The Status

of

Telecommunications

Competition

in

Michigan

December 2015

LICENSING AND REGULATORY AFFAIRS
CUSTOMER DRIVEN . BUSINESS MINDED.

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Introduction

Section 103 of the Michigan Telecommunications Act (MTA) as amended (MCL 484.2103), previously directed the Michigan Public Service Commission (Commission) to submit an annual report describing the status of competition in telecommunications service in Michigan, including, but not limited to, the toll and local exchange service markets in the state[1]. The MTA was amended on July 14, 2011 through PA 58 of 2011 which removed the requirement for the Commission to prepare the annual competition report after the Commission issued its report in the spring of 2013. The Commission is maintaining the report on the Status of Competition in Telecommunications Service in Michigan for informational purposes and is revising the format to fit its needs. This fifteenth report filed by the Commission includes information on the traditional wireline industry as well as other telecommunications technologies.

The telecommunications industry in Michigan continues to experience the same technological changes as the rest of the nation. The *Status of Telecommunications Competition in Michigan: Status as of December 31, 2014* finds that incumbent providers have continued to experience a decrease in their traditional wireline customer lines, a trend that began in the year 2002, while competitive providers have experienced a small decrease in their overall lines after three years of increasing wirelines. Competitive providers appear to be relying less on the incumbents' network and more on provisioning their lines over their own networks. At the same time, alternative technologies, such as wireless and voice over Internet protocol (VoIP), continue to add subscribers. The broadband market also continues to experience growth, especially in mobile wireless customers.

[1] Wireless service is not regulated by the Commission pursuant to Sec. 401 of the MTA and as such wireless providers are not required to report this information to the Commission.

Basic Local Exchange Market – Wireline

The Commission conducts annual surveys of AT&T Michigan, Frontier,[2] the smaller incumbent local exchange carriers (ILECs), as well as all licensed competitive local exchange carriers (CLECs) in order to obtain an accurate depiction of the competitive marketplace in Michigan for basic local exchange service. This survey includes ILECs that also operate as CLECs in Michigan as those lines provided in another ILEC's territory are considered competitive lines. CLECs are providers that compete in the same geographic area as ILECs. This year's survey was sent to the 39 ILECs and 160 CLECs, including 20 ILECs with CLEC expansions, in the state of Michigan that were licensed as of December 31, 2014. The data collected through this survey is for the year ended December 31, 2014. The information gathered assists the Commission in evaluating the scope of local competition in Michigan.

The results of this survey are presented as aggregate CLEC numbers to maintain the confidentiality of the individual company numbers. The surveyed companies consider some of the information requested to be confidential. For 2014, 36 of the ILECs responded to the ILEC survey and 95 CLECs and ILECs that have CLEC operations filed a response to the CLEC survey. Information for three ILECs that didn't respond and 17 of the CLECs who had indicated they provided service last year was gathered from the FCC's Form 477 data. The overall line count 2014 appears to be different than previous years but the overall market share percentages are on par with what has previously been shown. This is due in part to the change in reporting requirements with the change in the law here in Michigan. Companies are no longer required to report these numbers so the Commission must rely on companies to report voluntarily or to try and obtain the numbers from what is reported to the FCC, and while the FCC's data collection is similar to that done by the Commission, it is not identical and so there are some differences in

[2] Frontier includes the former Verizon North Inc. and Contel of the South, Inc., d/b/a Verizon North Systems.

what a company reports to the FCC and what it would have reported to the Commission.

As a historical perspective, in 2005 the Federal Communications Commission (FCC) and the courts overturned portions of the FCC's Triennial Review Order and eliminated the incumbents' obligation to provide the unbundled network element platform[3] (UNE-P) to competitors at a regulated cost-based price. Under the current MTA, telecommunications services are now largely affected by FCC requirements and market forces; rate regulation was removed for retail local service with the 2011 amendments to the MTA.

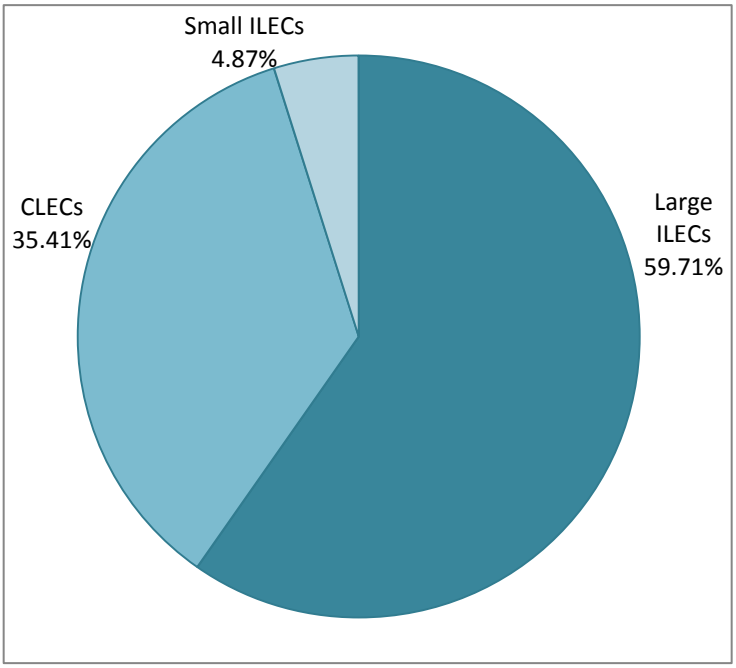


Figure 1: Michigan Market Share in 2014

The data for 2014 shows the total number of wirelines provided by ILECs and CLECs in Michigan was 2,295,471. This accounts for a decrease of about 507,322 lines from 2013, however as previously stated, some of this is likely the result of using FCC data for some of the non-

[3] UNE-P is an unbundled network element platform or UNEs combined into a complete set in order to provide an end-to-end circuit. Some providers have opted to pay market-based rates for UNE-P until they have alternative arrangements in place to move those residential customers.

responding providers. From the data compiled for 2014, the number of lines provided by CLECs via their own facilities, through unbundled network element loops (UNE-L)[4], through local wholesale arrangements (LW), and through resale of incumbent providers' services was 812,832. CLEC lines accounted for 35.41 percent of the total lines in 2014. Large ILECs operating in Michigan, those with 250,000 or more access lines, served 59.71% (1,370,763 lines). The small independent telephone companies represented the remaining 4.87 percent (111,876 lines) of the total lines in Michigan (Figure 1)

The Commission continues to license new providers, and as of the end of 2014, CLECs were providing service to 35.41 percent of the wirelines provided to customers in Michigan. This represents a slight increase from last year. On October 16, 2014, the FCC released its latest report to date on *Local Telephone Competition: Status as of December 31, 2013*. For the Michigan companies that are required to report this data to the FCC, the ILECs reported 1,745,000 switched access lines and 261,000 voice over Internet protocol (VoIP) lines for a total of 2,006,000 lines,[5] while the CLECs reported 335,000 switched access lines and 1,361,000 VoIP lines which amount to 1,696,000 lines, for a total of 3,702,000 lines. From the most recent data available from the FCC, the CLECs' share of Michigan's lines (including interconnected VoIP) was 46 percent as of December 31, 2013. One-hundred-seventy-five switched providers reported data to the FCC, (26 ILECs along with 158 CLECs) as well as 128 interconnected VoIP providers.

[4] UNE-L is an unbundled network element loop and is a common strategy used by facilities-based CLECs. A CLEC owns the local switch and leases the local loop from the ILEC. Unbundled network elements (UNEs) are defined as physical and functional elements of the network, e.g., Network Interface Devices, local loops, switch ports, and dedicated and common transport facilities.

[5] The total lines reported by the ILECs to the FCC differ from the lines reported to the Commission due, in part, to the difference in the date the lines were reported and due to the difference in the reporting by VoIP providers to the FCC and the state.

The chart of the Michigan survey results, Figure 2, categorizes the CLECs according to the number of customer lines that they served in 2014. The data indicates that of the 112 CLECs reporting, 38 (34 percent) were serving no Michigan customers in 2014. A second group of 38 CLECs (34 percent) served between one line and 1,000 lines. A third group served between 1,001 and 10,000 lines each and is comprised of 22 CLECs (20 percent), and the last group of CLECs served over 10,000 lines each and represents 14 CLECs (12 percent).

CLECs With No Lines	38	34%
CLECs With 1 – 1,000 Lines	38	34%
CLECs With 1,001 – 10,000 Lines	22	20%
CLECs With over 10,000 Lines	14	12%
Total CLECs Responding to Survey	112	100%

Figure 2: The 2014 Michigan Survey Results

Figure 3 represents the data gathered by the Commission over the past 15 years. As is shown, while total wirelines have consistently decreased since 2001, the actual number of CLEC providers and CLEC lines in Michigan grew over the first six years that this information was gathered; the CLEC market grew from a four percent share to a peak of 27.5 percent share at the end of 2004. However, for 2005, 2006 and again in 2008, Michigan experienced decreases in CLEC lines. In 2009, Michigan's competitive lines rebounded and grew to slightly under a million lines. For 2010, the increasing competitive lines trend continued due, in part, to the higher interconnected VoIP provider participation in the 2010 data request. In 2011 and again in 2012, there was a slight decrease in CLEC lines; however the CLEC market share again reached a new high of 33.2% of the wireline market in Michigan. In 2013 CLEC market share percentage decreased slightly to 33.09% while the actual number of CLEC lines reported also decreased. In 2014 the percentage of CLEC market share is again moving in the upward direction and is at 35.41 percent.

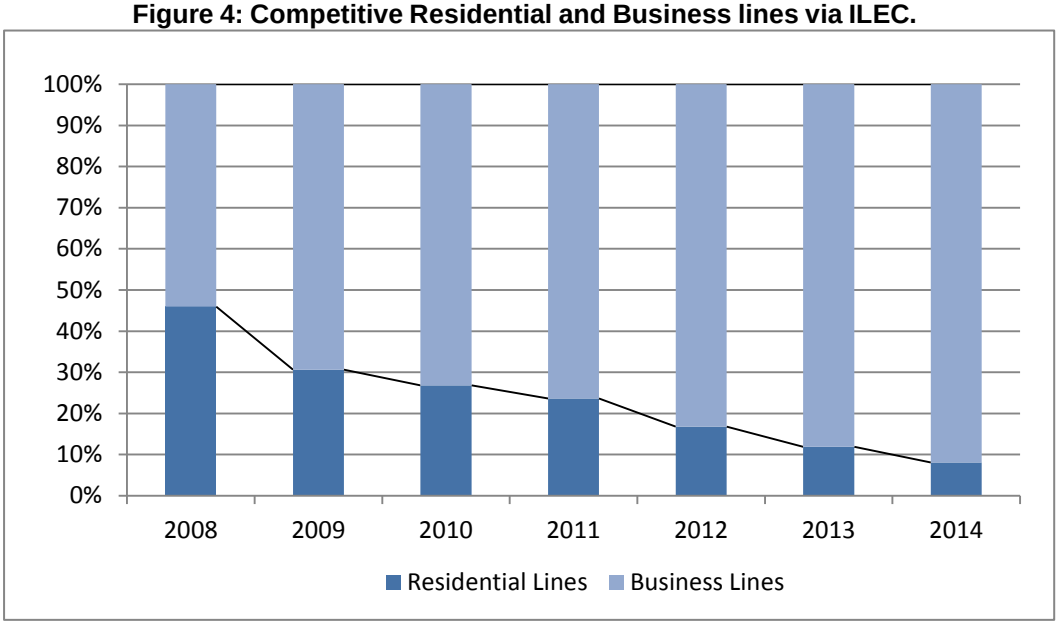
Year	Licensed CLECs	CLEC Replies	CLECs with Lines	CLEC Lines	Total Michigan Lines	CLEC %	AT&T Michigan %	Frontier %	ILECs %
1999	120	59	23	268,385	6,726,971	4.0	81.0	11.5	3.5
2000	167	69	31	446,164	6,901,813	6.5	78.0	12.0	3.5
2001	173	102	42	896,023	7,014,263	12.8	72.2	11.5	3.5
2002	219	113	54	1,447,176	6,668,124	21.7	62.9	11.9	3.6
2003	192	112	70	1,677,423	6,334,114	26.5	57.7	11.2	4.5
2004	202	127	77	1,681,173	6,103,250	27.5	56.9	11.8	3.7
2005	188	142	78	1,158,550	5,471,708	21.2	62.6	12.3	3.9
2006	210	116	63	961,460	5,260,443	18.3	65.5	12.3	3.9
2007	202	146	94	1,013,897	4,904,384	20.7	63.5	11.8	4.0
2008	203	122	67	859,370	4,286,071	20.0	64.2	11.5	4.3
2009	190	129	79	947,068	3,907,129	24.2	60.8	10.7	4.3
2010	190	132	74	1,032,595	3,627,513	28.5	57.1	10.5	3.9
2011	206	161	91	1,026,006	3,344,139	30.7	54.4	10.8	4.1
2012	173	165	100	1,022,729	3,078,219	33.2	52.0	10.6	4.2
2013	170	128	84	927,574	2,802,793	33.1	*	*	4.2
2014	160	112	74	812,832	2,295,471	35.41	*	*	4.9

Figure 3: Michigan Public Service Commission CLEC Survey Results

***Data withheld to protect confidentiality.**

For the last seven years, competitive telecommunications companies reliance on the incumbent's network to provide service, whether it be via resale, wholesale or UNE-L provisioning, have increasingly focused on the business side of the telecommunications marketplace as is represented in Figure 4. From the total lines provided in conjunction with the incumbent's network in 2014, over 92 percent are business lines and the remaining 8 percent are residential lines.

Figure 4: Competitive Residential and Business lines via ILEC.



In comparison, the lines provisioned over the CLECs' own networks represent a similar combination of residential and business lines. The competitive lines provisioned over their own networks without relying on the incumbent's infrastructure shows 85 percent business and 15 percent residential telecommunications marketplace in Michigan, as is shown in Figure 5.

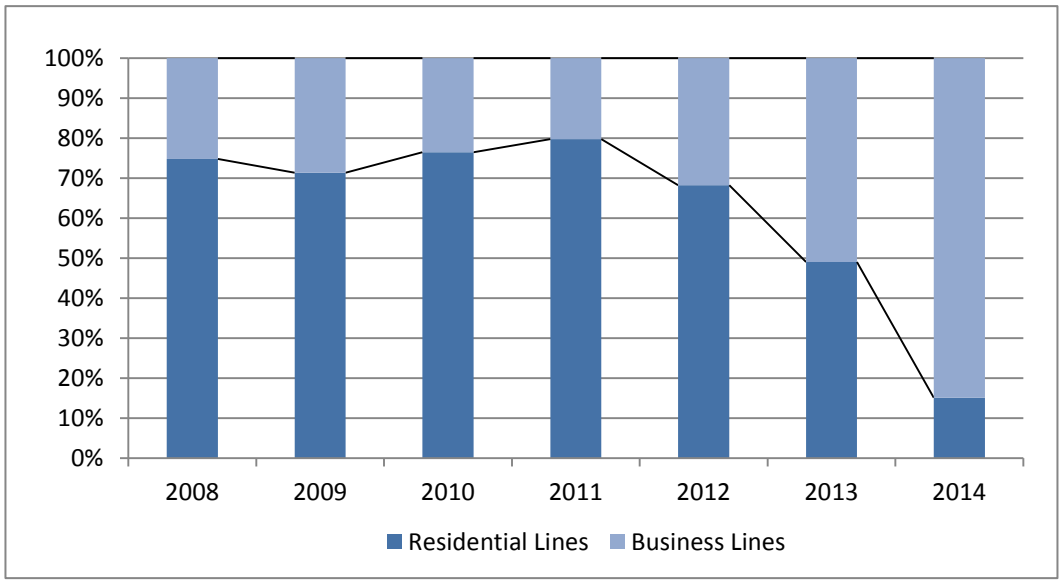
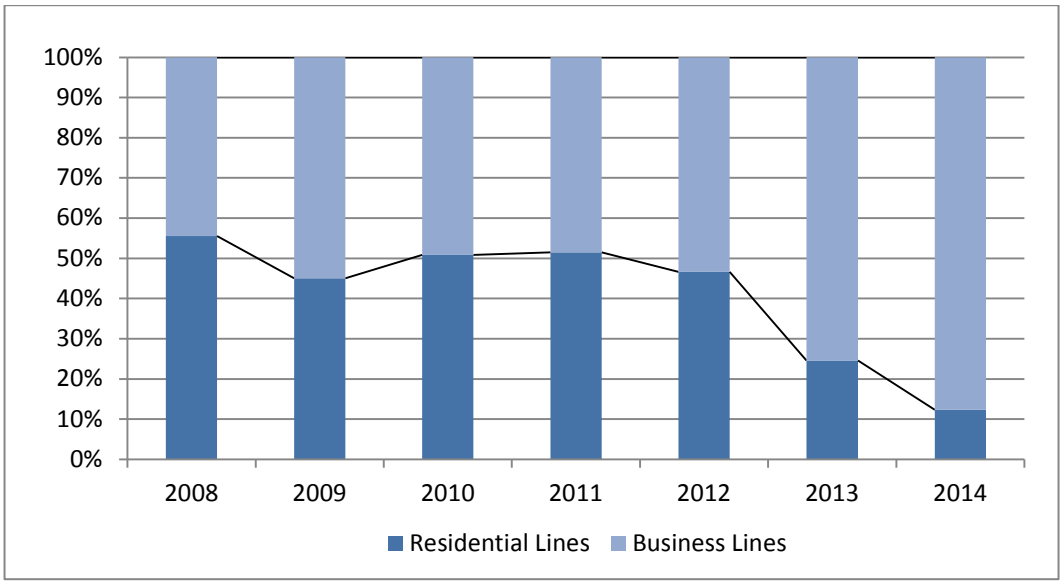


Figure 5: Competitive Residential and Business lines.

In 2009, CLECs as a total served more business lines than residential lines for the first time since the year 2000. The increase in business lines trend began in 2003 and it was more evident in the lines provisioned via the incumbents' network where two-thirds of the lines were business lines. The residential lines provisioned over the CLECs' own facilities accounted for almost three-fourths of the total facilities-based lines.

In 2010 and 2011 the percentage of residential competitive lines was slightly higher than the percentage of business competitive lines. However, as shown in Figure 6, in 2012 this had reversed and the percentage of business competitive lines was slightly higher. In 2013 and 2014 business lines continued to increase and were significantly higher than the residential lines.

Figure 6: Total Residential and Business Competitive Lines.



In 2014, the number of CLEC lines provided using their own facilities increased slightly while the lines provisioned over the incumbents' network has decreased. The increase in competitive lines provisioned over CLECs' own facilities began in 2005 and this trend had continued through 2011, while remaining steady in 2012, then dropping significantly in 2013 before leveling off with only a slight increase in 2014 as show in Figure 7. However, it should be

noted that some of this change, as well as the decrease in residential CLEC lines, is the result of VoIP lines that had been previously reported as wirelines being provisioned using CLEC facilities no longer being reported as such. Therefore the decrease is not as severe as it may seem.

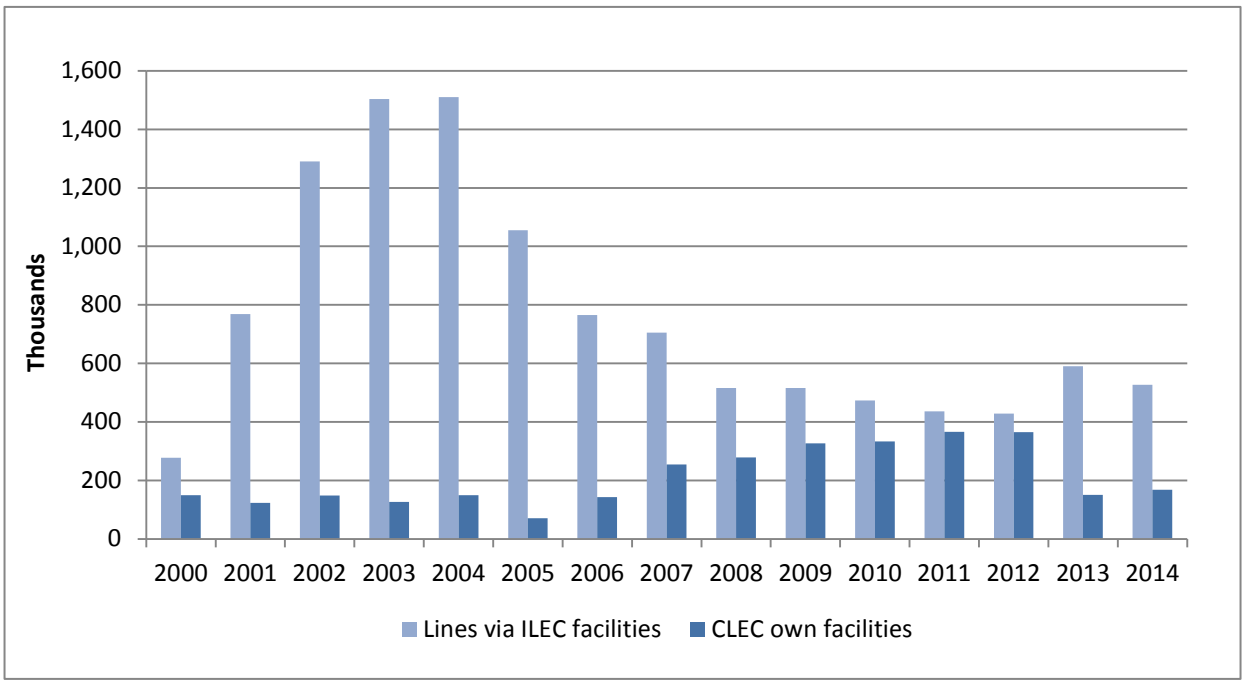


Figure 7: Competitive Lines

The existence of this type of provisioned lines is an indication that the provider has the intent of remaining in the marketplace for the long term as the initial investment to provision those lines is higher than the investment necessary to provision those same lines utilizing the incumbent's network. This investment by the CLECs represents important economic activity that benefits Michigan and points toward further stabilization of Michigan's competitive telecommunications market.

The total number of customers served via wireline technology continues to decrease following a trend that began in 2002. Historically, providers have asserted that the decline in total

wirelines was due to the increase in mobile wireless users[6] and the use of other types of telephony including VoIP, as well as a movement away from using dial-up Internet to high-speed connections. The Commission believes there is merit in this argument, however, it is worth noting that many telecommunications companies are offering one or more of these additional services (wireless, VoIP, Internet connections) provided through their own company or an affiliate which does not necessarily report to the Commission. As such, it is likely that some of the lost wireline customers represent customers migrating to VoIP and/or wireless with the same provider and not actually customers lost by that provider.

Mobile Wireless (Voice)

Pursuant to the MTA, the Commission does not regulate mobile wireless providers. Consequently, in preparing this report the Commission must rely on wireless data obtained from other sources. The FCC prepares a semiannual Local Telephone Competition Report that includes data on the number of mobile wireless telephone providers and subscribers in Michigan.

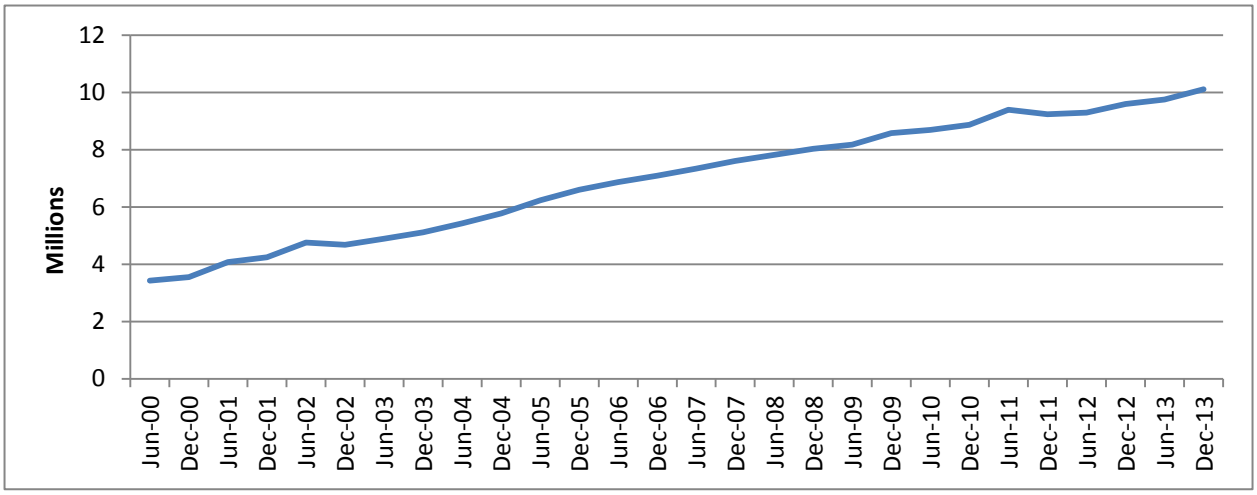


Figure 8: Number of Mobile Wireless Subscriptions in Michigan. FCC Data

[6] For example, see the Mobile Wireless Market section of this report, which discusses the increasing number of wireless only households.

The data from the FCC's most recently released report, ***Local Telephone Competition: Status as of December 31, 2013***, is current through the end of 2013 and shows that Michigan has continued to see an increasing number of mobile wireless subscriptions, with a small decrease between June and December of 2011 (see Figure 8.) At this time it is not known whether this is the beginning of a longer trend but given the prevalence of mobile wireless service it is likely to only be a short term drop. According to this FCC data, there were approximately 10,109,000 mobile wireless telephone subscribers in Michigan as of December 31, 2013. Despite the slight decrease from June to December noted above, Michigan continues to experience steady growth year over year in the number of mobile wireless subscriptions, though that growth is no longer at the peak levels Michigan experienced from 2000 through December 2005 (see Figure 9).

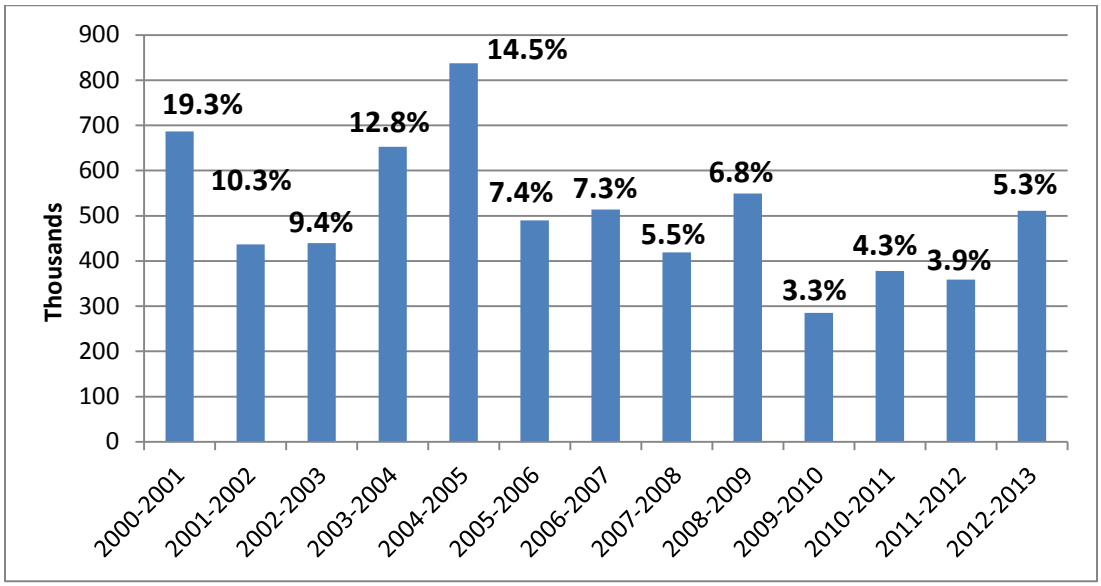


Figure 9: Change in Mobile Wireless Subscriptions in Michigan. FCC Data

The Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS), released its most recent data on wireless substitution in the report *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July - December 2014.*

The NCHS data shows that 45.4 percent of American households, representing approximately 106 million adults and 40 million children, had at least one wireless phone but no landline telephone during the last half of 2014. The report notes the continuing trend of increasing numbers of wireless-only households nationwide, however, it is noted that the annual percent change is decreasing each year. The report also provides evidence that younger adults are much more likely to "cut the cord" than older adults. For example, for the July – December 2014 period, the NCHS reports more than two-thirds (69.2 percent) of U.S. adults aged 25-29 lived in a wireless-only household while only 17.1 percent of adults aged 65 and older did.

While the Commission does not yet consider mobile wireless to be a complete functional equivalent to wireline service for all customers due to issues related to coverage, ability for 911 operators to locate callers, and communications during power outages, it is the case that mobile wireless is becoming a truly competitive alternative to wireline service for an increasing number of Michigan customers. The NCHS also released modeled state level estimates on the distribution of household telephone status of adults and children in its report *Wireless Substitution: State-Level Estimates from the National Health Interview Survey, 2012*. The National Center for Health Statistics' modeled estimates show that for 2012, 39.5 percent of adults and 44.2 percent of children in Michigan were living in a household with only wireless phone service. The report also shows that for 2012, 53.9 percent of adults were living in a wireless only or wireless mostly household; 21.6 percent lived in a household where wireline and wireless are used equally; and 22.3 percent lived in a household that is landline only or landline mostly (see Figure 10).

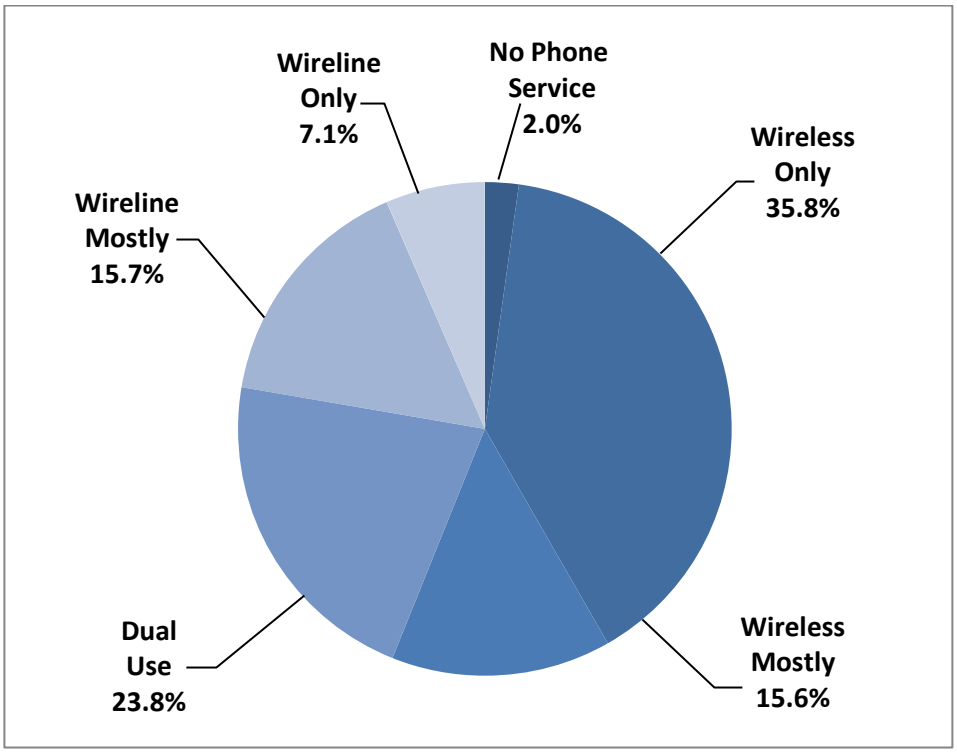


Figure 10: Estimates of the Percent Distribution of Household Telephone Status for Adults in Michigan 2012. National Center for Health Statistics Data.

The FCC released its Seventeenth Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Service (CMRS Report) on December 18, 2014. The FCC information in this report is at the level of Economic Areas (EA), which are regional areas defined by the U.S. Department of Commerce. Due to the large geographic area encompassed by each EA, the FCC's data only allows for generalized conclusions about wireless service in Michigan.[7] According to the FCC data, wireless penetration rates have continued to increase in 2012 and 2013 for four of the six EAs containing Michigan counties. The report did not contain penetration data for the other two EAs in order to protect firm confidentiality. This increase in wireless penetration represents

[7] For example, some of the areas include parts of other states and/or combine urban and rural areas.

additional wireless subscriptions in both the urban and rural areas of the state.

Michigan counties make up all or part of six Economic Areas. Below is a list of which counties are contained in each Economic Area that covers Michigan:

EA 57
Alcona, Iosco, Ogemaw, Gladwin, Arenac, Clare, Isabella, Midland, Bay, Saginaw, Huron, Gratiot, Tuscola, Sanilac, Clinton, Shiawassee, Genesee, Lapeer, St. Clair, Eaton, Ingham, Livingston, Oakland, Macomb, Jackson, Washtenaw, Wayne, Hillsdale, Lenawee, Monroe

EA 58
Chippewa, Luce, Mackinac, Emmet, Charlevoix, Cheboygan, Presque Isle, Montmorency, Alpena, Oscoda, Crawford, Roscommon, Otsego

EA 59
Keweenaw, Houghton, Baraga, Ontonagon, Gogebic, Iron, Marquette, Dickinson, Menominee, Delta, Alger, Schoolcraft . . . also includes portions of Wisconsin

EA 61
Leelanau, Antrim, Kalkaska, Grand Traverse, Benzie, Manistee, Wexford, Missaukee, Mason, Lake, Osceola

EA 62
Oceana, Newaygo, Mecosta, Montcalm, Muskegon, Ottawa, Kent, Ionia, Allegan, Barry, Van Buren, Kalamazoo, Calhoun, Branch

EA 65
Berrien, Cass, St. Joseph . . . also includes portions of Indiana

The penetration rate for each of these six Economic Areas is listed in Figure 11 below.

Figure 11: Wireless Penetration Rate
Source: FCC Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth CMRS Reports

Economic Area	2005 (based on US Census 2000 population data)	2006 (based on US Census 2006 population estimates)	2007 (based on US Census 2007 population estimates)	2008 (based on US Census 2008 population estimates)	2009 (based on US Census 2009 population estimates)	2010 (based on US Census 2010 population data)	2011 (based on US Census 2010 population data)	2012 (based on US Census 2010 population data)	2013 (based on US Census 2010 population data)
57	85%	96%	100%	105%	114%	119%	121%	128%	**137%**
58	41%	56%	65%	*	78%	*	*	*	*
59	63%	72%	85%	92%	82%	87%	92%	94%	**97%**
61	58%	66%	71%	77%	83%	88%	*	*	*
62	63%	68%	73%	78%	84%	85%	87%	93%	**97%**
65	59%	67%	74%	78%	81%	84%	88%	90%	**93%**
Nationwide	**71%**	**80%**	**86%**	**90%**	**93%**	**97%**	**102%**	**106%**	**110%**

* Data withheld to maintain firm confidentiality.

As noted in previous years' reports, wireless penetration rate is not evidence of coverage in all areas. The FCC's CMRS Reports include updated maps showing wireless coverage for 2013. Based on these maps, it appears that most areas in the Lower Peninsula have several options available for customers to choose their wireless provider while wireless competition is not as prevalent in the Upper Peninsula and some northern areas of the Lower Peninsula. However, the Commission finds that the best indicators of wireless coverage are the interactive provider coverage maps available on mobile wireless providers' websites. Many of these maps can show detail of coverage at the level of individual street addresses and are updated frequently as providers roll out additional towers or new technologies.

In addition to wireless voice service, mobile wireless can provide customers with other services including text messaging, multimedia messaging, email, web browsing, and numerous other applications. Broadband service via mobile wireless is discussed in more detail in the broadband section of this report. Data on mobile wireless consistently show that this technology continues to be a driving force in the telecommunications marketplace. While state-level data is difficult to obtain, the Commission will continue to the best of its ability to monitor the impact of mobile wireless voice service on telecommunications services in Michigan.

Voice over Internet Protocol

VoIP is both a technology and a service. There are two main types of VoIP service: interconnected VoIP technology, which allows a customer to make and receive calls from the public switched telephone network (PSTN); and non-interconnected VoIP technology in which calls do not use the PSTN. Aside from companies that offer only VoIP service, VoIP service is also often available from cable companies, some traditional telephone companies, and providers of broadband Internet services. Marketing literature available from a cross-section of these different types of providers shows that VoIP service offerings include residential and business

local and long distance calling, as well as features such as international calling, voicemail, call forwarding, etc. However, while VoIP service is in many ways similar to traditional wireline service, two significant differences are important to highlight. VoIP customers may need to provide location or other information to their VoIP provider, and update this information if they change locations, for their VoIP 911 service to function properly.[8] Additionally, VoIP services typically entail the use of equipment that requires electricity. Therefore, VoIP service may not function during an electrical outage while traditional wireline telephone service typically would. Some VoIP providers include a backup battery that would allow service to continue to operate for several hours during electrical outages, however during a longer term outage service could still be disrupted. Even though the MTA categorizes VoIP as an unregulated service, the MTA does include a registration requirement for providers of VoIP services. The Commission maintains an online registration system, the *Intrastate Telecommunications Service Provider Registry*, to help providers meet this requirement.

The Commission's survey collects information on the number of VoIP lines provisioned by licensed CLECs and the data shows an increasing use of this technology as a method for serving customers. Providers reporting VoIP lines on the CLEC survey reported 104,056 VoIP lines for 2014, representing a decrease from the lines reported in 2013. However, as noted in past reports, the Commission is aware of certain companies (some cable companies, un-licensed subsidiaries of licensed CLECs, other types of providers) that offer VoIP but do not report these lines on the Commission's CLEC survey. Also of note is the fact that providers are no longer required to respond to the CLEC survey due to the change in the MTA. This has likely had an impact on the number of lines reported across the board. Prior to 2008, the Commission did not have a method to determine the number of VoIP lines, but estimated the number during that time

[8] The FCC has a Consumer Advisory, available at http://www.fcc.gov/cgb/consumerfacts/voip911.pdf that explains important information regarding VoIP service and access to 911 emergency services.

to be in the several hundred thousand.

The FCC, however, expanded its reporting requirements and began mandatory reporting by interconnected VoIP providers in December 2008. The greater response of providers offering VoIP on the Commission's CLEC survey may be, in part, due to the fact that the FCC has required providers to report the number of VoIP lines they are provisioning. The FCC data, available in the *Local Telephone Competition* report, confirms that the number of VoIP lines in Michigan is significant. In fact, the FCC reports that as of December 31, 2013, there were 128 providers of interconnected VoIP serving over 1.3 million interconnected VoIP lines in Michigan. Interconnected VoIP is increasingly becoming a competitive option for some customers (with the caveats about 911 service and service during electrical outages), not just in Michigan, but nationwide. The FCC shows that nationwide the number of interconnected VoIP service subscriptions has increased by approximately 121 percent from December 2008 to December 2013, while traditional retail switched access lines decreased 40 percent.

There are many issues of interest to the Commission related to VoIP, including federal universal service funding, 911 functionality and funding, and compensation for traffic exchange between providers. These topics are under the primary jurisdiction of the FCC and debate on these topics continues at the federal level. Some of these issues were addressed in the FCC's universal service and intercarrier compensation reform order.[9] However, the legal challenges to that order were not fully resolved until May 2015and so the end result as it relates to VoIP service is not yet known. More on universal service and intercarrier compensation reform can be found later in this report. The Commission continues to follow this and other developments at the federal level and monitor any effects of federal policy regarding VoIP service on telecommunications competition in Michigan.

[9] http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0206/FCC-11-161A1.pdf

Broadband

The Commission monitors the development of broadband technologies, but does not have regulatory authority over these types of services. As such, the Commission must rely on external data sources when analyzing the state of broadband in Michigan. As reported in previous years, the FCC has made significant revisions to its process for collection of broadband data. These changes include expanding the number of broadband reporting speed tiers, requiring providers to report numbers of broadband subscribers by Census Tract, further broken down by speed tier and technology type, and specifying additional requirements to improve the accuracy of information collected regarding mobile wireless broadband deployment. The FCC has begun reporting the results of the enhanced data collection efforts in its Internet Access Services Reports. These reports replace the *High-speed Services for Internet Access* reports that covered 2000-2008 data. The most recent of these reports, *Internet Access Services: Status as of December 31, 2013* compiles broadband data submitted on the FCC's Form 477 through the end of 2013.

According to the FCC's *Internet Access Services Report*, Michigan now ranks 10th in the country in the number of Internet access lines offering at least 200kbps in at least one direction, with 113 different providers reporting 8,805,000 lines as of December 31, 2013 (see figure 12)[10].

[10] As explained in previous years, with the modifications to the types of data collected with Form 477, the data shows a one-time decrease (2008-2009) in the reported number of high-speed Internet access service connections. In previous reports, the FCC counted a device that was capable of sending or receiving data as a mobile wireless high-speed Internet connection. However, this did not take into account that some customers with these types of devices do not subscribe to mobile wireless broadband service. The revised Form 477 considers a person to have a mobile wireless broadband connection if they have a capable device and subscribe to a plan that allows for transferring data to and from Internet sites and excludes subscribers with plans that only allow for content that is for viewing on a mobile device such as text messaging.

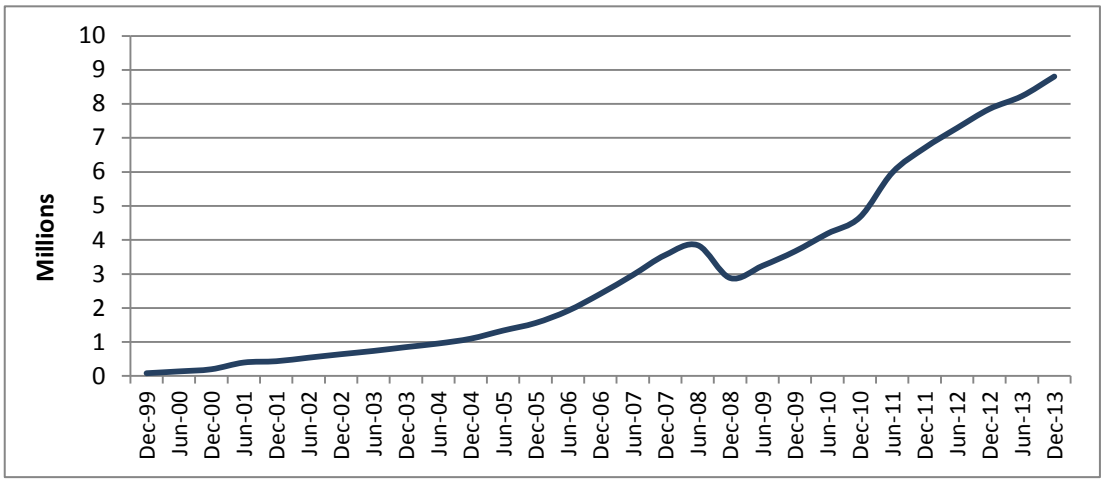


Figure 12: Number of High-speed Internet Lines in Michigan. (FCC Data)

Residential connections represent 81.5 percent total connections with speeds of at least 200kbps in one direction in Michigan, with business connections comprising the remaining 18.5 percent. Figure 13 represents the growth in Internet access lines offering speeds of at least 200kbps in at least one direction by technology type for the eight reporting periods since the FCC changed its data collection methodology. It should be noted that the FCC did not include some data on other wireline and satellite connections in its December 2013 report in order to protect confidentiality. As the figure shows, each technology platform for which data was available continues to see growth in the number of lines served with the exception of DSL which has decreased by a small

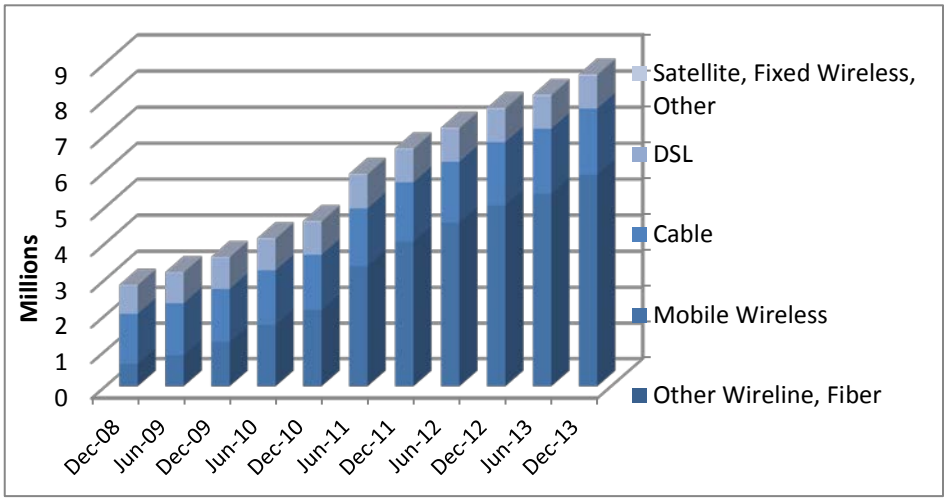


Figure 13: Number of Internet Access Lines at least 200kbps in one by Technology in Michigan (FCC Data).

margin. The most dramatic increase is in the number of high-speed Internet access lines provisioned with mobile wireless, the number of which increased by over 873% between December 2008 and December 2013.

Just as consumers are continuing to choose to use mobile wireless voice to complement or replace traditional wireline voice, expanded geographic coverage for data as well as the continued popularity of smart phones, wireless cards, and mobile hotspots for computers allows consumers to supplement or replace a wired Internet connection with mobile wireless. Mobile wireless connections continued to make up the largest portion of the total lines offering speeds of at least 200kbps in at least one direction in Michigan, representing 67 percent of the total as of December 31, 2013. Cable represented 21 percent, and DSL represents 10 percent, making up most of the remainder. The percentage of lines offering 200+kbps in at least one direction by technology is shown in Figure 14.

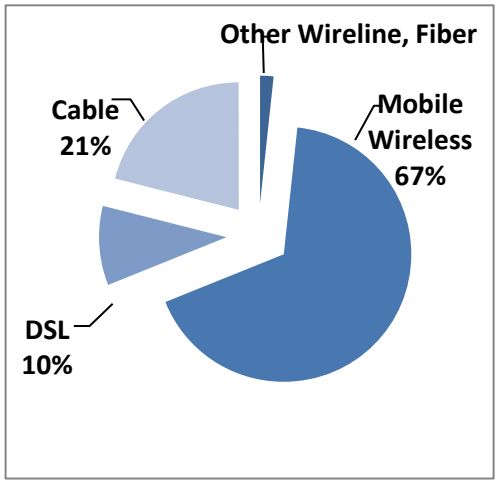


Figure 14: Percent of Michigan Internet Access Lines at Least 200kbps In One Direction by Technology (FCC Data)

For connections with greater speeds, mobile wireless continues to be the dominant technology; the FCC reports that as of December 31, 2013, 63 percent of Michigan connections

with speeds of at least 3mbps downstream/768kbps upstream are mobile wireless connections. The number of cable modem connections is 27 percent and DSL connections are 9 percent. However, the June 2013 report shows that as of June 30, 2013 mobile wireless connections accounted for 60 percent of 3 mbps or greater connections. This is up from 47 percent at the end of 2012, which seems to indicate that in addition to the dramatic growth in the number of mobile wireless broadband connections, wireless carriers are also increasing the speed of their wireless data networks.

The growing number of Internet access connections in Michigan shows that Michigan citizens and businesses increasingly value broadband service. Understanding why individuals and businesses do or do not adopt broadband is an important factor in increasing broadband adoption rates and ensuring that this vital technology is accessible, not just physically available, to all. There are many factors that can act as a barrier to adoption, even where service is available, such as price, lack of a device with which to access the Internet, privacy or security concerns, or a lack of interest/understanding what broadband access to the Internet offers. Determining the barriers to adoption and recommending solutions to overcome these challenges is a goal of the Commission's Connect Michigan program. There continues to be vibrant growth in the broadband sector of the telecommunications market, and the Commission will continue to monitor the developments in this area, as well as the effects of additional broadband availability and adoption on wireline telephone competition in Michigan.

The National Telecommunications and Information Administration awarded a grant to Connect Michigan for broadband mapping and planning initiatives over a five-year period from 2009 through January 31st of 2015. Connect Michigan is a public-private partnership between the Commission and Connected Nation, a national leader in broadband mapping, to expand broadband availability, adoption and use throughout Michigan. At the end of the federal grant

funding, the Commission engaged Connect Michigan to continue the creation and update maps of telecommunications service. This continuation was facilitated by changes to the Michigan Telecommunications Act in 2014 that mandated the Commission maintain a database of providers in the state of Michigan (Public Act 52 of 2014). Connect Michigan assists the Commission with this mandate by gathering broadband and voice service information from Michigan's telecommunications carriers in order to provide consumers and other stakeholders with information on the location of such services. The first iteration of the newly mandated database is scheduled to be released in the first quarter of 2016.

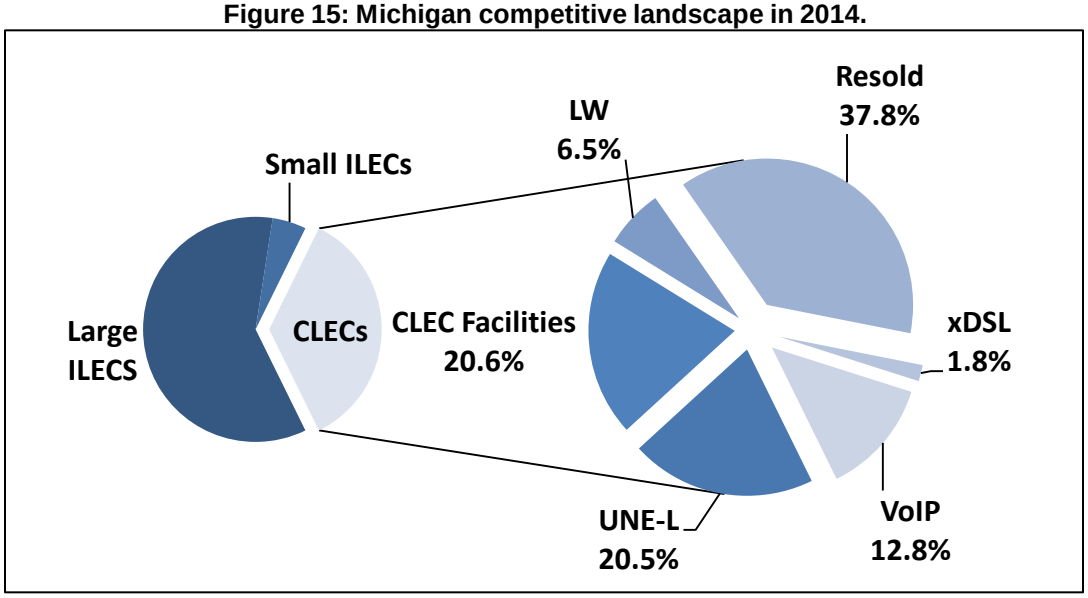
Additionally, Connect Michigan is currently working on a number of broadband planning projects through the Connected Community Engagement Program (Connected), a national certification program through Connected Nation. Connect Michigan field representatives are currently working directly with 54 communities across the state to assess the broadband needs and resources available at the community level. The community teams work with Connect Michigan to design broadband plans to address any identified gaps in broadband availability, adoption or use. Communities that score high enough on the assessment are eligible to become Connected certified. Michigan's own Charlevoix County was the first community in the nation to receive Connected certified status. As of today thirteen Michigan communities are Connected certified. The Connected program provides consumers, businesses, and institutions with an opportunity to better understand their community's broadband and technology strengths and weaknesses in order to more fully participate in the digital economy.

Conclusion

In 2014, Michigan's competitive wireline market share remained relatively stable with 35.41 percent. While the CLECs reported a decrease in line counts of 8.7 percent that decrease is less than the 20 percent decrease reported by the ILECs. However, as noted in this report,

some of this may be the result of using FCC data for non-responding providers, as well some of the lost wireline customers likely represent customers migrating to VoIP and/or wireless with the same provider and not actually customers lost by the provider. Similar to last year, facilities-based competition has remained steady through investment by the CLECs in developing their networks which is a positive economic sign. The chart in Figure 15 depicts the competitive landscape in Michigan for 2014. Services provided over CLEC facilities accounts for 20.6 percent of the provisioning, while VoIP accounts for 12.8 percent. The remainder is accounted for by provisioning using ILEC facilities through UNE-L and resale methods.

Figure 15: Michigan competitive landscape in 2014.



The competitive landscape in Michigan has significantly changed over the last several years, due largely to technological advancements. There is currently a national trend that telecommunication services provided over a traditional wireline is decreasing as VoIP and wireless become more prevalent. The Commission is monitoring the FCC proceedings on the IP transition and has filed comments in these dockets to express concerns about issues such as the

reliability of 911 with these new technologies; power outages and how that affects these newer technologies; rural and remote areas coverage issues and their lack of these new service opportunities, etc. There still exist a fairly large number of consumers in Michigan using traditional wireline technology today which indicates a continued need and desire for wireline services. The Commission strives to strike a balance to position Michigan to reap the benefits of new technologies while at the same time preserving a quality wireline system for those for whom newer technologies are currently unavailable or unaffordable.

The Commission continues to carry out its duties under the MTA as well as monitoring current developments on the national level and keeping abreast of the ever changing technological developments in the industry to ensure that Michigan consumers have telecommunication service choices available to them.