



The Status of Local Telephone Competition in South Carolina

2017 Annual Report

South Carolina
Office of Regulatory Staff



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Acronyms

CDC	Centers for Disease Control and Prevention
CLEC	Competitive Local Exchange Company
DOR	South Carolina Department of Revenue
ETC	Eligible Telecommunications Carrier
FCC	Federal Communications Commission
ILEC	Incumbent Local Exchange Company
IP	Internet Protocol
ORS	South Carolina Office of Regulatory Staff
PSC	South Carolina Public Service Commission
SC USF	South Carolina Universal Service Fund
TRS	Telecommunications Relay Service
VoIP	Voice over Internet Protocol



OVERVIEW

- Status of competition in the local telephone exchange market
- Effects of changes that occurred in 2016
- Growth of broadband and wireless services
- New or changed state legislation
- Important decisions by the PSC
- Consumer complaints that the ORS receives and resolves
- New industry trends

Introduction

The South Carolina Office of Regulatory Staff (ORS) is required to compile information and monitor the status of local telephone competition in the State on an annual basis.¹ This document reports the status of competition in the local telephone exchange market in South Carolina, notes the effects of changes that occurred in the local telecommunications marketplace in 2017, and monitors the growth of broadband and wireless services within the competitive local exchange market. Across the nation only two other states publish an annual report on local telephone competition, Florida and Oregon.

The report also addresses other notable developments related to the telecommunications industry, such as new or changed state legislation, important decisions by the South Carolina Public Service Commission (PSC or Commission), consumer complaints that the ORS receives and resolves, and new industry trends that may affect the delivery of and access to critical telecommunications services in South Carolina.

Much of the data that appears in this report was provided to the Federal Communications Commission (FCC) by companies operating in South Carolina and was reported on FCC Form 477. According to the FCC, data was submitted by 16 Incumbent Local Exchange Companies (ILECs), some with multiple operating entities (25 ILECs serve the state of South Carolina); 168 non-ILEC, interconnected Voice over Internet Protocol (VoIP) providers; and 6 wireless carriers. The term Competitive Local Exchange Company (CLEC) no longer appears in FCC data reports.

¹ This report contains both data generated by the ORS and state data gathered by the FCC and posted on its website or published in reports.

Notable Telecommunications Events of 2017

PSC changes to the South Carolina Universal Service Fund (SC USF) were put into effect during 2017. These changes (initiated in 2016, Order No. 2016-22, in Docket No. 2015-290-C) require “wireless retail carriers operating in South Carolina... pursuant to S.C. Code Ann. Section 58-9-280(E)(2), to contribute to the SC USF in the same manner that other telecommunications service providers contribute.”

Act 181, initiating additional changes to the SC USF and effective 5/25/2016, was also implemented during 2017. These changes to the SC USF are itemized below:

- At the beginning of 2017 (1/1/17), the South Carolina Department of Revenue (DOR) began collecting State USF contributions from wireless service providers and retail outlets selling prepaid wireless services/minutes of use.
- The ORS, the SC USF Administrator, set the 2017 per-transaction fee for prepaid wireless sellers at \$0.50 per transaction, and the DOR collected this fee through its Form ST-406 during 2017. Sellers were allowed to retain a 3% administrative fee.
- As mandated by PSC Order No. 2016-22, wireless carriers are required to contribute to the SC USF and remit their payment to DOR.
- The ORS established each carrier’s (wireline and wireless) contribution amount, and the ORS or DOR invoiced carriers this amount monthly. The DOR sent invoices to wireless carriers, and the ORS sent invoices to regulated/certificated wireline carriers throughout the year.
- The DOR transferred the collected funds to the SC USF, and the ORS distributed the authorized support to all COLRs during 2017.

Continuing with changes to modernize the SC USF, the Commission issued Order No. 2016-837 in Docket No. 2016-267-C on December 15, 2016. This order required all interconnected VoIP service providers, “regardless of whether they hold a Certificate of Public Convenience and Necessity issued by the Commission,” to contribute to the SC USF based on their retail voice communications services. Interconnected VoIP service providers not currently contributing were directed to contribute on a prospective basis and to submit appropriate information to the SC USF Administrator (ORS) in the next reporting cycle.

Based on the Order, VoIP service providers began reporting using the SC USF Worksheet on August 1, 2017, and some of those reporting VoIP revenue began SC USF contributions in January 2018. The ORS is working to bring all VoIP service providers into compliance. VoIP companies that have reported to the FCC that they are operating in South Carolina form the list of companies that the ORS is attempting to contact and bring into compliance.

Local Telephone Competition

FCC Form 477 is used by the FCC to collect subscribership information from providers of local telephone service -- ILECs, CLECs, mobile telephone providers, and interconnected VoIP service providers. Traditional wireline service is rapidly being replaced by VoIP and wireless or cellular technology.

The local telephone market is defined as the delivery of voice telephone service to residential and/or business customers over a wired or wireless communications path regardless of the technology used. Traditional wired telephone service, VoIP service, and wireless or cellular telephone service make up the local telephone market today. Each of these services allows two or more individuals to engage in a simultaneous speaking conversation, even though they are not all located in the same place and are considered direct substitutes for each other. Local competition is measured by counting the number of access lines, telephone lines, or wireless handsets sold or controlled by each provider.

ILECs are the traditional local telephone companies that existed prior to the Federal Telecommunications Act of 1996. The term “local telephone service” is fast becoming obsolete as ILECs and CLECs are converting their services to VoIP technology, and wireless/cellular service continues to increase in dominance as the preferred personal communications device of most individuals.

The number of wired access lines as reported by the FCC in South Carolina peaked in 2002 and has gradually declined since that time. This trend may be attributed to the increasing number of households replacing their wireline telephone with a cell phone. This phenomenon has been studied extensively by the Centers for Disease Control and Prevention, National Center for Health Statistics (CDC). The most recent data published by the CDC estimates that in South Carolina 52% of all households now exclusively use a

wireless phone for communication, or they are “wireless-only.”² In households with children under age 18, representing younger families, the wireless-only percentage is nearly 64%.³

While VoIP service is gradually replacing traditional TDM-based telephone service, VoIP service is still delivered over a copper or fiber optic connection to the customer’s location. VoIP is further delineated as either interconnected or non-interconnected.⁴ Interconnected VoIP providers are required to contribute to the Federal Universal Service Fund (USF) and Federal Telecommunications Relay Service Fund (TRS).⁵ Some, though not all, interconnected VoIP providers are contributing to South Carolina’s USF and TRS funds as of the end of 2017. On the federal level, interconnected VoIP providers are generally being treated in many respects as traditional telecommunications carriers.

Based on South Carolina legislative and regulatory changes made during 2016, both cellular and VoIP providers are now, as of January 1, 2018, required to contribute to the South Carolina TRS Fund. In addition, based on two 2016 Commission orders, wireless carriers began contributing to the SC USF on January 1, 2017, and non-certificated VoIP providers began contributing to the SC USF on January 1, 2018.

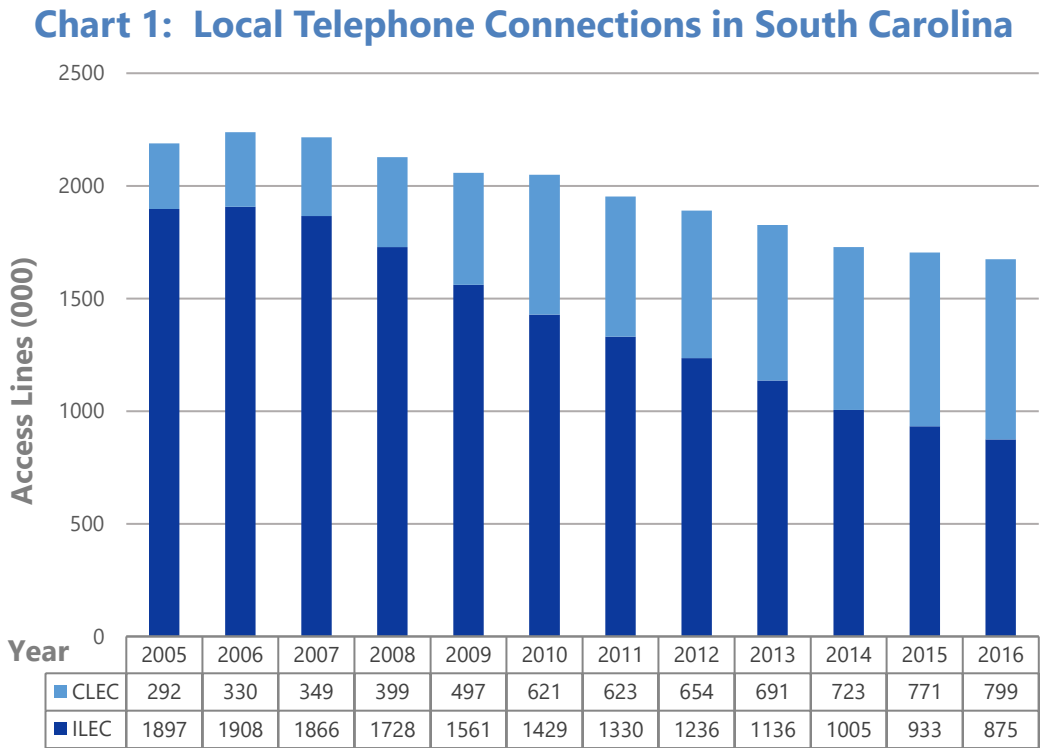


² NCHS, National Health Interview Survey, 2011 – 2015; U.S. Census Bureau, American Community Survey, 2010 – 2014; and infoUSA.com consumer database, 2011 – 2015. Table 1 Modeled estimates of the percent distribution of household telephone status for adults aged 18 and over, by state: United States, 2015
³ NCHS, National Health Interview Survey, 2011 – 2015; U.S. Census Bureau, American Community Survey, 2010 – 2014; and infoUSA.com consumer database, 2011 – 2015. Table 2 Modeled estimates of the percent distribution of household telephone status for children under age 18, by state: United States, 2015

⁴ See, 47 C.F.R. § 9.3 and 47 C.F.R. § 64.601(a).

⁵ See 47 C.F.R. § 64.604(c)(5)(iii)(A) for TRS and 47 C.F.R. § 54.706 for USF.

Chart 1 illustrates the gradual decline in total wired access lines occurring since 2006. Importantly, during that period ILEC lines declined by approximately 54% and have fallen by 61% since their peak in 2002.



SOURCE: Local Telephone Competition Status as of Dec. 31, 2016, issued by Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, Feb. 2018

Incumbent Local Exchange Carriers

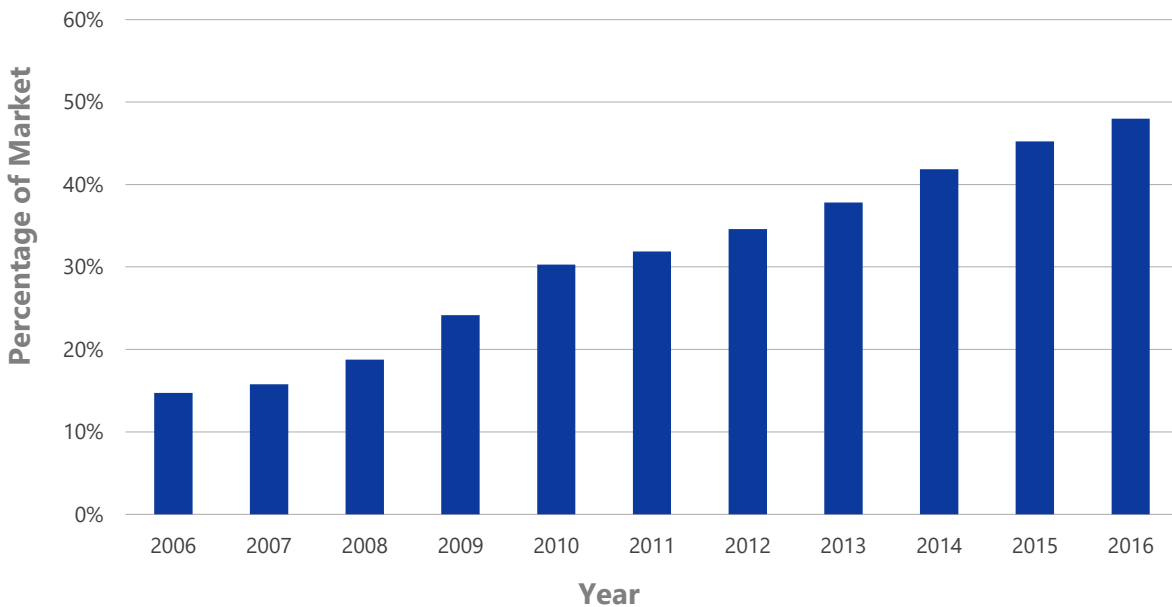
During 2016 the ILEC market share continued its steady decline in South Carolina, with market share dropping to 52%. In 2016, 24 of 25 ILECs in South Carolina were operating under the Alternative Regulation provisions of the Code, Section 58-9-576(B) or (C). One ILEC remained rate-of-return regulated in 2017 (*See Table 1, page 15*).

Competitive Local Exchange Carriers

The FCC now refers to competitive carriers as “Other (Non-ILECs),” no longer as CLECs. The ORS will continue to use Competitive Local Exchange Carrier (CLEC).

Chart 2 illustrates the growth in market share that South Carolina’s 180 CLECs have experienced since 2006. Based on access lines reported to the FCC, CLEC market share grew again in 2016 as it increased from 45% to 48% of the local telephone market.

Chart 2: CLEC Market Share Growth in SC Since 2006



SOURCE: Voice Telephone Services (fka - Local Telephone Competition Status) as of Dec. 31, 2016, issued by Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, Feb. 2018

VoIP Providers

As of December 2016, the FCC reported 168 VoIP providers serving subscribers in South Carolina. Some of these VoIP providers are certificated CLECs, and some are uncertificated providers of VoIP telephone service. In 2016, approximately 75% of CLEC wireline customers purchased their telephone service from a VoIP provider.⁶

⁶ Voice Subscriptions: Status as of December 31, 2016, Industry Analysis and Technology Division, Wireline Competition Bureau, Released February, 2018; Supplemental Table 1 – South Carolina.

Alternative Regulation

Prior to the development of competition in the telecommunications market, each ILEC's rates were regulated by the Commission based on the telephone utility's rate of return. With the passage of the federal Telecommunications Act of 1996, as well as legislative changes in South Carolina, ILECs are regulated in a more flexible manner. Section 58-9-576(C) provides local exchange companies the ability to offer nearly all retail local service on a deregulated basis.

If an ILEC or a CLEC opts for alternative regulation pursuant to Section 58-9-576(C) or Act 7, then its retail service offerings are deregulated – thereby allowing them the ability to set price, terms, and conditions without Commission review. In addition, an ILEC choosing Act 7 deregulation will be subject to a three-year phase-down of any SC USF support it receives, but it will continue to contribute to the SC USF. The Commission retains authority over wholesale services like switched access and services sold to other carriers, as well as limited authority over stand-alone basic residential lines.

Lifeline – Eligible Telecommunications Carriers

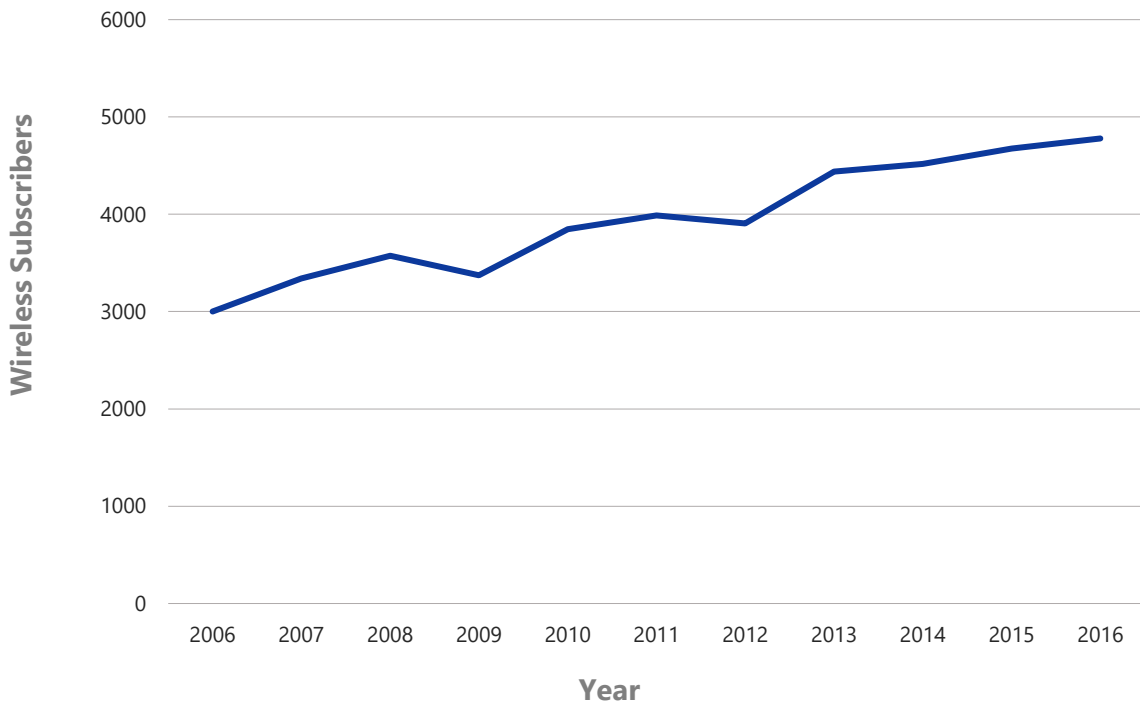
Beginning in 2007, South Carolina began accepting applications from carriers requesting permission to become Eligible Telecommunications Carriers (ETCs) offering Lifeline services to low-income households. In addition to the ILECs, South Carolina had 11 wireless Lifeline ETCs⁷ actively offering Lifeline at the end of 2017 that were receiving approximately \$17.6 million in total Lifeline support from the Federal Universal Service Fund during Calendar year 2017.

⁷ One South Carolina Lifeline ETC is authorized to provide both wireline and wireless lifeline service.

Wireless Carriers

In December 2016, six mobile wireless providers were operating in South Carolina.⁸ As reflected on [Chart 3](#), these wireless companies reported nearly 4.8 million wireless subscribers.

Chart 3: Total Wireless Telephone Subscribers in South Carolina

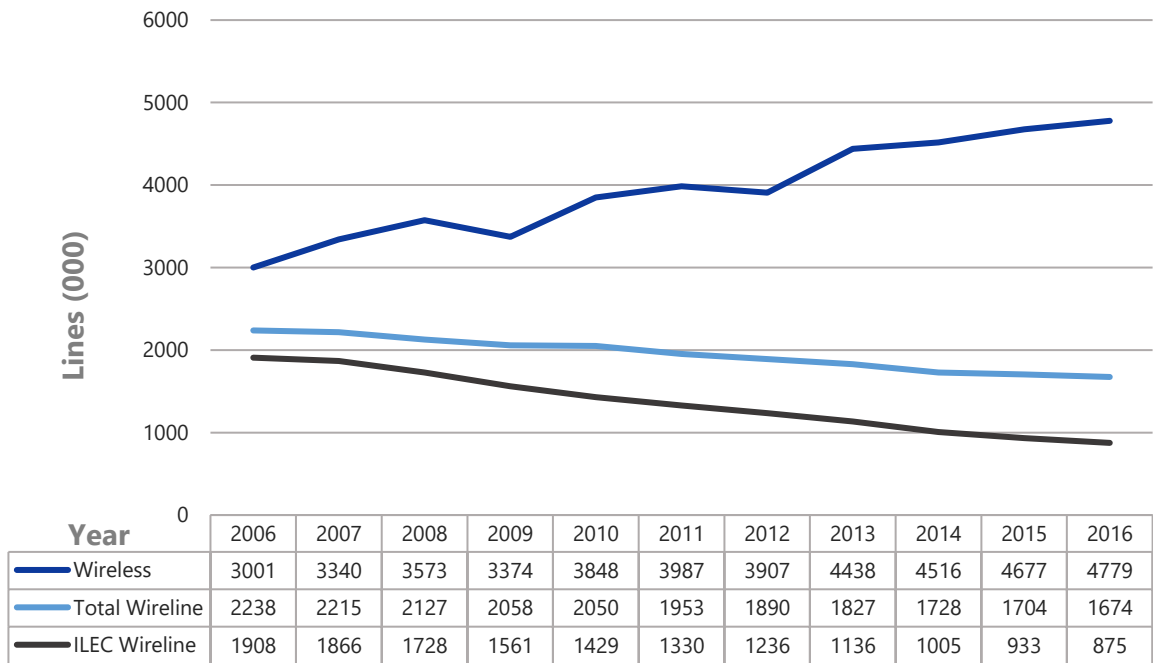


SOURCE: Voice Telephone Services (fka - Local Telephone Competition Status) as of Dec. 31, 2016, issued by Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, February, 2018

⁸ FCC Voice Telephone Services as of December 31, 2016.

Chart 4 provides a comparison of total wireless and wireline access lines in South Carolina from 2006 to 2016.

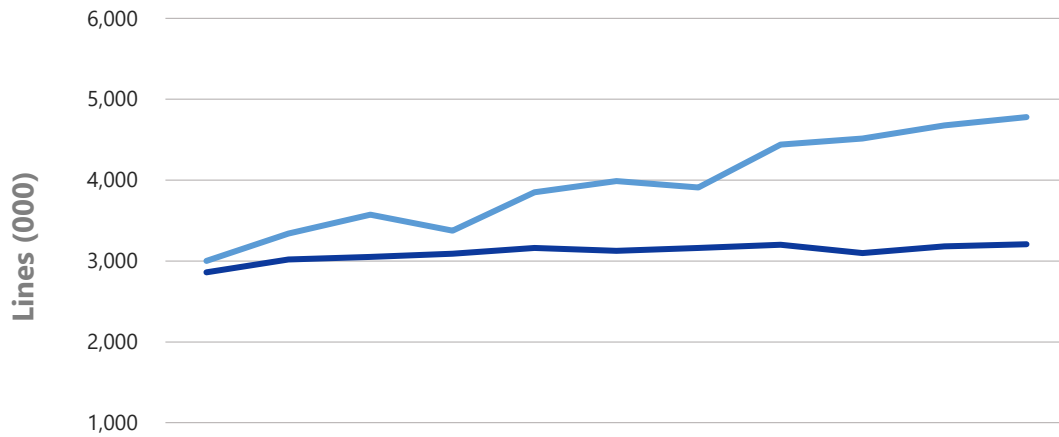
Chart 4: Wireline and Wireless Access Lines



SOURCE: Voice Telephone Services (fka - Local Telephone Competition Status) as of Dec. 31, 2016 Issued by Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, February, 2018

Chart 5 illustrates the ILEC and CLEC voice lines plus high-speed broadband connections (wireline combined) as compared with wireless connections.

Chart 5: Wireline Voice/Broadband and Wireless Access Lines



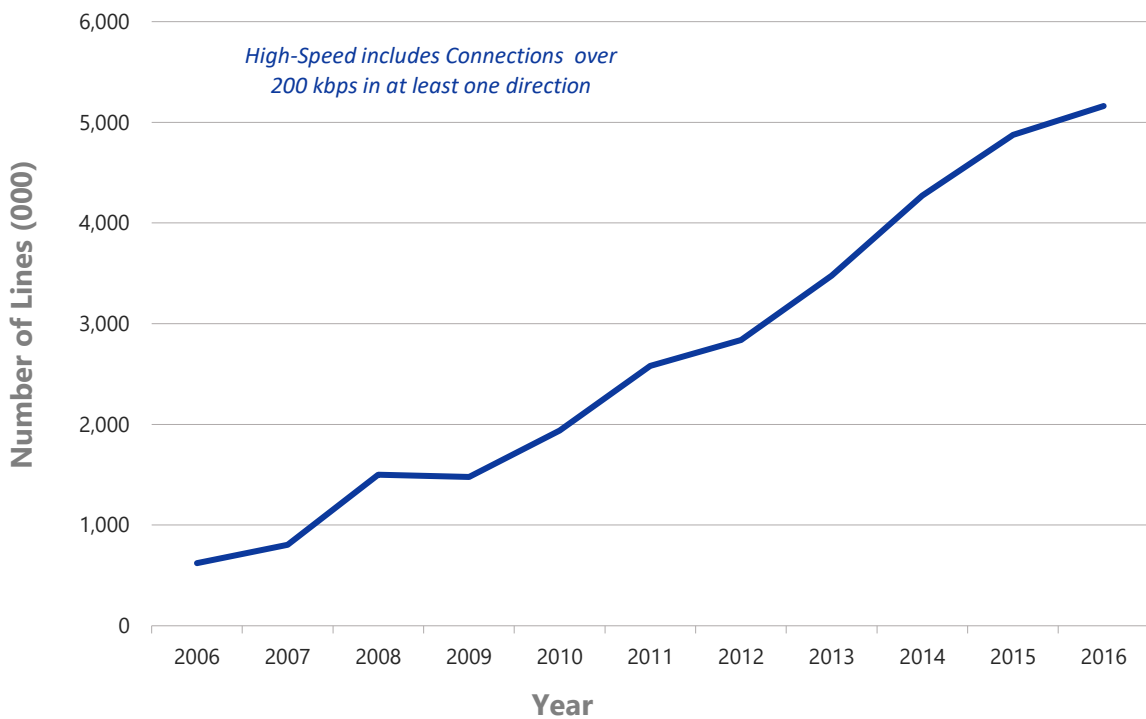
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Wireline Combined	2,860	3,018	3,052	3,090	3,162	3,127	3,162	3,199	3,096	3,181	3,207
Wireless	3,001	3,340	3,573	3,374	3,848	3,987	3,907	4,438	4,516	4,677	4,779

SOURCE: Internet Access Services, Status as of Dec 31, 2016 Issued by Industry Analysis and Technology Division of the FCC Wireless Competition Bureau, February 2018

Broadband Deployment

Broadband access has grown significantly in South Carolina. As illustrated in **Chart 6**, the number of high-speed internet-access lines has increased from 622,000 in 2006 to nearly 5.2 million in 2016. In fact, overall broadband access has soared past expectations due to several factors such as industry technology advances, the popularity of wireless broadband, and the expanding role broadband is taking both in residential and business applications. According to FCC data, nearly 70% of the 5.2 million broadband connections in South Carolina are mobile wireless broadband.

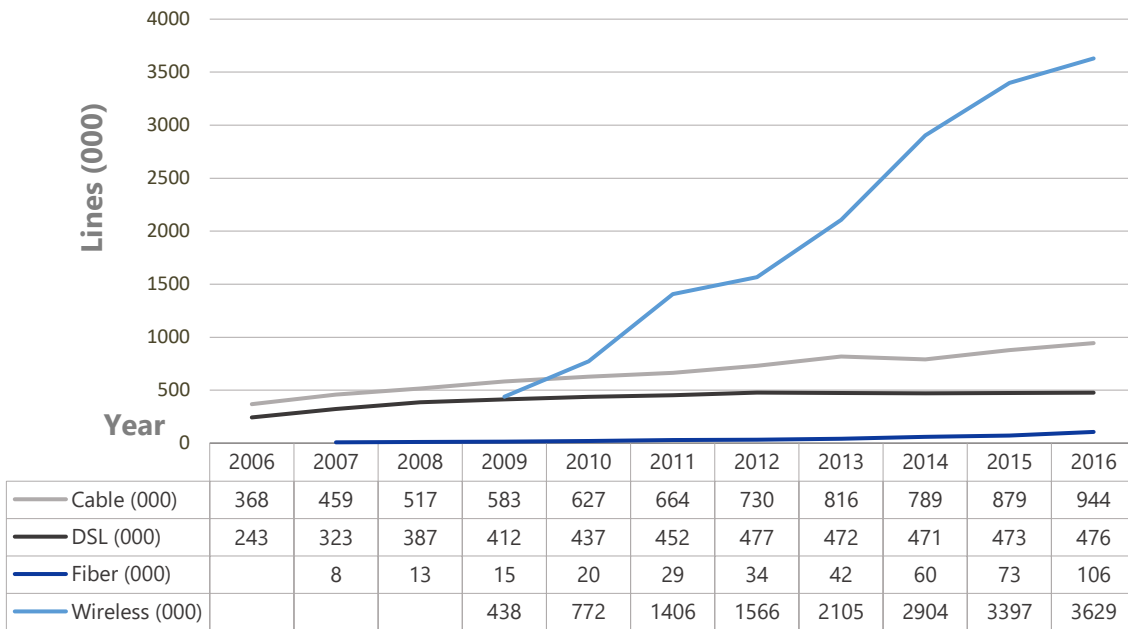
Chart 6: Total High-Speed Lines for Internet Access in South Carolina
Includes Mobile Wireless Broadband



SOURCE: Internet Access Services, Status as of Dec. 31, 2016, issued by Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, February 2018

Chart 7 shows the stunning growth of wireless broadband connections as compared to the other popular and growing broadband technologies. Approximately 3.6 million cell phone users in South Carolina have taken advantage of the availability of the smart phone and upgrades to the cellular networks of the major wireless carriers. Improvements in

Chart 7: High-Speed lines by Technology



SOURCE: Internet Access Services, Status as of Dec. 31, 2016 Industry Analysis and Technology Division of the FCC Wireline Competition Bureau, February 2018

wireline networks have occurred as well, but at a slower pace.

Consumer Services

The ORS tracks a wide range of consumer complaints related to regulated and non-regulated telecommunications services. **Chart 8** depicts a breakdown of complaint calls received by the ORS during 2017. By far, the largest area of complaints in telecommunications, 48%, relates to non-regulated aspects of the business. Service quality at 24% and miscellaneous complaints at 12% round out the top 3 complaint areas.

Chart 8: Consumer Services Division Telecommunications Complaints by Type, Number & Percentage - 2017

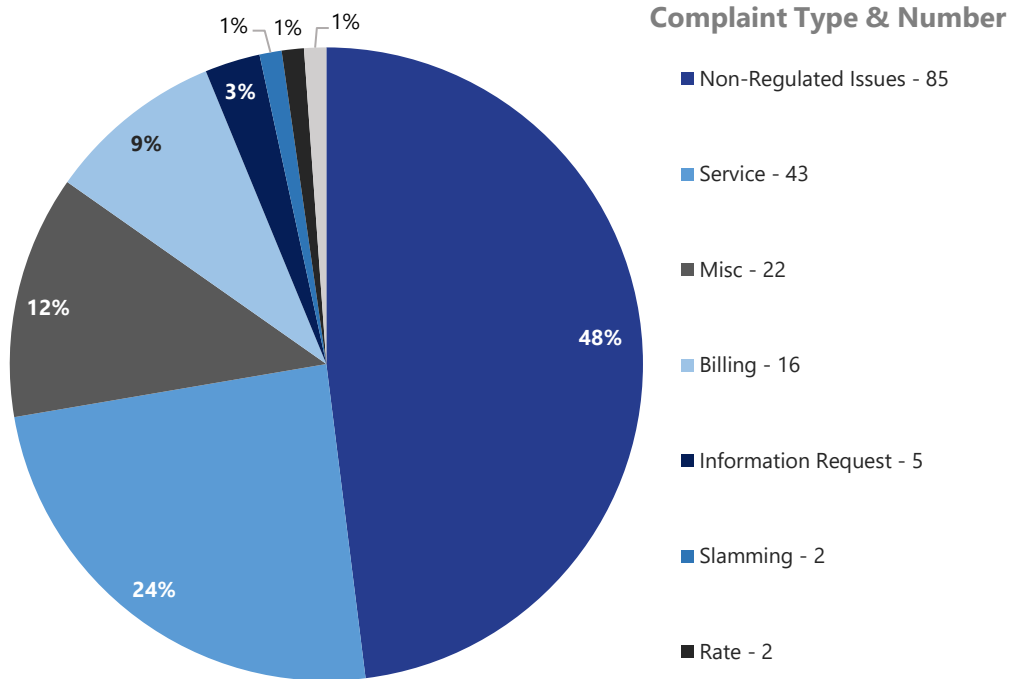


Table 1: Alternative Regulation: ILECs

Carrier	Alt. Reg. § 58-9-576(B)	Alt. Reg. § 58-9-576(C) Act 7	Rate of Return Regulation
United Telephone Company of Carolinas dba CenturyLink, fka Embarq, fka Sprint	29-Sep-97 ⁹		
BellSouth Telecommunications	13-Aug-1999 ⁹	1-Oct.-09 ¹⁰	
Frontier fka Verizon South, Inc.	14-Oct-2000 ⁹		
Windstream South Carolina	27-Sep-2002 ⁹		
Horry Telephone Coop.	30-Jan-2003 ⁹		
PBT Telecom	18-Feb-2006 ⁹		
Home Telephone Co.	7-Apr-2006 ⁹		
West Carolina Rural Tel. Coop.	16-Oct-2006 ⁹		
Piedmont Rural Telephone Coop.	12-Jan-2007 ⁹		
Lockhart Telephone Co.	9-Aug-2007 ⁹		
Farmers Telephone Coop.	1-May-2008 ⁹		
Bluffton Telephone Co.	4-Mar-2005 ¹¹		
Hargray Telephone Co.	4-Mar-2005 ¹¹		
McClellanville Telephone Co. (TDS)	30-May-2005 ¹¹		
Norway Telephone Co. (TDS)	30-May-2005 ¹¹		
St. Stephen Telephone Co. (TDS)	30-May-2005 ¹¹		
Williston Telephone Co. (TDS)	30-May-2005 ¹¹		
Fort Mill Telephone Co. dba Comporium	1-Aug-2005 ¹¹		
Lancaster Telephone Co. dba Comporium	1-Aug-2005 ¹¹		
Rock Hill Telephone Co. dba Comporium	1-Aug-2005 ¹¹		
Chester Telephone Co.	9-Aug-2007 ¹¹		
Ridgeway Telephone Co.	9-Aug-2007 ¹¹		
Chesnee Telephone Co.	23-Aug-2014 ⁹		
Palmetto Rural Telephone Coop.	1-May-2014 ⁹		
Sandhill Telephone Coop.			X

⁹ Company requested Alternative Regulation based on interconnection agreement.

¹⁰ Company requested Alternative Regulation based on Section 58-9-576(C) which effectively deregulates retail service pricing.

¹¹ Company requested Alternative Regulation based on determination that at least two wireless providers have coverage generally available in the LEC's service area.