Village of
Barrington Hills

Memo

To: Trustee Konicek

From: Robert Kosin

cc: Board of Trustees, Village President

Date: November 17, 2015

Re: Emergency Communication Land Line

The Village of Barrington Hills has for the last thirteen years required a land line telephone connection for 911 services as a condition of occupancy. This was a requirement adopted before the accuracy and prevalence of wireless technology.

Since then the usage of land lines has declined in residences in the Village. NOAA has moved its storm alerts to wireless telephones. Digital communication as texting has become so prevalent that the State had to adopt a prohibition of using it when driving. Technology is evolving to reach emergency services by texting. The Illinois Commerce Commission who regulate 911 services in the state did an assessment of the extent of usage of wireless communication and it is attached for reference.

With this changes there is then proposed the elimination of the requirement to use land line communication for emergency services. An ordinance has been drafted for consideration of the Board of Trustees.

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By Tim Landis

November 14. 2015 10:00PM

Annual report finds nearly half of Illinois households are wireless-only

Illinois households are at the halfway point in the consumer switch from landline to wireless-only phone service.

Roger Whitaker continues to use his landline phone because of its reliability during power outages. Justin L. Fowler/The State Journal-Register

An annual telecommunications update from the Illinois Commerce Commission this summer found that 48 percent of state households relied on wireless-only service at the end of 2014, continuing a decades-long trend that has continued to accelerate. Landline use dropped nearly 36 percent from 2005 to 2014 to approximately 5 million, even when Internet- and cable-based service was included.

In contrast, the ICC estimates that there are nearly 13 million wireless subscribers in Illinois.

The number of POTS lines — the regulatory acronym for "plain old telephone service" — in AT&T territory is dropping by 1,000 a day, according to company estimates. The state's other major carrier, Verizon Communications, sold its Illinois landlines in 2010 to Frontier Communications. The Federal Communications Commission in August set consumer notification guidelines for carriers planning to end traditional copper-line service.

Danisha Hall, ICC's director of diversity and community affairs, wrote in an email that the commission began tracking wireless-only households based on data from the Centers for Disease Control and Prevention in Atlanta.

"Households are identified as wireless-only if they include at least one wireless family (member), and if there are no (family members) with landline telephone service in the household," Hall wrote.

Illinois' switching is ahead of the nation, according to the CDC, which reported that 41 percent of households nationwide were wireless-only last year.

State regulators, too, have attempted to balance the rapid spread of wireless with the implications for emergency services, including 911.

"Which is better in an emergency is definitely circumstance-driven," Hall wrote. "For example, mobile might be important in an emergency. Additionally, while mobile coverage is almost ubiquitous, there are still areas where people are unable to acquire signals."

Telecommunications law

AT&T won changes in a rewrite of the Illinois Telecommunications Act this year that allows for a two-year phaseout of Consumer Choice plans that provide customers an option of basic landline phone service. The service is available for as little as $10 a month outside of Chicago, according to the Citizens Utility Board, a statewide consumer advocacy group. Customers already on the plan will remain until at least July 1, 2017.

The company maintains that there are ample low-cost alternatives available to consumers through wireless, cable and Internet. Low-income consumers can continue to apply for Consumer Choice plans through the federal Lifeline program.

The next big legislative fight when the current law expires in 2017 is likely to be over an "obligation to serve" provision that requires AT&T and other landline carriers to maintain the old copper-wire networks even as consumers flock to wireless.

"Nearly 50 percent of Illinois households are wireless-only, and most others already updated to modern landlines from either U-verse or cable," AT&T Illinois president Paul La Schiazza said in a written statement to The State Journal-Register.

"Yet, state policy requires our company to spend precious investment dollars maintaining 100 percent of the old rotary-dial network in our territory," La Schiazza said. Springfield is in AT&T territory.

AT&T estimates that only 18 percent of Illinois customers remain on dial-up lines. The company also is pushing for Illinois to join 17 of 21 states in AT&T territory that have authorized telecommunications companies to phase out the old networks once the FCC sets rules for the process.

Company spokesman Eric Robinson said any phaseout would include time for consumers to make the transition from landlines to wireless.

Many consumers consider Internet and cable phone service equivalent to traditional copper-wire service, he added.

"If you ask them whether they have a 'landline,' they'll say, 'Yes,' " Robinson said, "when they're really talking about the Internet or cable."

Reliability issues

The Citizens Utility Board and AARP Illinois are among groups fighting to keep the dial-up network mandate until wireless, cable and Internet alternatives provide the same kind of reliability as a copper wire, especially in emergencies.

"Those individuals that have traditional landlines have them for a reason," said Julie Vahling, associate state director for AARP Illinois. "They may live in an area that has poor cellphone coverage, or they may have a medical condition, and they want that reliability.

"Until we see the cellphone and voice (over Internet) industry with the same reliability as traditional landlines," Vahling said, "we're going to fight for consumers to have the right to make that choice."

CUB executive director Dave Kolata said the FCC has begun two small pilot projects to test the transition from landlines to wireless while still addressing issues such as 911 service, reliability, quality, home security and medical monitoring, access for low-income consumers and people with disabilities, and wireless network security.

The Illinois telecommunications law is revised every two years. While basic dial-up service survived the latest changes, Kolata said the issue will be back when the current law expires in the summer of 2017.

"We know it will keep coming up," Kolata said. "We're going to fight that battle again."

***

Plain old telephone service still has its followers

Plain old telephone service came in handy for Roger Whitaker after tornadoes struck Springfield in March 2006, causing widespread damage and knocking out power for days.

"The landline worked without a hitch," Whitaker said. "We were on the phone checking family members from the basement while the tornado was overhead."

The Whitaker household was without power for a week and without cable and Internet for 10 days. Whitaker, an electrical engineer, and his wife have smartphones. But they still have two old-fashioned copper landline phones through AT&T.

"I plan to keep them if AT&T will let me," Whitaker said.

Traditional dial-up, copper-line phone service still has loyal fans, based on a wireless vs.landline question posed to readers of The State Journal-Register. But as with nearly half of Illinois households, according to state data, the switch to wireless only continues.

Steve Proctor of Springfield wrote in an email that he dropped landlines in favor of cellular service in about 1999.

"The decision was based on cost, and the fact that 90 percent of calls received were from telemarketers at dinner," Proctor wrote.

Springfield real estate agent Phil Chiles, who relies heavily on mobile for his business, dropped his home landline service four years ago for much the same reason.

"We realized that most of the landline calls we were receiving were from telemarketers," Chiles wrote. "It was a little scary getting rid of our home phone after 60 years, but I have to say, I haven't missed it."

Not everyone is a fan of go-anywhere communication.

Despite urging from her family, Chatham resident Diane Theodor refuses to carry a cellphone.

"I do not understand why people feel they have to be at the beck and call 24/7 of family and friends," Theodor said. Her husband, however, does have a cellphone.

Deloris Cook of Springfield is among readers who have both wireless and landline service, and she wrote in an email that she intends to keep her landline as along as possible.

"The cellphone is a royal pain in the neck," Cook wrote. "The reception is not good at all times, and your call can be dropped in certain areas. My cellphone is for emergencies only."

— Contact Tim Landis: tim.landis@sj-r.com, 788-1536, twitter.com/timlandisSJR.

Cutting the cord

Number of landlines in Illinois, 2005-15

2005: 7.81 million

2006: 7.22 million

2007: 7.06 million

2008: 6.69 million

2009: 6.28 million

2010: 6.09 million

2011: 5.65 million

2012: 5.34 million

2013: 5.05 million

2014: 5.02 million

Note: Landline total include Internet- and cable-based lines as well as traditional phone lines.

— Source: Illinois Commerce Commission

— Contact Tim Landis: tim.landis@sj-r.com, 788-1536, twitter.com/timlandisSJR.

Annual Report on Communications Markets in Illinois

Submitted to the Illinois General Assembly
Pursuant to Section 13-407 of the
Illinois Public Utilities Act

Illinois Commerce Commission

527 East Capitol Avenue
Springfield, Illinois 62701
www.icc.illinois.gov

August 25 2015

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STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

August 25, 2015

The Honorable Members of the Illinois General Assembly
State Capitol
Springfield, Illinois

Dear Members of the Illinois General Assembly:

Enclosed is the Illinois Commerce Commission's Report to the General Assembly entitled "Annual Report on Communications Markets in Illinois."

This report is submitted to the Illinois General Assembly in compliance with Section 13-407 of the Illinois Public Utilities Act.

Sincerely,

Brien J. Sheahan
Chairman

527 East Capitol Avenue, Springfield, Illinois 62701 [TDD ("V/TTY") 217/782-7434]

Annual Report on Communications Markets in Illinois

Submitted to the Illinois General Assembly
Pursuant to Section 13-407 of the
Illinois Public Utilities Act

Illinois Commerce Commission
527 East Capitol Avenue
Springfield, Illinois 62701

August 25, 2015

EXECUTIVE SUMMARY

This report presents summary statistics on competition in local telephone services and the deployment of broadband services in Illinois. It is the fourteenth such Report submitted to the Illinois General Assembly by the Illinois Commerce Commission pursuant to Section 13-407 of the Illinois PUA. The first such report was submitted to the General Assembly on October 23, 2002.

The statistics presented in this report are compiled from data reported to the Illinois Commerce Commission, the Federal Communications Commission, and various other governmental entities. The report provides a snapshot of competition in the areas of telephone and broadband services. The following are selected highlights from the facts and findings in this Report:

- 41 incumbent local exchange carriers (ILECs) and 107 competitive local exchange carriers (CLECs) reported providing wireline telephone service to Illinois customers as of December 31, 2014.

- CLECs, including fixed voice over Internet protocol (VoIP) providers, provided approximately 2.2 million (or 44%) of the roughly 5 million reported total Illinois wireline telephone lines in service at year-end 2014. The number of CLEC reported wireline telephone lines statewide increased from approximately 2.0 million at year-end 2013 to approximately 2.2 million at year-end 2014.

- ILECs provided approximately 2.8 million (or 56%) of the roughly 5 million reported Illinois wireline telephone lines in service at year-end 2014. The number of ILEC reported wireline telephone lines decreased in Illinois from approximately 3.1 million at year-end 2013 to approximately 2.8 million at year-end 2014.

- Approximately 9 million Illinois retail wireline telephone lines were reported at year end 2001. Approximately 5 million Illinois retail wireline telephone lines were reported at year end 2014. Thus, reported Illinois retail wireline telephone lines decreased by approximately 4 million (or 44%) between year-end 2001 and year-end 2014.

- Mobile-wireless subscribership stayed relatively constant during 2013. The number of wireless subscribers in Illinois as of December 2013 (approximately 12.8 million) exceeds the number of reported wireline subscribers for all periods since the Commission began producing reports pursuant to Section 13-407.

- Data collected by the Centers for Disease Control (CDC) indicate that in 2014 approximately 48% of the adult population in Illinois lived in households with only wireless service. In conjunction with the estimated percentage of wireline telephone lines provided by wireline CLECs (both reported and estimated unreported lines) and the percentage of households with no phone service

available, the CDC figures suggest that approximately 26% of Illinois residential customers received wireline service from an ILEC in 2014 and that approximately 74% of Illinois residential customers did not take wireline service from an ILEC.

- Illinois providers served nearly 11.9 million Illinois broadband customers as of December 31, 2013.

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LIST OF ACRONYMS

ADSL – Asymmetric Digital Subscriber Line
BOC – Bell Operating Company
CDC – Centers for Disease Control
CLEC – Competitive Local Exchange Carrier
DSL –Digital Subscriber Line
DSLAM – Digital Subscriber Line Access Multiplexer
Gbps – Gigabits per Second
HFC – Hybrid Fiber-Coaxial
ILEC – Incumbent Local Exchange Carrier
ISP – Internet Service Provider
FCC – Federal Communications Commission
Kbps – Kilobits per Second
LATA – Local Access and Transport Area
LEC – Local Exchange Carrier
LERG – Local Exchange Routing Guide
Mbps – Megabits per Second
NTIA -- National Telecommunications and Information Administration
PCI – Partnership for a Connected Illinois
PSTN -- Public Switched Telephone Network
PUA – Public Utilities Act
UNE – Unbundled Network Element
UNE-L – Unbundled Network Element – Loop
UNE-P – Unbundled Network Element – Platform
VGE – Voice Grade Equivalent
VoIP – Voice over Internet Protocol

I. INTRODUCTION

Section 13-407 of the Illinois Public Utilities Act (PUA) requires that the Illinois Commerce Commission (Commission) monitor and analyze the status of competition in Illinois telecommunications markets, and to annually report its findings to the Illinois General Assembly.

PUA Section 13-407 was amended on June 15, 2010 with the enactment of P.A. 096-0927. Among other things, these amendments explicitly require the Commission to include analyses of broadband services in its Report, and also direct the Commission to collect and evaluate information from registered interconnected VoIP providers in Illinois.

This current Report, dated August 25, 2015, summarizes competitive developments in wireline and wireless telephone and broadband services, updated to reflect:

- the most recent available information reported to the Commission (as of December 31, 2014),
- the most recent data made available by the FCC (as of December 31, 2013) concerning high speed and wireless service provisioning,
- the most recent broadband deployment information made available in the National Broadband Map[1] (as of June 30, 2014) by the FCC and the National Telecommunications and Information Administration (NTIA).

The bulk of the wireline telephone data provided by Illinois carriers and compiled by Commission Staff is displayed in Appendix B of this report (Tables B1 through B3). Selected data from these tables are highlighted and displayed in several sections of the Report.[2]

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[1] See http://www.broadbandmap.gov/.

[2] The bulk of the information provided herein reflects data reported by ILECs, CLECs, and Interconnected VoIP providers measuring provisioning as of December 31, 2014.

II. TELEPHONE SERVICES

A. Overview

Wireline telephone service, as that term is used in this report, refers to basic local voice service provided over wireline network facilities. This service enables the end-user to place and receive calls to and from any other user on the Public Switched Telephone Network (PSTN), but, as the name suggests, does so only through physical wires or other comparable technologies from a fixed location (e.g., the customer's premises). The information presented in this section of this report focuses on the local line (or loop) that connects end-users to the PSTN, enabling the provision of wireline telephone service.

Technologies used to provide wireline telephone service vary. Local exchange carriers (LECs) traditionally have provisioned wireline telephone service over a "twisted" pair of copper wires and electronics that enable the customer to make or receive a single phone call. Carriers increasingly provide wireline telephone service over alternative technologies, such as fiber optics and associated electronics which allow multiple customers to make simultaneous phone calls over a single fiber optic strand. To enable uniform reporting and analysis of wireline telephone service regardless of the technologies utilized, the information presented herein is reported by voice grade equivalent (VGE) lines. Carriers report the number of lines provided by measuring the number of simultaneous phone calls that their customers are able to make or receive. This uniformity ensures direct comparability for purposes of reporting and analysis.

Two general classes of LECs provide wireline telephone service in Illinois: incumbent local exchange carriers (ILECs) and competitive local exchange carriers (CLECs). An ILEC is a telecommunications carrier (including its successors, assigns, and affiliates) that historically has served as the exclusive provider of wireline local telephone service in a specific service territory. CLECs are competitive carriers authorized and certificated by the Commission to provide local telephone service in competition with ILECs. As used herein, CLECs also include fixed voice over Internet protocol (VoIP) providers that are registered with the Commission. Some telecommunications carriers operate as both an ILEC and CLEC.[3]

The Illinois PUA and the Federal Telecommunications Act of 1996 encourage and endorse the development of competition in local

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[3] Such carriers were requested to report to the Commission information separately for ILEC and CLEC operational units. Because of mergers and acquisitions, some ILECs have affiliates that are certified as CLECs and are providing lines within their incumbent local service areas. For purposes of this report all lines provided by an affiliate of an ILEC in that ILEC's service area have been treated as though provided by the ILEC. The approach adopted here with respect to the merged entities, to the extent feasible given the information supplied by the companies, minimizes the error of counting affiliates as competitors and of excluding competitive activity by ILEC affiliates outside their affiliated ILEC service areas.

telecommunications services. Together, these provide a framework for competitors to enter local markets by three fundamental and distinct methods:

- Building complete telecommunications networks using their own facilities,
- Leasing a portion of the facilities needed to serve end-user customers from ILECs as unbundled network elements (UNEs),
- Purchasing telecommunications services from ILECs at discounted prices and reselling these services to customers.

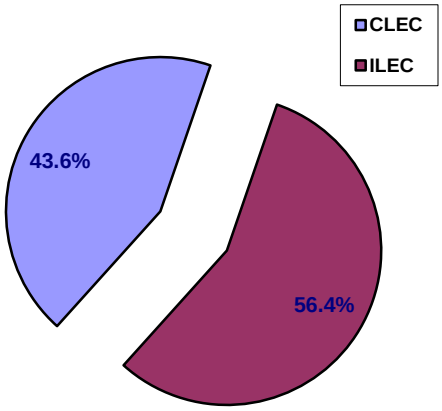
Over time, competitors have increasingly adopted additional methods of entry, including:

- Leasing all or a portion of the facilities needed to serve end-user customers from ILECs under commercial agreements,
- Leasing or purchasing telecommunications services from non-ILECs at discounted prices and reselling these services to customers,
- Providing telephone service over broadband connections and/or using Internet protocol facilities and software.

Regardless of the method utilized by a CLEC, significant cooperation and coordination between all carriers is crucial to the maintenance and proper operation of the various interconnected communications networks. This remains true even where a CLEC has deployed a network utilizing 100% of its own facilities. Even under these circumstances, telephone traffic must be passed back and forth efficiently and reliably between the networks of all ILECs and all CLECs.

B. Statewide Competition In Retail Wireline Telephone Service in Illinois

Figure 1: ILEC and CLEC Retail Wireline Telephone Market Shares



As Figure 1 shows, at year-end 2014, reporting CLECs provided approximately 44% of all reported retail wireline telephone lines in Illinois. Approximately 5 million total retail wireline telephone lines were reported in Illinois. ILECs provided approximately 2.8 million lines (or 56%), while reporting CLECs provided approximately 2.2 million lines (or 44%). Table 1 displays these figures and comparable year-end figures for years 2001 through and including 2014.

Table 1: Retail Wireline Telephone Lines in Illinois

Date	Total Lines	ILEC Lines	CLEC Lines	CLEC Share
Dec 2001	9,036,493	7,628,679	1,407,814	16%
Dec 2002	8,727,943	7,029,967	1,697,976	19%
Dec 2003	8,327,835	6,549,268	1,778,567	21%
Dec 2004	8,103,503	6,262,826	1,840,677	23%
Dec 2005	7,805,958	6,462,064	1,343,894	17%
Dec 2006	7,221,713	6,108,281	1,113,432	15%
Dec 2007	7,061,103	5,684,221	1,376,882	20%
Dec 2008	6,691,734	5,228,376	1,463,358	22%
Dec 2009	6,278,499	4,810,584	1,467,915	23%
Dec 2010	6,091,400	4,307,415	1,783,985	29%
Dec 2011	5,645,938	3,852,215	1,793,723	32%
Dec 2012	5,337,103	3,460,976	1,876,127	35%
Dec 2013	5,047,575	3,092,942	1,954,633	39%
Dec 2014	5,023,177	2,835,215	2,187,962	44%

As Table 2 shows, 41 ILECs provided wireline telephone lines in Illinois in 2014.[4] The 4 largest ILECs (AT&T, Frontier, Consolidated, and CenturyLink)

[4] Fluctuation in ILEC counts are explained over time by changes in common control and certain reporting inconsistencies. Prior to 2004, four ILECs, C-R Telephone Company, El Paso Telephone Company, Odin Telephone Company, and Yates City Telephone Company, now under the control of Fairpoint Communications, were reported separately. Beginning in 2005, these entities were counted and reported as a single ILEC. Mid-Century Telephone Cooperative, Inc. subsequently replaced Yates City as the ILEC in the Yates City's ILEC service area. Its line counts are no longer included within the Fairpoint ILEC lines, but rather within the Mid-Century lines. Prior to 2004, two ILECs, Marseilles Telephone Company and Metamora Telephone Company, under the common control of MTCO Corporation were reported separately. Beginning in 2005, these entities were counted and reported as a single ILEC. Three mutual incumbent local exchange carriers, Clarksville Mutual Telephone, Grandview Mutual Telephone, and Leonore Mutual Telephone, were not required pursuant to Section 13-407 of the Illinois Public Utilities Act to and did not report line counts to the Commission for year-end 2010 and year-end 2011. Similarly, for 2012, 2013, and 2014 four mutual incumbent local exchange carriers, Clarksville Mutual Telephone, Grandview Mutual Telephone, Kinsman Mutual Telephone Company, and Leonore Mutual Telephone, were not required pursuant to Section 13-407 of the Illinois Public Utilities Act and did not, with the exception of Kinsman Mutual Telephone Company which reported in 2013 and 2014, report line counts to the Commission for year-end 2012, 2013, and 2014. Additionally, one ILEC, Grafton Telephone Company, failed to respond to the Commission's CDR in time for inclusion for year-end 2013. As of July 1, 2010, Frontier assumed control of ILEC properties formerly under the control of Verizon. One mutual incumbent local exchange carrier, Clarksville Mutual Telephone, did not report line counts to the Commission for year-end 2008 and year-end 2009. It is included in ILEC carrier counts for 2008 and 2009. Year-end 2008 and year-end 2009 line counts for this entity were assumed to be the same as line counts reported by this entity for year-end 2005. Two mutual incumbent local exchange carriers, Clarksville Mutual Telephone and Kinsman Mutual Telephone Company, did not report line counts to the Commission, but are included in ILEC carrier counts for 2006 and 2007. Year-end 2006 and 2007 line counts for these two entities were assumed to be the same as line counts reported by these entities for year-end

provided approximately 98% of all ILEC retail wireline telephone lines, while the remaining 37 ILECs provided approximately 2% of the total ILEC lines in Illinois.

One-hundred-seven (107) CLECs reported providing retail wireline telephone service in Illinois in 2014.[5] Of these 107 CLECs, the 4 largest (Comcast, Windstream, Call One, and Verizon) accounted for approximately 71% of all reported CLEC retail wireline telephone lines, while the remaining 103 CLECs provided approximately 29% of all reported CLEC retail wireline telephone lines.

Table 2: Retail Wireline Telephone Providers in Illinois

Date	*No. of Retail wireline telephone Providers Reporting*	*No. of ILEC wireline telephone Providers Reporting*	*No. of CLEC wireline telephone Providers Reporting*
Dec 2001	82	47	35
Dec 2002	94	49	45
Dec 2003	102	49	53
Dec 2004	114	49	65
Dec 2005	114	45	69
Dec 2006	136	45	91
Dec 2007	125	45	80
Dec 2008	132	45	87
Dec 2009	129	45	84
Dec 2010	123	41	82
Dec 2011	117	41	76
Dec 2012	129	40	89
Dec 2013	128	40	88
Dec 2014	148	41	107

C. Competition from Wireless and VoIP Providers

As Table 1 shows, the total reported retail wireline telephone lines fell from slightly over 9 million to approximately 5 million, or approximately 4 million lines (nearly 44%) between year-end 2001 and year-end 2014. These reductions in total reported lines are consistent with other evidence that customers are substituting non-reported (and non-reporting) services for reported wireline telephone services. Two such non-reported (and non-reporting) services are:

2005. Two ILECs, Bergen Telephone Company and Sharon Telephone Company, failed to respond to the Commission's CDR for year-end 2001.

[5] These figures treat affiliated CLECs under common control as a single competitive entity.

wireless mobile (or cellular) service and nomadic VoIP (Voice over Internet Protocol) service.

In the past, telecommunications customers generally purchased cellular service as a complement to, rather than as a substitute for, traditional wireline telephone service.[6] Over time, survey data and substitution studies indicate that consumers increasingly are substituting wireless service for wireline service.[7] Because this report summarizes competitive substitution for ILEC wireline services, wireless substitution for wireline services is increasingly influencing the competitive information reported.

VoIP services also substitute for traditional wireline telephone service. Many VoIP services closely resemble traditional circuit switched telephone service, but are provided using Internet protocol technologies. Variations of VoIP service include non-nomadic, i.e., facilities-based services, which customers may use from a single location only, and nomadic services, which can be accessed from multiple locations (e.g., from any broadband access point). Customers subscribing to VoIP services appear to do so in substitution of, rather than in addition to, their traditional wireline telephone service.

Reported reductions in wireline telephone lines in Illinois between 2001 and 2009 likely were attributable, in part, to the fact that both nomadic and non-nomadic VoIP lines were not fully accounted for in the total reported line counts. In 2010, Public Act 96-0927 required non-nomadic VoIP providers (registered interconnected VoIP providers) to provide basic information to the Commission. Subsequent reporting compliance by non-nomadic VoIP providers as a result of Public Act 96-0927 accounts for some of the increase in reported CLEC lines between 2009 and 2010.

While registered VoIP providers now report their VoIP lines counts to the Commission, nomadic VoIP providers do not.

Table 3 provides residential market share estimates with wireless substitution included. Data collected and reported by the Centers for Disease Control indicate in 2014 that an estimated 48.0% of the adult population in the mid-west lived in households with only wireless service.[8] The FCC reported that an

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[6] Since provider reported line counts, like those summarized in this report, do not reveal whether and where customers have substituted cellular service for some or all of their traditional wireline telephone lines, line count based analyses of competition have generally excluded wireless lines from counts used to calculate incumbent carrier market shares.

[7] Federal Communications Commission, Seventeenth Report, In the Mater of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, DA 14-1862, Released December 18, 2014, Table III.C.ii.

[8] Stephen J. Blumberg and Julian V. Luke, *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2014*, National Center for Health

additional 3.5% of households in Illinois had no voice service in 2014.[9] Assuming that 3.5% and 48.0% of what would otherwise be residential wireline lines were displaced by no service or wireless substitution, respectively, Table 3 displays the estimated overall degree to which residential consumers have substituted other services for traditional ILEC provided wireline service.[10]

Table 3: Retail Residential Lines and Market Shares in Illinois (with Estimated Wireless Only Households and Estimated Households with No Phones)

Date	*Total Lines*	*ILEC Lines*	*CLEC Lines*	*No Phone Lines*	*Wireless Only Lines*
Dec 2014	5,546,804 (100%)	1,419,042 (25.6%)	1,271,158 (22.9%)	194,138 (3.5%)	2,662,466 (48.0%)

The estimates displayed in Table 3 suggest that approximately 26% of Illinois residential customers received wireline service from an ILEC in 2013, and approximately 74% of Illinois residential customers did not take wireline service from an ILEC.[11]

D. Retail Wireline Telephone Competition by LATA

This section of the report provides an overview of wireline telephone competition broken down by Local Access and Transport Area (LATA). LATAs are the geographic areas within which Bell Operating Companies (BOCs), such as Ameritech Illinois (now AT&T Illinois) were permitted to carry telephone traffic following their divesture from AT&T in 1984.

There are fourteen LATAs with substantial geographic areas in Illinois which contain a significant number of Illinois customers. An additional four LATAs lie

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Statistics, Centers for Disease Control, June 23, 2015, *available at* http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201506.pdf.

[9] FCC, Universal Service Monitoring Report, CC Docket No. 96-45 (Data through September 2014), Released December 2014, at Table 6.8.

[10] The estimates here were computed by assuming that the estimated 2,690,200 residential lines (including non-reported E9-1-1 lines) represent 48.5% (or 100% - 3.5% - 48.0%) of all lines that would, with 100% penetration and no wireless substitution, be provided to residential telephone customer in Illinois. These estimate should be interpreted with caution as they will not be precise if, for example, the 48.0% of the adult population in Illinois living in households with only wireless service would not purchase 48.0% of all lines that would otherwise, with 100% penetration and no wireless substitution, be provided to residential telephone customer in Illinois.

[11] The estimates in Table 3 do not fully capture the degree to which consumers have substituted away from ILEC wireline services. Notably, many customers that still subscribe to ILEC wireline phone service also subscribe to wireless service. Many also subscribe to broadband service. Such customers almost certainly rely on wireless and broadband services to partially replace their ILEC wireline service (for example, substituting wireless calls, VoIP calls, and text messages for calls that they formerly would have made using their ILEC wireline services).

predominately outside of Illinois and encompass relatively few Illinois customers.[12] Information applicable to the Illinois portion of these 4 LATAs will be included with information for the 14 LATAs that lie predominately in Illinois.[13] Additional detail concerning Illinois LATAs is presented in Appendix A.

Table 4 – Illinois LATA Demographic Data

U.S. Census 2010

LATA Name	*Area (Sq. Miles)*	*Population*	*No. of Households*	*Population per Sq. Mile*	*Households per Sq. Mile*
Chicago, IL	8,504	8,725,868	3,199,681	1,000	367
Rockford, IL [1]	2,124	425,008	164,759	209	81
Springfield, IL	3,028	362,039	150,834	119	49
St Louis, MO	6,718	801,380	314,902	124	49
Champaign, IL [2]	3,635	347,007	139,908	93	38
Davenport, IA	2,058	217,944	90,141	101	42
Peoria, IL	4,834	476,393	191,089	101	41
Sterling, IL	2,966	235,082	90,941	85	33
Forrest, IL	3,698	281,640	108,458	73	28
Cairo, IL	4,863	313,137	127,451	63	26
Mattoon, IL	4,248	220,444	87,598	53	21
Quincy, IL	3,682	159,855	63,531	41	16
Macomb, IL	3,248	128,972	52,301	42	17
Olney, IL	4,309	135,863	55,378	32	13
Total - All LATAs	57,914	12,830,632	4,836,972	222	84
Average	4,137	916,474	345,498	---	---
Standard Deviation	1,673	2,172,433	794,349	---	---

[1] Includes information for those portions of the Southeast and Southwest Wisconsin LATAs located in Illinois.

[2] Includes information for those portions of the Indianapolis and Terre Haute Indiana LATAs located in Illinois.

Reporting and analysis of wireline telephone data by LATA has several important advantages. First, disaggregation of statewide information into 14 separate LATA markets illustrates important competitive differences across Illinois markets and regions that cannot be discerned from data aggregated at the state level. Second, LATAs are a natural unit for the reporting of many types of information by telephone companies. Notably, the telephone numbers provided to

[12] Although LATA boundaries were created in order to delineate the geographical area within which BOCs could offer long distance services, other LATA boundaries have been created in order to segment non-BOC service territories. The LATA geography adopted here follows Telcordia Technologies, Inc. ("Telcordia" f/k/a Bellcore) conventions as delineated in the local exchange routing guide (LERG).

[13] Information is aggregated in this manner to protect the confidentiality of individual carrier information reported to the Commission.

LECs for assignment to their customers are, with limited exceptions, assigned uniquely to LATAs.[14] This permits the Commission to readily identify the LATAs within which telephone customers reside.[15] Finally, data disaggregated by LATA still are sufficiently aggregated to protect sensitive competitive information, and the proprietary concerns of local telephone service providers.[16]

Table 4 displays basic demographic information for each Illinois LATA. It reveals that there is considerable variation in LATA demographics within Illinois. Not surprisingly, the Chicago LATA surpasses all other Illinois LATAs both in total population and population density.

Table 5 shows CLEC market shares by LATA. These market share estimates are based upon reported wireline telephone lines.

Table 5 – CLEC Market Shares by LATA

December 31, 2014

LATA Name	*Reported CLEC Market Share*	*Reported CLEC Residential Market Share*	*Reported CLEC Business Market Share*
Statewide	43.6%	47.3%	39.3%
Chicago, IL	46.5%	50.6%	42.0%
Rockford, IL[1]	52.8%	57.9%	45.3%
Cairo, IL	18.9%	19.3%	18.4%
Sterling, IL	38.8%	47.7%	24.9%
Forrest, IL	32.7%	44.5%	17.9%
Peoria, IL	41.6%	46.9%	34.2%
Champaign, IL[2]	37.2%	44.5%	28.6%
Springfield, IL	34.6%	46.1%	22.8%
Quincy, IL	25.6%	20.0%	32.2%
St Louis, MO	43.5%	38.3%	50.5%
Davenport, IA	27.8%	30.3%	24.0%
Mattoon, IL	12.5%	15.2%	8.3%
Macomb, IL	24.2%	27.7%	18.1%
Olney, IL	15.5%	16.5%	14.0%

[14] Traditionally, blocks of telephone numbers have been assigned uniquely to rate exchange areas, which in turn, have been uniquely assigned to LATAs.

[15] The use of more "traditional" means to identify the location of individual telephone customers, such as the county of residence, is, at best, problematic, since telephone numbers are assigned to geographic areas with boundaries that are not congruent with the boundaries of the more traditional geographical divisions.

[16] Per the Commission's Competition Data Request, the Commission is offering proprietary treatment to individual company retail provisioning information. Therefore, all retail provisioning numbers have been aggregated into carrier classes.

E. CLEC Methods of Provisioning Retail Wireline Telephone Services

As previously noted, CLECs can provide wireline telephone service to customers via several methods:

- Building and using their own facilities exclusively,
- Leasing a portion of the facilities needed to serve end-user customers from ILECs as unbundled network elements,
- Leasing all or a portion of the facilities needed to serve end-user customers from ILECs under commercial agreements,
- Purchasing telecommunications services from ILECs at discounted prices and reselling these services to customers,
- Leasing or purchasing telecommunications services from non-ILECs at discounted prices and reselling these services to customers, and
- Providing telephone service over broadband connections and/or using Internet protocol facilities.

These methods are not mutually exclusive; they can each be employed by a particular CLEC to provide services at different times and/or in different regions. For example, a CLEC may deploy its own network in a particular part of the state while using resale to provide services to consumers in another area of the state.[17]

Table 6 shows that at year-end 2014, approximately 1,798,000 CLEC retail wireline telephone lines in Illinois (82% of the CLEC total) were provisioned entirely over CLEC owned facilities or using Internet protocol technologies. Approximately 209,000 CLEC retail wireline telephone lines (10% of all CLEC lines) were provisioned over facilities leased (in part or in whole) from ILECs. Approximately 142,000 CLEC lines (about 7%) were provided by CLECs purchasing discounted services from ILECs and reselling them to their customers. Finally, about 39,000 lines (or approximately 2%) were provided by CLECs using non-ILEC third party facilities and/or services.

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[17] The basic network elements used in the provision of wireline telephone service include local loops (connecting customer premises to telephone company switching equipment), local switching, and interoffice transport (between telephone company switches). In some circumstances CLECs may lease some of these basic network elements from an ILEC pursuant to ILEC obligations under federal and/or state law. CLECs can provide service using various combinations of ILEC supplied network elements and their own self-supplied elements. The most common variant of this approach is to lease ILEC local loops and self-supply local switching. When CLECs combine leased ILEC loops with their own (or third party supplied) local switching, such combinations are termed unbundled network element loop (UNE-L) combinations. The term applied to describe leasing of complete combinations of local loops, local switching, and interoffice transport, when leased pursuant to state or federal rules, was UNE-P. ILECs have been relieved of most state and federal obligations to provide UNE-P.

Table 6: CLEC Reported Retail Wireline Telephone Lines by Provisioning Method

(Percentages of Total for Each Year in Brackets)

	Own Facilities and VoIP	*UNE-L*	*UNE-P[3]*	*Commercial Agreement with ILEC[1]*	*Resale from ILEC*	*Use of 3rd Party Non-ILEC[2]*	*All Methods*
Dec 2001	460,598 (33%)	314,459 (22%)	314,718 (22%)	NA	NA	NA	1,407,814 (100%)
Dec 2002	433,131 (26%)	355,658 (21%)	644,932 (38%)	NA	318,039 (23%)	NA	1,697,976 (100%)
Dec 2003	434,524 (24%)	362,102 (20%)	804,036 (45%)	NA	264,255 (16%)	NA	1,778,567 (100%)
Dec 2004	616,218 (34%)	278,616 (15%)	793,410 (43%)	NA	177,905 (10%)	NA	1,840,677 (100%)
Dec 2005	635,691 (47%)	245,783 (18%)	384, 975 (29%)	NA	152,433 (8%)	NA	1,343,894 (100%)
Dec 2006	369,098 (33%)	311,131 (28%)	59,076 (5%)	209,048 (19%)	139,202 (13%)	25,877 (2%)	1,113,432 (100%)
Dec 2007	635,391 (46%)	277,319 (20%)	NA	255,825 (19%)	195,667 (14%)	12,670 (1%)	1,376,882 (100%)
Dec 2008	804,510 (55%)	303,265 (21%)	NA	123,607 (8%)	148,532 (10%)	83,444 (6%)	1,463,358 (100%)
Dec 2009	886,950 (60%)	270,607 (18%)	NA	119,745 (8%)	175,592 (12%)	15,021 (1%)	1,467,915 (100%)
Dec 2010	1,118,056 (63%)	415,493 (23%)			191,452 (11%)	58,984 (3%)	1,783,985 (100%)
Dec 2011	1,370,870 (76%)	245,363 (14%)			173,498 (10%)	3,992 (0%)	1,793,723 (100%)
Dec 2012	1,412,041 (75%)	231,963 (12%)			147,329 (8%)	84,794 (5%)	1,876,127 (100%)
Dec 2013	1,460,574 (75%)	194,613 (10%)			241,790 (12%)	64,285 (3%)	1,961,262 (100%)
Dec 2014	1,797,527 (82%)	209,309 (10%)			142,120 (7%)	39,006 (2%)	2187962 (100%)

[1] Category added in 2006. Prior to 2006 lines in this category, if any, may have been included along with UNE-P and/or resale.
[2] Category added in 2006. Prior to 2006 lines in this category may have been included along with resale.
[3] Lines reported as UNE-P are, beginning with Dec 2007, included as lines in the Commercial Agreement with ILEC category.

As Table 7 shows, 77 CLECs provided some wireline telephone service completely over their own facilities or using VoIP technologies. Twenty-six CLECs provided some wireline telephone service entirely or partially over leased facilities.

Statewide, 37 CLECs provided wireline telephone service over resold lines. Finally, 9 CLECs provided wireline telephone service using non-ILEC third party facilities and/or services.

Table 7: CLEC Retail Wireline Telephone Providers by Provisioning Method

	Own Facilities or VoIP	*UNE-L*	*UNE-P*[2]	*Commercial Agreement with ILEC*	*Resale*	*Use of 3rd Party Non-ILEC*	*All Methods*[1]
Dec 01	11	12	11	NA	23	NA	35
Dec 02	10	14	16	NA	30	NA	45
Dec 03	14	14	23	NA	29	NA	53
Dec 04	14	15	40	NA	28	NA	65
Dec 05	11	16	37	NA	29	NA	69
Dec 06	19	17	21	24	40	13	91
Dec 07	15	18	NA	39	37	6	80
Dec 08	19	19	NA	32	39	10	87
Dec 09	17	18	NA	35	44	12	84
Dec 10	37	32			42	10	82
Dec 11	48	26			35	11	76
Dec 12	51	22			42	14	89
Dec 13	52	27			40	14	88
Dec 14	77	26			37	9	107

[1] The sum of CLECs providing services over the respective provisioning methods exceeds the total number of CLECs providing services because some CLECs provide services using more than one method of provisioning.
[2] Companies reported as UNE-P are, beginning with Dec 2007, included as companies in the Commercial Agreement with ILEC category.

F. Mobile Wireless Subscribership

Data on mobile wireless subscribership are reported to the FCC by facilities-based wireless providers on a state-by-state basis. Facilities-based wireless providers serve subscribers using electromagnetic spectrum that they are licensed to utilize or manage.[18] Wireless mobile service is similar to wireline telephone service in that it permits subscribers to place and receive calls to and from any other user on the PSTN.

[18] FCC, Local Telephone Competition: Status as of December 31, 2001, Released July 2002, at 1-2.

Table 8 shows wireless subscribership data for Illinois and for the nation as a whole (reported biannually to the FCC). In June of 2013, mobile wireless providers reported approximately 12.8 million subscribers in Illinois.

Table 8: Mobile Wireless Subscribers (Millions)[19]

	Total US Subscribers	*Total IL Subscribers*
DEC 1999	79.7	3.9
JUNE 2000	90.6	4.3
DEC 2000	101.0	5.1
JUNE 2001	114.0	5.6
DEC 2001	124.0	5.6
JUNE 2002	130.8	5.4
DEC 2002	138.9	6.5
JUNE 2003	147.6	6.8
DEC 2003	157.0	7.2
JUNE 2004	167.3	7.5
DEC 2004	181.1	8.1
JUNE 2005	192.1	8.2
DEC 2005	203.7	8.7
JUNE 2006	217.4	9.1
DEC 2006	229.6	9.6
JUNE 2007	238.2	9.9
DEC 2007	249.2	10.3
JUNE 2008	255.7	10.6
DEC 2008	261.3	10.9
JUNE 2009	265.3	11.1
DEC 2009	274.3	11.5
JUNE 2010	278.9	11.6
DEC 2010	285.1	12.1
JUNE 2011	290.3	12.3
DEC 2011	298.3	12.7
JUNE 2012	301.5	12.9
DEC 2012	304.9	12.9
JUNE 2013	305.7	12.8
DEC 2013	310.7	12.8

[19] Source: Federal Communications Commission, Industry Analysis and Technology Division, Wireline Competition Bureau, Local Telephone Competition: Status as of December 31, 2013, Released October 2014. Subscriber counts for periods before June 2005 include only counts for subscribers served by large providers (those with over 10,000 subscribers in a state).

III. BROADBAND SERVICES

A. Overview

Section 13-407 of the PUA requires that the Commission monitor and analyze the deployment of high-speed (broadband) communications services in Illinois. Section 13-407 effectively uses the terms "high speed" and "broadband" communications interchangeably, and the Commission adopts that convention in this Report. As defined herein, such high-speed telecommunications services provide the subscriber with data transmission at speeds in excess of 200 kilobits per second (kbps) in at least one direction.[20] This definition matches the definition of "advanced telecommunications services" as used in the PUA.

Information concerning high-speed service provisioning is reported by state to the FCC only by facilities-based providers of high-speed lines. Carriers do not report high-speed capable lines that are obtained from other carriers for resale to end users or Internet Service providers (ISPs). This practice ensures that each high-speed line is reported only once by the underlying provider.[21] The information reported here encompasses three methods of high-speed service provisioning:

- high speed service over ADSL technology,
- high-speed service over coaxial cable (cable modem) technology.
- high-speed service over "other" technologies.

ADSL and cable modem technologies are most commonly used to provide services to residential customers. These technologies typically provide customers a single path to the Internet, and services provided via ADSL and cable modem technologies generally are viewed as substitutes. Technologies in the "other" category include symmetric DSL, traditional T1 wireline, fiber optic to the customer's premises, satellite, (terrestrial) fixed wireless, and mobile wireless technologies.[22]

The following descriptions of ADSL and cable modem technologies are taken from the FCC's Deployment of Telecommunications Capability: Second Report:

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[20] 220 ILCS 5/13-517

[21] Prior to mid-year 2005, only providers with at least 250 lines in a given state reported to the FCC. There is no indication of how comprehensively small providers, many of which serve rural areas with relatively small populations, are represented in the FCC data summarized here for periods prior to mid-year 2005. See FCC, High Speed Services for Internet Access: Status as of December 31, 2001, Released July 2002, at 1-2.

[22] Services provided over technologies in the "other" category vary greatly in quality, speed, and price. These technologies, with the exception of mobile wireless technology, commonly are used to provide service to medium and large business customers, rather than residential customers. Therefore, comparison of figures for the "other" category to ADSL and cable modem figures is largely an apples to oranges exercise --- as is comparison of "other" figures across states. Accordingly, while figures for the "other" technologies category are presented here for completeness, caution should be exercised in their interpretation.

ADSL Technology

With the addition of certain electronics to the telephone line, carriers can transform the copper loop that already provides voice service into a conduit for high-speed data traffic. While there are multiple variations of DSL … most DSL offerings share certain characteristics. With most DSL technologies today, a high-speed signal is sent from the end-user's terminal through the last 100 feet and the last mile (sometimes a few miles) consisting of the copper loop until it reaches a Digital Subscriber Line Access Multiplexer (DSLAM), usually located in the carrier's central office. At the DSLAM, the end-user's signal is combined with the signals of many other customers and forwarded though a switch to middle mile facilities.

As its name suggests, ADSL provides speeds in one direction (usually downstream) that are greater than the speeds in the other direction. Many, though not all, residential ADSL offerings provide speeds in excess of 200 kbps in only the downstream path with a slower upstream path and thus do not meet the standard for advanced telecommunications capability. However, ADSL permits the customer to have both conventional voice and high-speed data carried on the same line simultaneously because it segregates the high frequency data traffic from the voice traffic. This segregation allows customers to have an "always on" connection for the data traffic and an open path for telephone calls over a single line. Thus a single line can be used for both a telephone conversation and for Internet access at the same time.[23]

Cable Modem Technology

Cable modem technologies rely on the same basic network architecture used for many years to provide multichannel video service, but with upgrades and enhancements to support advanced services. The typical upgrade incorporates what is commonly known as a hybrid fiber-coaxial (HFC) distribution plant. HFC networks use a combination of high-capacity optical fiber and traditional coaxial cable. Most HFC systems utilize fiber between the cable operators' offices (the "headend") and the neighborhood "nodes." Between the nodes and the individual end-user homes, signals travel over traditional coaxial cable infrastructure. These networks transport signals over infrastructure that serves numerous

[23] FCC's Deployment of Telecommunications Capability: Second Report, August 2000, at ¶¶ 35-36 (footnotes omitted).

users simultaneously, i.e., a shared network, rather than providing a dedicated link between the provider and each home, as does DSL technology.[24]

B. Statewide High-Speed Line Subscribership in Illinois

Table 9 shows high-speed line counts nationwide and in Illinois, as reported biannually to the FCC. This table indicates that nationwide and in Illinois there has been substantial growth in high-speed telecommunications lines over time. The reported count of 12 million high speed lines in Illinois (as of Dec 2013) significantly exceeds the estimated count of approximately 66,000 when numbers were first reported to the FCC (as of December 1999).

[24] FCC's Deployment of Telecommunications Capability: Second Report, August 2000, at ¶ 29 (footnotes omitted).

TABLE 9: High-Speed Lines

(Thousands)[25]

	Total U.S. Lines	Total IL Lines
DEC 1999	2,754	66
JUNE 2000	4,107	149
DEC 2000	7,070	242
JUNE 2001	9,242	325
DEC 2001	12,793	423
JUNE 2002	15,788	526
DEC 2002	19,881	734
JUNE 2003	22,995	841
DEC 2003	28,230	1,089
JUNE 2004	31,951	1,271
DEC 2004	37,352	1,498
JUNE 2005	42,518	1,817
DEC 2005	51,218	2,160
JUNE 2006	65,271	2,666
DEC 2006	82,810	3,539
JUNE 2007	101,008	4,310
DEC 2007	121,165	5,084
DEC 2008	102,043	4,265
DEC 2009	133,148	5,651
JUNE 2010	152,920	6,464
JUNE 2011	206,124	8,645
JUNE 2012	243,397	10,085
DEC 2012	261,731	10,792
JUNE 2013	275,608	11,300
DEC 2013	293,397	11,952

Table 10 displays high-speed line counts in Illinois by technology. At year-end 2013, the number of high-speed connections provided over ADSL technology was exceeded by the number of such connections provided over Cable Modem technology. This table also displays the continuing emergence and importance of mobile wireless high-speed connections.

[25] Source: Federal Communications Commission, Industry Analysis and Technology Division, Wireline Competition Bureau, Internet Access Services: Status as of December 31, 2013, Released October 2014. Line counts for periods before June 2005 include only lines provided by large providers (those with over 250 lines in a state).

TABLE 10: Illinois High-Speed Connections by Technology

December 31, 2013

(Thousands)[26]

ADSL	Cable Modem	Mobile Wireless	Other	Total
1,470	2,145	8,171	166	11,952

Table 11 shows high-speed percentages by download speed in Illinois.

.

TABLE 11: Illinois Percentage of High-Speed Connections by Download Speed

December 31, 2013 [27]

% over 200 kbps Downstream and Upstream	% at least 768 kbps Downstream and over 200 kbps Upstream	% at least 3 mbps Downstream and over 200 kbps Upstream	% at least 6 mbps Downstream and over 200 kbps Upstream	% at least 10 mbps Downstream and over 200 kbps Upstream
98.1	89.8	78.8	50.9	39.1

C. Deployment in Incumbent Telephone Company Service Areas

Public Act 096-0927 designates the non-profit *Partnership for a Connected Illinois* ("PCI") as the primary entity for collecting broadband data in Illinois. Among its other responsibilities, PCI is to:

> Collaborate with the Department [DCEO] and the Illinois Commerce Commission regarding the collection of the information required by this Section to assist in monitoring and analyzing the broadband markets and the status of competition and deployment of broadband services to consumers in the State.

The National Broadband Map[28], maintained through a joint effort of the FCC and National Telecommunications and Information Administration ("NTIA"), publishes certain of the information collected by PCI. Table 12, below, provides broadband deployment data by ILEC service area taken from the National Broadband Map.

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[26] Source: Federal Communications Commission, Industry Analysis and Technology Division, Wireline Competition Bureau, Internet Access Services: Status as of December 31, 2013, Released October 2014.

[27] Source: Federal Communications Commission, Industry Analysis and Technology Division, Wireline Competition Bureau, Internet Access Services: Status as of December 31, 2013, Released October 2014.

[28] See http://www.broadbandmap.gov/.

Table 12: Broadband Deployment in ILEC Service Areas

(Data as of June 30, 2014)

ILEC Service Area	*% of Population with Wireline Access to Download Speeds > 3 Mbps and Upload Speeds > 0.768 Mbps*	*% of Population with Wireless Access to Download Speeds > 3 Mbps and Upload Speeds > 0.768 Mbps*	*% of Population with Access to DSL Broadband[1]*	*% of Population with Access to Cable Modem Broadband[1]*	*% of Population with Access to Wireless Broadband[1]*	*% of Population with Access to Fiber Broadband[1]*
Nationwide	94.8%	99.3%	90.0%	88.8%	99.4%	25.4%
Statewide	97.3%	99.9%	94.1%	92.8%	100%	14.3%
Adams Telephone Cooperative	59.4%	99.1%	96.7%	0.0%	99.9%	57.2%
Alhambra - Grantfork Telephone Company	89.6%	100%	90.9%	36.8%	100%	32.2%
Cambridge Telephone Company[3]	88.6%	100%	5.5%	83.1%	100%	0.0%
Cass Telephone Company	98.0%	100%	97.4%	66.2%	100%	25.9%
Clarksville Mutual Telephone Company[3]	0.0%	96.9%	0.0%	0.0%	100%	0.0%
C-R Telephone Company	62.0%	100%	62.0%	47.2%	99.4%	0.0%
Crossville Telephone Company	100%	100%	100%	67.6%	100%	0.0%
Egyptian Telephone Cooperative Association	91.2%	90.8%	91.1%	0.1%	94.9%	0.0%
El Paso Telephone Company[3]	5.3%	100%	5.3%	0.0%	100%	0.0%
Flat Rock Telephone Cooperate, Inc.	100%	100%	100%	0.0%	100%	0.0%
Citizens Telephone Company of Illinois	91.9%	99.9%	91.7%	53.6%	99.9%	5.8%
Frontier Communications of Depue, Inc.	99.4%	100%	98.9%	69.6%	100%	15.9%
Frontier Communications of Illinois, Inc.	71.0%	100%	94.4%	57.9%	100%	0.0%
Frontier Communications of Lakeside, Inc.	72.2%	100%	93.1%	0.0%	100%	0.0%
Frontier Communications - Midland, Inc.	83.2%	100%	83.5%	15.7%	100%	3.4%
Frontier Communications of Mt. Pulaski, Inc.	89.0%	100%	86.9%	46.4%	100%	8.6%
Frontier Communications of Orion, Inc.	99.5%	100%	99.3%	77.5%	100%	0.0%
Frontier Communications - Prairie, Inc.	83.7%	100%	83.7%	51.2%	100%	0.0%
Frontier Communications - Schuyler, Inc.	98.4%	99.1%	98.4%	52.6%	100%	0.0%
Frontier Communications of the Carolinas Inc.	85.1%	99.7%	83.7%	71.1%	100%	4.9%
Frontier North[4]	86.5%	97.5%	84.9%	78.4%	99.7%	9.2%
Frontier North (Contel)	88.7%	99.8%	86.3%	75.6%	100%	1.9%
Gallatin River Communications	94.8%	99.9%	92.6%	87.2%	100%	25.6%
Geneseo Telephone Company	98.7%	100%	92.1%	87.6%	100%	5.0%
Glasford Telephone Company	99.2%	100%	99.5%	53.6%	100%	1.1%
Grafton Telephone Company	100%	100%	89.2%	0.0%	100%	99.5%

Table 12: Broadband Deployment in ILEC Service Areas (Continued)

(Data as of June 30, 2014)

ILEC Service Area	*% of Population with Wireline Access to Download Speeds > 3 Mbps and Upload Speeds > 0.768 Mbps*	*% of Population with Wireless Access to Download Speeds > 3 Mbps and Upload Speeds > 0.768 Mbps*	*% of Population with Access to DSL Broadband[1]*	*% of Population with Access to Cable Modem Broadband[1]*	*% of Population with Access to Wireless Broadband[1]*	*% of Population with Access to Fiber Broadband[1]*
Nationwide	94.8%	99.3%	90.0%	88.8%	99.4%	25.4%
Statewide	97.3%	99.9%	94.1%	92.8%	100%	14.3%
Grandview Mutual Telephone Company[3]	0.0%	100%	0.0%	0.0%	100%	0.0%
Gridley Telephone Company[3]	100%	100%	100%	0.0%	100%	0.0%
Hamilton County Telephone Cooperative	2.2%	93.7%	97.8%	0.9%	97.1%	0.0%
Harrisonville Telephone Company	100%	100%	100%	69.6%	100%	12.8%
Henry County Telephone Company	87.9%	100%	89.7%	72.2%	100%	11.4%
Home Telephone Company	98.3%	100%	17.8%	68.8%	100%	78.4%
Illinois Bell Telephone Company	98.5%	99.9%	94.4%	96.6%	100%	9.1%
Illinois Consolidated Telephone Company[4]	91.9%	99.8%	91.4%	79.0%	100%	2.2%
Kinsman Mutual Telephone Company[3]	0.0%	100%	27.3%	0.0%	100%	0.0%
La Harpe Telephone Company	99.7%	99.1%	44.1%	64.1%	100%	77.1%
Leaf River Telephone Company[3]	96.9%	100%	96.9%	0.0%	100%	0.0%
Leonore Mutual Telephone Company[3]	100%	100%	100%	0.0%	100%	0.0%
Madison Telephone Company	99.9%	100%	99.4%	97.1%	100%	0.0%
Marseilles Telephone Company	98.3%	100%	98.6%	86.2%	100%	14.6%
McDonough Telephone Cooperative	98.4%	97.6%	98.0%	44.1%	99.6%	36.6%
McNabb Telephone Company	100%	100%	100%	0.0%	100%	0.0%
Metamora Telephone Company	100%	100%	99.9%	91.4%	100%	29.8%
Mid Century Telephone Cooperative, Inc.	98.4%	99.1%	91.1%	33.1%	100%	7.7%
Montrose Mutual Telephone Company	99.0%	98.9%	99.0%	0.0%	100%	2.0%
Moultrie Independent Telephone Company	100%	100%	100%	0.0%	100%	0.0%
New Windsor Telephone Company	100%	100%	100%	0.0%	100%	0.0%
Odin Telephone Exchange	77.9%	100%	80.1%	52.8%	100%	1.1%
Oneida Telephone Exchange	100%	100%	6.5%	0.0%	100%	100%
Reynolds Telephone Company	65.7%	99.5%	92.4%	65.7%	100%	36.9%
Shawnee Telephone Company	98.1%	72.6%	37.3%	6.8%	78.5%	73.0%
Stelle Telephone Company[4]	0.0%	100%	75.5%	0.0%	100%	0.0%
Tonica Telephone Company	92.7%	100%	96.4%	56.1%	100%	0.0%
Viola Home Telephone Company	91.4%	100%	91.4%	70.9%	100%	0.0%
Wabash Telephone Cooperative, Inc.	99.8%	97.8%	99.8%	13.0%	98.8%	42.6%
Woodhull Telephone Company	95.9%	100%	94.7%	0.0%	100%	2.8%

[1] To be defined as broadband, speeds must meet: Download Speeds > 0.769 Mbps and Upload Speeds > 0.2 Mbps
[2] The information in this table reflects only the information for those providers that provided information to PCI. To the extent that providers failed to report to PCI, the numbers will understate availability.
[3] This area does not contain a complete broadband record set. Data reported is available data (if any).
[4] Information for this area is as of June 30, 2013.

In addition to summary broadband information, the PCI website contains broadband service provider information down to the household level. PCI's website allows Illinois residents to input their address information and obtain lists of broadband providers that report providing service in the resident's area and contact information for these providers. The current results of PCI's efforts are available at http://www.broadbandillinois.org/maps/index.html.

IV. CONCLUSION

This report summarizes the market shares of ILECs and CLECs in Illinois local telephone markets. While many other factors affect actual market competitiveness, market share information is a useful starting point for analyzing the status of market competition.[29]

According to the market share information reported here, the CLEC overall wireline telephone market share increased between year-end 2013 and year-end 2014. At the same time, total reported wireline telephone lines in Illinois declined between year-end 2013 and year-end 2014 (as has occurred each year since year-end 2001). Consumers continue to increasingly substitute mobile wireless phone service for wireline telephone service. The more consumers turn to such alternatives to wireline telephone services, the less accurate an examination based solely on CLEC wireline telephone market shares will be as a gauge of competition in local telephone markets. For, this reason, the information contained in this report must be interpreted with caution.

Even given such limitations, the market share data and other information presented in this report reveal and confirm that competition for incumbent wireline services continues to increase and that such competition continues to increasing come from providers of both wireless and broadband services.

Recommendations for Legislative Action

The Commission has no specific recommendations for legislative action to accompany this report.

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[29] "Other things being equal, market share affects the extent to which participants or the collaboration must restrict their own output in order to achieve anticompetitive effects in a relevant market. The smaller the percentage of total supply that a firm controls, the more severely it must restrict its own output in order to produce a given price increase, and the less likely it is that an output restriction will be profitable." Antitrust Guidelines for Collaborations Among Competitors, Issued by Federal Trade Commission and the U.S. Department of Justice, April 2000, Section 3.3.3.

APPENDIX A: Illinois LATA Geography and Demographics

Local Access and Transport Areas (LATAs) are the geographic areas within which Bell Operating Companies (BOCs) were permitted to carry telephone traffic following their divesture from AT&T. In 1984, BOCs (including Ameritech in Illinois) were prohibited from carrying telephone traffic across LATA boundaries (interLATA traffic), but were allowed to carry telephone traffic, including toll calls, within LATA boundaries (intraLATA traffic). There are 193 domestic LATAs in the United States. Of the 193 domestic U.S. LATAs, 18 are either in whole, or in part, within Illinois.[30]

There is considerable variation in size and demographic makeup among the Illinois LATAs.[31] Table 4 (above) lists size and demographic data for each of the 14 LATAs for which information is presented in this report. Table 4 illustrates that the average LATA in Illinois is approximately 4,100 square miles. The largest LATA in terms of area is the Chicago LATA with approximately 8,500 square miles. The smallest is the portion of the Davenport, Iowa LATA located in Illinois, which encompasses approximately 2,100 square miles.

The Chicago LATA is the most populous LATA in Illinois with over 8.7 million residents, well above the average LATA size of approximately 920,000 residents. The Chicago LATA also contains the greatest number of households, with approximately 3.2 million. In contrast the Macomb, Illinois LATA contains less than 130,000 residents and just over 52,000 households. The Chicago and Olney, Illinois LATAs, respectively, contain the highest and lowest population per square mile. There are nearly 1,000 residents per square mile in the Chicago LATA and less than 32 residents per square mile in the Olney LATA. These two LATAs also contain the highest and lowest number of households per square mile, with 367 households per square mile in the Chicago LATA and 13 households per square mile in the Olney LATA.

Of the 18 LATAs in Illinois, 4 are predominately outside of Illinois and contain very few customers located within Illinois. For this report, information applicable to the pieces of these four LATAs will be included with information for

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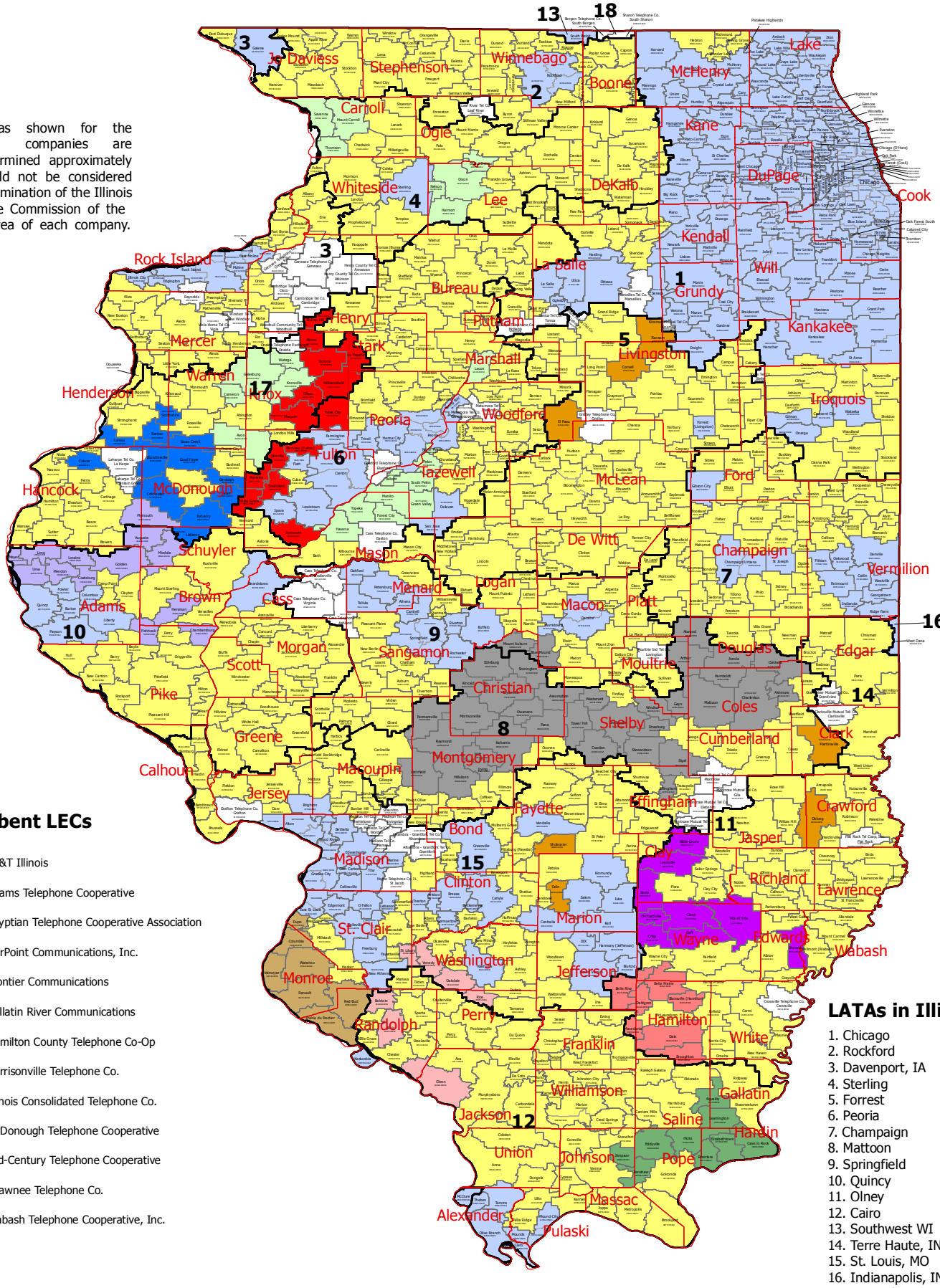
[30] Although LATA boundaries were created in order to delineate the geographical area within which BOCs could offer long distance services, other "LATA" boundaries have been created in order to segment non-BOC service territories. The LATA geography adopted here follows Telcordia Technologies, Inc. ("Telcordia" f/k/a Bellcore) conventions as delineated in the local exchange routing guide ("LERG").

[31] The LATA size and demographic information contained in this table is derived from U.S. Census 2010 obtained from U.S. Department of Commerce, Census Bureau Web Cite at http://www.census.gov/. To obtain estimates of area and demographic information, Staff aggregated census block group information up to the LATA level, assigning each census block group uniquely to the LATA containing the centroid of the census block group.

LATAs that are predominately in Illinois or contain a significant number of Illinois customers. For example, very few Illinois residents or businesses are located within the Terre Haute, Indiana LATA. The information reported for Illinois residents and businesses in the Terre Haute, Indiana LATA is, therefore, included in information reported for the Champaign, Illinois LATA. There are a significant number of Illinois residents and businesses located within the St Louis, Missouri LATA. Therefore, information for Illinois residents and businesses in the St Louis, Missouri LATA is reported separately from other Illinois LATAs. All information reported is for those customers located in Illinois. For example, no information is reported for customers located in the Missouri portions of the St Louis, Missouri LATA. Figure A-1 depicts the 18 LATAs for which information is reported in this report.

Figure A1: Local Access and Transport Areas ("LATAs") and Rate Exchange Area Boundaries in the State of Illinois

The areas shown for the respective companies are only determined approximately and should not be considered as a determination of the Illinois Commerce Commission of the service area of each company.



Incumbent LECs

- AT&T Illinois
- Adams Telephone Cooperative
- Egyptian Telephone Cooperative Association
- FairPoint Communications, Inc.
- Frontier Communications
- Gallatin River Communications
- Hamilton County Telephone Co-Op
- Harrisonville Telephone Co.
- Illinois Consolidated Telephone Co.
- McDonough Telephone Cooperative
- Mid-Century Telephone Cooperative
- Shawnee Telephone Co.
- Wabash Telephone Cooperative, Inc.

LATAs in Illinois

1. Chicago
2. Rockford
3. Davenport, IA
4. Sterling
5. Forrest
6. Peoria
7. Champaign
8. Mattoon
9. Springfield
10. Quincy
11. Olney
12. Cairo
13. Southwest WI
14. Terre Haute, IN
15. St. Louis, MO
16. Indianapolis, IN
17. Macomb
18. Southeast WI

APPENDIX B: Wireline Telephone Provisioning Detail

Table B1 – B3 contain detail wireline telephone provisioning information for the 14 Illinois LATAs examined in this report. Table B1 contains wireline telephone lines in each LATA provided by ILECs, CLECs and all LECs combined. Tables B2 and B3 contain similar information regarding, respectively, residential and business wireline telephone line provisioning.

Table B1 - Retail Wireline Telephone Provision by LATA
(December 31, 2014)

LATA	LATA Name	All LECs	All LEC Lines	ILECs	ILEC Lines	CLECs	CLEC Lines	CLEC Lines as % if Total
358	CHICAGO ILLINOIS	92	3,654,020	7	1,955,058	85	1,698,962	46.5%
360	ROCKFORD ILLINOIS[1]	41	145,152	4	68,508	37	76,644	52.8%
362	CAIRO ILLINOIS	32	77,363	4	62,736	28	14,627	18.9%
364	STERLING ILLINOIS	31	75,149	4	46,018	27	29,131	38.8%
366	FORREST ILLINOIS	28	88,795	4	59,727	24	29,068	32.7%
368	PEORIA ILLINOIS	43	163,866	7	95,779	36	68,087	41.6%
370	CHAMPAIGN ILLINOIS[2]	34	98,833	2	62,026	32	36,807	37.2%
374	SPRINGFIELD ILLINOIS	42	156,572	5	102,430	37	54,142	34.6%
376	QUINCY ILLINOIS	28	53,681	3	39,916	25	13,765	25.6%
520	ST LOUIS MISSOURI	43	278,821	9	157,528	34	121,293	43.5%
634	DAVENPORT IOWA	34	68,279	9	49,286	25	18,993	27.8%
976	MATTOON ILLINOIS	22	78,691	4	68,890	18	9,801	12.5%
977	MACOMB ILLINOIS	25	41,675	7	31,591	18	10,084	24.2%
978	OLNEY ILLINOIS	22	42,280	6	35,722	16	6,558	15.5%
	Statewide	148	5,023,177	41	2,835,215	107	2,187,962	43.6%

[1] Includes information for those portions of the SE and SW Wisconsin LATAs located in Illinois.

[2] Includes information for those portions of the Indianapolis Indiana and Terre Haute Indiana LATAs located in Illinois.

Table B2 - Residential Retail Wireline Telephone Provision by LATA
(December 31, 2014)

LATA	LATA Name	All LECs	All LEC Lines	ILECs	ILEC Lines	CLECs	CLEC Lines	CLEC Lines as % if Total
358	CHICAGO ILLINOIS	39	1,909,719	7	943,675	32	966,044	50.6%
360	ROCKFORD ILLINOIS[1]	22	86,773	4	36,550	18	50,223	57.9%
362	CAIRO ILLINOIS	19	41,165	4	33,216	15	7,949	19.3%
364	STERLING ILLINOIS	17	45,657	4	23,859	13	21,798	47.7%
366	FORREST ILLINOIS	9	49,517	4	27,499	5	22,018	44.5%
368	PEORIA ILLINOIS	24	94,466	7	50,130	17	44,336	46.9%
370	CHAMPAIGN ILLINOIS[2]	16	53,736	2	29,838	14	23,898	44.5%
374	SPRINGFIELD ILLINOIS	22	78,938	5	42,512	17	36,426	46.1%
376	QUINCY ILLINOIS	16	28,937	3	23,142	13	5,795	20.0%
520	ST LOUIS MISSOURI	27	160,394	9	98,964	18	61,430	38.3%
634	DAVENPORT IOWA	20	40,926	9	28,509	11	12,417	30.3%
976	MATTOON ILLINOIS	13	47,557	4	40,335	9	7,222	15.2%
977	MACOMB ILLINOIS	14	26,481	7	19,152	7	7,329	27.7%
978	OLNEY ILLINOIS	14	25,934	6	21,661	8	4,273	16.5%
	Statewide	94	2,690,200	41	1,419,042	53	1,271,158	47.3%

[1] Includes information for those portions of the SE and SW Wisconsin LATAs located in Illinois.

[2] Includes information for those portions of the Indianapolis Indiana and Terre Haute Indiana LATAs located in Illinois.

Table B3 - Business Retail Wireline Telephone Provision by LATA
(December 31, 2014)

LATA	LATA Name	All LECs	All LEC Lines	ILECs	ILEC Lines	CLECs	CLEC Lines	CLEC Lines as % if Total
358	CHICAGO ILLINOIS	83	1,744,301	7	1,011,383	76	732,918	42.0%
360	ROCKFORD ILLINOIS[1]	37	58,379	4	31,958	33	26,421	45.3%
362	CAIRO ILLINOIS	26	36,198	4	29,520	22	6,678	18.4%
364	STERLING ILLINOIS	28	29,492	4	22,159	24	7,333	24.9%
366	FORREST ILLINOIS	26	39,278	4	32,228	22	7,050	17.9%
368	PEORIA ILLINOIS	36	69,400	7	45,649	29	23,751	34.2%
370	CHAMPAIGN ILLINOIS[2]	28	45,097	2	32,188	26	12,909	28.6%
374	SPRINGFIELD ILLINOIS	37	77,634	5	59,918	32	17,716	22.8%
376	QUINCY ILLINOIS	24	24,744	3	16,774	21	7,970	32.2%
520	ST LOUIS MISSOURI	37	118,427	9	58,564	28	59,863	50.5%
634	DAVENPORT IOWA	30	27,353	9	20,777	21	6,576	24.0%
976	MATTOON ILLINOIS	20	31,134	4	28,555	16	2,579	8.3%
977	MACOMB ILLINOIS	21	15,194	7	12,439	14	2,755	18.1%
978	OLNEY ILLINOIS	19	16,346	6	14,061	13	2,285	14.0%
	Statewide	137	2,332,977	41	1,416,173	96	916,804	39.3%

[1] Includes information for those portions of the SE and SW Wisconsin LATAs located in Illinois.
[2] Includes information for those portions of the Indianapolis Indiana and Terre Haute Indiana LATAs located in Illinois.

ORDINANCE AMENDING TITLE 4, CHAPTER 2, BUILDING CODE, SECTION 4-2-7 OF THE VILLAGE CODE RELATIVE TO EMERGENCY COMMUNICATION

WHEREAS, the Village of Barrington Hills ("Village") is a duly organized and existing Illinois home rule municipality pursuant to the Illinois Municipal Code, 65 ILCS 5/1-1-1 et seq.; and

WHEREAS, the Village of Barrington Hills is authorized and empowered, under the Municipal Code and the Code of Ordinances of the Village of Barrington Hills, to set forth regulations for building within the Village, including but not limited to those regulations relative to emergency communication; and

WHEREAS, the Village of Barrington Hills requires as a means of communicating for emergency services by a hard wire from a residence to the Dispatch Center; and

WHEREAS the technology of communication has been supplanted by various other means including wireless.

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Barrington Hills, Cook, Kane, Lake and McHenry Counties, Illinois, as a home rule municipality, the following:

SECTION ONE: That the forgoing recitals are hereby incorporated by reference as if fully set forth herein.

SECTION TWO: That Title 4, Chapter 2 Building Regulations, Section 4-2-2 BOCA BASIC BUILDING CODE ADOPTED; EXCEPTIONS; ADDITIONS be and hereby is amended as set forth in the provision of Fire Protection Systems/Supervision Section 1020.3, by deleting in its entirety as follows:

> 1020.3 Emergency Number Telephone System. Notification of the need for emergency services shall be accomplished by a caller through dialing the digits 9-1-1 on a wired line in the public switched telephone network. The telephone connection will originate from the caller's location and terminate at the Barrington Hills police safety answering point, where the telecommunicator will receive a voice connection, call back number and service address of the location of the caller.

SECTION THREE: That all other ordinances and resolutions, or parts thereof, in conflict with the provisions of this Ordinance, are, to the extent of such conflict, expressly repealed.

SECTION FOUR: That this Ordinance shall be in full force and effect from and after its passage, approval, and publication in pamphlet form as provided by law.

Ayes: Nays: Absent:

PASSED AND APPROVED by the President and Board of Trustees of the Village of Barrington Hills, Illinois, this 19th day of November, 2015.

APPROVED:

_____
Village President

ATTEST:

_____
Village Clerk