Report on the

Status of Competition in the Telecommunications Industry

AS OF DECEMBER 31, 2022

Florida Public Service Commission

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List of Acronyms

ACP	Affordable Connectivity Program
CDC	Centers for Disease Control and Prevention
CLEC	Competitive Local Exchange Carrier
ETC	Eligible Telecommunications Carrier
FCC	Federal Communications Commission
FPSC	Florida Public Service Commission
F.S.	Florida Statutes
ICC	Interstate Commerce Commission
ILEC	Incumbent Local Exchange Carrier
IP	Internet Protocol
LTE	Long-Term Evolution
Mbps	Megabits per second
NANPA	North American Numbering Plan Administrator
NCHS	National Center for Health Statistics
NPA	Numbering Plan Area
OTT	Over-the-top
PSTN	Public Switched Telephone Network
RDOF	Rural Digital Opportunity Fund
TDM	Time Division Multiplexing
UNE	Unbundled Network Elements
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 submit a report on the status of competition in the telecommunications industry to the Legislature by August 1 of each year. As of December 31, 2022, there were 10 incumbent local exchange carriers (ILECs) and 239 competitive local exchange carriers (CLECs) certificated by the Commission to operate in Florida.

In 2022, 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 2022. Lifeline subscriptions in Florida rose to 300,285 households in 2022, a 9.7% percent increase.

Consumers in Florida continue to migrate from traditional switched wireline service to wireless and Voice over Internet Protocol (VoIP) services. Carriers reported approximately 900,000 total wireline access lines in Florida for 2022, about 19.5 percent fewer than the previous year. Residential and business wirelines both experienced significant drops in 2022.

Total residential access lines declined 16.5 percent. The transition to VoIP and wireless-only services continues to be responsible for much of this decline. For the fourth year in a row, AT&T edged CenturyLink as Florida's largest residential access line provider. AT&T experienced a 17.4 percent decline in residential lines during 2022 while CenturyLink declined 17.8 percent. Frontier again experienced the biggest residential loss with a 23.7 percent decline in residential access lines during the same period.

For the 12th year in a row, total business access lines exceeded total residential access lines; however, total business access lines declined 21.3 percent in 2022. More than half of AT&T's and Frontier's wireline subscribers were business lines, while CenturyLink's business wireline subscribers made up less than half of its total access line amounts. Over 98 percent of CLEC access lines were business lines, although their total business market share declined to 29 percent in 2022.

As reported for the past several years, intermodal competition from wireless and VoIP services continued to drive the telecommunications markets in 2022. According to the most recent data from the Federal Communications Commission (FCC), there are nearly 23 million wireless subscriptions in Florida, and nearly 4.6 million VoIP connections, far eclipsing the 900,000 remaining wireline access lines in 2022.

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

- Many CLECs reported offering a variety of services and packages comparable to those offered by ILECs. Subscribers to wireless and business VoIP services continued to increase while residential VoIP and switched access lines decreased. These factors

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

- The traditional wireline market continues to decrease; however, the population of Florida and the need for telecommunications services continues to expand. Wireless subscription growth and VoIP are meeting the increased demand for service. Consumers are choosing to obtain a majority of wireless and VoIP subscriptions from competitors. Given the decline in the traditional wireline market and competitors' substantial wireless and VoIP market shares, consumers are able to obtain functionally equivalent services at comparable rates, terms, and conditions.

- A competitive market requires comparable affordability and reliability of service. The vast majority of Florida households subscribe to telephone service. Consumers are willing and able to choose telecommunications service from competitors using a variety of technologies, so competitors have been maintaining significant market share over an extended period. Based on competitors' substantial market share and market pressures requiring comparable affordability and reliability, competition is having a positive effect on the maintenance of reasonably affordable, reliable telecommunications services.

Chapter I. Introduction and Background

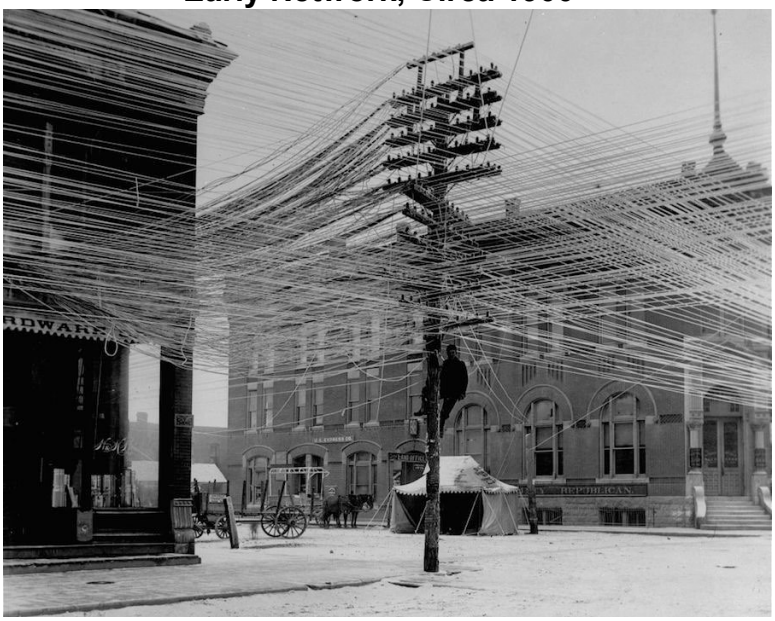
Telephone service has been regulated to some degree nearly since the moment the technology was patented by Alexander Graham Bell (Bell) in 1876.[1] This section summarizes the major historical regulatory events both at the federal and state levels. For the purposes of this report, the history of federal telecommunications regulation is useful because state regulation of these markets has always been intertwined with, and largely a derivative of, federal laws and rules.

A. Federal Regulation

When Bell's patents expired in 1894, competitors were allowed to build their own facilities. This accelerated the development of the nationwide telephone network. In the 18 years Bell held the patents, the average daily calls per 1,000 population peaked at 37. In the first 15 years of competition it increased tenfold.[2] Competitors gained over 50 percent market share by 1907.[3]

Early competition also had its drawbacks. Populated areas saw many lines crisscrossing the streets as competitors raced to build their independent networks. Figure 1-1 shows the lines in Pratt, Kansas circa 1900.

Figure 1-1
Early Network, Circa 1900



Source: America calling: a social history of the telephone to 1940

[1]Diane Katz and Theodore Bolema, "Crossed Lines: Regulatory Missteps in Telecom Policy," Mackinac Center, December 3, 2003, https://www.mackinac.org/6033, accessed June 21, 2023.

[2]Adam D. Thierer, "Unnatural Monopoly: Critical Moments in the Development of the Bell System Monopoly," Washington, D.C.; *The Cato Journal*, Vol. 14, No. 2, (Fall 1994), p. 270, https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/1994/11/cj14n2-6.pdf, accessed June 21, 2023.

[3]Ibid.

Bell's American Telephone and Telegraph Company (AT&T) responded to this competition by acquiring its competitors' networks. Once it had acquired enough rivals to control a market, it would refuse to interconnect with any independent providers.[4] AT&T even acquired a controlling interest in its chief rival, The Western Union Telegraph Company (Western Union). These actions eventually got the attention of federal antitrust lawyers and the Interstate Commerce Commission (ICC), which received authority to regulate telephone service in 1910.[5]

In 1913, AT&T reached a settlement with the Department of Justice. AT&T agreed to divest its Western Union stock, interconnect with other companies, and not acquire any more independent companies without approval from the ICC.[6] This began a decades-long practice by AT&T where, after pressure from potential competitors, courts, or regulators, AT&T would enter into agreements with state and/or federal authorities in order to maintain its control of the national telephone market.[7]

By the 1920s, AT&T had sold the idea of telecommunications as a necessary "universal service" and a "natural monopoly" to state and federal regulators, who in turn discouraged or outright banned competitive telephone services.[8] During this period, AT&T repeatedly agreed to be subject to heavy, rate-restricted regulation in exchange for a guaranteed monopoly in a particular area.[9] AT&T's market share rebounded during this period until it controlled nearly 80 percent of the national market.[10]

Telephone regulation then looked a lot like today's electric regulation. The local telephone markets were considered monopolies and were rate-of-return regulated. Companies submitted cost information, regulators established their rate base and a revenue requirement, and the companies' rates were set to recover that amount. This became the de facto regulatory regime at both the federal and state levels.

By enacting the Communications Act of 1934 (1934 Act) as part of President Roosevelt's New Deal, Congress created a new agency, The Federal Communications Commission (FCC), and

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[4]Richard Gabel, "The Early Competitive Era in Telephone Communication, 1893-1920," 34 *Law and Contemporary Problems*, Vol. 34, No. 2, (Spring 1969), p. 350, https://scholarship.law.duke.edu/lcp/vol34/iss2/8, accessed June 21, 2023.

[5]Frank Dixon, "The Mann-Elkins Act, Amending the Act to Regulate Commerce," *The Quarterly Journal of Economics*, Oxford University Press, vol. 24, no. 4, (August 1910), p. 596, https://www.jstor.org/stable/pdf/1883490.pdf, accessed June 21, 2023.

[6]Milton Mueller, "Universal Service: Competition, Interconnection and Monopoly in the Making of the American Telephone System," Syracuse University, 2013, pp. 127-128, https://surface.syr.edu/books/18, accessed June 21, 2023.

[7]Matthew Lasar, "How AT&T Conquered the 20th Century," *Wired*, September 3, 2011, https://www.wired.com/2011/09/att-conquered-20th-century/, accessed June 21, 2023.

[8]Ibid.

[9]Ibid.

[10]Ibid.

transferred to it the ICC's telecommunications jurisdiction.[11] The new law enabled the FCC to codify its rate-of-return regulation of AT&T while also protecting AT&T's monopoly market position.[12] This regulatory regime continued for several decades, allowing AT&T to grow into the largest corporation in the world. At its peak, AT&T became larger than most countries' economies, and larger than the five largest U.S. oil companies combined.[13]

Starting in the 1950s, cracks in the monopoly regime began to develop, and AT&T's ability to negotiate its way out of competition began to erode, first with the courts, and eventually with the FCC itself. Federal proceedings and lawsuits with nicknames such as "Hush-A-Phone," "Carterfone," and "Above 890" forced AT&T to interconnect with competitors' telephone equipment, wireless radio phones, and microwave networks.

Still, AT&T remained the largest corporation in the world when the federal government filed another antitrust suit in 1974. This action led AT&T to enter into one final agreement, this time to break itself up into smaller companies. The long distance and equipment markets had slowly become competitive and would soon be federally deregulated. AT&T offered to divest itself into eight major companies: seven regional Bell Operating Companies were established to continue the local monopolies, and AT&T, while barred from providing local service, remained as a competitor in the long distance and equipment markets.[14] This action, known simply as Divestiture, became final in 1984, and as a result AT&T's size dropped 70 percent.

Between 1984 and the 1990s, technology continued to put pressure on the local and long distance telephone markets. Cable, cellular, and broadband services all showed promise as substitutes for traditional phone service. Divestiture had created the opportunity for Congress to rewrite the 1934 Act to accommodate these technologies and open the local markets to competition.

Congress passed the Telecommunications Act of 1996 (1996 Act), rewriting the majority of the 1934 Act and setting up the ground rules for local competition.[15] The new law encouraged local competition nationwide, and required massive rulemakings from both the FCC and state regulators to ensure wholesale prices, consumer protections, and universal service principles were fair and reasonable.[16] This effectively ended rate-of-return regulation for the vast majority of local telephone services nationwide.

Congress delegated to the FCC and the States the ability to write rules implementing the 1996 Act. Carriers were required to interconnect with one another, and the existing companies, called ILECs, were required to lease elements of their networks to the new competitors, called CLECs. Wholesale rates for these Unbundled Network Elements (UNEs) had to be established at the state

[11]Communications Act of 1934, Pub. L. No. 73-416, 48 Stat. 1064.

[12]Ibid.

[13]Ray Horak, *Webster's New World Telecom Dictionary*, Wiley Publishing, Indianapolis, Indiana, 2008, p. 42.

[14]*United States v. American Tel. and Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982).

[15]"Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56.

[16]Ibid.

level using a specific and complicated cost methodology. Small, rural, independent ILECs could escape the voluminous interconnection rules if they could demonstrate to the state utility commission that they could not implement the rules or if there was no demand by competitors in their area.[17]

Companies were encouraged to negotiate interconnection agreements, adopt another company's agreement, or resell a complete service. A process was also established for the regulator to step in should disagreements between companies require arbitration. While the FCC was responsible for establishing the national framework for executing the 1996 Act, it took several years for the States and the FCC to complete the initial implementation of the 1996 Act.

While Congress hoped that the 1996 Act would settle the endless litigation in the telecommunications market, the opposite proved true. The FCC's attempts to implement the interconnection and UNE access provisions were struck down, at least in part, no fewer than three times by federal courts. Finally, four tries and over eight years after the 1996 Act was passed, the FCC's "Triennial Review Remand Order" was issued.[18] The Triennial Review Remand Order, following directives from the courts, limited CLEC access to several UNEs where competitive alternatives existed, as well as local loops combined with local switching, known as the UNE Platform. The UNE Platform was the primary method non-cable CLECs used to provide residential service. Once the courts struck down UNE Platform access, CLECs essentially abandoned the residential market to cable and wireless companies.

B. Florida Regulation

While all this activity was occurring at the federal level, state actions were just as busy. The Florida Legislature added telephone and telegraph regulation to the Florida Railroad Commission's responsibilities in 1911.[19] The agency's name was changed to the Florida Public Service Commission (FPSC or Commission) in 1965.

As previously described, rate-of-return regulation was the norm up through the 1980s in Florida. In 1990, the Florida Legislature recognized the emerging competitive markets for some telecommunications services provided by local carriers and delegated to the FPSC the authority to, in some circumstances, allow price cap regulation for those services.[20] If the FPSC decided that effective competition existed for a particular service or market, it could allow market conditions to control prices and eliminate rate-of-return regulation for that service or market.[21]

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[17]47 U.S.C. § 251(f).

[18]FCC 04-290, WC Docket No. 04-313, CC Docket No. 01-338, Unbundled Access to Network Elements, Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Order on Remand, released February 4, 2005.

[19]See 1911 Fla. Laws 6186.

[20]Price caps are a regulatory scheme where, instead of regulators limiting a company's percent return on investment, a company could elect to have its prices capped at a regulator-approved level, allowing the company to keep any profits generated by selling its services at or below the price caps.

[21]See 1990 Fla. Laws 244.

Competition for more services developed and, by 1995, the emergence of cable companies made it obvious that competition for all local services was inevitable. In anticipation of a federal law becoming imminent, the Florida Legislature passed a sweeping revision to Chapter 364, Florida Statutes (F.S.), finding that "the competitive provision of telecommunications services, including local exchange service, is in the public interest."[22] Competitive entry into the local market was allowed, and CLECs were able to enter subject to a lesser degree of regulatory oversight than ILECs. Also, ILECs were allowed to elect price caps for all their services, eliminating them from rate-of-return regulation altogether.[23] The Legislature also required the FPSC to start publishing this report on the status of competition in Florida.

The Legislature followed up in 1998 by requiring the FPSC to issue a series of five reports on competition, including forward-looking cost estimates of local service, impacts to low-income assistance programs such as Lifeline, the relationships between costs and existing prices, what are fair and reasonable local rates, and impacts on multi-tenant environments.[24]

To further accommodate the growing competitive landscape, in 2003 the Legislature passed another major amendment to Chapter 364, F.S. The changes included less FPSC oversight of long distance companies, and ILECs were allowed to petition the FPSC for lesser regulatory oversight, similar to the regulation of their local competitors. It also expanded Lifeline eligibility for low-income Florida consumers, and exempted from FPSC jurisdiction VoIP services, which at that time were largely utilized by cable companies to provide telephone service.[25]

In 2005, the Legislature again amended Chapter 364, F.S., addressing local governments and broadband deployment, FPSC jurisdiction regarding advanced services, Lifeline awareness and participation, and storm damage recovery. The Amendment established rules that governmental entities, such as municipalities, must follow in order to provide communications services (cable, broadband, etc.) in competition with private providers. The 2005 revisions also clarified the FPSC's jurisdiction, or more precisely the exemption from the FPSC's jurisdiction, for advanced services, including wireless, broadband, and VoIP. The new law also further clarified and expanded Lifeline eligibility and procedures. Finally, as a result of the storm season in 2004, it permitted the recovery of costs and expenses related to damage caused by named tropical storms.[26]

In 2006, carrier of last resort obligations in multitenant environments were amended, and some previously enacted rate requirements were repealed.[27] In 2007, changes included further rate

[22]See 1995 Fla. Laws 403.

[23]Ibid.

[24]See 1998 Fla. Laws 277.

[25]See 2003 Fla. Laws 32.

[26]See 2005 Fla. Laws 107 and 132.

[27]See 2006 Fla. Laws 080.

reductions, rebalancing, and repeals. Also, an automated enrollment process for Lifeline was created, and the ILECs' overall carrier of last resort obligations were allowed to sunset.[28]

In 2009, the definition of basic service was narrowed and regulation for non-basic services was decreased. Service quality oversight for non-basic services was eliminated and company tariffs were no longer required to be filed with the Commission. Lifeline eligibility was again expanded. The Florida Department of Management Services was designated as the agency to oversee broadband deployment in Florida. In 2010, the rate-of-return sections in Chapter 364, F.S., were repealed.[29]

The most recent revision to Chapter 364, F.S., came in 2011, when the deregulation of all retail services by the ILECs was finalized. This included the elimination of rate caps, the consumer protection and assistance duties of the FPSC, and all service quality oversight. It also repealed the previously-enacted storm damage recovery provisions.[30]

Although telecommunications is largely deregulated in Florida at this time, the FPSC still retains authority to monitor intercarrier relations and resolve wholesale disputes, oversee the Lifeline and Florida relay programs, and issue certificates of authority to provide telecommunications service. The FPSC has continuing authority over numbering issues, including area code relief, number conservation, and local number portability. The FPSC also resolves complaints relating to Lifeline, relay service, and payphones.

C. Status of Competition Report

Chapter 364, F.S., requires the Commission 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.

[28]See 2007 Fla. Laws 029.

[29]See 2009 Fla. Laws 226.

[30]Regulatory Reform Act, ch. 36, 2011 Fla. Laws 1231.

The Commission is required to make requests to local exchange telecommunications providers each year for the data required to complete the report. The data request was mailed on February 24, 2023, to 10 ILECs and 239 CLECs. Responses were due April 17, 2023. The data and analyses that follow accurately reflect the information provided by the ILECs and the reporting CLECs.

This report is divided into chapters that summarize key events and data that may have a short-term or long-term effect on the Florida telecommunications market. Chapter II presents data regarding wireline access line competition in Florida, including access line trends, residential/business access line mix, and market share. Chapter III discusses the continued development of the wireline market's principle forms of intermodal competition: broadband, wireless, and VoIP. Chapter IV primarily uses data outlined in the other chapters to address the four statutory issues delineated above. Chapter V provides a summary of state activities affecting local telecommunications competition in 2022, including intercarrier matters, Lifeline, and the Telecommunications Relay Service. Chapter VI details some of the major federal activities that may affect the Florida market.

Chapter II. Wireline Competition Overview

For the past decade, the technologies used to deliver voice telephony have continued to evolve. Analog circuits using copper wires and Time Division Multiplexing (TDM) are traditionally referred to as switched access lines, or more commonly known by consumers today as landlines. This legacy wireline technology is being replaced by wireless cell-based transmission and VoIP, which is provided via a digital broadband connection, either wireless or wired. Wireless, VoIP, and broadband are all exempt from FPSC jurisdiction. The FPSC is therefore limited in what data it can collect regarding these technologies. Trends in these technologies are summarized in Chapter III.

TDM-based wireline service, which is the primary subject of this report, is still used throughout the country and Florida. In fact, the wireless and broadband networks utilize many of the traditional wireline facilities for interoffice and long distance transport.

This chapter discusses the incumbent carriers' corporate trends as disclosed in their federal financial reports. It then discusses the number, market mix, and market share of residential and business wirelines. Knowledge of the number of wirelines and the trends for market participants is essential to understanding the state of the market.

A. Incumbent Carriers

Florida's ILECs have been experiencing switched access line losses for well over a decade. These losses appear consistent with the companies' national trends reflected in their respective annual reports filed with the Securities and Exchange Commission. There are 10 ILECs providing wireline services in Florida, the largest of which are AT&T, CenturyLink, and Frontier.[31] These companies' annual reports showed that, like in Florida, they continue to face access line losses nationally as customers disconnect traditional landline services and migrate to alternative services.

In Florida, AT&T's switched access lines declined by over 74,000 (18.2 percent) in 2022, with residential access lines decreasing by nearly 31,000 (17.4 percent) and business lines by over 43,000 (18.8 percent).[32] Nationwide, AT&T reported losses of approximately 964,000 switched access lines (15.61 percent). AT&T is the only major ILEC in Florida that reports access line numbers at the national level in its annual reports. Despite the loss of switched access lines, AT&T reported a nearly 2.0 percent increase in operating revenues nationally.[33]

CenturyLink's Florida switched access lines declined over 41,000 (14.6 percent), with residential access lines decreasing nearly 27,000 (17.8 percent) and business access lines decreasing nearly

[31]Responses to local competition data request 2023.

[32]AT&T's response to the local competition data request 2023.

[33]AT&T Inc., "Form 10-K," December 31, 2022, https://otp.tools.investis.com/clients/us/atnt2/sec/sec-outline.aspx?FilingId=16393783&Cik=0000732717&PaperOnly=0&HasOriginal=1, accessed June 21, 2023; responses to local competition data request 2023.

15,000 (11.0 percent).[34] Nationwide, CenturyLink reported operating revenues of approximately $17.48 billion in 2022, reflecting a decline of nearly 11.22 percent from 2021.[35]

Frontier's switched access lines in Florida declined by over 45,000 (30.7 percent), with residential access lines decreasing nearly 9,000 (23.7 percent) and business lines by nearly 37,000 (33.0 percent).[36] Nationwide, Frontier reported 2022 revenue of $5.73 billion, reflecting a decline of 5.68 percent.[37]

The seven rural Florida ILECs experienced a contraction in the number of switched access lines. In 2022, rural carriers in Florida saw their total access lines decline by approximately 6,900 (7.7 percent). Residential lines decreased over 4,600 (7.5 percent) and business lines decreased by nearly 2,300 (8.3 percent).[38]

B. Wireline Trends in Florida

Figure 2-1 illustrates the overall trend in Florida for both residential and business switched access lines. Beginning in 2011, business lines exceeded residential lines. Based on current data, the rate of decline in residential lines moderated, while the rate of decline in business lines accelerated in 2022. Residential access lines totaled nearly 358,000 as of December 2022, representing a decline of 16.4 percent from 2021. Business access lines totaled over 570,000, representing a decline of 21.3 percent from the previous year. Total combined access lines for ILECs and CLECs declined 19.4 percent, from approximately 1.2 million in December 2021 to around 900,000 as of December 2022. Over the past five years, the total number of switched access lines decreased by nearly one million, or 51.5 percent.

[34] CenturyLink/Lumen's response to local competition data request 2023.

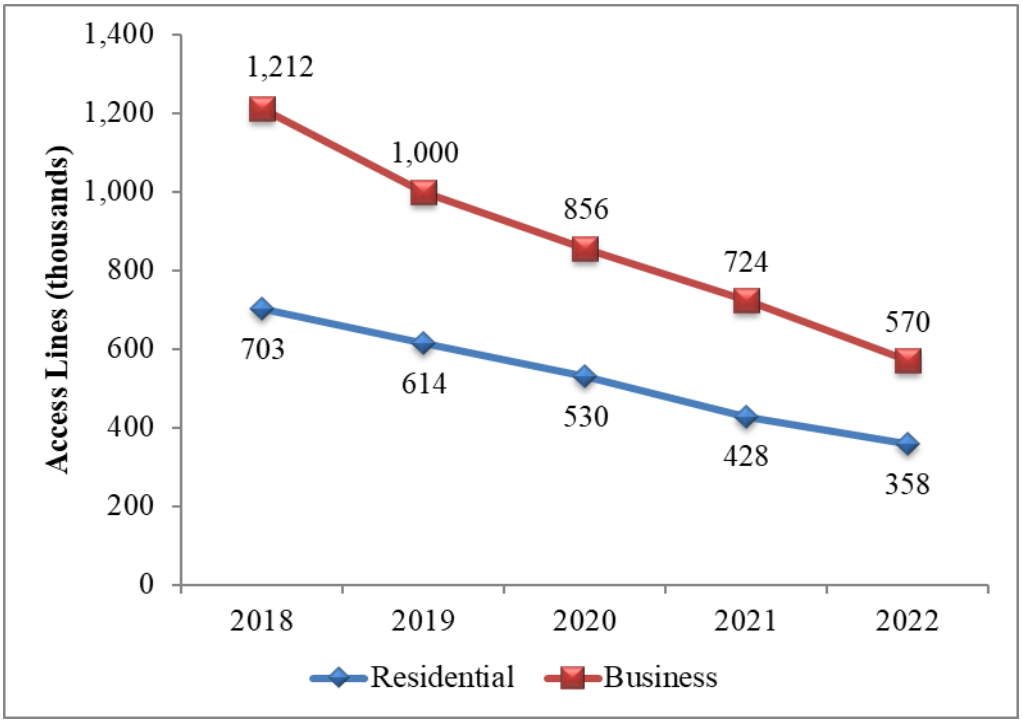
[35]Lumen Technologies, Inc., "Form 10-K," December 31, 2022, https://d18rn0p25nwr6d.cloudfront.net/CIK-0000018926/0507eca4-4505-4239-97de-83829dacd262.html, , accessed on June 21, 2023.

[36]Frontier's response to local competition data request 2023.

[37]Frontier Communications Corporation, "Form 10-K," December 31, 2022, https://d18rn0p25nwr6d.cloudfront.net/CIK-0000020520/ef674170-3193-46d4-a363-784ac8f594dd.html, accessed on June 21, 2023.

[38]Responses to local competition data request 2023.

Figure 2-1
Florida Wireline Access Line Trends



Source: Responses to local competition data request (2019-2023)

C. Wireline Market Mix, Market Share, and Market Composition

1. Market Mix

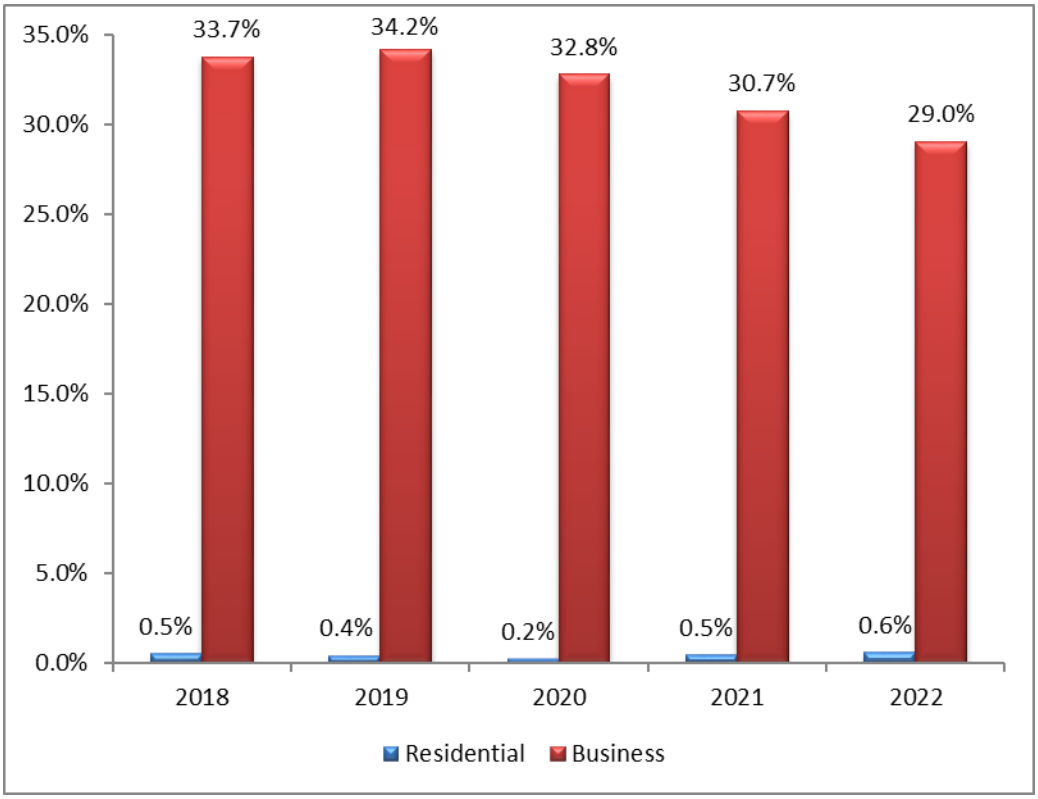
The business-to-residential ratio of customers served by ILECs and CLECs has shifted over time. In general, both ILECs and CLECs have seen an increased concentration of traditional wireline business customers as residential customers migrate to other options. The business-to-residential customer mix 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 wirelines exceeded the percentage of residential wirelines. In 2022, the ILECs' ratio was 53 percent business lines to 47 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 to 37 percent residential. In 2022, the CLEC customer mix was nearly 99 percent business lines.

2. Market Share

CLECs have traditionally focused more on business customers. Figure 2-2 illustrates FPSC data on CLEC market share by business and residential customer classes. The inverse of this percentage would be market share for the ILECs in Florida. According to FPSC data, the CLEC residential market share increased slightly from 0.5 percent in 2021 to 0.6 percent in 2022, while the CLEC business market share decreased from 30.7 percent in 2021 to 29.0 percent in 2022.

Figure 2-2
Florida Residential & Business CLEC Market Share



Source: Responses to local competition data request (2019-2023)
Note: 2020 data updated from previous report

3. Market Composition

The market composition of access lines served by local exchange companies is illustrated in Table 2-1. In 2022, ILEC residential access lines decreased by 16.7 percent, while ILEC business lines decreased by 19.3 percent. The CLECs experienced a slight increase in the number of residential access lines, but given their small market presence, this yielded a percentage gain of 9.2 percent. CLEC business access lines decreased by 25.6 percent.

Table 2-1
Florida Wireline Access Line Comparison

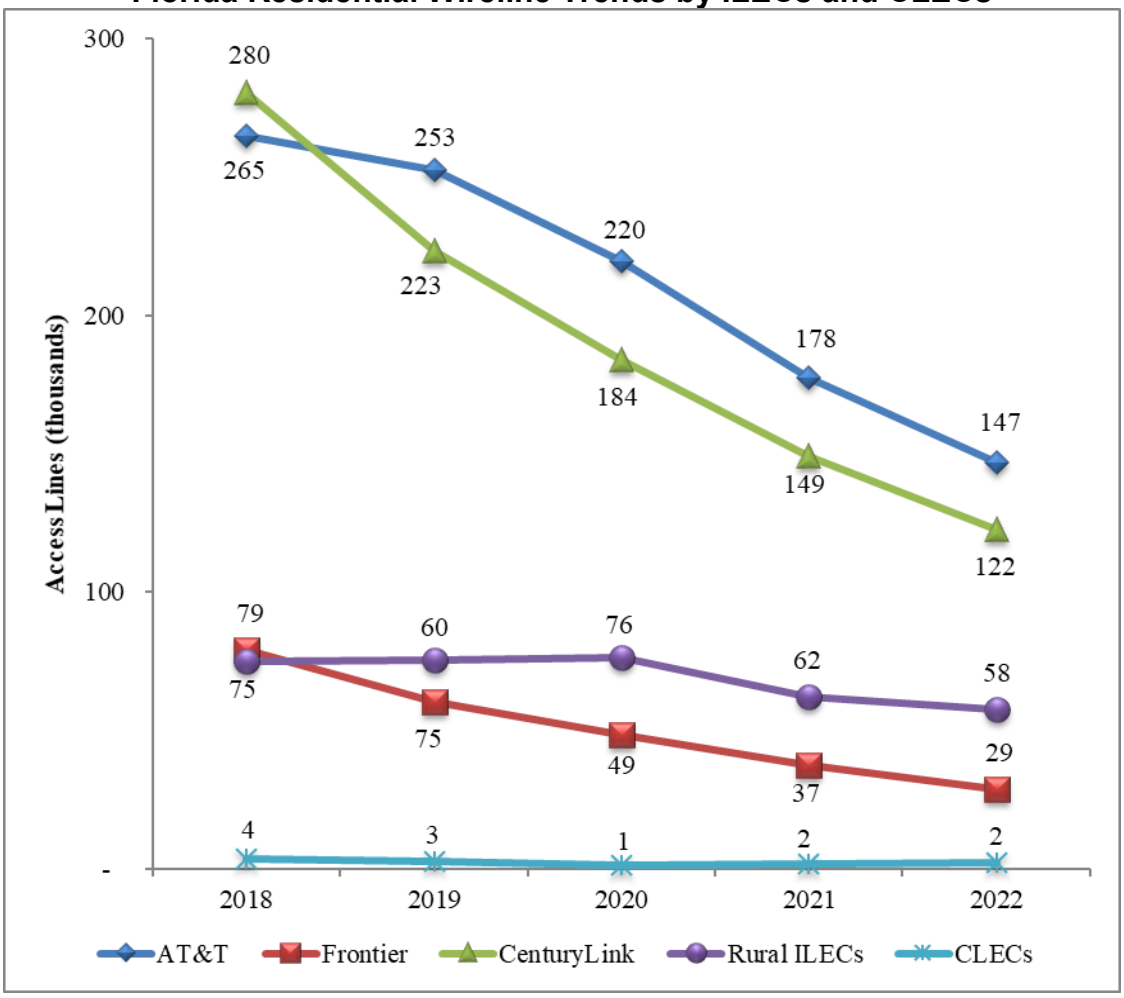
		ILECs	CLECs	Total
2019	Residential	611,329	2,600	613,929
	Business	658,040	341,707	999,747
	Total	1,269,369	344,307	1,613,676
2020	Residential	528,480	1,265	529,745
	Business	575,682	280,541	856,223
	Total	1,104,162	281,806	1,385,968
2021	Residential	426,460	1,971	428,431
	Business	501,370	222,608	723,978
	Total	927,830	224,579	1,152,409
2022	Residential	355,425	2,153	357,578
	Business	404,564	165,519	570,083
	Total	759,989	167,672	927,661
Change 2021-2022	Residential	-16.7%	9.2%	-16.5%
	Business	-19.3%	-25.6%	-21.3%
	Total	-18.1%	-25.3%	-19.5%

Source: Responses to local competition data request (2020-2023)

4. Residential Wireline Access Line Trends

Figure 2-3 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 has averaged losses of nearly 15 percent per year. Frontier and CenturyLink exceeded AT&T with average respective losses of approximately 23 percent and 21 percent per year. During that period, rural ILEC access lines declined by an average of over five percent, while CLEC residential lines declined by an annual average of over 14 percent.

Figure 2-3
Florida Residential Wireline Trends by ILECs and CLECs



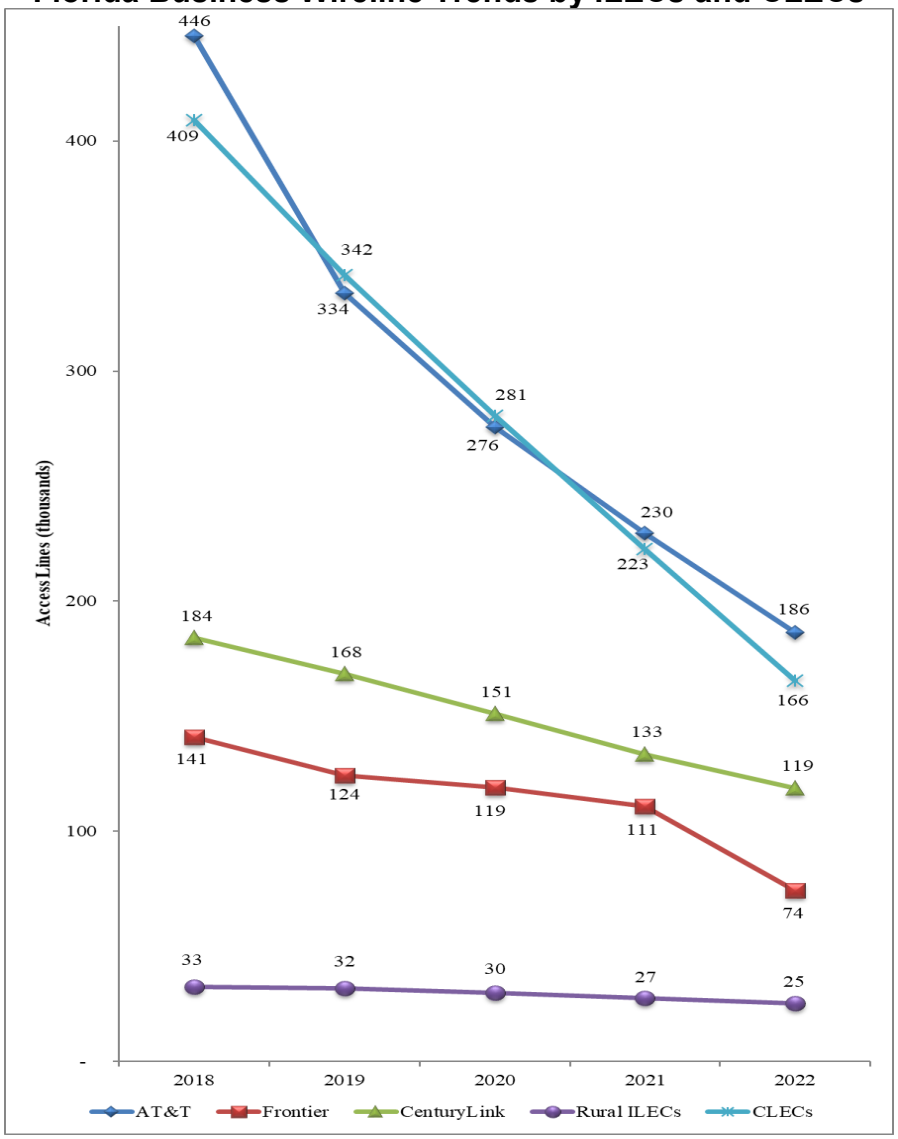
Source: Responses to local competition data request (2019-2023)

AT&T experienced residential wireline losses of 19.2 percent in 2021 and 17.4 percent in 2022. Frontier lost 22.9 percent of its residential wirelines in 2021 and 23.7 percent in 2022, while CenturyLink lost 19.0 percent of its residential lines in 2021 and 17.8 percent in 2022. The rural ILECs reported line losses of 18.2 percent in 2021 and 7.5 percent in 2022, and the CLECs reported residential wireline gains of 55.8 percent in 2021 and 9.2 percent in 2022. The rate of line loss accelerated for Frontier, while all other categories, except for CLECs, experienced a moderation. CLECs reported a moderated increase in residential lines.

5. Business Wireline Access Line Trends

Figure 2-4 displays the wireline business access line levels 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 over 18 percent per year, while Frontier and CenturyLink have experienced average annual declines of over 17 percent and 12 percent, respectively. The average annual decline in rural ILEC business access lines over the past five years is seven percent, while CLEC business access lines declined by over 22 percent annually over the same period.

Figure 2-4
Florida Business Wireline Trends by ILECs and CLECs



Source: Responses to local competition data request (2019-2023)

AT&T experienced business wireline losses of 16.7 percent in 2021 and 18.8 percent in 2022. Frontier lost 6.9 percent of its business wirelines in 2021 and 33.0 percent in 2022, while CenturyLink lost 11.6 percent of its business lines in 2021 and 11.0 percent in 2022. The rural ILECs reported line losses of 8.4 percent in 2021 and 8.3 percent in 2022, and the CLECs reported business wireline declines of 20.7 percent in 2021 and 25.6 percent in 2022. The rate of line loss accelerated for AT&T, Frontier, and the CLECs while CenturyLink and the rural ILECs experienced a moderation in losses.

Chapter III. Intermodal Competition Overview

Total switched access lines in Florida peaked over 20 years ago at approximately 12 million.[39] Florida's population has increased significantly since that time and communications services have continued to expand, yet as previously shown in Table 2-1, access lines decreased to around 928,000 by the end of 2022. So where did over 92 percent of the access lines go?

Wireless companies began attracting customers in the 1980s, and by 1995 there were over 24 million cellular subscribers in the U.S.[40] Cable companies discovered that they could provide telephone service using VoIP and sought authorization from Congress to do so. These pressures resulted in the 1996 Act, which set up rules for these technologies to directly compete with ILECs, as well as companies that wished to compete using the ILECs' own technology and networks. While the ILECs have continued to dominate the traditional wireline markets, demand and competition has exploded for the wireless and VoIP services. These other modes are simply different technological evolutions of telephone service, much as connecting a call through an operator was replaced by direct dialing many decades ago. The additional capabilities available with these technologies have led the vast majority of residential consumers and businesses to make the transition to these modes.

A major development that has attracted many customers to these technologies is the speed and volume of information that can be transmitted. High-speed Internet and data services, generically known as broadband, allow customers to do much more than talk: they can send and receive audio, video, and other large streams of data to meet many of their business and entertainment needs. Broadband facilities not only serve retail customers, but they have also become the backbone of wired and wireless interoffice data transport.

The benefit of real-time broadband services became evident during the recent COVID-19 pandemic. Sportscasters and other announcers needed to be able to remotely broadcast events due to travel restrictions. Historically, long distance interviews have been done via satellite with a noticeable delay between transmission and reception. With broadband, however, sports events were broadcast live with announcers thousands of miles apart. John McEnroe announcing the 2020 French Open tennis tournament from his home office in Malibu, California, nine time zones away, could only be accomplished by using terrestrial broadband facilities that carried his voice across the globe nearly instantaneously.[41]

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[39]Florida Public Service Commission, "Competition in Telecommunications Markets in Florida," Tallahassee, FL, December 2002, p. 21, https://www.floridapsc.com/pscfiles/website-files/PDF/Publications/Reports/Telecommunication/TelecommunicationIndustry/2002.pdf, accessed June 21, 2023.

[40]Statement of Anne K. Bingaman Assistant Attorney General Antitrust Division United States Department of Justice, Submitted to the Subcommittee on Oversight and Investigations United States House of Representatives On Competition in the Cellular Telephone Service Industry, p. 3, October 12, 1995, https://www.justice.gov/sites/default/files/atr/legacy/2015/05/06/0460.pdf, accessed June 21. 2023.

[41]Marc Berman, "Mary Carillo will call French Open remotely amid 'shabby' COVID-19 protocols'" New York Post, September 23, 2020, https://nypost.com/2020/09/23/mary-carillo-will-call-french-open-remotely-amid-covid-19-spike/, accessed June 21, 2023.

A. Wireless

In the early 1990s, wireless service was still new, signal strength and network availability were limited, and the services were marketed primarily to enterprise and other business users. The general population of consumers could not afford the cost of the cellular phone, and the limited availability of network access meant that mass adoption of the platform would take time.

However, as technology became more affordable and easier to upgrade, consumers started to enter the wireless market en masse. Eventually this led to the integration of wireless technology and broadband internet connections. Past reports have consistently shown that adoption of wireless services in the United States, and Florida specifically, far surpasses the adoption of other modes of communications.

1. Market Share

As shown in Figure 3-1, US market share among the top five wireless companies was split with Verizon leading at 33.2% (approximately 114.5 million subscribers), followed by T-Mobile at 32.9% (113.6 million), AT&T at 30.2% (104.0 million), Dish Network at 2.3% (7.9 million), and UScellular at 1.4% (approximately 4.7 million).[42,43,44,45,46]

[42]AT&T Inc. "Form 10-K," February 16, 2022, https://otp.tools.investis.com/clients/us/atnt2/sec/sec-outline.aspx?FilingId=15576872&Cik=0000732717&PaperOnly=0&HasOriginal=1, accessed June 21, 2023.

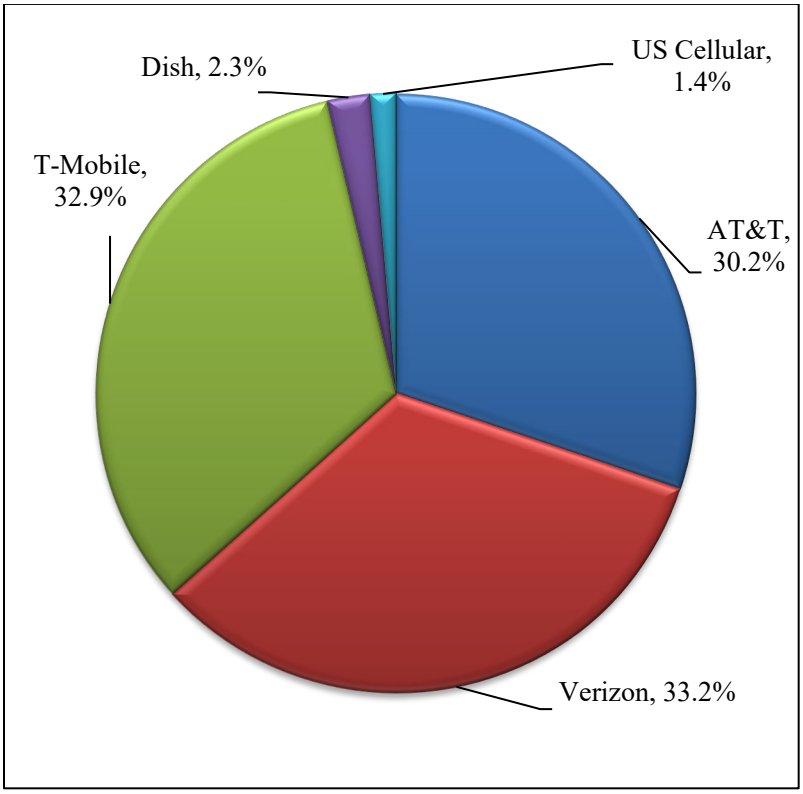
[43]Verizon Communications Inc., "Form 10-K," February 10, 2023, https://verizon.api.edgar-online.com/EFX_dll/EdgarPro.dll?FetchFilingHTML1?SessionID=P-u-k35Whv7uGTQ&ID=16385592, accessed June 21, 2023.

[44]T-Mobile US Inc., "Form 10-K," February 14, 2023, https://d18rn0p25nwr6d.cloudfront.net/CIK-0001283699/ee65def8-2d92-4882-a8c6-e3794b37ffe8.html, accessed June 21, 2023.

[45]DISH Network Corporation, "Form 10-K," February 23, 2023, https://dish.gcs-web.com/node/34501/html, accessed June 21, 2023.

[46]United States Cellular Corporation, "Form 10-K," February 16, 2023, https://d18rn0p25nwr6d.cloudfront.net/CIK-0000821130/ac993502-01fd-414c-a77e-1ae8f77bd4b9.html, accessed June 21, 2023.

Figure 3-1
U.S. Wireless Market Share, Fourth Quarter 2022



Source: Companies' 2022 10K Earnings Reports

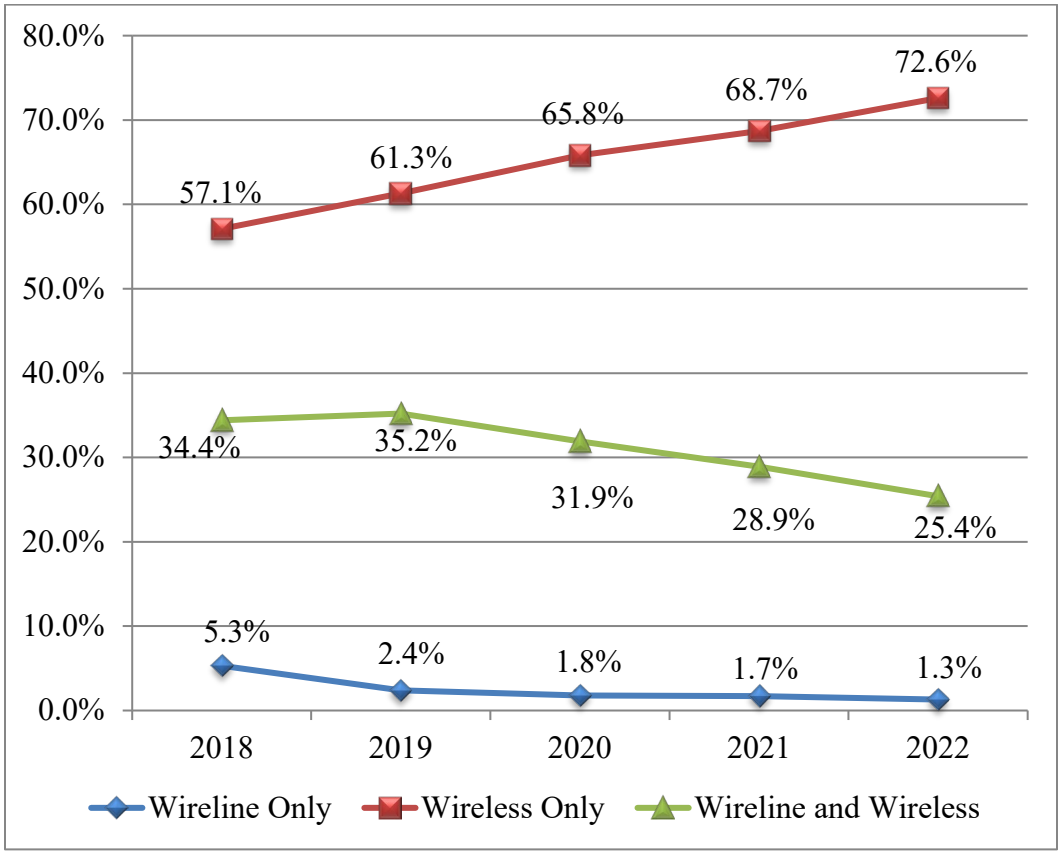
2. Wireless Substitution

According to the most recent data from carriers' financial reports, the five largest wireless service providers in the United States accounted for over 439 million connections by year-end 2022.[47] Less than 30 percent of U.S. households subscribe to both wireline and wireless service. As shown in Figure 3-2, wireless-only households in the United States rose from 68.7 percent in June 2021 to 72.6 percent in 2022.[48]

[47]Companies' 2023 Annual filings with the SEC.

[48]Blumberg SJ, Luke JV. "Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2022," National Center for Health Statistics, December 2022, https://doi.org/10.15620/cdc:121999, accessed June 21, 2023.

Figure 3-2
U.S. Wireless Substitution Rates



Source: CDC/NCHS, National Health Interview Survey

3. Florida Trends

Updated information for Florida's wireless trends is not regularly available, but in the past Florida's wireless subscription distribution has tracked closely with national trends. The most recent data available from the FCC, from June 2021, estimated Florida's wireless subscriptions to be 22,817,000. This was an increase of approximately 4.3 percent from June 2020 (21,875,000).[49] Florida's population was estimated at 22,244,823 in 2022, and with over 22.8 million wireless subscriptions in 2021, Florida continues to have more connected wireless devices than people.[50,51]

[49]FCC, "Voice Telephone Services Report, State-Level Subscriptions," released August 1, 2022, https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

[50]Macrotrends, Florida Population 1900-2022, https://www.macrotrends.net/states/florida/population, accessed June 21, 2023.

[51]FCC, "Voice Telephone Services Report," released August 12, 2022, available from https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

4. New Technology

The demand for wireless broadband service continues to grow with each new evolution of technology. The fifth generation of wireless connectivity, known as 5G, has brought a more robust broadband experience to wireless services. Advancements made from spectrum auctions aimed at repurposing existing sub-6GHz spectrum such as "C-Band" frequencies are allowing wireless providers to develop new products that will offer 5G speeds in the 50-500 megabits per second (Mbps) range over broader areas. Millimeter wave (mmWave) frequencies, usually near 20GHz and above, will ultimately offer Gigabit and higher speeds, but have a relatively short range and require more expensive equipment, thus at present are best suited for high-density urban areas. Fixed wireless access service (FWA) is a fiber-based last-mile technology that can be easily deployed to provide high-speed broadband services to people in harder-to-reach service areas.[52]

AT&T's network covers 337 million people with 4G LTE (long-term evolution) and over 285 million with 5G technology in the United States. The company expects to continue investing capital expanding its network capacity and obtaining additional spectrum to meet long term needs.[53]

Verizon is using its low and mid-band spectrum to provide 4G LTE and 5G wireless services. In addition, Verizon is also using low and mid-band spectrum for 5G through Dynamic Spectrum Sharing (DSS) to compliment both C-Band and spectrum licenses in the 28 and 39 GHz band. According to its 10-K annual report, Verizon's C-Band spectrum reached approximately 189 million points of presence by the end of December 2022.[54]

By December 31, 2022, T-Mobile's total 5G coverage covered 325 million people, reaching 98 percent of Americans. Its "Ultra Capacity 5G" utilizing mid-band and mmWave service covered 263 million people by the end of 2022, and its total 5G coverage, including low-band spectrum, covers 325 million people.[55]

Dish Network reached its FCC buildout requirement of providing coverage to 70% of the population by June 14, 2023. In the second half of 2023, the company plans to expand 5G Voice over New Radio (VoNR) over its 5G standalone network.[56] While the company will continue to

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[52]Salvatore Salamone, "Is 5G Fixed Wireless Access the New ISDN?," *Network Computing*, February 4, 2019, https://www.networkcomputing.com/wireless-infrastructure/5g-fixed-wireless-access-new-isdn, accessed June 21, 2023.

[53]AT&T Inc. "Form 10-K," February 13, 2022, https://otp.tools.investis.com/clients/us/atnt2/sec/sec-outline.aspx?FilingId=15576872&Cik=0000732717&PaperOnly=0&HasOriginal=1, accessed June 21, 2023.

[54]Verizon Communications Inc., "Form 10-K," February 10, 2023, https://verizon.api.edgar-online.com/EFX_dll/EdgarPro.dll?FetchFilingHTML1?SessionID=P-u-k35Whv7uGTQ&ID=16385592, accessed June 21, 2023.

[55]T-Mobile US Inc., "Form 10-K," February 14, 2023, https://d18rn0p25nwr6d.cloudfront.net/CIK-0001283699/ee65def8-2d92-4882-a8c6-e3794b37ffe8.html, accessed June 21, 2023.

[56]DISH Network Corporation, "Form 10-K," February 23, 2023, https://dish.gcs-web.com/node/34501/html, accessed June 21, 2023.

rely on its mobile virtual network operator (MVNO) arrangements with T-Mobile and AT&T, it's focused on serving all its customers with its own voice-based service.[57]

UScellular currently offers FWA service over its 5G network that operates on low-band 600 MHz spectrum but will incorporate its mid-band spectrum when it deploys that later this year. The company spent $1.46 billion in 2021 to purchase C-band spectrum licenses that cover 94% of its footprint.[58]

B. Voice over Internet Protocol (VoIP)

VoIP technology utilizes digital computer protocols in order to complete telephony voice calls over the Internet. Interconnected VoIP allows users to make and receive calls between their VoIP networks and the public switched telephone network (PSTN).[59] These calls can be provided via separate interconnected digital channels or "over-the-top" of existing Internet traffic. Interconnected VoIP is a substitute for traditional TDM-based service, and so is included in this report to the extent information is available. Non-interconnected VoIP services lack the capability of interconnecting with the PSTN and are not considered a substitute for TDM.[60] Non-interconnected VoIP is not discussed in this report.

VoIP providers include cable companies, ILECs, CLECs, and Over-the-Top (OTT) providers. Customers usually subscribe to a broadband service and lease/purchase telephone equipment from the VoIP provider. Calls are sent through the broadband connection.

OTT companies include Magic Jack, Vonage and Skype. OTT calls can be viewed as interconnected VoIP services because of their ability to connect to internet infrastructure and route calls through the PSTN. These companies require the customer to have a broadband internet connection. Some use plugin converters between the consumer's existing phone and their standard phone jack.

Because VoIP is not regulated in Florida, the FPSC has no direct way to access VoIP access line data. The FPSC therefore estimates residential VoIP from responses to data requests. Florida Internet and Television (FiTV) is able to provide some information on residential VoIP subscriptions, but the FPSC staff relies on FCC data for Florida business VoIP subscriptions.[61] The FCC tracks this data and periodically reports it. However, the FCC's currently-published data only includes information through June 2021.

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[57]Marek, Sue, "Dish will expand VoNR throughout network later this year," Fierce Wireless, May 10, 2023, https://www.fiercewireless.com/5g/dish-will-expand-vonr-throughout-network-later-year, accessed June 21, 2023.

[58]Marek, Sue, Uscellualr CTO says FWA offering is 'wildly successful', Fierce Wireless, May 9, 2023, https://www.fiercewireless.com/wireless/uscellular-cto-says-fwa-offering-wildly-successful, accessed June 21, 2023.

[59]47 C.F.R. § 9.3.

[60]47 U.S.C. § 153(36). An example of a non-interconnected VoIP network is a video game console service such as Xbox Live.

[61]FiTV represents several of Florida's largest cable-based communications providers.

FCC data from June 2016 through June 2021 showed an annual growth rate for VoIP of one percent per year.[62] The FCC also reported that there were nearly 67 million Interconnected VoIP subscribers in the U.S.[63] Table 3-1 shows U.S. VoIP subscribership by customer type as of June 30, 2021.

Table 3-1
U.S. Interconnected VoIP Subscribership by Customer Type
(In Thousands)

Total	Over-the-Top	All Other VoIP	Total
ILEC	69	11,031	11,100
Non-ILEC	15,495	40,284	55,779
Total	15,564	51,314	66,878
Residential			
ILEC	0	6,644	6,644
Non-ILEC	1,873	24,100	25,973
Total	1,874	30,744	32,617
Business			
ILEC	69	4,387	4,456
Non-ILEC	13,621	16,545	32,617
Total	13,690	20,572	34,262

Source: FCC Voice Telephone Services Report, June 30, 2021 (Figure 3)

1. National Market

VoIP subscriptions have remained steady, both nationally and in Florida, while traditional switched access lines have decreased. As shown in Figure 3-3, the FCC reported approximately 66.9 million VoIP subscriptions and nearly 32.4 million switched access lines (TDM) as of June 2021, resulting in approximately 99.3 million total voice telephone subscriptions.[64] Of those 99.3

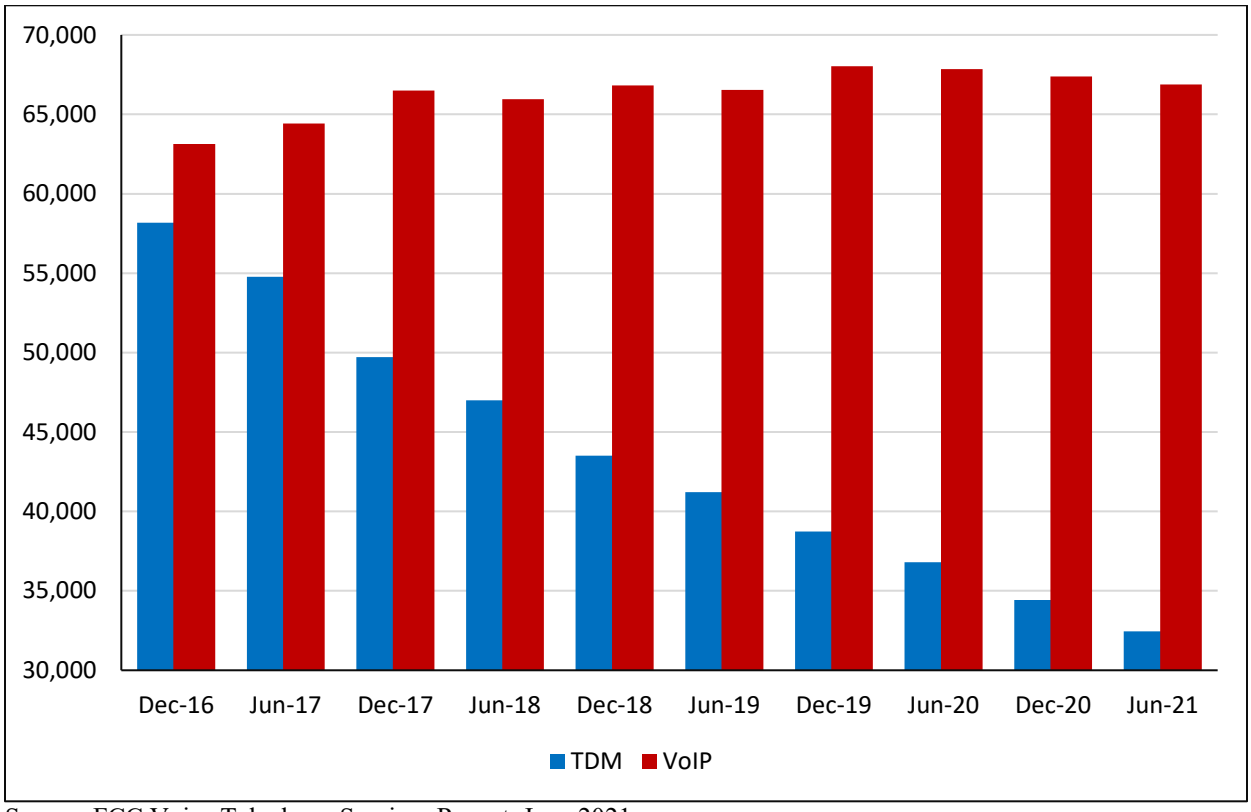
[62]FCC, "Voice Telephone Services: Status as of June 30, 2021," released August 1st, 2022, https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

[63]Ibid, Figure 3, accessed April 20, 2023.

[64]FCC, "Voice Telephone Services: Status as of June 30, 2021," released August 1, 2022, https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

million connections, 46.1 percent (45.8 million) were residential and 53.9 percent (53.5 million) were business.[65]

Figure 3-3
U.S. Retail Voice Telephone Subscriptions
(In Thousands)



Source: FCC Voice Telephone Services Report, June 2021

a. Facilities-Based VoIP Providers

According to the FCC, non-ILEC companies accounted for over 25.9 million residential VoIP subscribers as of June 2021, compared to nearly 6.6 million residential ILEC VoIP subscribers. This represents a market share of 80 percent for the non-ILECs in this market.[66] Comcast, the country's largest cable provider, reported a decrease just above ten percent from 2021 (8.6 million) to 2022 (7.7 million).[67] The second largest cable provider, Charter Communications, reported approximately 7.9 million residential VoIP subscribers at year-end 2022, a decrease of

[65]Ibid.

[66]Ibid.

[67]Comcast Corporation, "Comcast 2022 Annual Report on Form 10-K," released February 03, 2022, https://www.cmcsa.com/financials/annual-reports, accessed June 21, 2023.

just over 13 percent from 2021.[68] AT&T reported approximately 2.9 million U-verse VoIP subscribers at year-end 2022, which is nearly a 12 percent decrease from the previous year.[69]

Each of these top three facilities-based providers reported that improvements in wireless carriers' broadband infrastructure is a factor in consumer decisions to leave wireline broadband and VoIP services. These providers have developed wireless and video services and bundle them in an attempt to retain customers.

b. Over the Top VoIP Providers

Routing voice calls over a customer's existing internet connection allows over-the-top providers to have a much lower cost of service than wireline and wireless competition. According to the FCC, there were nearly 15.6 million OTT VoIP subscribers in the U.S. as of June 2021. This total included more than 1.9 million residential subscribers and just under 13.7 million business subscribers nationwide. The FCC's figures showed a decrease of approximately 18.5 percent in residential subscribers, and approximately 24.7 percent increase in business subscribers from June 2020 to June 2021.[70]

2. Florida Market

As previously stated, the FPSC does not have jurisdiction over VoIP services, which limits the agency's ability to determine an accurate estimate of the total number of VoIP subscribers in Florida. For the Florida VoIP residential market, several ILECs and CLECs in Florida voluntarily responded to the Commission's data request and provided information on the number of residential VoIP subscribers. FiTV reported roughly 700,000 million residential VoIP subscribers for the four member providers in 2022.[71] For the Florida VoIP business market, the FCC reported non-ILECs in Florida served approximately 2 million business interconnected VoIP subscribers by June 2021, an increase of just over 4.3 percent from the end of June 2020.[72] In total, the FCC reported that Florida had 4.6 million Interconnected VoIP subscriptions in June 2021.[73]

Figure 3-4 shows an estimated 1.8 million residential VoIP subscribers in Florida as of 2022. This data indicates a decrease of roughly 218,000 residential VoIP subscriptions from 2021. Over a five-year time frame, the Florida residential VoIP market has declined about 8.4 percent

[68]Charter Communications, Inc., "Charter Investors: Results, SEC Filings & Tax Information," News Release, released January 27, 2023, https://ir.charter.com/financial-information/annual-reports, accessed June 21, 2023.

[69]AT&T Inc. "Form 10-K," February 16, 2022, https://otp.tools.investis.com/clients/us/atnt2/sec/sec-outline.aspx?FilingId=15576872&Cik=0000732717&PaperOnly=0&HasOriginal=1 accessed June 21, 2023.

[70]FCC, "Voice Telephone Services: Status as of June 30, 2021," Table 1, released August 1, 2022, https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

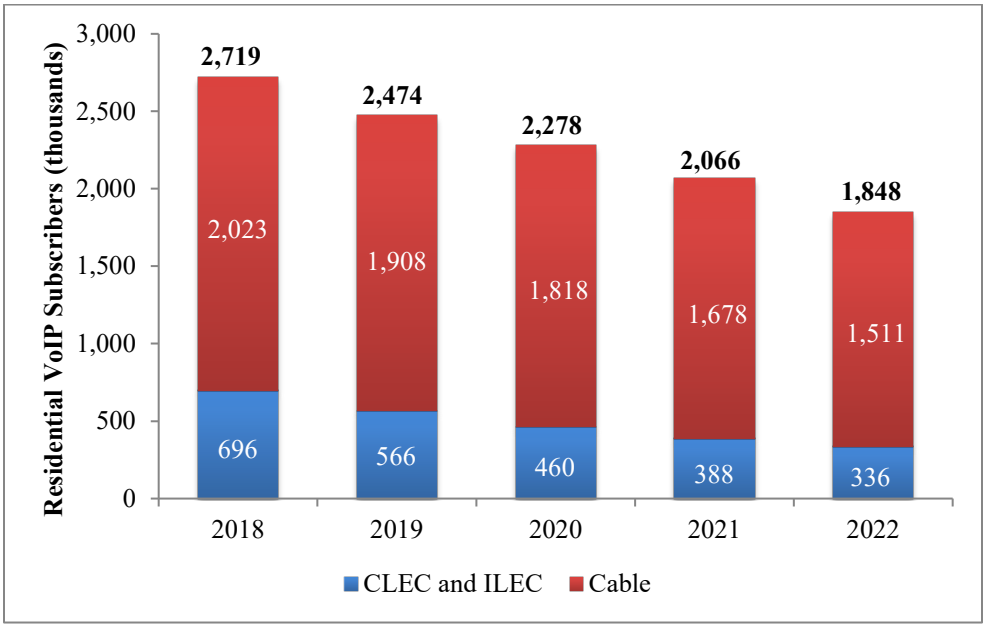
[71]Charter Communications is no longer a member of FiTV.

[72]FCC, "Voice Telephone Services Report, State-Level Subscriptions," Supplemental Table 1, Florida, released March 9, 2022, https://www.fcc.gov/voice-telephone-services-report, accessed June 21, 2023.

[73]Ibid.

per year. As previously stated, the major VoIP carriers have expressed that increased competition from wireless competitors has affected VoIP subscriptions.

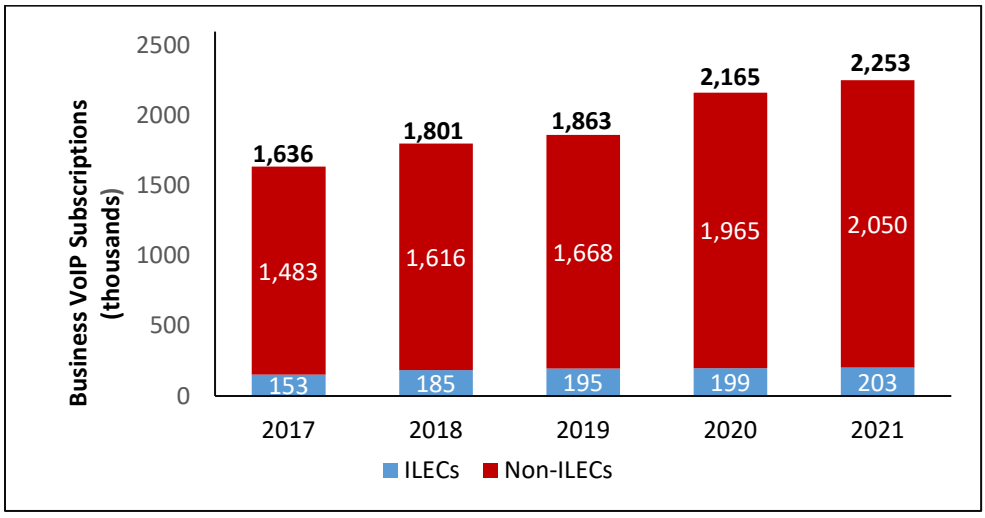
Figure 3-4
Florida Residential Interconnected VoIP Subscribers



Source: Responses to local competition data request (2019-2023)

While Florida's residential VoIP market contracted over the past five years, its business VoIP market continued to expand, at least through 2021. Figure 3-5 displays VoIP business subscribers by ILEC and non-ILEC carriers as reported by the FCC. Business VoIP growth lagged behind residential growth for several years as cable companies concentrated on the residential market, but as that market matured, they turned their attention towards business customers.

Figure 3-5
Florida Business Interconnected VoIP Subscribers



Source: FCC, Voice Telephone Services Report, June 2021, State Level Subscriptions

Chapter IV. Competitive Market Analysis & Statutory Issues

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.

The data discussed in previous chapters suggests that competitive carriers are able to provide functionally equivalent services to residential and business customers at acceptable rates, terms, and conditions. As of June 16, 2023, 218 CLECs responded to the Local Competition Report data request. Several CLECs reported providing a number of services: local phone service (54), VoIP (92), broadband Internet access (68), video services (12), and bundled services (53).[74]

In response to FPSC data request questions, the majority of CLECs reported no barriers to competition or elected not to respond. However, the companies that did report competitive concerns mentioned issues with the difficulty in arranging and ordering physical trunk groups for direct connections with ILECs, as well as issues with ILEC online portal transition from Internet Explorer to Microsoft Edge.[75] We note that the CLECs have not filed any petitions with the Commission to address these issues. Some of these issues may be addressed by the FCC.

Conclusion: Dozens of competitors offered multiple combinations of services to attract customers. Also, subscriptions to wireline telephony decreased again in 2022, indicating consumer choice continues to be primarily wireless and VoIP services. Based on the multiple services offered by alternative providers and their significant market share, companies are offering functionally equivalent services to both business and residential customers.

B. Statutory Issue – Consumers

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

If companies are making functionally equivalent services available at comparable rates, terms, and conditions, as concluded in the previous issue, this issue determines whether there are significant impediments to consumers obtaining those services. One of the best determinants of whether consumers can obtain alternative services is the degree to which they are actually subscribing to them in large numbers.

Since reaching a peak in the year 2000, total traditional access lines have declined by over 92 percent in Florida, even as the population has grown significantly. Given the importance of telecommunications service and the large decline in traditional access lines, consumers must be finding service elsewhere. Competitors have been successfully maintaining substantial shares in traditional access lines as well as other technologies, such as wireless and VoIP.

[74]Responses to local competition data request 2023 as of May 12, 2023.

[75]Responses to local competition data request 2023.

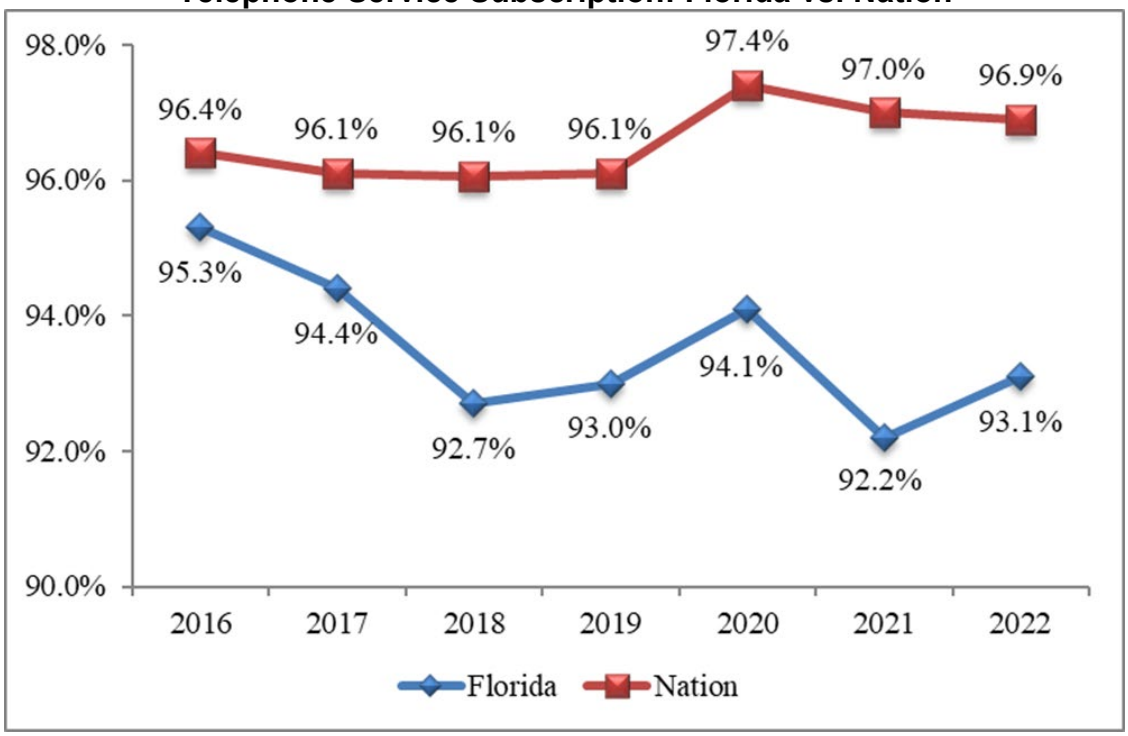
Conclusion: The traditional wireline market continues to decrease despite population growth. Increasing demand for service is being met by wireless subscription growth and VoIP, and the majority of consumers are choosing to obtain wireless and VoIP service from competitors. Given competitors' substantial wireless and VoIP market shares, consumers are able to obtain functionally equivalent services at comparable rates, terms, and conditions.

C. Statutory Issue – Affordability & Reliability

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

In order to compete successfully in a free market, a business needs to provide equivalent value to consumers. The value of telecommunications service is most broadly determined by affordability and reliability. As shown in Figure 4-1, the average Florida household telephone subscription rate has averaged 93.5 percent over the last seven years.[76] This high telephone subscription rate is not a recent occurrence; the average household telephone subscription rate has been 93.4 percent over the past 35 years.[77]

Figure 4-1
Telephone Service Subscription: Florida vs. Nation



Source: FCC staff interviews

[76]FCC staff, interview, March 22, 2023.

[77]FCC staff, interviews (1986-2023).

Following the passage of the Florida Regulatory Reform Act in 2011, the FPSC no longer retains jurisdiction over telecommunications consumer complaints and holds no data on quality of service.[78] However, consumers freely choosing competitors for telecommunications service suggests that they view competitors' services as having reliability that is sufficiently comparable to ILEC service.

Conclusion: A competitive market requires comparable affordability and reliability of service. The vast majority of Florida households subscribe to telephone service. Consumers are willing and able to choose telecommunications service from competitors using a variety of technologies. Based on competitors' substantial market share and market pressures requiring comparable affordability and reliability, competition is having a positive effect on the maintenance of reasonably affordable, reliable telecommunications services.

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 2022.

[78]Regulatory Reform Act, Ch. 36, 2011 Fla. Laws 1231.

Chapter V. State Activities

This chapter provides a summary of state activities affecting local telecommunications competition in 2022. The state activities discussed in this chapter are important in helping to gauge how well the market is functioning for Florida businesses and consumers.

A. Intercarrier Matters

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 2016), and for Verizon in June 2003 (revised in 2007 and later adopted by Frontier). Trending analysis is applied to monthly performance measurement data provided by each ILEC.[79]

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 current Performance Assessment Plan consists of 47 measurements; financial remedies are applied to 24 of these measures. On September 28, 2022, AT&T declared a force majeure event for Provisioning, Maintenance & Repair, and Trunk Group Performance measures in some of its wire centers as a result of Hurricane Ian. The declaration was lifted for the last affected wire centers on October 10, 2022. AT&T paid $147,573 in remedies in 2022, representing an increase of 29.2 percent from 2021.[80]

On October 15, 2015, CenturyLink filed proposed revisions to its Performance Measurement Plan as a result of a negotiated settlement with the Nevada Public Utilities Commission. 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 on February 15, 2016.[81] CenturyLink has reported no noncompliance since the revisions were adopted. Following its approval by the Nevada Public Utilities Commission, on April 26, 2023, CenturyLink filed a request for forbearance from following its Performance Measurement Plan in Florida, citing changes in the telecommunications market.[82] The FPSC is scheduled to consider this request later this year.

[79]FPSC Dockets: Nos. 20000121A-TP (AT&T), 20000121B-TP (CenturyLink), and 20000121C-TP (Frontier FL).

[80]Remedies are paid two months in arrears; amounts shown are for payments made in 2021 and 2022.

[81]FPSC Order No. PSC-2016-0072-PAA-TP, Docket No. 20000121B-TP, Investigation into the establishment of operations support systems permanent performance measures for incumbent local exchange telecommunications companies (CenturyLink Florida Track), issued February 15, 2016, http://www.psc.state.fl.us/library/filings/2016/00858-2016/00858-2016.pdf , accessed June 21, 2023.

[82]FPSC Document No. 02887-2023, Docket No. 20000121B-TP, Investigation into the establishment of operations support systems permanent performance measures for incumbent local exchange telecommunications companies (CenturyLink Florida Track), filed April 26, 2023, https://www.floridapsc.com/pscfiles/library/filings/2023/02887-2023/02887-2023.pdf, accessed June 21, 2023.

Frontier Communications completed its purchase of Verizon Florida's wireline operations in April 2016. In its role as a major ILEC, Frontier is responsible for a Performance Measurement Plan that includes 29 measures. In 2022, Frontier maintained an average monthly compliance rate of 80.6 percent, yielding a 3.6 percent decrease from 2021's average monthly compliance rate of 84.2 percent.

The Commission processed a number of other telecommunications-related items in 2022. The items processed include 54 service schedule and tariff filings, 70 interconnection agreements and amendments, 12 carrier certifications, 9 certificate cancellations, and 28 general inquiries/informal complaints.

B. Numbering Resources

Numbering resources are administered by the North American Numbering Plan Administrator (NANPA). NANPA's responsibilities include assigning area codes and prefixes, and tracking numbering usage to ensure effective and efficient utilization. Also, NANPA is responsible for forecasting the exhaust of geographic area codes and area code relief planning. While NANPA is responsible for forecasting the exhaust of area codes, the FPSC is responsible for determining the appropriate form of area code relief when telephone numbers exhaust within a Numbering Plan Area (NPA).

Several methods are available to handle area code exhaust issues; however an overlay has been the preferred method. An overlay adds a new area code to the same geographic area served by the area code requiring relief. This results in assigning more than one area code to the same NPA. Current customers keep their existing area code and number; however, new customers or customers adding additional lines receive the new area code. Once an overlay is implemented, the FCC requires 10-digit dialing for all local calls within the NPA.

In 2022, the Commission approved two overlay relief plans. The first approved overlay was for the 305/786 area code, which serves Miami-Dade County and the Florida Keys.[83] The new area code, 645, will be implemented in the third quarter of 2023. The second approved overlay was for the 904 area code, which serves all or most of Nassau, Duval, Baker, Bradford, Clay, St Johns, and Union Counties.[84] The new area code, 324, will be implemented in 2024.

[83]FPSC Order No. PSC-2022-0050-PAA-TP, Docket No. 20210190-TP, Petition on behalf of the Florida telecommunications industry for expeditious approval of the industry's consensus recommendation to implement Alternative No. 1, the all-services distributed overlay of the 305/786 NPA overlay, by North American Numbering Plan Administrator. issued February 2, 2022, https://www.floridapsc.com/pscfiles/library/filings/2022/00988-2022/00988-2022.pdf, accessed June 21, 2023.

[84]FPSC Order No. PSC-2022-0178-PAA-TP, Docket No. 20220036-TP, Petition of North American Numbering Plan Administrator on behalf of the Florida telecommunications industry, in the matter of the implementation for relief of the 904 numbering plan area., issued May 10, 2022, https://www.floridapsc.com/pscfiles/library/filings/2022/02883-2022/02883-2022.pdf, accessed June 21, 2023.

C. Lifeline

The Lifeline program is designed to enable low-income households to obtain and maintain basic telephone and broadband services by offering qualifying households a discount on their monthly bills. The FPSC has oversight over the Lifeline program in Florida pursuant to Section 364.10, F.S. However, the Lifeline program is a federal Universal Service Fund (USF) program. The rules affecting the Lifeline program are established by the FCC, which has designated the Universal Service Administrative Company (USAC), an independent not-for-profit corporation, as the program's administrator. USAC is responsible for data collection and maintenance, support calculation, and disbursement for the Lifeline program along with other federal USF programs.

Customers apply for Lifeline through the National Verifier, which is an electronic system established by the FCC to determine customer eligibility. Customers can complete their application online through the National Verifier portal and eligible telecommunications carriers (ETCs) can assist customers applying by utilizing an interconnected provider portal.[85] Upon completion of an application, and subsequent approval for the Lifeline program, customers are able to find a Lifeline service provider through USAC's "Companies Near Me" tool.[86]

The FPSC has a Lifeline promotion process to encourage participation in the Lifeline program. This process involves a computer interface between the FPSC and the Florida Department of Children and Families identifying clients who are eligible for Lifeline due to their approval for the Medicaid and SNAP programs. ETCs access this system and contact their customers to determine if they have already been approved for the Lifeline program through the National Verifier. For those customers who have not yet applied for the program, ETCs will either instruct customers on how to apply or assist these customers with their applications in person. If a customer mistakenly identifies an ETC that does not serve the area in which they live, the FPSC sends instructions on how to apply with the National Verifier, along with a list of each ETC's contact information.

Using SNAP participation as a proxy for Lifeline eligible households, as of June 2022, eligible households decreased by 15.54 percent, while enrollment of those households in the Lifeline program increased by 9.7 percent from the prior year.[87] Overall, the Lifeline participation rate was 18.88 percent in 2022, a slight increase from the prior year. Table 5-1 shows the Lifeline eligibility and participation rates in Florida for the last six years.[88]

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[85]USAC, "National Verifier Application Portal," https://nationalverifier.servicenowservices.com/lifeline, accessed June 21, 2023.

[86]USAC, "Companies Near Me Tool," https://data.usac.org/publicreports/CompaniesNearMe/Download/Report, accessed June 21, 2023.

[87]FPSC, "2022 Florida Lifeline Report," released December 2022, https://www.floridapsc.com/pscfiles/website-files/PDF/Publications/Reports/Telecommunication/LifelineReport/2022.pdf, Figure 3, accessed June 21, 2023.

[88]Ibid.

Table 5-1
Florida Lifeline Eligibility and Participation Rate

Year	Lifeline Enrollment	Eligible Households	Participation Rate
Jun-17	685,864	1,690,899	40.56%
Jun-18	694,647	1,655,134	41.97%
Jun-19	604,693	1,540,682	39.25%
Jun-20	371,180	2,151,503	17.25%
Jun-21	273,641	1,882,842	14.53%
Jun-22	300,285	1,590,216	18.88%

Source: Florida DCF, ACCESS Florida: Standard Data Reports

D. Telecommunications Relay Service

Telecommunications Relay Service (TRS) facilitates telephone calls between people with hearing loss or speech disabilities and other individuals by using special equipment and a communications assistance operator to relay information. Section 427.704, F.S., charges the Commission with overseeing the administration of a statewide telecommunications access system that provides TRS. Funding for TRS in Florida is through a surcharge on switched access lines. The assessment rate will decline to $0.09 per line effective September 1, 2023 from the current assessment rate of $0.10 per line per month.[89] Relay services are currently provisioned under contract by T-Mobile USA, Inc.

[89]The rate may not exceed $.25 per landline.

Chapter VI. Federal Activities

A. Mergers and 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 2022, there were approximately 49 completed telecommunications mergers and acquisitions nationally. Recent transactions of interest to Florida are described below.

1. CenturyLink/Lumen Technologies & Apollo

On August 3, 2021, Lumen announced it was selling 20 of its 36 U.S.-based, CenturyLink-branded ILEC service territories to Apollo Global Management for a total of $7.5 billion. The divestiture included fiber, copper networks, tower site connections and central offices. On June 14th, 2022, the FCC approved the transaction. The Florida ILEC was not among the territories sold and will remain a CenturyLink-branded Lumen subsidiary.[90]

2. BullsEye & Lingo Entities

On June 14, 2022, The FCC approved an application filed for the transfer of control of BullsEye Telecom, Inc. to Lingo Management, LLC, Lingo Communications, LLC and B. Riley Principal Investments, LLC. BullsEye, a Michigan corporation, provides telecommunications services in the District of Columbia and the lower 48 states, including Florida. Lingo Management, LLC, a Delaware limited liability and holding company, provides telecommunication services in multiple states through its operating subsidiaries. After the proposed transaction, indirect ownership and control of BullsEye will be transferred to the Lingo entities (20%) and B. Riley Principal Investments, LLC (80%). The FCC chose not to streamline the request due to the complexity of the transaction.[91]

B. Broadband Deployment

The federal government has recognized there is no one-size-fits-all solution to delivering broadband service to rural areas. The 2021 Infrastructure Investment and Jobs Act (IIJA) allocates $65 billion in broadband infrastructure investment, creating multiple programs that envision using many technologies including fiber, fixed wireless, and satellites.[92]

Multiple federal agencies are responsible for broadband deployment and affordability programs through existing mechanisms as well as the IIJA. The FCC is in charge of several programs, including the Rural Digital Opportunity Fund (RDOF), which will provide $20.4 billion in

[90]Lumen Technologies, Inc., "Form 10-K for the fiscal year ended December 31, 2021," February 24, 2022, https://d18rn0p25nwr6d.cloudfront.net/CIK-0000018926/12795305-7ff0-4e6a-ba1f-e0f9335f51d8.pdf, accessed June 21, 2023.

[91]FCC, Domestic Section 214 Application Filed For The Transfer Of Control Of BullsEye Telecom, Inc. to the Lingo Entities, May 10, 2022, https://docs.fcc.gov/public/attachments/DA-22-512A1.pdf, accessed June 21, 2023.

[92]117th Congress (2021-2022), "H.R.3684 - Infrastructure Investment and Jobs Act," November 15, 2021, https://www.congress.gov/bill/117th-congress/house-bill/3684, accessed June 21, 2023.

support to providers nationally over ten years for unserved and underserved areas. The FCC ultimately awarded RDOF support of over $152 million to seven providers over ten years to provide service in Florida. More details about the status of that support may be found in the High Cost discussion under the Universal Service section of this chapter.[93]

The FCC's Affordable Connectivity Program (ACP) was created from the Emergency Broadband Benefit Program with an allocation of $14.2 billion from the IIJA. The ACP provides a discount of up to $30 per month toward internet service for eligible households and up to $75 per month for households on qualifying Tribal lands. It also provides a one-time discount of up to $100 to purchase a laptop, desktop computer, or tablet from participating providers.[94,95] As of April 17, 2023, 1,230,298 households in Florida were enrolled in the ACP through 125 providers offering mobile and/or fixed broadband access.[96,97] The FCC also established two programs to promote ACP participation: the Affordable Connectivity Outreach Grant Program and the "Your Home, Your Internet" pilot program.[98,99] ACP promotion grants awarded in Florida include:

The National Competitive Outreach Program

- Blueprint 2000 and Beyond, Tallahassee FL: $214,355
- Community Health of South Florida, Inc., Miami FL: $450,000
- Goodwill Industries of Southwest Florida, Inc., Fort Myers FL: $200,000[100]

The "Your Home, Your Internet" pilot program awarded the Housing Authority of the City of Tampa Florida a grant of $152,413,[101] The FCC has also implemented COVID-19 related

[93]FCC, Auction 904: Rural Digital Opportunity Fund, January 13, 2023, https://www.fcc.gov/auction/904, accessed June 21, 2023.

[94]FCC, "FCC Launches Affordable Connectivity Program," December 31, 2021, https://www.fcc.gov/document/fcc-launches-affordable-connectivity-program, accessed June 21, 2023.

[95]FCC, "FCC Adopts Rules To Implement Affordable Connectivity Program," January 14, 2022, https://www.fcc.gov/document/fcc-adopts-rules-implement-affordable-connectivity-program, accessed June 21, 2023.

[96]FCC, Affordable Connectivity Program Providers, May 17, 2023, https://www.fcc.gov/affordable-connectivity-program-providers, accessed June 21, 2023.

[97]USAC, ACP Enrollment and Claims Tracker, April 17, 2023, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/, accessed June 21, 2023.

[98]FCC, "FCC Establishes Affordable Connectivity Outreach Grant Program," August 8, 2022, https://www.fcc.gov/document/fcc-establishes-affordable-connectivity-outreach-grant-program-0, accessed June 21, 2023.

[99]FCC, "FCC Creates 'Your Home, Your Internet' Pilot Program," August 8, 2022, https://www.fcc.gov/document/fcc-creates-your-home-your-internet-pilot-program-0, accessed June 21, 2023.

[100]FCC, "FCC Announces $66M in Affordable Broadband Outreach Grants," March 10, 2022, https://www.fcc.gov/document/fcc-announces-66m-affordable-broadband-outreach-grants-0, accessed June 21, 2023.

programs such as the Connected Care Pilot Program, COVID-19 Telehealth Program, and the Emergency Connectivity Fund.

NTIA has been charged by the IIJA with administering nearly a dozen different broadband deployment programs. These programs will invest over $47 billion in broadband infrastructure.[102,103,104] On May 13, 2022, the NTIA announced the launch of the Biden Administration's Internet for All initiative, which will help organize the investment of $45 billion of the broadband support.[105] On November 29, 2022, NTIA announced that Florida received an "Internet for All" grant of $7.4 million in funding, which is comprised of $5 million in Broadband Equity, Access and Deployment Program Support for planning, infrastructure deployment and adoption programs and $2.4 million for the Digital Equity Act planning efforts.[106]

Another NTIA program is the Connecting Minority Communities Pilot Program. It specifically directed $268 million from the Consolidated Appropriations Act of 2021 to expanding high-speed Internet access and connectivity to eligible Historically Black Colleges and Universities, Tribal Colleges or Universities, and other Minority-serving institutions.[107] In Florida, NTIA awarded $10.8 million to three educational institutions in 2023, including:

- Broward College $3 million
- Florida A&M University $5.4 million

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[101]FCC, "FCC Targets Over $7M Toward Affordable Connectivity Program Awareness," March 15, 2022, https://www.fcc.gov/document/fcc-targets-over-7m-toward-affordable-connectivity-program-awareness-0, accessed June 21, 2023.

[102]NTIA, "Commerce Department's NTIA Announces $288 Million in Funding Available to States to Build Broadband Infrastructure," May 19, 2021, https://www.ntia.doc.gov/press-release/2021/commerce-department-s-ntia-announces-288-million-funding-available-states-build, accessed June 21, 2023.

[103]NTIA, Connecting Minority Communities Pilot Program, December 2, 2021, https://www.ntia.doc.gov/press-release/2021/commerce-department-s-ntia-announces-288-million-funding-available-states-build, accessed June 21, 2023.

[104]NTIA, "NTIA's Role in Implementing the Broadband Provisions of the 2021 Infrastructure Investment and Jobs Act," November 16, 2021, https://broadbandusa.ntia.doc.gov/news/latest-news/ntias-role-implementing-broadband-provisions-2021-infrastructure-investment-and, accessed June 21, 2023.

[105]NTIA, "Biden-Harris Administration Launches $45 Billion "Internet for All" Initiative to Bring Affordable, Reliable High-Speed Internet to Everyone in America," May 13, 2022, https://www.ntia.doc.gov/press-release/2022/biden-harris-administration-launches-45-billion-internet-all-initiative-bring, accessed June 21 2023.

[106]NTIA, "Biden-Harris Administration Awards More Than $7.4 Million to Florida in 'Internet for All' Planning Grants," November 29, 2022, https://www.ntia.doc.gov/press-release/2022/biden-harris-administration-awards-more-74-million-florida-internet-all-planning, accessed June 21, 2023.

[107]BroadbandUSA, Connecting Minority Communities Program, https://broadbandusa.ntia.doc.gov/funding-programs/connecting-minority-communities, accessed June 21, 2023.

- Miami Dade College $2.4 million[108,109]

The Rural Utilities Service of the United States Department of Agriculture maintains several programs for broadband deployment. The Consolidated Appropriations Act, 2023 includes $364 million for the ReConnect Program, $65 million for the Distance Learning, Telemedicine, and Broadband Program, $35 million for the Community Connect Grant Program, and $690 million for direct, Treasury-rate, telecommunications loan authorizations.[110]

The United States Department of Housing and Urban Development awards support from its Community Development Block Grant - CV (CDBG-CV) program to primarily benefits low- and moderate-income residents for various activities including broadband infrastructure and planning. In Florida, the CDBG-CV program is administered by the Florida Department of Commerce. On August 22, 2022, Governor Ron DeSantis awarded more than $22 million for community development projects in ten Florida communities, including nearly $3 million for addressing historical broadband deficiencies in Micanopy, Florida.[111]

Given the plethora of federal broadband programs, NTIA maintains a Federal Funding site, which serves as a comprehensive, "one-stop shop" of resources for potential applicants seeking federal broadband funding. The site includes broadband funding opportunities and information on more than 80 federal programs across 14 federal agencies.[112]

C. Universal Service

Universal service is the policy that seeks to ensure all Americans have access to communications services through a series of financial support programs. The USF supports the budgets of universal service programs. The USF is funded by telecommunications providers based on an assessment of interstate and international revenues. Carriers are allowed by federal rules to pass these costs on to their customers through their bills.

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[108]NTIA, "Biden-Harris Administration Announces More Than $33.5 Million in Internet for All Grants to 12 Minority-Serving Colleges and Universities," January 30, 2023, https://broadbandusa.ntia.doc.gov/news/latest-news/biden-harris-administration-announces-more-335-million-internet-all-grants-12, accessed June 21, 2023.

[109]NTIA, "Biden-Harris Administration Announces More Than $175 Million in Internet for All Grants to 61 Minority-Serving Colleges and Universities," February 22, 2023, https://broadbandusa.ntia.doc.gov/news/latest-news/biden-harris-administration-announces-more-175-million-internet-all-grants-61, accessed June 21, 2023.

[110]Congress.gov, "H.R.2617 - Consolidated Appropriations Act, 2023," https://www.congress.gov/bill/117th-congress/house-bill/2617, accessed June 21, 2023.

[111]DEO, "Governor Ron DeSantis Awards More Than $22 Million for Community Development Projects in 10 Florida Communities," August 22, 2022, https://www.floridajobs.org/news-center/DEO-Press/2022/08/22/governor-ron-desantis-awards-more-than-$22-million-for-community-development-projects-in-10-florida-communities, accessed June 21, 2023.

[112]BroadbandUSA, NTIA Launches Updated Federal Broadband Funding Guide, https://broadbandusa. ntia.doc.gov/news/latest-news/ntia-launches-updated-federal-broadband-funding-guide-0, accessed June 21, 2023.

In general, Florida consumers pay more into the USF than what is returned to eligible service providers in Florida.[113] For 2021, only consumers in California were larger net contributors than consumers in Florida. The FCC annually publishes contributions to and disbursements from the fund. The most current data for this report is through December 2021. Table 6-1 shows Florida's estimated contribution and receipts for 2021 and provides a comparison of net contributions for 2019 and 2020. The total estimated consumer contribution for 2021 includes approximately $14 million related to USAC's administrative expense.

Table 6-1
Federal Universal Service Payments and Contributions in Florida
(Thousands of Dollars)

	2019	2020	2021		
	Estimated Net	Estimated Net	Service Providers Payments	Estimated Contributions	Estimated Net
High-Cost	(249,610)	(248,298)	39,811	290,610	(250,799)
Low Income	2,486	(8,978)	28,705	41,014	(12,309)
Schools & Libraries	(37,729)	(31,925)	80,959	121,613	(40,654)
Rural Health Care	(9,705)	(12,255)	7,195	31,541	(24,346)
Admin. Expense	(11,233)	(11,648)		14,276	(14,276)
Total	($305,791)	(313,104)	156,670	499,054	(342,384)

Source: FCC Universal Service Monitoring Report, various years, Table 1.9

1. High Cost

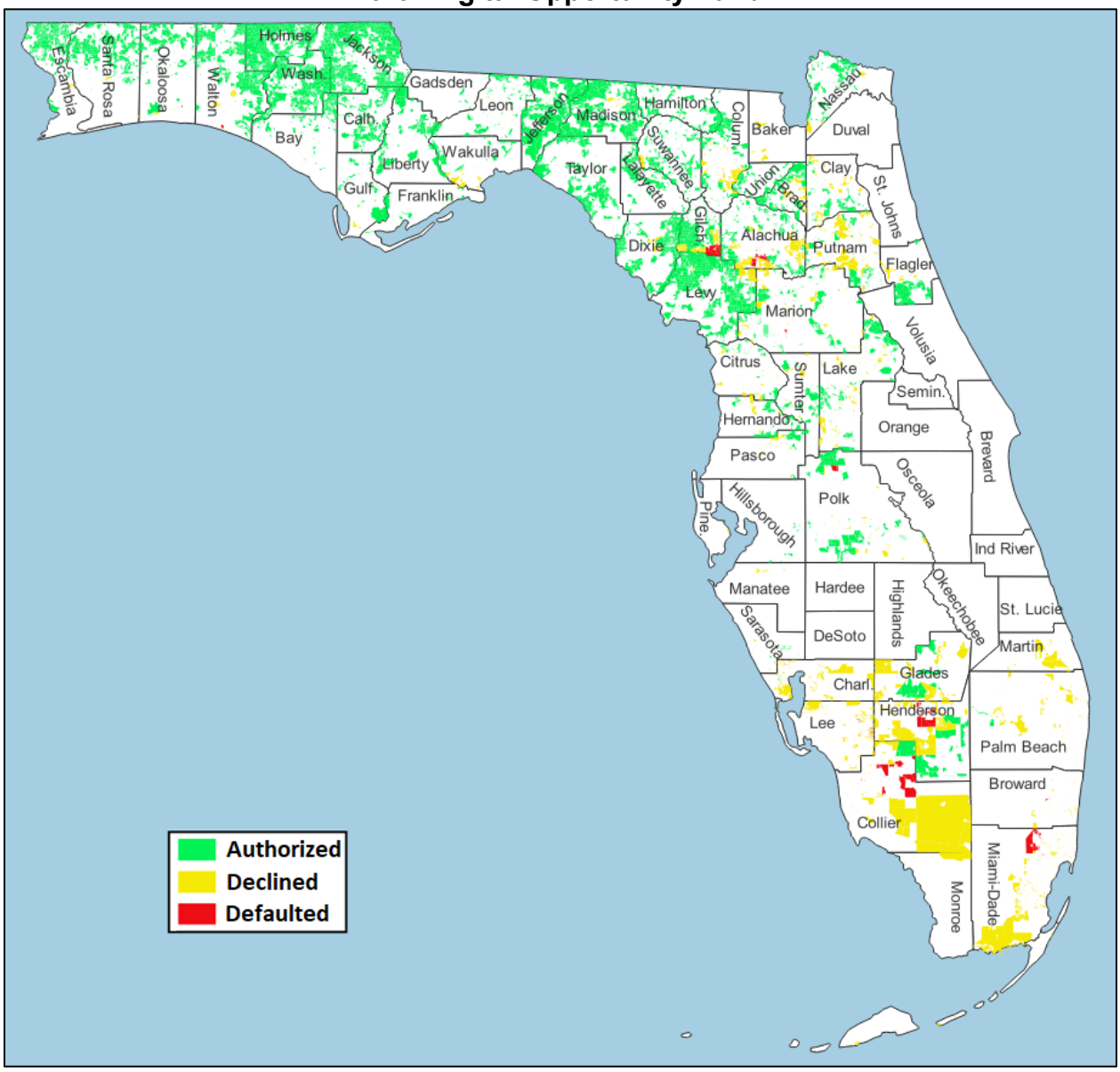
Since 2011, the FCC has been modernizing the federal high-cost programs to maintain voice services and extend broadband capable infrastructure.[114] On January 30, 2020, the FCC adopted a Report and Order establishing the framework for the $20.4 billion RDOF to bring high speed fixed broadband service to rural homes and small businesses, using reverse auctions in two phases.

The Phase I auction targeted over six million homes and businesses in census blocks that are entirely unserved by voice and broadband with download speeds of at least 25 Mbps. The RDOF is structured to prioritize higher network speeds and lower latency. Figure 6-1 provides a map identifying areas in Florida that will receive RDOF support in the first phase of the program.

[113]FCC, Universal Service Monitoring Report-2022, released February 13, 2023, https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf, accessed June 21, 2023.

[114]FCC 11-161, WC Docket No. 10-90, Report and Order and Further Notice of Proposed Rulemaking, released November 18, 2011, https://docs.fcc.gov/public/attachments/FCC-11-161A1.pdf, accessed June 21, 2023.

Figure 6-1
Areas in Florida Eligible for Phase I
Rural Digital Opportunity Fund



Source: FCC, US Census Bureau Shapefile

Seven providers in Florida were authorized by the FCC to receive RDOF support of over $152.1 million over ten years.[115] Starlink was originally on track to receive $33.6 million in funding in Florida to cover 34,757 census blocks, however, the FCC declined Starlink's final application.

[115]Designated by the FCC as "authorized" include: Bright House Network Information Services, Conexon Connect LLC, Consolidated Communications of Florida Company, Embarq Florida, Inc, Frontier Florida LLC, Mediacom Wireless of Florida LLC, and Windstream Florida LLC.

The FCC determined that the application failed to demonstrate that Starlink could deliver the promised service. As a result, broadband funding will not be available in those census blocks.[116] Defaulted areas represent areas where the carrier that was initially awarded RDOF support failed to file the final application with the FCC. Both the defaulted and declined areas will not receive RDOF funding in the first phase of the program. However in the second RDOF phase, the remaining program funds along with an additional $4.4 billion will be used to cover unserved locations not previously funded.[117] Locations in census blocks that are partially served will also be eligible to receive support in the second phase.

Two companies that defaulted from the RDOF in Florida were penalized for their violation of federal rules by the FCC. AB Indiana committed two rule violations resulting in a forfeiture of $53,000.[118] Similarly, Hotwire defaulted in its 34 census block groups, with the FCC concluding that 28 of those defaults were individual rule violations that resulted in a forfeiture of $84,000 against Hotwire.[119]

2. Schools and Libraries

The schools and libraries support program, commonly known as the E-Rate Program, provides financial support to eligible schools and libraries for connectivity. 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. The E-Rate program has two funding categories that support schools and libraries. Category One provides connectivity to schools and libraries (e.g. access lines, broadband connections, etc.) and Category Two provides connectivity for services within schools and libraries (e.g. routers, servers, etc.). The E-Rate program has a funding cap that is annually adjusted for inflation. For 2023, this represents a 7 percent increase, establishing a new cap of $4.77 billion.[120] Figure 6-2 illustrates a comparison of the amounts disbursed in Florida for funding years 2017-2021 (the latest data years available).

[116]FCC, News Release, released August 10, 2022, https://www.fcc.gov/document/fcc-rejects-ltd-broadband-starlink-bids-broadband-subsidies, accessed June 21, 2023.

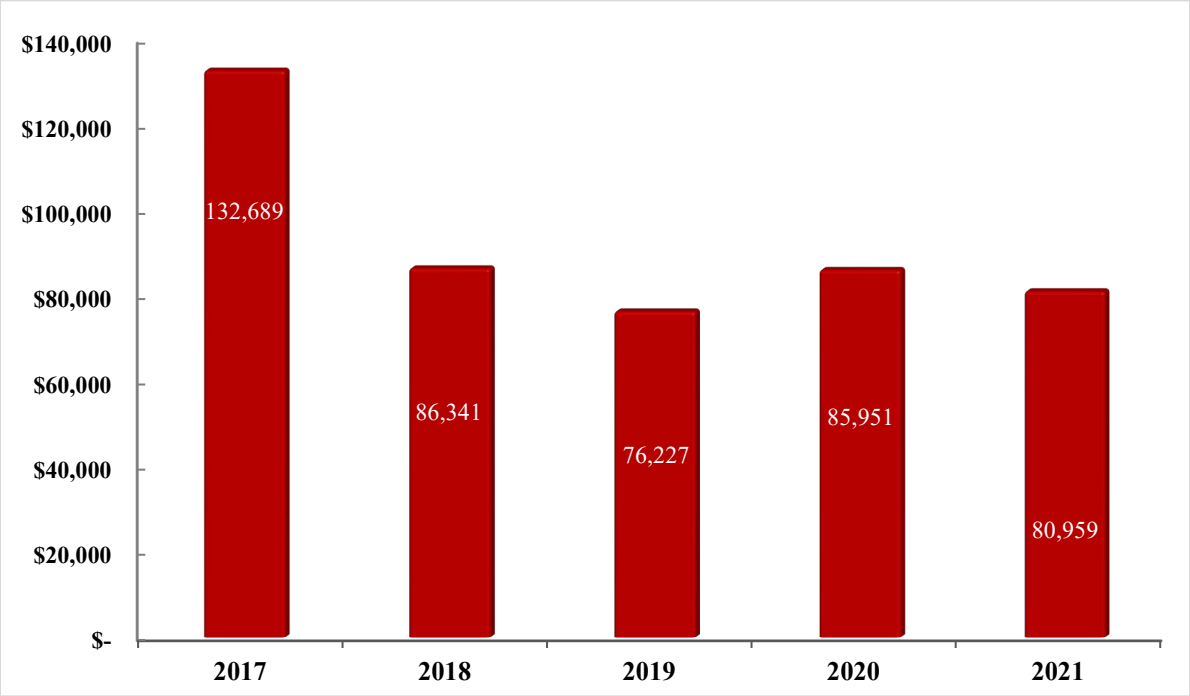
[117]FCC 19-77, WC Docket No 19-126, Notice of Proposed Rulemaking, released August 2, 2019 https://docs.fcc.gov/public/attachments/FCC-19-77A1.pdf, accessed June 21, 2023.

[118]FCC 23-33, Notice of Apparent Liability for Forfeiture, released May 1, 2023, https://docs.fcc.gov/public/attachments/FCC-23-33A1.pdf, accessed June 21, 2023.

[119]FCC 22-59, Notice of Apparent Liability for Forfeiture, released July 22, 2022, https://docs.fcc.gov/public/attachments/FCC-22-59A1.pdf, accessed June 21, 2023.

[120]FCC DA 23-178, Public Notice, released March 3, 2023, https://docs.fcc.gov/public/attachments/DA-23-178A1.pdf, accessed June 21 2023.

Figure 6-2
School and Libraries Funding Disbursements in Florida
(In Thousands)



Source: Universal Service Monitoring Report, Table 1.9

3. Low Income

The Lifeline program provides a monthly discount on phone or broadband service for qualifying low-income consumers. In 2016, the FCC reformed the Lifeline program to transition to a more broadband-focused program, which included a phase-down of federal support for voice-only services.[121] Broadband services that include a voice component will continue to be eligible to receive Lifeline support after the final phase-out date of December 1, 2024. As discussed in Chapter V above, 300,285 Floridians participated in the Lifeline program as of June 2022.

4. Rural Health Care

The goal of the Rural Health Care (RHC) Program is to ensure the affordability of telehealth services in rural communities to promote healthcare in underserved and hard to reach geographic areas. To achieve these goals, the RHC Program provides funding to eligible rural healthcare providers for broadband and telecommunications services. The new RHC funding cap for 2023 was established by the FCC at $682 million.[122] This represents a 7 percent increase from the

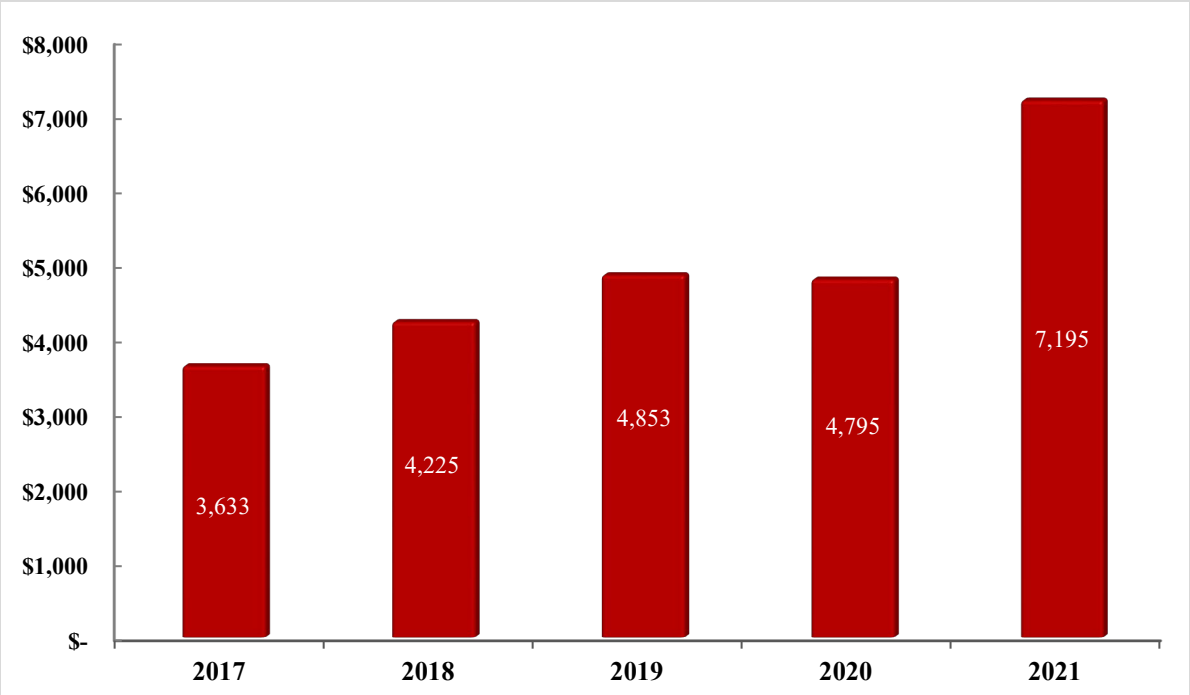
[121]FCC 16-38, WC Docket No. 11-42, Third Report and Order, Further Report and Order, and Order on Reconsideration, released April 27, 2016, https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf, accessed June 21, 2023.

[122]FCC DA 23-178, Public Notice, released March 3, 2023, https://docs.fcc.gov/public/attachments/DA-23-178A1.pdf, accessed June 21, 2023.

prior year's cap to adjust for inflation. Funding is distributed through two programs: the Telecommunications Program and the Healthcare Connect Fund Program.

The Telecommunications Program subsidizes the difference between urban and rural rates for telecommunications services. By comparison, the Healthcare Connect Fund Program promotes the use of broadband services by providing a flat 65% discount on an array of communications services to both individual rural healthcare providers and any related healthcare consortia.[123] In 2021, all RHC funds in Florida were from the Health Care Connect Fund program. Figure 6-3 illustrates a comparison of the amounts disbursed in Florida for funding years 2017-2021 (the latest data years available).

Figure 6-3
Rural Health Care Funding Disbursements in Florida
(In Thousands)



Source: Universal Service Monitoring Report, Table 1.9

[123]FCC, "Universal Service Monitoring Report - 2022," https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf, accessed June 21, 2023.

D. Public Safety

Florida has faced numerous public safety challenges in the use of its telecom networks.

1. Emergency Response

On September 23, 2022, Hurricane Ian, a Category 5 hurricane, made landfall in southwest Florida on Cayo Costa Island. Along with other infrastructure, the telecommunications network sustained major damage. The initial FCC communications status report included 63 Florida counties. At the peak level of damage, nearly 64 percent of cell sites in the most affected counties (Charlotte, Desoto, and Lee) were rendered nonfunctional, while the peak of cable and wireline service outages exceeded 800,000 subscribers. Other outages included: 15 FM radio stations, six AM stations, and four Public Safety Answering Points.[124]

In preparation and response, the FCC took several steps to promote public safety and connectivity. These steps included updating status and restoration efforts with status reports and granting waivers of its Affordable Connectivity Program non-usage requirement and de-enrollment for non-usage rules and Lifeline program non-usage, recertification, and reverification requirements. The FCC also extended deadlines for the COVID-19 Telehealth, E-Rate, and Rural Health Care Programs.[125] In addition to service restoration efforts, providers responded with several steps including: opening up free Wi-Fi hotspots, waiving overage and late charges, and allowing unlimited talk, text, and data.

On November 11, 2022, Hurricane Nicole, a Category 1 hurricane, made landfall in central Florida near Vero Beach. Along with other infrastructure, the telecommunications network sustained damage. According to the FCC, at the peak level of damage in the affected Florida counties, nearly 0.9 percent of cell sites were rendered nonfunctional, while more than 175,000 cable and wireline subscribers experienced service outages. Other outages included two FM radio stations and one AM station.[126] In addition to tracking outages, the FCC issued several waivers of spectrum rules, extended filing, and regulatory deadlines in affected areas.[127]

On November 17, 2022, after soliciting comments, the FCC held a hearing on the impact of Hurricanes Fiona and Ian on communications and the recovery effort. The hearing featured two panels, which explored lessons learned from the hurricanes, focusing largely on coordination between the communications and power sectors in response to these storms and on FCC actions to promote the availability of critical communications services following disasters. The first panel examined first-hand accounts from public safety stakeholders responding to disasters with the goal of exploring which measures are effective, which are not, and what lessons can be

[124]FCC, Hurricane Ian: Communications Status Reports, released September 28 - October 10, 2022, https://www.fcc.gov/ian, accessed June 21, 2023.

[125]FCC, Hurricane Ian: Public Notices and Orders, released September 28 - October 10, 2022, https://www.fcc.gov/ian, accessed June 21 2023.

[126]FCC, Hurricane Nicole: Communications Status Reports, released November 10 - 11, 2022, https://www.fcc.gov/nicole, accessed June 21, 2023.

[127]FCC, Hurricane Nicole: Public Notices and Orders, released November 10 - 11, 2022, https://www.fcc.gov/nicole, accessed June 21, 2023.

learned from their experiences. The second panel examined opportunities to improve wireless resiliency through better coordination with the power sector as well as innovative ideas for mitigating disaster impacts on the communications sector.[128]

To improve response and recovery efforts for future storms, the FCC has issued several orders and notices of proposed rulemaking. These recent actions enable national security personnel to obtain prioritized connectivity during emergency situations, improve the reliability and resilience of mobile wireless networks, improve the clarity and accessibility of Emergency Alert System (EAS) visual messages, improve the security and reliability of the EAS and Wireless Emergency Alerts, and propose to more precisely route wireless 911 calls and texts to 911 call centers.[129,130,131, 132]

2. COVID-19

The increase in the use of telework, telemedicine, remote learning, and other network applications caused by COVID-19 has highlighted the importance of internet access. In response, the federal government has provided extensive support for broadband connectivity.

- The FCC's Connected Care Pilot Program provided $100 million from the Universal Service Fund over a three-year period to selected applicants to support the provision of connected care telehealth services; in Florida, the FCC awarded over $1.5 million to two projects in 2021.[133]

- The FCC's COVID-19 Telehealth Program provided $200 million in Round 1 and $256 million in Round 2 in support of telecommunications services, information services, and connected devices necessary to enable telehealth during the COVID-19 pandemic. In Florida, the FCC awarded over $15.4 million to 26 projects in 2021 and nearly $570,000 to one project in 2022.[134]

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[128]FCC, Hearing on Impact to Communications of Hurricanes Fiona and Ian, posted November 17, 2022, https://www.fcc.gov/hearing-impact-communications-hurricanes-fiona-and-ian, accessed June 21, 2023.

[129]FCC, FCC Modernizes and Improves Its Priority Services Rules, released May 20, 2022, https://www.fcc.gov/document/fcc-modernizes-and-improves-its-priority-services-rules-0, accessed June 21, 2023.

[130]FCC, FCC Acts to Improve Network Resiliency During Disasters, released July 6, 2022, https://www.fcc.gov/document/fcc-acts-improve-network-resiliency-during-disasters, accessed June 21, 2023.

[131]FCC, The Emergency Alert System (EAS), Archives, https://www.fcc.gov/emergency-alert-system, accessed June 21, 2023.

[132]FCC, FCC Proposes Rules for Location-Based Routing for Wireless 911 Calls, released December 22, 2022, https://www.fcc.gov/document/fcc-proposes-rules-location-based-routing-wireless-911-calls, accessed June 21, 2023.

[133]FCC, "WCB Releases Interim Report on Connected Care and COVID-19 Telehealth ," updated March 21, 2023, https://www.fcc.gov/document/wcb-releases-interim-report-connected-care-and-covid-19-telehealth, accessed June 21, 2023.

[134]Ibid.

- The FCC's Emergency Connectivity Fund is a $7.17 billion program that will help schools and libraries provide the tools and services their communities need for remote learning during the COVID-19 emergency period. In Florida, the FCC awarded a total of over $351 million to 542 schools, school districts, libraries, library systems and consortia beginning in 2021 through the spring of 2023.[135]

In addition to these programs, the FCC has also granted waivers for compliance with Lifeline and Affordable Connectivity Program recertification and reverification requirements for tribal subscribers residing on Tribal lands through April 30, 2023. and extended deadlines for some E-Rate services and regulatory fees.[136,137,138]

[135]FCC, Emergency Connectivity Fund, updated April 12, 2023, https://www.fcc.gov/emergency-connectivity-fund, accessed June 21, 2023.

[136]FCC, "WCB Extends COVID Waivers Impacting Lifeline, ACP Tribal Subscribers," January 30, 2023, https://www.fcc.gov/document/wcb-extends-covid-waivers-impacting-lifeline-acp-tribal-subscribers-0, accessed June 21, 2023.

[137]FCC, "WCB Extends Delivery Deadline for Certain FY2020/21 E-Rate Services," released September 19, 2022, https://www.fcc.gov/document/wcb-extends-delivery-deadline-certain-fy202021-e-rate-services, accessed June 21, 2023.

[138]FCC, "FY 2022 Regulatory Fees Waiver Public Notice," released September 29, 2022, https://www.fcc.gov/document/fy-2022-regulatory-fees-waiver-public-notice-0, accessed June 21, 2023.

Appendix - List of Certificated ILECs and CLECs as of 12/31/2022

** Indicates the company did not respond to the Commission's data request as of June 16, 2023

Accelecom GA LLC
Access One, Inc.
ACN Communication Services, LLC
Airespring, Inc.
Airus, Inc.
Allstream
Altaworx LLC
American Dark Fiber, LLC
American Telephone Company LLC
ANEW Broadband, Inc.
ANPI Business, LLC
AT&T Corp.
AT&T Florida
ATC Outdoor DAS, LLC
Atlantis Communications LLC
ATN, Inc.
Bandwidth.com CLEC, LLC
Barr Tell USA, Inc.
BCM One, Inc.
BCN Telecom, Inc.
Consolidated Communications of Florida Company
BeCru
BIF IV Intrepid OpCo LLC
Blue Stream Fiber
Branch Communications, LLC
Bright House Networks Information Services (Florida), LLC
Broadband Dynamics, L.L.C.
Broadview Networks, Inc.
Broadvox-CLEC, LLC
Broadwing Communications, LLC
BT Communications Sales LLC
BullsEye Telecom, Inc.
Business Telecom, LLC
C3
Cablevision Lightpath LLC
Callis Communications, Inc.
Campus Communications Group, Inc.
Cathect Communications Inc.**
CBTS Technology Solutions LLC
CenturyLink
City of Bartow
City of Lakeland
City of Ocala
Clear Rate Communications, LLC
Cogeco US Enterprise, LLC d/b/a Breezeline
Cogent Communications of Florida
Comcast Business Communications, LLC
Comcast Digital Phone
Communications Authority, Inc
Comtech21, LLC
Consolidated Communications Enterprise Services, Inc.
Conterra Ultra Broadband, LLC
Convergia, Inc.
CoreTel Florida, Inc.
Cox Florida Telcom, L.P.
Crexendo Business Solutions, Inc.
Crosstel Tandem, Inc.
Crosstown Fiber IL LLC**
Crown Castle Fiber LLC
CSG-Cloud, LLC d/b/a Citrus Phones**
Custom Network Solutions, Inc.
Custom Tel, LLC**
Dais Communications, LLC
Data Stream Telecom of Florida Inc.**
DeltaCom LLC
Discount CLEC Services Corporation**
dishNET Wireline L.L.C.
DSCI, LLC
EarthGrid PBC
Easton Telecom Services, L.L.C.
Easy Telephone Services Company
Embarq Communications
ENA Services, LLC
eNetworks NC, LLC
ENGAGE COMMUNICATIONS
Enhanced Communications Network, Inc.
Entelegent Solutions, Inc.
ExteNet Asset Entity, LLC
ExteNet Systems, LLC
Faster.IO, Inc.**
FiberLight, LLC
First Choice Technology, Inc.
First Communications, LLC
FL Network Transport, LLC
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
Fusion Cloud Services, LLC
Georgia Public Web, Inc.**
GetGo Communications LLC
GIGAMONSTER NETWORKS, LLC
Gigapower, LLC (f/k/a Infrastructure Endeavors, LLC)
Global Capacity
Global Crossing Local Services, Inc.
Gold Data USA Inc.**
Granite Telecommunications, LLC
Great America Networks, Inc.
GRU Communication Services/GRUCom/GRU
GRUCom
Harbor Communications, LLC
Hargray of Florida, LLC
Hargray of Tallahassee LLC
Hayes E-Government Resources, Inc.
HD Carrier, LLC
HFA of Florida LLC
Home Town Telephone, LLC
Hudson Fiber Network Inc
inContact, Inc.
INdigital
INNOVATIVE TECH PROS**
Integrated Path Communications, LLC
Intelletrace, Inc.
Intellifiber Networks, LLC
Interactive Services Network, Inc.
InterGlobe Communications, Inc.
InterMetro Fiber, LLC
Intrado Communications, LLC
Intrado Safety Communications, Inc.
IPC Network Services, Inc.
JEA**
Keys Energy Services
Level 3 Communications, LLC
Level 3 Telecom of Florida, LP
Light Source Communications, LLC
Lightspeed CLEC, Inc.**
Lingo Telecom, LLC
Luxury Telecommunications LLC d/b/a Luxury Telecommunications
Maryland TeleCommunication Systems, Inc.
MassComm, LLC
MasTec Network Solutions, LLC**
MCC Telephony of Florida, LLC
McLeodUSA Telecommunications Services, L.L.C.
MetroNet
MetTel
Micro-Comm, Inc.
MIX Networks, Inc.
Mobilitie, LLC
MOSAIC NETWORX LLC
Motorola Solutions Connectivity, Inc.
MULTIPHONE LATIN AMERICA, INC.**
Myakka Communications, Inc.
Nebula Telecommunications of Florida LLC
NEFCOM
Neo Network Development, Inc.
Network Innovations, Inc.**
Network Telephone, LLC
Neutral Tandem-Florida, LLC
New Horizons Communications Corp.
NextCity Networks, LLC
NGA 911, L.L.C.
NOS Communications, Inc.
One Voice Communications, Inc.
Onvoy, LLC
Open Infra East Inc.
Opextel LLC d/b/a Alodiga**
PacOptic Networks, LLC
PaeTec Communications, LLC
PBX-Change
PeakNet, LLC
Peering Hub Inc.
Peerless Network of Florida, LLC
Phone Club Corporation
Pioneer Telephone
PowerNet Global Communications
Preferred Long Distance, Inc.
QuantumShift Communications, Inc.
RCLEC, Inc.
Reddot Networks Inc.
RingSquared Telecom LLC
SanTel Communications**
SBA DAS & Small Cells, LLC
Seminole Telecom of Florida, LLC
SH Services LLC**
Simwood Inc.
SKYNET360, LLC**
Smart Choice Communications, LLC
Smart City Metro
Smart City Networks, Limited Partnership
Smart City Solutions, LLC
Smart City Telecom

Southeastern Services, Inc.
Southern Light, LLC
Southern Telecom
Spectrotel of Florida LLC d/b/a Touch Base Communications
Spectrum Fiberlink Florida, LLC
SQF, LLC
Stanley Utility Contractor, Inc.
Stratus Networks, Inc.
Summit Broadband
Synergem Technologies, Inc.
T3 Communications, Inc.
TDS Telecom
Telco Experts, LLC
TelCove Operations, LLC
Telepak Networks, Inc.
TELETECH COMMUNICATIONS INC
Teliax, Inc.
Telrite Corporation
Tel-Star Communications of Florida Inc.**
Terra Nova Telecom, Inc.
TerraNovaNet, Inc.
Tillman FiberCo Florida, LLC
TIME CLOCK SOLUTIONS, LLC
Time Warner Cable Business LLC
Tone Communication Services LLC**
TotalComUSA
Touchtone Communications Inc. of Delaware
Tristar Communications Corp.**
Triton Networks LLC
Ubiquity Florida, LLC
United Commercial Telecom, LLC
Uniti Fiber LLC
Uniti National LLC
US LEC of Florida, LLC
US Signal Company, L.L.C.
USA FIBER
Vanco US, LLC**
Velocity, A Managed Services Company, Inc.**
Verizon Access Transmission Services
Verizon Select Services Inc.
Vero Networks
VoDa Networks, Inc.
Vodafone US Inc.
Voxbeam Telecommunications Inc.
WANRack, LLC
Wholesale Carrier Services, Inc.
Wide Voice, LLC
WiMacTel, Inc.
Windstream Florida, LLC
Windstream KDL, LLC
Windstream New Edge, LLC
Windstream Norlight, LLC
Windstream NuVox, LLC
Windstream Talk America, LLC
Wire 3 LLC
WonderLink Communications, LLC**
WOW! Internet, Cable and Phone
XO Communications

Glossary

5G	5G is the short name for fifth-generation wireless broadband technology. 5G provides higher bandwidth, faster speeds and coverage than the current 4G. 5G offers speeds of up to 1 Gb/s for tens of connections or tens of Mb/s for tens of thousands of connections.
Access Line	The circuit or channel between the demarcation point at the customer's premises and the serving end or class 5 central office.
Broadband	A term describing evolving digital technologies offering consumers integrated access to voice, high-speed data, video on demand, and interactive information delivery services.
C-Band	The electromagnetic radio spectrum between 4GHz and 8GHz. Specifically, 3.7-3.98GHz is being used to transmit 5G cellular data.
Circuit	A fully operational two-way communications path.
CLEC	*Competitive Local Exchange Company*. 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, 1996 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.
Facilities-based VoIP service	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.
Fixed Wireless Access (FWA)	Wireless broadband Internet service provided through stationary customer premise equipment that connects to a cellular network.
ILEC	*Incumbent Local Exchange Company*. 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 standards that keep the Internet functioning. It describes software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages.
Millimeter Wave (mmWave)	The band of electromagnetic radio frequency spectrum with wavelengths between 10 millimeters (30GHz) and 1 millimeter (300GHz) and are often associated with 5G deployments. mmWave signals are capable of high bandwidth transmission, but are limited to relatively short range, line-of-sight applications vs. longer range Wi-Fi (2.4GHz, 5GHz, 6GHz) and cellular (2.5-3.7GHz, 600MHz-700MHz) networks.
Over-the-Top VoIP service	VoIP service that is provided independently from a particular broadband connection and is transmitted via the public Internet.
Switched Access	Local exchange telecommunications company-provided exchange access services that offer switched interconnections between local telephone subscribers and long distance or other companies.
Time Division Multiplexing (TDM)	A method of transmitting and receiving independent signals over a common signal path. TDM circuit switched lines represent the traditional wireline access line data within this report and do not include VoIP connections.
Universal Service Fund	Provides compensation to 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)	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.
Voice over Internet Protocol (VoIP)	The technology used to transmit voice conversations over a data network using Internet Protocol.
Wireline	Synonymous with “landline” or land-based technology for providing telephone service.