRI's 2018-2019 budget, directing FTRI to reduce its proposed budget. The reduction is due to review of the requested budget items. Specifically, the FPSC approved FTRI's projected operating revenue of \$5,793,651 and expenses of \$6,055,120. As a result, the TASA surcharge will remain at \$0.10, beginning September 1, 2018.

## Chapter VII. Federal Activities

### A. USTelecom Forbearance Petition

On May 4, 2018, the United States Telecom Association (USTelecom) filed a petition with the FCC seeking forbearance from several of the ILEC regulatory obligations under Sections 251 and 252 of the Communications Act of 1934, as amended, such as providing wholesale access to unbundled network elements (UNEs) and resale. USTelecom also requested that states not be allowed to issue similar unbundling and resale rules if a forbearance is granted.<sup>87,88,89</sup>

The FCC issued a public notice on May 8, 2018, that set the deadline for comments and oppositions on June 7, 2018, and for reply comments on June 22, 2018. Given the complexity and importance of the potential ramifications of the requested forbearance, several parties requested an extension of the comment due dates.<sup>90</sup> The FCC granted an extension to August 6, 2018, for comments and to September 5, 2018, for reply comments.<sup>91</sup>

### B. FCC Hurricane Response

Several major storms and hurricanes struck the United States during the 2017 hurricane season. Hurricanes Irma and Maria, in particular, caused substantial damage in Florida, especially in the Florida Keys.

In response, the FCC took several steps to promote public safety and connectivity. It created web pages to track information regarding its activities for each hurricane. The FCC also gave a presentation on hurricane response at its 2017 September Open Agenda meeting.

The FCC offered Puerto Rico and the U.S. Virgin Islands nearly \$77 million in advanced Universal Service Funding (USF) to help recovery.<sup>92</sup> It also accelerated the post-incentive auction transition to support broadcasters in the territories.<sup>93</sup> The FCC granted temporary Lifeline recertification rules, while expediting approval of experimental licenses to provide Internet access to residents.<sup>94,95</sup> The FCC also approved targeted and flexible support to help

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<sup>87</sup> USTelecom, “Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) to Accelerate Investment in Broadband and Next-Generation Networks,” filed May 4, 2018,

<https://www.ustelecom.org/sites/default/files/documents/USTelecom%20Forbearance%20Petition.pdf>, accessed May 15, 2018.

<sup>88</sup> FCC, Communications Act of 1934, <https://transition.fcc.gov/Reports/1934new.pdf>, accessed May 15, 2018.

<sup>89</sup> Ibid Footnote 1. Section B, pp. 30-31.

<sup>90</sup> FCC, Public Notice WC Docket No. 18-141, “Pleading Cycle Established For Comments On USTelecom’s Petition For Forbearance From Section 251(C) Unbundling And Resale Requirements And Related Obligations, And Certain Section 271 And 272 Requirements,” released May 8, 2018, <https://www.fcc.gov/document/pleading-cycle-established-ustelecom-forbearance-petition>, accessed May 15, 2018.

<sup>91</sup> FCC, Order DA 18-574, “WCB Grants Comment Extension on USTA Forbearance Petition,” released June 1, 2018, <https://www.fcc.gov/document/wcb-grants-comment-extension-usta-forbearance-petition>, accessed June 1, 2018.

<sup>92</sup> USF advance [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-347069A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-347069A1.pdf), accessed March 7, 2018.

<sup>93</sup> Accelerating post-incentive broadcast auction [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-348681A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-348681A1.pdf), accessed March 7, 2018.

<sup>94</sup> Lifeline recertification waivers [https://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2018/db0202/DA-18-102A1.pdf](https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0202/DA-18-102A1.pdf), accessed March 7, 2018.

restore connectivity of schools and libraries. The agency granted more than 200 waivers and requests for Special Temporary Authority to help re-establish communications in hurricane-affected areas.<sup>96</sup> It allocated \$954 million for the creation of two substantial funds for the communications networks in Puerto Rico and the US Virgin Islands.<sup>97</sup> The FCC also hosted a public information workshop on Federal, State/Local/Territorial, and Consumer critical information needs.<sup>98</sup>

Additionally, the FCC solicited comments on the resiliency of communications infrastructure, the effectiveness of emergency communications, and government and industry responses to the 2017 hurricane season.<sup>99</sup> Common problems from hurricane issues mentioned in the comments included delays in reliable electricity restoration, lack of access to repair sites because of blocked roads, etc., theft of generators and copper wire, depletion of recovery resources due to multiple hurricanes over a short window, and possible favoritism in recovery priorities. Reply comments included concerns that potential new regulatory mandates would harm continued new deployment and recovery time. Common suggested solutions to hurricane issues listed in the comments and reply comments included FCC responsiveness in organizing, licensing, granting waivers and USF funding, etc., inter-agency coordination, prepositioning of assets to aid recovery, assistance provided by amateur radio operators, and the effectiveness of the Wireless Network Resiliency Cooperative Framework, which is a voluntary agreement among the major wireless carriers and the FCC to enhance coordination during emergencies.<sup>100,101</sup>

### **C. Broadband Deployment Issues**

FCC Chairman Ajit Pai has stated that his number one priority is expanding broadband access.<sup>102</sup> On January 31, 2017, Chairman Pai announced the formation of a new federal advisory committee, the Broadband Deployment Advisory Committee (BDAC), which will provide advice and recommendations for the FCC on how to accelerate the deployment of high-speed Internet access. The BDAC charter lasts until March 1, 2019, or whenever its work is complete.

The BDAC's mission is to make recommendations for the FCC on how to accelerate the deployment of high-speed Internet access by reducing and/or removing regulatory barriers to infrastructure investment. BDAC is intended to provide an effective means for stakeholders with

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<sup>95</sup> Project Loon experimental license [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-347125A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-347125A1.pdf), accessed on March 7, 2018.

<sup>96</sup> E-rate funding [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-347419A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-347419A1.pdf), accessed on March 7, 2018.

<sup>97</sup> FCC news release available at <https://www.fcc.gov/document/chairman-pai-proposes-954-million-plan-puerto-rico-and-usvi>, accessed on March 7, 2018.

<sup>98</sup> FCC Public Notice available at <https://www.fcc.gov/document/fcc-hold-workshop-april-13-critical-info-during-disasters>, released Mar. 23, 2018.

<sup>99</sup> Public Notice available at <https://ecfsapi.fcc.gov/file/1207118673392/DA-17-1180A1.pdf>, accessed on March 7, 2018.

<sup>100</sup> FCC Hurricane response comments and reply comments available at [https://www.fcc.gov/ecfs/search/filings?express\\_comment=0&limit=100&proceedings\\_name=17-344&q=\(proceedings.name:\(\(17%5C-344\\*\)\)%20OR%20proceedings.description:\(\(17%5C-344\\*\)\)\)&sort=date\\_disseminated\\_DESC](https://www.fcc.gov/ecfs/search/filings?express_comment=0&limit=100&proceedings_name=17-344&q=(proceedings.name:((17%5C-344*))%20OR%20proceedings.description:((17%5C-344*)))&sort=date_disseminated_DESC), accessed on March 7, 2018.

<sup>101</sup> FCC Hurricane Recovery Task Force available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-347113A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-347113A1.pdf), accessed on March 7, 2018.

<sup>102</sup> FCC, "Bridging The Digital Divide For All Americans," <https://www.fcc.gov/about-fcc/fcc-initiatives/bridging-digital-divide-all-americans>, accessed April 27, 2018.



interests in this area to exchange ideas and develop recommendations for the FCC, which will in turn enhance the FCC's ability to carry out its statutory responsibility to encourage broadband deployment to all Americans.<sup>103</sup>

BDAC has working groups on each of the following:

- Model Code for States
- Model Code for Municipalities
- Streamlining Federal Siting
- Competitive Access to Broadband Infrastructure
- Removing State and Local Regulatory Barriers

Reports, presentations and other BDAC related information can be found on the FCC's BDAC webpage, <https://www.fcc.gov/broadband-deployment-advisory-committee>.<sup>104</sup>

While continuing to work on multiple broadband issues, the FCC has released some measures of its progress so far. On February 2, 2018, the FCC released its 2018 Broadband Deployment Report. Based on the FCC's actions to accelerate deployment in 2017, the report concludes that the FCC is now encouraging broadband deployment on a reasonable and timely basis. Still, the report finds that far too many Americans lack access to high-speed Internet service, defined as 25 Mbps download/3 Mbps upload speeds, and the FCC must continue its work to encourage deployment of broadband to all Americans, including those in rural areas, on Tribal lands, and in the nation's schools and libraries. The report also concludes that mobile services are not currently full substitutes for fixed services.<sup>105</sup>

On February 22, 2018, the FCC announced that it has updated and modernized its National Broadband Map. The new, cloud-based map will support more frequent data updates and display improvements at a lower cost than the original mapping platform.<sup>106</sup>

#### ***D. Open Internet/Net Neutrality***

On May 23, 2017, the FCC released a proposal to undo the 2015 net neutrality rules, which prevented blocking, throttling and paid prioritization.<sup>107</sup> The Notice of Proposed Rulemaking (NPRM), also known as the Restoring Internet Freedom NPRM, was adopted on May 18, 2017, during the FCC's Open Meeting.<sup>108</sup> According to the FCC, the purpose of the NPRM was to end the utility-style regulatory approach that gives government control of the Internet and to restore

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<sup>103</sup> FCC, "Broadband Deployment Advisory Committee," <https://www.fcc.gov/broadband-deployment-advisory-committee>, accessed April 25, 2018.

<sup>104</sup> Ibid.

<sup>105</sup> FCC, "FCC Releases 2018 Broadband Deployment Report," released February 2, 2018, <https://www.fcc.gov/document/fcc-releases-2018-broadband-deployment-report>, accessed April 26, 2018.

<sup>106</sup> FCC, "FCC Updates National Broadband Map," released February 22, 2018, <https://www.fcc.gov/document/fcc-updates-national-broadband-map>, accessed April 26, 2018.

<sup>107</sup> FCC 17-60, WC Docket No. 17-108, "Restoring Internet Freedom," Notice of Proposed Rulemaking, adopted May 18, 2017 and released May 23, 2017, [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-17-60A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-60A1.pdf), accessed May 24, 2017.

<sup>108</sup> A Notice of Proposed Rulemaking or NPRM is a public notice that is issued by law during the rulemaking process when an independent U.S. agency, such as the FCC, adds, removes, or changes a rule or regulation.

the market-based policies necessary to preserve the future of Internet freedom, and to reverse the decline in infrastructure investment, innovation, and options for consumers put into motion by the FCC in 2015.<sup>109</sup>

Following consideration of the NPRM, on December 14, 2017, the FCC reversed the 2015 Order. In place of that framework, the FCC is returning to the framework that was in place until 2015. The FCC also adopted transparency requirements that will facilitate government oversight of broadband providers' conduct. In particular, the FCC's action has restored the jurisdiction of the Federal Trade Commission (FTC) to act when broadband providers engage in anticompetitive, unfair, or deceptive acts or practices. The Declaratory Ruling, Report and Order, and Order adopted by the FCC:

- Restores the classification of broadband Internet access service as an “information service” under Title I of the Communications Act, the classification affirmed by the Supreme Court in the 2005 Brand X case.<sup>110</sup>
- Reinstates the classification of mobile broadband Internet access service as a private mobile service.
- Restores broadband consumer protection authority to the FTC, enabling it to provide online protections against unfair, deceptive, and anticompetitive practices.
- Requires that internet service providers (ISPs) disclose information about their practices to consumers, entrepreneurs, and the FCC, including any blocking, throttling, paid prioritization, or affiliated prioritization.
- Eliminates the Internet Conduct Standard, under which the FCC could micromanage business models.

The new rules took effect on June 11, 2018.<sup>111,112</sup>

Prior to the 2015 Open Internet Order, the FTC had been responsible for regulation of internet activities using its authority to prohibit deceptive or unfair acts and practices in all commerce, with a few exceptions like common carriers. But some common carrier telecom companies also offer internet services. The FTC has also been involved in a long running lawsuit regarding its ability to regulate the internet service provision of telecom companies that are common carriers. In 2014, the agency sued AT&T Mobility LLC for throttling its customers' unlimited mobile data plans without proper notice. The company claimed that its common carrier status exempted it

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<sup>109</sup> FCC, Fact Sheet Restoring Internet Freedom Notice of Proposed Rulemaking – WC Docket No. 17-108, released April 27, 2017, [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-344614A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-344614A1.pdf), accessed May 24, 2017.

<sup>110</sup> Tech Law Journal, “Supreme Court Rules in Brand X Case,” <http://www.techlawjournal.com/topstories/2005/20050627b.asp>, accessed April 25, 2018.

<sup>111</sup> FCC, “FCC Takes Action to Restore Internet Freedom,” released December 14, 2017, <https://www.fcc.gov/document/fcc-takes-action-restore-internet-freedom>, accessed April 25, 2018.

<sup>112</sup> FCC, “WCB Announces Effective Date of Restoring Internet Freedom Order,” released May 11, 2018, <https://www.fcc.gov/document/wcb-announces-effective-date-restoring-internet-freedom-order>, accessed June 8, 2018.

from the jurisdiction of the FTC. That case has been appealed and heard en banc. On February 26, 2018, the Ninth US Circuit Court of Appeals ruled that the FTC data-throttling lawsuit against AT&T may proceed.<sup>113,114</sup>

On December 14, 2017, the FTC and the FCC announced a Memorandum of Understanding under which the two agencies would coordinate online consumer protection efforts following the adoption of the Restoring Internet Freedom Order, which returns jurisdiction to the FTC to police the conduct of ISPs, including with respect to their privacy practices.<sup>115</sup>

In response to the imminent change in net neutrality protections, proponents of the previous rules have mounted court challenges, proposed federal laws and promulgated state level laws and rules.

### **1. Federal Court Challenges**

Multiple parties have filed legal challenges to the new order. On January 17, 2018, the United States Court of Appeals for the D.C. Circuit issued an Order consolidating four Protective Petitions for Review of the FCC's Restoring Internet Freedom Order filed by the State of N.Y., et al., Mozilla, Public Knowledge, and New America's Foundation OTI.<sup>116</sup>

### **2. Federal Legislative Challenges**

Democratic lawmakers have sought to use the Congressional Review Act (CRA) to invalidate the FCC repeal of net neutrality rules with a joint Congressional resolution of disapproval. The net neutrality CRA was introduced in the Senate by Senator Bill Markey (D-MA) and in the House by Representative Mike Doyle (D-PA).<sup>117</sup>

On December 19, 2017, Representative Marsha Blackburn (R-TN) introduced the Open Internet Preservation Act to replace some of the net neutrality rules that the FCC repealed. The bill would prohibit internet service providers from blocking or throttling web content. The bill would still allow companies to charge websites for faster data speeds, and it pre-empts states from implementing stronger net neutrality protections.<sup>118,119</sup>

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<sup>113</sup> engadget, "FTC sues AT&T over 'deceptive' mobile data throttling (update: response)," released October 28, 2014, <https://www.engadget.com/2014/10/28/ftc-sues-att-over-throttling/>, accessed April 25, 2018.

<sup>114</sup> US 9<sup>th</sup> Circuit Court of Appeals, "Federal Trade Commission, Plaintiff-Appellee, v. AT&T Mobility LLC, a limited liability company, Defendant-Appellant," filed February 26, 2018, <http://cdn.ca9.uscourts.gov/datastore/opinions/2018/02/26/15-16585.pdf>, accessed April 25, 2018.

<sup>115</sup> FCC, "FCC/FTC To Coordinate Online Consumer Protection Efforts," released December 11, 2017, <https://www.fcc.gov/document/fcc-ftc-coordinate-online-consumer-protection-efforts>, accessed April 25, 2018.

<sup>116</sup> NECA, US DC Circuit Court of Appeals, "New America Foundation's Open Technology Institute, Petitioner v. Federal Communications Commission and United States of America, Respondents," filed January 17, 2018, <https://prodnet.www.neca.org/publicationsdocs/wwwpdf/011718dcctorder.pdf>, accessed April 25, 2018.

<sup>117</sup> The Hill, "Dems introduce legislation to stop FCC net neutrality repeal," published February 27, 2018, <http://thehill.com/policy/technology/375829-democrats-officially-introduce-legislation-to-stop-fcc-net-neutrality>, accessed April 25, 2018.

<sup>118</sup> Congress, "H.R.4682 - Open Internet Preservation Act," introduced December 19, 2017, <https://www.congress.gov/bill/115th-congress/house-bill/4682?r=2>, accessed April 25, 2018.

<sup>119</sup> The Hill, "House Republican offers net neutrality replacement bill," published December 19, 2017, <http://thehill.com/policy/technology/365671-house-republican-offers-net-neutrality-replacement-bill>, accessed April 25, 2018.

### 3. State Legislative Challenges

According to the National Regulatory Research Institute’s Net Neutrality State Actions Tracker, as of April 17, 2018, 32 states and the District of Columbia have passed legislation and/or resolutions concerning net neutrality since the FCC adopted the Restoring Internet Freedom Order. Also four state governors have issued executive orders that effectively bar state agencies from doing business with ISPs that violate net neutrality, using the state governments’ positions as large customers to influence ISPs.<sup>120</sup>

### E. Universal Service

Universal service is the policy that all Americans should have equal access to communications services. While Florida consumers benefit from being able to make and receive calls from all parts of the nation, there is a cost associated with this policy.

In general, Florida consumers pay more into the federal USF than what is returned to eligible service providers in Florida.<sup>121</sup> For 2016, New York consumers continued to be larger net contributors than Florida. The FPSC monitors and participates in ongoing proceedings at the FCC and with the Federal-State Joint Board on Universal Service. Table 7-1 shows Florida’s estimated contribution and receipts for 2016 and provides a comparison of net contributions for 2014 and 2015.

**Table 7-1**  
**2016 Federal Universal Service Programs in Florida**  
**(Annual Payments and Contributions in Thousands of Dollars)**

	2014	2015	2016		
			Payments to Service Providers	Estimated Consumer Contributions	Estimated Net
High-Cost	(\$173,267)	(\$219,785)	\$60,719	\$272,713	(\$211,994)
Low Income	1,299	(6,787)	97,378	93,378	4,004
Schools & Libraries	(62,451)	(60,265)	96,709	144,966	(48,257)
Rural Health Care	(12,059)	(16,315)	4,466	18,105	(13,639)
Total	(\$254,024)	(\$308,505)	\$259,276	\$539,589	(\$280.312)

Source: FCC Universal Service Monitoring Report, various years, Table 1.9.<sup>122</sup>

### 1. Contribution System Reform

Telecommunications service providers fund the USF based on a quarterly FCC assessment factor and the amount of telecommunications revenues service providers collect from end-users. Specifically, the assessment factor is applied to interstate and international telecommunications revenues.

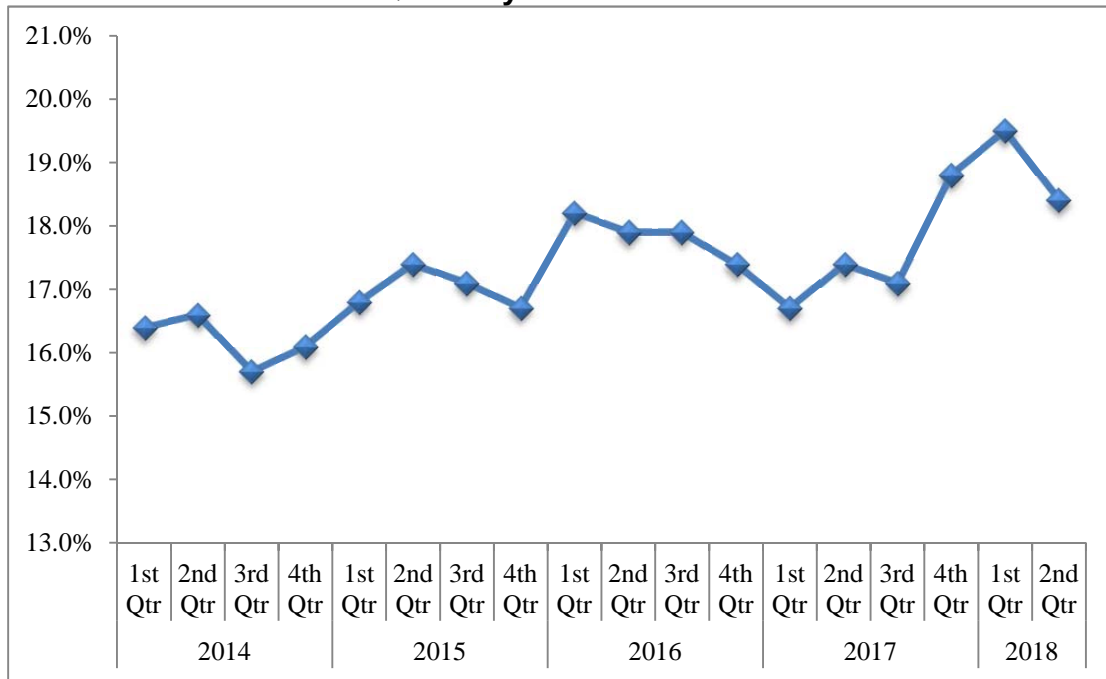
<sup>120</sup> NRRI, “Net Neutrality State Actions Tracker,” published April 17, 2018, <http://nrri.org/net-neutrality-tracker/>, accessed April 25, 2018.

<sup>121</sup> FCC, “Universal Service Monitoring Report-2017,” released April 13, 2018, <https://docs.fcc.gov/public/attachments/DOC-350207A1.pdf>, accessed June 5, 2018.

<sup>122</sup> Note: Figures may not add up due to rounding.

Mobile wireless carriers and interconnected VoIP providers are also required to contribute.<sup>123</sup> In the last four and a half years, the assessment factor ranged from a high of 19.5 percent in the first quarter of 2018 to a low of 15.7 percent in the third quarter of 2015.<sup>124</sup> Figure 7-1 illustrates changes to the assessment factor over the last four and a half years.

**Figure 7-1**  
**USF Quarterly Assessment Factor**



Source: FCC Public Notices on Proposed Contribution Factors, various quarters

## 2. High Cost

In 2011, the FCC reformed and modernized its existing high-cost fund to maintain voice services and extend broadband capable infrastructure.<sup>125</sup> As part of this reform, the FCC began to phase out the existing high-cost support programs and began funding through the Connect America Fund (CAF). The CAF focuses on supporting and expanding fixed broadband availability and voice service. Figure 7-2 identifies the authorized national support by high-cost program for 2017, an increase of 3.9 percent from 2016.

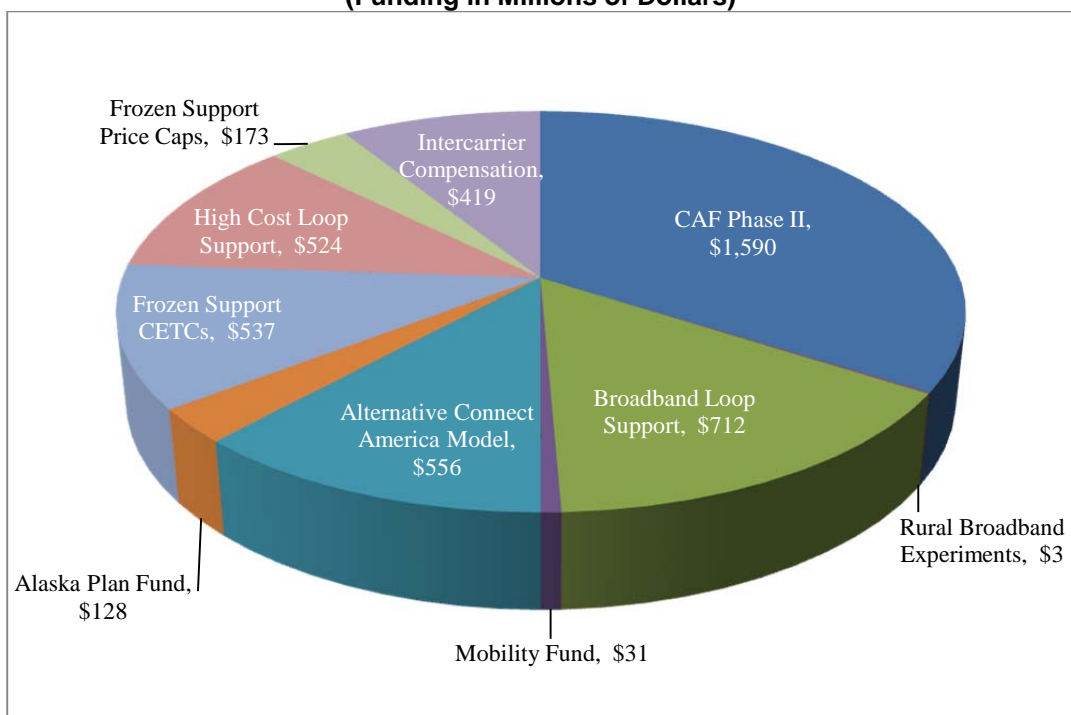
<sup>123</sup> Wireless carriers and interconnected VoIP providers may use the interim safe harbor percentages to estimate the interstate portion of their revenues.

<sup>124</sup> FCC, "Contribution Factor & Quarterly Filings - Universal Service Fund (USF) - Management Support," <http://www.fcc.gov/encyclopedia/contribution-factor-quarterly-filings-universal-service-fund-usf-management-support>, accessed June 5, 2017.

<sup>125</sup> FCC 11-161, WC Docket No. 10-90, Connect America Fund, Report and Order and Further Notice of Proposed Rulemaking, released November 18, 2011, [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-11-161A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-161A1.pdf), accessed June 5, 2018.

The High Cost Program implemented three new funds in 2017 with the intended goal to bring broadband to rural America. First, the Alternative Connect America Cost Model, with \$555.8 million disbursed in 2017, offered interstate rate-of-return carriers the option to elect to receive model-based support for a 10-year term in exchange for extending broadband service to a pre-determined number of eligible locations. Second, the Connect America Broadband Loop Support, with \$713.9 million disbursed in 2017, was made available to interstate rate-of-return carriers that elected not to participate in the Alternative Connect America Cost Model. This program is a rebranded form of interstate common line support, but expanded to support broadband-only lines. Finally, the Alaska Plan, with \$128.3 million disbursed in 2017, established a separate fund for wireline and wireless carriers that serve Alaska. Like the Alternative Connect America Cost Model, carriers can elect to receive model-based support for a 10-year term in exchange for extending broadband service. It differs from that program in so far as it incorporates the unique climate and geographical conditions of Alaska.

**Figure 7-2**  
**2017 Authorized Federal High-Cost Support**  
**(Funding in Millions of Dollars)**



Source: USAC 2017 Annual Report<sup>126</sup>

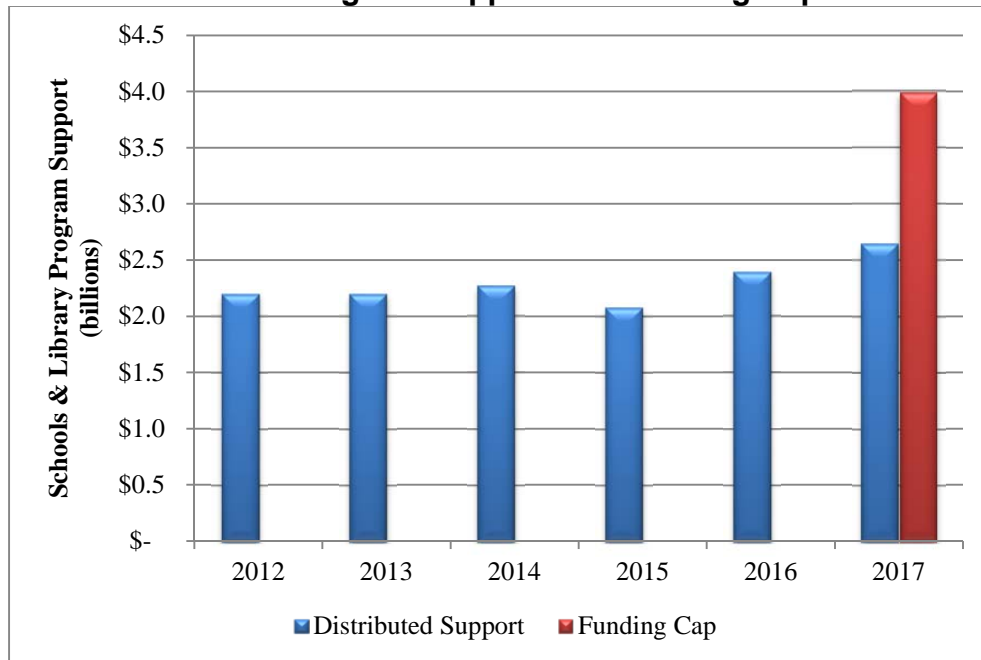
<sup>126</sup> Universal Service Administrative Company 2017 Annual Report, <https://www.usac.org/res/documents/about/pdf/annual-reports/usac-annual-report-2017.pdf>, page 10, accessed June 5, 2018.

### 3. Schools and Libraries

The schools and libraries support program, commonly known as the E-rate Program, provides financial assistance for eligible schools and libraries. The program provides support to reduce the cost associated with telecommunications services, Internet access, and eligible equipment, along with repair and upkeep of eligible equipment. The discounts range from 20 percent to 90 percent of the costs of eligible services depending on the level of poverty and whether the school or library is located in an urban or rural area.

Figure 7-3 reflects the new cap relative to the amount of support distributed in prior years.<sup>127</sup> On an annual basis, Florida consumers can expect to pay about \$50 million more per year into the federal program than the amount of support Florida schools and libraries will receive based on 2017 estimated contribution data. Because the cap is almost twice the amount as what was distributed, there is the potential for increased net contributions into the program in the future.

**Figure 7-3**  
**E-Rate Program Support and Funding Cap**



Source: USAC 2017 Annual Report<sup>128</sup>

### 4. Low Income

The Lifeline program provides a \$9.25 discount on phone service for qualifying low-income consumers to ensure that all Americans have the opportunities and security that phone service brings. In addition, the FCC has determined that broadband has become essential to participation

<sup>127</sup> FCC Public Notice, DA 17-243, Wireline Competition Bureau Announces E-Rate Inflation-Based Cap for Funding Year 2017, released March 13, 2017, <https://docs.fcc.gov/public/attachments/DA-17-243A1.pdf>, accessed June 5, 2018.

<sup>128</sup> Universal Service Administrative Company 2017 Annual Report, <https://www.usac.org/res/documents/about/pdf/annual-reports/usac-annual-report-2017.pdf>, page 7, accessed June 5, 2018.



in modern society, offering access to jobs, education, health care, government services and opportunity. On April 27, 2016, the FCC released an Order to further modernize the federal Lifeline program.

The FCC’s Order takes a variety of actions to encourage more Lifeline providers to deliver newly supported broadband services as the FCC transitions from primarily supporting voice services to targeting support at providing broadband services. The Order also limits the qualifying criteria consumers can use to sign up for Lifeline services, removing the ability of states to specify additional qualifying programs or criteria. In addition, the FCC has established a budget for the expanded Lifeline program of \$2.25 billion, indexed to inflation. By way of comparison, the authorized support for the Lifeline program in 2017 was \$1.26 billion.<sup>129</sup>

The FCC states that to be sustainable and achieve its goals of providing low-income consumers with robust, affordable, and modern service offerings, a forward-looking Lifeline program must focus on broadband services. Therefore, the FCC concluded that it is necessary that going forward the Lifeline discount will no longer apply to voice-only offerings, following an extended transition period, except in census blocks with only one Lifeline provider. Prior to the complete phase out of support for voice-only services, the FCC will reevaluate its conclusion as part of a 2021 report on the state of the Lifeline marketplace. After this transition, the federal Lifeline program will continue to support voice service when bundled with a broadband service that meets the FCC’s minimum service standards.<sup>130</sup> The table below outlines the FCC's phase down schedule.

**Table 7-2  
Lifeline Support Phase Down Schedule**

Effective Dates	Fixed Voice	Mobile Voice	Fixed Broadband	Mobile Broadband
Through 11/30/19	\$9.25	\$9.25	\$9.25	\$9.25
From 12/1/19 to 11/30/20	\$7.25	\$7.25	\$9.25	\$9.25
From 12/1/20 to 11/20/21	\$5.25	\$5.25	\$9.25	\$9.25
After 11/30/21	\$0	\$0	\$9.25	\$9.25

Source: FCC, Lifeline Modernization Order

On December 1, 2017, the FCC released its Fourth Report and Order and Notice of Proposed Rulemaking to further reform the Lifeline program.<sup>131</sup> The FPSC filed comments in this proceeding on February 21, 2018. In this proceeding, the FCC asserted that Lifeline support will best promote access to advanced communications services if it is focused on encouraging

<sup>129</sup> Ibid. p. 9.

<sup>130</sup> The fixed broadband speed standard is based on what a substantial majority of consumers receive (currently 10 Mbps downloads/1 Mbps uploads). The FCC also sets minimum monthly fixed broadband usage allowances, starting at 150 GB, and updated thereafter. Mobile broadband services standards are phased in starting at 500 MB per month of 3G data by December 1, 2016, 1 GB by December 1, 2017, and increasing to 2 GB per month by the end of 2018.

<sup>131</sup> FCC, Fourth Report and Order, Order on Reconsideration, Memorandum Opinion and Order, Notice of Proposed Rulemaking, and Notice of Inquiry, FCC 17-155, WC Docket Nos. 17-287, 11-42, and 09-197, released December 1, 2017.



investment in broadband-capable networks. It therefore proposed “limiting Lifeline support to facilities-based broadband service provided to a qualifying low-income consumer over the ETC’s voice- and broadband-capable last-mile network.”<sup>132</sup>

In the FPSC’s comments, we noted our continued concern about growth in the size of the Lifeline budget and that we do not believe the FCC’s proposal will have the desired effect to more efficiently meet the needs of Lifeline consumers. First, resellers contribute, albeit indirectly, to the infrastructure of the underlying network. Specifically, resellers pay wholesale companies a market-based rate for the services they use that should include the wholesale companies’ expenses related to infrastructure. Second, some prominent facilities-based carriers have already left the Lifeline market. In Florida, AT&T has withdrawn as an ETC in areas where it was not eligible to receive high-cost support. Resellers are the only option in many of the affected areas where AT&T has relinquished this designation for wireline service. Finally, many states have seen a significant transition in the provision of Lifeline service from wireline to wireless carriers. Many of these wireless resellers have developed this business plan, not to defraud the Lifeline program, but to serve a market underserved by many traditional carriers.

The FCC also asked for comment on continuing the phase-down of Lifeline support for voice-only services. The FPSC takes the position that customers should have the option to continue to receive Lifeline support for voice-only service and that the FCC should eliminate its planned phase down of support for voice-only services. We noted our concern that if the only option for customers to obtain Lifeline voice service is by combining the service with broadband, the cost of the combined services may become cost prohibitive for some consumers without increasing financial support from the Lifeline program. Furthermore, some consumers may have concluded that they do not need broadband service. Customers should continue to have the option of stand-alone voice or a combination of voice and broadband services.

## ***F. FCC Major Enforcement Actions***

Federal and state agencies routinely initiated enforcement actions to deter noncompliance with government regulations. During 2017, the Florida Attorney General, FCC, FTC, and Department of Justice issued major violations for buildout failure, calling violations, fraud, slamming and cramming, and universal service program rule violations. Some major violations involving Florida-based companies include the following.

### ***1. Calling Violations***

The Truth in Caller ID Act prohibits callers from deliberately falsifying caller ID information, a practice called “spoofing”, to disguise their identity with the intent to harm, defraud consumers, or wrongfully obtain anything of value. Changes in technology have made it easier and cheaper for scammers to make robocalls and to manipulate caller ID information. To address this consumer problem, the FCC and FTC have focused both on enforcement actions and on pursuing policies to help consumers and their service providers block malicious robocalls. Some recent examples of calling violation enforcement actions are listed below.

- On January 13, 2017, the FTC said that defendants in two legal actions the agency brought agreed to pay the FTC more than \$510,000 in settlement of those suits. The

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<sup>132</sup> Ibid.

defendants in the cases, including Justin Ramsey, managing member of Boynton Beach, FL based Data Guru LLC, which is not certificated in Florida, and Aaron Jones, owner of Allorey, Inc., based in Orange County, CA, directed millions of robocalls since 2012 to consumers listed on the Do-Not-Call Registry. Monetary judgments against the defendants in the cases totaled \$11.3 million, but were reduced to \$510,000 based on the defendants' ability to pay. In addition to the monetary judgments, defendants in the case agreed to court orders banning them from making robocalls, making calls to numbers on the Do-Not-Call Registry, and violating the FTC's Telemarketing Sales Rule. The FTC said that Mr. Ramsey and Mr. Jones have previously been sued by state attorneys general for telemarketing violations.<sup>133</sup>

- On June 5, 2017, at the request of the FTC and the Florida Attorney General, a federal district court judge entered eight orders against an intertwined web of Orlando-based individuals and companies that bombarded consumers with illegal robocalls from "Card Member Services," pitching worthless credit card interest rate reduction programs.

All of the stipulated orders contain monetary judgments that are either entirely or partially suspended based on the defendants' inability to pay. If they are later found to have misrepresented their financial condition, the entire amount of the respective judgment will become due. The judgments entered against the 12 defendants that were alleged to be primarily responsible for this scam are in the amount of \$4,890,797. The stipulated orders against three other defendants are for lesser amounts, reflecting the consumer injury caused by their more-limited conduct.<sup>134</sup>

- On June 22, 2017, the FCC proposed a \$120 million fine against an individual who apparently made almost \$100 million from spoofed robocalls in violation of the Truth in Caller ID Act. Mr. Adrian Abramovich of Miami, FL apparently made 96 million spoofed robocalls during a three-month period. Mr. Abramovich's operation apparently made the spoofed calls in order to trick unsuspecting consumers into answering and listening to his advertising messages. The FCC's Enforcement Bureau also issued a citation to Mr. Abramovich for apparent violations of the Telephone Consumer Protection Act (TCPA) robocall limits and the federal wire fraud statute.<sup>135,136,137</sup>

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<sup>133</sup> Consumerist, "Feds Shut Down Two Massive Illegal Robocall Operations," released January 14, 2017, <https://consumerist.com/2017/01/13/feds-shut-down-two-massive-illegal-robocall-operations/>, accessed January 15, 2017.

<sup>134</sup> FTC, News Release, "FTC, Florida Attorney General Close the Book on Robocall Ring That Pitched U.S. Consumers Worthless Credit Card Rate Reduction Programs," released June 5, 2017, <https://www.ftc.gov/news-events/press-releases/2017/06/ftc-florida-attorney-general-close-book-robocall-ring-pitched-us>, accessed June 6, 2017.

<sup>135</sup> FCC, News Release, "FCC Proposes \$120 Million Fine of Massive Caller ID Spoofing Operation," released June 22, 2017, <https://www.fcc.gov/document/fcc-proposes-120-million-fine-massive-caller-id-spoofing-operation>, accessed June 23, 2017.

<sup>136</sup> U.S. Government Publishing Office, "Truth in Caller ID Act of 2009," <https://www.gpo.gov/fdsys/pkg/BILLS-111s30enr/pdf/BILLS-111s30enr.pdf>, accessed April 23, 2018.

<sup>137</sup> FCC, "Telephone Consumer Protection Act," <https://transition.fcc.gov/cgb/policy/TCPA-Rules.pdf>, accessed April 23, 2017.

## **2. Fraud/Other Noncompliance**

On January 6, 2017, the Justice Department announced that the operator of an Orlando, FL telecommunications company, Arymyx, Inc., pled guilty in conjunction with a global cellphone fraud scheme in which the accounts of wireless customers were compromised and their phones were cloned in order to make fraudulent international calls. Also, a West Palm Beach resident was sentenced on January 4, 2017 to 52 months in prison in connection with the scheme. Ramon Batista, pleaded guilty to several counts, while Jose Santana (aka Octavio Perez), was given 52 months in prison. This company is a Florida wireless service provider, but is not certificated by the Florida Public Service Commission.<sup>138</sup>

## **3. Slamming and Cramming**

“Slamming” is the illegal practice of switching a consumer’s traditional wireline telephone company for local, local toll, or long distance service without permission. The slamming rules also prohibit unreasonable delays in the execution of an authorized switch by your local telephone company. “Cramming,” is the illegal act of placing unauthorized charges on your wireline, wireless, or bundled services telephone bill. Crammers often rely on confusing telephone bills to trick consumers into paying for services they did not authorize or receive, or that cost more than the consumer was led to believe. Below is a list of slamming and cramming enforcement actions taken by the FCC.

- On April 25, 2017, the FCC announced a \$1 million fine against a Winter Park, FL-based long distance carrier, Advantage Telecommunications, for “slamming” and “cramming.” This company was regulated by the Florida Public Service Commission as an interexchange company (IXC) until IXCs were deregulated on July 1, 2011. The company’s telemarketers violated FCC rules by impersonating representatives of customers’ existing long-distance providers and switching the customers’ long-distance carriers without obtaining proper, verified authorization. Advantage also added unauthorized charges to consumers’ telephone bills. In addition, the company violated the FCC’s truth-in-billing rules by failing to plainly and clearly describe its charges on bills. The vast majority of consumers impacted were small businesses.<sup>139</sup>
- On October 3, 2017, the FCC issued a Notice of Apparent Liability, that contains a nearly \$4 million fine against Neon Phone Service of Rockledge, FL for “slamming” and “cramming.” This is also a Florida company, but as an IXC, it is not regulated by the FPSC. The company appears to have violated FCC rules by switching customers’ long distance carriers without obtaining proper, verified authorization. It also apparently added unauthorized charges to consumers’ telephone bills. Due to Neon’s apparent violations of the Communication Act and FCC rules for these actions, the

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<sup>138</sup> Department of Justice, News Release, “Owner of Florida Telecommunications Company Pleads Guilty, Second Defendant Sentenced to 52 Months in Prison for Involvement in International Cellphone Fraud Scheme,” released January 5, 2017, <https://www.justice.gov/opa/pr/owner-florida-telecommunications-company-pleads-guilty-second-defendant-sentenced-52-months>, accessed January 6, 2017.

<sup>139</sup>FCC, News Release, “FCC Fines Company \$1 Million For Illegally Switching Consumers’ Long Distance Carriers,” released April 25, 2017, <https://www.fcc.gov/document/fcc-fines-company-1-m-violating-slamming-cramming-rules>, accessed May 12, 2017.

FCC is proposing a \$3,963,722 fine against Neon.<sup>140</sup>

#### **4. Universal Service Violations**

- On January 30, 2018, the FCC proposed an \$18,715,405 fine against DataConnex for apparent violations involving the Universal Service Fund Rural Health Care Program. The Florida and Mississippi-based telecommunications services provider is charged with violating the Communications Act, the program's competitive bidding rules, and using forged, false, misleading, and unsubstantiated documents to improperly seek funding from the USF. DataConnex's apparent financial relationship with a consultant hired by rural health care providers to help select a service provider undermined the competitive bidding process. DataConnex also apparently provided false and misleading information to unlawfully increase the USF funding it received. As a VoIP provider, the Brandon, FL, company is not regulated by the Florida Public Service Commission.<sup>141</sup>
- On February 15, 2017, the FCC announced a \$9.1 million settlement with two companies which provide telecommunications services to consumers with hearing and speech disabilities. In addition to a monetary penalty for improper billing, the settlement with TRS providers Purple Communications and CSDVRS, of Clearwater, FL, repays the TRS Fund and establishes a 5-year compliance plan to ensure that services going forward incorporate the required checks.<sup>142</sup>
- On June 8, 2017, the FCC released a Forfeiture Order against Advanced Tel, Inc. (ATI), of New Port Richey, FL. The penalty of \$975,000 has been imposed on ATI for violating its federal regulatory obligations as a telecommunications service provider for several years by failing to file required data and make required contributions to federal programs.<sup>143</sup>

#### **G. Local Number Portability Transition**

Local Number Portability (LNP), or number porting, is a system that enables end users to keep their telephone numbers when switching from one communications service provider to another. When deregulation came to the telephone industry, many new service providers emerged, giving consumers a choice of services and prices. Yet, switching to a new provider meant getting a new telephone number. Number portability changed that, making it easy for consumers to freely select the communications service provider of their choice and retain the same telephone number.<sup>144</sup>

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<sup>140</sup> FCC, News Release, "FCC Proposes \$3.9 Million Fine Against Neon for Slamming and Cramming," released October 3, 2017, <https://www.fcc.gov/document/fcc-proposes-39-million-fine-against-neon-slamming-and-cramming>, accessed October 4, 2017.

<sup>141</sup> FCC, News Release, "FCC Proposes \$18.7 Million Fine Against DataConnex," released January 30, 2017, <https://www.fcc.gov/document/fcc-proposes-187-million-fine-against-dataconnex>, accessed January 31, 2017.

<sup>142</sup> FCC, News Release, "FCC Settles Investigation Of Relay Service Providers," released February 15, 2017, <https://www.fcc.gov/document/fcc-settles-investigation-relay-service-providers>, accessed February 16, 2017.

<sup>143</sup> FCC, News Release, "FCC Fines ATI \$975K for Universal Service and Other Violations," released June 8, 2017, <https://www.fcc.gov/document/fcc-fines-ati-975k-universal-service-and-other-violations>, accessed June 9, 2017.

<sup>144</sup> NPAC Number Portability Administration Center, "Local Number Portability," <https://www.npac.com/number-portability>, accessed April 24, 2018.

The Number Portability Administration Center (NPAC) supports the implementation of and is the system used to facilitate number porting in the United States. Comprised of seven regional systems across the U.S., the NPAC manages the number portability processes of all Telecom Service Providers in the United States, including wireline, wireless and VoIP.<sup>145</sup>

North American Portability Management LLC, (NAPM) negotiates and manages the contracts for LNP administration, including "immediate oversight and management" of the LNP administrator(s) in accordance with orders and directions from the FCC.<sup>146</sup>

Neustar had been the Local Number Portability Administrator (LNPA) for all seven NPAC regions since 1997, but after a bidding process, the FCC awarded the contract to iconectiv, as the next LNPA. On August 8, 2016, iconectiv and the NAPM signed the Master Services Agreements for each of the seven U.S. NPAC regions, officially establishing iconectiv as the next LNPA in all U.S. regions.<sup>147</sup>

The first NPAC region to transfer to iconectiv was the Southeast and on April 8, 2018, iconectiv announced that the transition had been successful. This marks the first regional cutover of NPAC data and services for Service Providers, Service Bureaus and Providers of Telecom-Related Services, and it follows iconectiv's successful transition of law enforcement services enabling number identification and porting in March 2018.<sup>148</sup>

## **H. Public Safety Network**

On December 28, 2017, the state of Florida opted to join the First Responder Network Authority (FirstNet). FirstNet is a nationwide public safety broadband network, as well as the name of the federal agency that was created in 2012 to deploy and operate the network. Congress established FirstNet in Section 6204 of the Middle Class Tax Relief and Job Creation Act of 2012, which also directed the FCC to reserve some spectrum frequencies for public safety use in a nationwide broadband network and allocated up to \$7 billion dollars for construction of the network. FirstNet falls under the responsibility of the National Telecommunications and Information Agency (NTIA), which is itself under the purview of the United States Department of Commerce. FirstNet is envisioned as a way to improve efficiency and coordination of emergency services amongst thousands of federal, state, and local first responders. All states and territories have joined FirstNet.<sup>149,150,151</sup>

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<sup>145</sup> NPAC, "About The NPAC," <https://numberportability.com/about-us/about-npac/>, accessed April 24, 2018.

<sup>146</sup> North American Portability Management LLC, "Welcome to the North American Portability Management LLC website!," <https://www.napmlc.org/pages/home.aspx>, accessed April 24, 2018.

<sup>147</sup> RCR Wireless News, "Iconectiv officially tapped to serve as nation's LNPA," published August 10, 2016, <https://www.rcrwireless.com/20160810/policy/iconectiv-officially-tapped-to-serve-as-nations-lnpa-tag2>, accessed April 24, 2018.

<sup>148</sup> NPAC, "iconectiv Announces Cutover of First Regional NPAC System," published April 9, 2018, <https://numberportability.com/news/iconectiv-announces-cutover-first-regional-npac-system/>, accessed April 24, 2018.

<sup>149</sup> Tampa Bay Times, "Florida finally joins FirstNet's future first-responder network," published January 1, 2018, <http://www.tampabay.com/news/publicsafety/Florida-finally-joins-FirstNet-s-future-first-responder-network-164012151>, accessed April 24, 2018.

<sup>150</sup> First Responder Network Authority, <https://firstnet.gov/>, accessed April 24, 2018.

## ***I. Robocalls***

Robocalls are calls dialed by an Automatic Telephone Dialing Systems (ATDS) that deliver a recorded message. The majority of such are unsolicited calls from spammers and scammers, often from organized criminal groups overseas. There are some legitimate uses for robocalls like appointment reminders or school closing announcements, etc., but the main issue is whether a citizen consents to being called. These calls have become an ever more pressing topic of interest in the telecommunications industry, because cheaper and improved technology has spurred a sharp increase in the volume of robocalls. Citizens are receiving robocalls on all voice media including wireline, wireless and VoIP telephones (robotexts as well). According to the YouMail robocall index, the volume of robocalls nationwide had risen from 2.3 billion calls in January 2017 to 3.2 billion calls in March 2018.<sup>152</sup> The FTC and FCC received more than 600,000 complaints about unwanted calls in 2017 from Florida.<sup>153</sup> The Telephone Consumer Protection Act (TCPA), which is the principal federal legislation that prohibits robocalls, allows for civil lawsuits against robocallers. Citizens filed 4,392 lawsuits in 2017, up from just 14 in 2007.<sup>154</sup> The Department of Justice (DOJ), Consumer Financial Protection Bureau (CFPB), FCC, FTC and many states attorneys general have been active in pursuing civil and criminal penalties against offending robocallers as well. Despite these efforts, the volume of robocalls still continues to increase.

The FCC took several actions to halt the proliferation of robocalls. The FCC's efforts to reduce unwanted robocalls met with a legal setback on March 16, 2018, when the United States Court of Appeals for the District of Columbia Circuit issued a decision granting in part and denying in part petitions for review of the 2015 Robocall Order in which the FCC sought to clarify various aspects of the TCPA's general bar against using automated dialing devices to make uninvited calls.<sup>155,156</sup> The Court upheld the FCC's approach to revocation of consent, under which a party may revoke consent through any reasonable means clearly expressing a desire to receive no further messages from the caller, and sustained the scope of the agency's exemption for time-sensitive health care calls. The Court, however, set aside the FCC's effort to clarify the types of calling equipment that fall within the TCPA's restrictions, and vacated the FCC's approach to calls made to a phone number previously assigned to a person who had given consent but since reassigned to another (nonconsenting) person. The Court ruled the FCC's one-call safe harbor, at least as defended in the Order, is arbitrary and capricious.<sup>157</sup>

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<sup>151</sup> Government Publishing Office, "Middle Class Tax Relief And Job Creation Act Of 2012," released February 22, 2012, <https://www.gpo.gov/fdsys/pkg/PLAW-112publ96/pdf/PLAW-112publ96.pdf>, accessed January 24, 2018.

<sup>152</sup> YouMail, Robocall Index, <https://robocallindex.com/>, accessed April 24, 2018.

<sup>153</sup> FTC, "Do Not Call Registry Data Book 2017," <https://www.ftc.gov/policy/reports/policy-reports/commission-staff-reports/national-do-not-call-registry-data-book-fy> accessed on April 24, 2018.

FCC, "Consumer Complaints Data - Unwanted Calls Consumer," <https://opendata.fcc.gov/Consumer/Consumer-Complaints-Data-Unwanted-Calls/vakf-fz8e>, accessed on April 24, 2018.

<sup>154</sup> WebRecon, LLC, "WebRecon Stats for Dec 2017 & Year in Review," <https://webrecon.com/webrecon-stats-for-dec-2017-year-in-review/>, accessed April 24, 2018.

<sup>155</sup> NECA, "US DC Court of Appeals: ACA International, et al., Petitioners V. Federal Communications Commission and United States Of America," released on March 16, 2018, <https://prodnet.www.neca.org/publicationsdocs/wwwpdf/031618aca.pdf>, accessed on April 24, 2018.

<sup>156</sup> FCC, "TCPA Omnibus Declaratory Ruling and Order," released July 10, 2015, <https://www.fcc.gov/document/tcpa-omnibus-declaratory-ruling-and-order>, accessed on April 24, 2018.

<sup>157</sup> Ibid, Footnote 155.



## Appendix A. List of Certificated CLECs as of December 31, 2017

\*\* Indicates the company did not respond to the Commission's data request.

365 Wireless, LLC	C3
382 Networks, Inc.	Callis Communications, Inc.
A.SUR Net, Inc.**	Campus Communications Group, Inc.
Access One, Inc.	Cbeyond Communications, LLC**
Access Point, Inc.	CBTS Technology Solutions LLC
ACN Communication Services, LLC	CenturyLink
Airbus DS Communications, Inc.	Citadel Design & Construction, LLC
Airespring, Inc.	City Communications Inc.**
Airus, Inc.	City of Bartow
ALEC, LLC	City of Lakeland
Alternative Phone, Inc.	City of Leesburg
American Telephone Company LLC	City of Ocala
ANEW Broadband, Inc.	Clear Rate Communications, Inc.
ANPI Business, LLC	Cogent Communications of Florida LHC, Inc.
AT&T Corp.	Comcast Business Communications, LLC
AT&T Florida	Comcast Digital Phone
ATC Outdoor DAS, LLC	Comity Communications, LLC
Atlantic Broadband Enterprise, LLC	Communications Authority, Inc
Atlantis Communications LLC	ComNet (USA) LLC
ATN, Inc.	Comtech21, LLC
Backbone Communications Inc.	Consolidated Communications/GTC
Baldwin County Internet/DSSI Service, L.L.C.**	Conterra Ultra Broadband, LLC
Bandwidth.com CLEC, LLC	Convergia, Inc.
Barr Tell USA, Inc.	CoreTel Florida, Inc.
BCM One, Inc.	Cox Florida Telcom, L.P.
BCN Telecom, Inc.	Crexendo Business Solutions, Inc.
BeCru	Crosstel Tandem, Inc.
BetterWorld Telecom	Crown Castle NG East LLC
Birch Communications, Inc.**	Custom Network Solutions, Inc.
Birch Telecom of the South, Inc.**	Custom Tel, LLC
Bright House Networks Information Services (Florida), LLC	Dais Communications, LLC
Broadband Dynamics, L.L.C.	Dedicated Fiber Systems, Inc.
BroadRiver Communication Corporation	Dialtone Telecom, LLC
Broadsmart Florida, Inc.	DIGITALIPVOICE, INC.
Broadview Networks, Inc.	Discount CLEC Services Corporation
Broadvox-CLEC, LLC	dishNET Wireline L.L.C.
Broadwing Communications, LLC	DSCI, LLC
BT Communications Sales LLC	EarthLink Business
BullsEye Telecom, Inc.	EarthLink Business, LLC
	Easy Telephone Services Company
	Electronet Broadband Communications, Inc.

Embarq Communications  
 ENA Services, LLC  
 eNetworks NC, LLC  
 ENGAGE COMMUNICATIONS  
 Enhanced Communications Network, Inc.  
 Entelegent Solutions, Inc.  
 ExteNet Systems, Inc.  
 FiberLight, LLC  
 Fibernet Direct Florida LLC  
 First Choice Technology, Inc.  
 First Communications, LLC  
 FL Network Transport, LLC  
 Florida Hearing and Telephone Corporation  
 Florida Phone Systems, Inc.  
 FPUAnet Communications  
 France Telecom Corporate Solutions L.L.C.  
 Frontier Communications of America, Inc.  
 Frontier Communications of the South, LLC  
 Frontier Florida LLC  
 Fusion\*\*  
 Georgia Public Web, Inc.  
 GetGo Communications LLC  
 GigaMonster, LLC  
 Global Capacity  
 Global Connection Inc. of America (of Georgia)  
 Global Crossing Local Services, Inc.  
 Granite Telecommunications, LLC  
 Great America Networks, Inc.  
 GRU Communication Svs/GRUCom  
 GRUCom  
 GTC Communications, Inc.  
 Harbor Communications, LLC  
 Hayes E-Government Resources, Inc.  
 HD Carrier, LLC  
 Home Town Telephone, LLC  
 Hotwire Communications, Ltd.  
 IDT America, Corp.  
 inContact, Inc.  
 INdigital  
 iNetworks Group, Inc.\*\*  
 INNOVATIVE TECH PROS\*\*  
 Integrated Path Communications, LLC\*\*  
 IntelTel, LLC  
 Inteltrace, Inc.  
 Intellicall Operator Services, Inc.\*\*  
 Intellifiber Networks, LLC  
 InterGlobe Communications, Inc.  
 InterMetro Fiber, LLC  
 Internet & Telephone, LLC  
 IPC Network Services, Inc.  
 IPFone  
 ITS Fiber  
 ITS Telecommunications Systems, Inc.  
 J C Telecommunication Co., LLC  
 Joytel Wireless Communications, Inc.  
 Keys Energy Services  
 Latin American Nautilus USA, Inc.  
 Level 3 Communications, LLC  
 Level 3 Telecom of Florida, LP  
 Lighttower Fiber Networks II, LLC  
 Lightspeed CLEC, Inc.  
 Litestream Holdings, LLC  
 Local Access LLC  
 Local Telecommunications Services - FL, LLC  
 Magna5 LLC  
 Maryland TeleCommunication Systems, Inc.  
 Mass Communications  
 Matrix Telecom, LLC  
 MCC Telephony of Florida, LLC  
 McLeodUSA Telecommunications Services,  
 L.L.C.  
 MetTel  
 Miami-Dade Broadband Coalition I LLC  
 Micro-Comm, Inc.  
 Mitel Cloud Services, Inc.  
 MIX Networks, Inc.  
 Mobilitie Management, LLC  
 Mobilitie, LLC  
 Momentum Telecom, Inc.  
 MOSAIC NETWORKX LLC  
 MULTIPHONE LATIN AMERICA, INC.  
 Nebula Telecommunications of Florida LLC  
 NEFCOM  
 Network Innovations, Inc.  
 Network Telephone LLC  
 Neutral Tandem-Florida, LLC  
 New Horizons Communications Corp.  
 Norstar Telecommunications, LLC  
 North County Communications Corporation  
 NOS Communications, Inc.  
 O1 Communications East, LLC  
 Offramp, LLC  
 One Voice Communications, Inc.  
 OneStar Long Distance, Inc.\*\*  
 Onvoy, LLC  
 Opextel LLC d/b/a Alodiga\*\*  
 PacOptic Networks, LLC  
 PAETEC Business Services



PaeTec Communications, LLC  
Paradigm Telecom II, LLC  
Paradigm Telecom, Inc.\*\*  
PBX-Change  
Peerless Network of Florida, LLC  
Phone Club Corporation  
Pioneer Telephone  
PowerNet Global Communications  
Preferred Long Distance, Inc.  
Pro-Net, Inc.  
Pure Telephone Corp\*\*  
QuantumShift Communications, Inc.\*\*  
RCLEC, Inc.  
Real Fast Networks LLC  
Reliance Globalcom Services, Inc.  
Rosebud Telephone, LLC  
Sage Telecom Communications, LLC  
SBA DAS & Small Cells, LLC  
Seminole Telecom of Florida, LLC  
SH Services LLC\*\*  
SKYNET360, LLC\*\*  
Smart City Communications  
Smart City Networks, Limited Partnership  
Smart City Telecom  
Southeastern Services, Inc.  
Southern Light, LLC  
Southern Telecom  
Sprint Communications Company L.P.  
SanTel Communications  
Stratus Networks, Inc.  
Strome Networks, LLC  
Summit Broadband  
Sunesys, LLC  
Synergem Technologies, Inc.  
T3 Communications, Inc.  
Talk America Services, LLC  
Talkie Communications, Inc. (f/k/a Sonic  
Systems, Inc. of Maryland)  
TDS Telecom  
TelCentris Communications, LLC  
Telco Experts, LLC  
TelCove Operations, LLC  
Tele Circuit Network Corporation  
Telepak Networks, Inc.  
Teleport Communications America, LLC  
Teliix, Inc.\*\*  
Telrite Corporation  
Telscape Communications, Inc.

Terra Nova Telecom, Inc.  
TerraNovaNet, Inc.  
The Other Phone Company, LLC  
TIME CLOCK SOLUTIONS, LLC  
Time Warner Cable Business LLC  
TNE Telephone, Inc.\*\*  
Total Marketing Concepts, LLC  
TotalComUSA  
Touch Base Communications  
Touchtone Communications Inc. of Delaware  
Trans National Communications International,  
Inc.\*\*  
Tristar Communications Corp.  
Triton Networks, LLC  
United Commercial Telecom, LLC  
Uniti Fiber LLC  
US Signal Company, L.L.C.  
USA FIBER  
Vanco US, LLC  
Velocity The Greatest Phone Company Ever,  
Inc.  
Verizon Access Transmission Services  
Verizon Select Services Inc.  
Vitcom, LLC  
VoDa Networks, Inc.  
Vodafone US Inc.  
VOX3COM\*\*  
Voxbeam Telecommunications Inc.  
WAHL TV INC.  
Webpass Florida LLC  
West Safety Communications Inc.  
West Telecom Services, LLC  
Wholesale Carrier Services, Inc.  
Wide Voice, LLC  
WiMacTel, Inc.  
Windstream Florida, LLC  
Windstream KDL, LLC  
Windstream Norlight, LLC  
Windstream NTI, LLC  
Windstream NuVox, LLC  
Windstream Talk America, LLC  
WonderLink Communications, LLC  
WOW! Internet, Cable and Phone  
WTI Communications, Inc.  
XO Communications Services, LLC  
YMax Communications Corp.  
Zayo Group, LLC



## Glossary

4G	The short name for fourth-generation wireless, the stage of broadband mobile communications that will supercede the third generation (3G). A 4G network requires a mobile device to be able to exchange data at 100 Mbit/sec.
5G	5G is the coming fifth-generation wireless broadband technology. 5G will provide better speeds and coverage than the current 4G. 5G is set to offer speeds of up to 1 Gb/s for tens of connections or tens of Mb/s for tens of thousands of connections. 5G is not scheduled for launch until 2020.
Access Line	The circuit or channel between the demarcation point at the customer's premises and the serving end or class 5 central office.
Backhaul	In wireless networks, the connection from an individual base station (tower) to the central network (backbone). Typical backhaul connections are wired high-speed data connections (T1 line, etc.), but they can be wireless as well (using point-to-point microwave or WiMax, etc.).
Broadband	A term describing evolving digital technologies offering consumers integrated access to voice, high-speed data services, video on demand services, and interactive information delivery services.
Circuit	A fully operational two-way communications path.
CLEC	<i>Competitive Local Exchange Company</i> . Any company certificated by the Florida Public Service Commission to provide local exchange telecommunications service in Florida on or after July 1, 1995.
Communications Act or The Act	The federal Communications Act of 1934, as amended by the Telecommunications Act of 1996, established a national framework to enable CLECs to enter the local telecommunications marketplace.
DSL	Digital Subscriber Line, a technology that connects the user to broadband connections across a telephone network. It uses the same copper loops as wireline telephone service.
Facilities-based VoIP service	This term refers to VoIP service provided by the same company that provides the customer's broadband connection. Facilities-based VoIP services are generally provided over private managed networks and are capable of being provided according to most telephone standards. While this service uses Internet Protocol for its transmission, it is not generally provided over the public Internet.
FiOS	FiOS is Verizon's suite of voice, video, and broadband services provisioned over fiber optic cable directly to the customer premises. FiOS can currently provide Internet access with maximum download speed of 500 Mbps and upload speed of 500 Mbps.

ILEC	<i>Incumbent Local Exchange Company.</i> Any company certificated by the FPSC to provide local exchange telecommunications service in Florida on or before June 30, 1995.
Interconnected VoIP service	According to the FCC, it is a VoIP service that (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet protocol-compatible customer premises equipment; and (4) permits users generally to receive calls that originate and terminate on the public switched telephone network.
Intermodal	The use of more than one type of technology or carrier to transport telecommunications services from origination to termination. When referring to local competition, intermodal refers to non-wireline voice communications such as wireless or VoIP.
Internet Protocol (IP)	The term refers to all the standards that keep the Internet functioning. It describes software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages.
Over-the-Top VoIP service	This term refers to VoIP service that is provided independently from a particular broadband connection and is transmitted via the public Internet. Examples of this service include Vonage and Skype.
Switched Access	Local exchange telecommunications company-provided exchange access services that offer switched interconnections between local telephone subscribers and long distance or other companies. Long distance companies use switched access for origination and termination of user-dialed calls.
TDM	Time Division Multiplexing is a method of transmitting and receiving independent signals over a common signal path by means of synchronized switches at each end of the transmission line so that each signal appears on the line only a fraction of the time in an alternating pattern. TDM circuit switched lines represent the traditional wireline access line data within this report and do not include VoIP connections.
U-verse	U-verse is the brand name of AT&T for a group of services provided via Internet Protocol (IP), including television service, Internet access, and voice telephone service. Similar to Verizon's FiOS service, AT&T's U-verse is deployed using fiber optic cable.
Universal Service	This term describes the financial support mechanisms that constitute the national universal service fund. This fund provides compensation to telephone companies or other communications entities for providing access to telecommunications services at reasonable and affordable rates throughout the country, including rural, insular, high-cost areas, and public institutions.

Universal Service Administrative Company (USAC)	USAC is an independent American nonprofit corporation designated as the administrator of the federal Universal Service Fund by the Federal Communications Commission. USAC is a subsidiary of the National Exchange Carrier Association.
VoIP	<i>Voice over Internet Protocol</i> . The technology used to transmit voice conversations over a data network using Internet Protocol.
Wireline	A term used to describe the technology used by a company to provide telecommunications services. Wireline is synonymous with “landline” or land-based technology.