Philip J. Wood, Jr.
Verizon Pennsylvania
State Government Affairs

veri_z_**on**

303 Walnut Street
12ᵗʰ Floor
Harrisburg, PA 17101
717-777-5619

philip.j.wood.jr@verizon.com

March 31, 2015

RECEIVED

Ms. Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, Pennsylvania 17120

MAR 3 1 2015

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Dear Secretary Chiavetta:

Enclosed please find an original and one copy, plus one expurgated copy, of Verizon North LLC's seventh biennial update to its Network Modernization Plan under Chapter 30 and Act 183.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Philip J. Wood, Jr, /san

Attachments

Verizon North LLC

Chapter 30/Act 183

Network Modernization Plan

2015 Biennial Update

March 31, 2015

Expurgated Version

Executive Summary

In accordance with its Commission-approved Network Modernization Plan ("NMP") and 66 Pa. C.S. § 3014(f), Verizon North LLC ("Verizon North") provides its seventh biennial status report detailing the progress of its NMP commitments for the two-year period beginning January 1, 2013 and ending December 31, 2014. As detailed below, Verizon North is meeting or exceeding its commitments as it moves toward the goal of universal broadband availability by December 31, 2015.

Verizon North does not have a benchmark to meet a specific broadband availability percentage for this reporting period. Its next benchmark is to provide full broadband availability by December 31, 2015. In this biennial update, Verizon North reports its progress in terms of the percentage of its lines to which broadband service is available as of December 31, 2014. The NMP states that Verizon North's "broadband commitments . . . do not require a specific technology," and that Verizon North "may choose any technology to meet its broadband commitments." (Verizon North NMP at 6). In keeping with these provisions, Verizon North is reporting the availability of broadband service to its customers under the three types of technologies it has relied upon to meet its broadband commitment during the reporting period.

First, Verizon North continues to deploy fiber optic interoffice, feeder and distribution facilities and other infrastructure to provide High-Speed Internet ("HSI") service (formerly known as xDSL service) to customers in its service territory. Second, as reported in its biennial update for the 2009-2010 reporting period, Verizon North uses its Fiber To The-Premises ("FTTP") network to provide FiOS Internet service at broadband speeds. Third, Verizon North is also continuing to report on the availability of

broadband service using 4G Long Term Evolution ("LTE") wireless broadband

technology through a joint venture with its affiliate Cellco Partnership d/b/a Verizon

Wireless ("Verizon Wireless") in locations where HSI and FiOS Internet service are not

available but where 4G LTE service is available.[1]

As of December 31, 2014, Verizon North, through this combination of three

broadband technologies, has made broadband service available to 93.85% of its access

lines. Verizon North has also met or exceeded all other NMP commitments. Verizon

North has invested over $179 million in deploying wireline broadband services since the

start of its NMP in 2002. In addition, Verizon North and Verizon Pennsylvania have

invested more than **(Begin Proprietary)** **(End Proprietary)** in deploying wireless

4G LTE broadband since 2012. The increased access to broadband services resulting

from this investment enhances the quality of life for all Pennsylvanians in Verizon

North's territory, including those with disabilities.

Key Plan Components

Verizon North's NMP Key Plan Components and results are shown in the table

below.

---

[1]   When customers have both DSL and 4G LTE broadband options available, Verizon North has
   identified the lines as LTE qualified.

NMP Key Requirement	Objective	Status at Time of Original NMP (as of June 30, 2000)	2003 Update Report Status (EOY 2002)	2005 Update Report Status EOY 2004)	2007 Update Report Status (EOY 2006	2009 Update Report Status (EOY 2008)	2011 Update Report Status (EOY 2010)	2013 Update Report Status (EOY 2012)
Digital Switching	-	100%	100%	100%	100%	100%	100%	100%
Intelligent Network Signaling	100% by 2002	92%	100%	100%	100%	100%	100%	100%
Class Services Availability	100% by 2002	-	100%	100%	100%	100%	100%	100%
Broadband Interoffice facilities	100% by 2005	94%	96.6%	99.6%	100%	100%	100%	100%
Broadband Availability 10 Business Days	35% by 2005 65% by 2010 100% by 2015	22.8%	44.5%	50.6%	55.9%	70.1%	72.3%	86.04%
Broadband Deployment Reasonably Balanced	Narrow the gap between urban and rural as the plan progresses	~80%	23.4%	18.2%	14.6%	2.45%	0.61%	(2.39%)

NMP Key Requirement	Objective	2015 Update Report Status (EOY 2014)
Digital Switching	-	100%
Intelligent Network Signaling	100% by 2002	100%
Class Services Availability	100% by 2002	100%
Broadband Interoffice facilities	100% by 2005	100%
Broadband Availability 10 Business Days	35% by 2005 65% by 2010 100% by 2015	93.85%

Broadband Deployment Reasonably Balanced	Narrow the gap between urban and rural as the plan progresses	3.39%

These results demonstrate that Verizon North continues to meet or exceed all of its NMP key requirements to date. They are discussed in detail in the sections that follow.

Broadband Availability

As discussed above, Verizon North is reporting on three technologies used to make broadband service available during this reporting period. The table below shows Verizon North's progress, as of year-end 2014, in meeting its commitments to make available broadband service at speeds of at least 1.544 Mbps downstream and 128 Kbps upstream using all relevant technologies for the applicable reporting period.[2] A discussion of each technology follows.

	2000	2002	2004	2005	2006	2008	2010	2012	2014	2015
Target	-	-	-	35%	-	-	65%	-	-	100%
Actual Broadband Availability	22.8%	44.5%	50.6%	-	55.9%	70.1%	72.3%	86.04%	93.85%	

HSI: Verizon North continues to deploy equipment capable of delivering HSI, formerly known as DSL, at a broadband service speed of at least 1.544 Mbps within 10 business days of customer request. For the biennial period ending December 31, 2014, the average provisioning interval for HSI broadband orders was **(Begin Proprietary)**

---

[2] As stated in its approved NMP, Verizon North in the future may utilize other existing or future technologies to meet its broadband availability commitments as circumstances may warrant or permit.

4

(End Proprietary) business days and **(Begin Proprietary)**   **(End Proprietary)** of broadband HSI orders were completed in 10 business days or less.[3]

FiOS Internet: Verizon North also continues to provide FiOS Internet service over its FTTP network at broadband speeds. For FiOS Internet orders, the average provisioning interval was **(Begin Proprietary)**   **(End Proprietary)** business days and **(Begin Proprietary)**   **(End Proprietary)** of orders were completed within 10 business days or less for the biennial period ending December 31, 2014.[4]

LTE: As discussed in the Commission's order entered February 28, 2013 at Docket P-2012-2323362, Verizon North and its sister company Verizon Pennsylvania LLC ("Verizon PA") have entered into a joint venture with their affiliate Verizon Wireless under which Verizon North may market 4G LTE wireless broadband service to its customers to satisfy its Chapter 30 broadband availability commitments. Verizon Wireless's 4G LTE service provides typical speeds of 5 to 12 Mbps for downloads and 2-5 Mbps for uploads, well above the broadband speed required under Chapter 30. As of the reporting period ending December 31, 2014, Verizon North's reported broadband availability percentages include the availability of Verizon Wireless 4G LTE broadband in locations where, in some cases, neither HSI nor FiOS broadband service is available but 4G LTE is available.[5] Verizon North expects the availability of wireless 4G LTE broadband service to be expanded over the next reporting period.

---

[3]   HSI orders completed in more than 10 days due to customer reasons were excluded from this calculation.

[4]   FiOS Internet orders completed in more than 10 days due to customer reasons were excluded from this calculation.

[5]   When customers have both DSL and 4G LTE broadband options available, Verizon North has identified the lines as LTE qualified.

As discussed in the amended Joint Report between Staff and Verizon PA relating to provisioning intervals that was approved by Secretarial Letter dated February 28, 2013 at Docket D-2008-2056921, it was anticipated that customers would likely use the following devices for home broadband access with Verizon Wireless 4G LTE: LTE Internet (Installed) (previously called HomeFusion® Broadband) and Jetpack® 4G LTE Mobile Hotspot. It was therefore agreed that Verizon PA would report provisioning performance for LTE Internet (Installed) and Jetpack. However, the amended Joint Report recognized that new devices are developed and brought to market rapidly in the wireless industry and it may become appropriate to report other devices in lieu of or in addition to LTE Internet (Installed) and Jetpack in the future. Verizon North is reporting on two additional 4G LTE devices likely to be used for home broadband access with sales volumes in 2013 and 2014: 4G LTE Broadband Router and 4G USB Modem. The provisioning intervals for these LTE devices are as follows:

> ***LTE Internet (Installed):*** **(Begin Proprietary)** **(End Proprietary)** were installed within 10 business days in 2013 and 2014. Sales of LTE Internet (Installed) in Pennsylvania began in May 2012.

> ***Jetpack:*** For the Jetpack, "provisioning" is considered to be delivery to the customer of the unit capable of immediate activation, subject to the customer's choice of when to activate it. **(Begin Proprietary)** **(End Proprietary)** of the units were delivered within 10 business days in 2013 and 2014. Jetpack sales in Pennsylvania began in 2011.

> ***4G LTE Broadband Router:*** This router allows customers to connect multiple wired and wireless devices to the Internet using the Verizon Wireless 4G LTE network. The router provides extended Wi-Fi coverage and has the ability to create instant networks anywhere there is a mobile broadband signal. It is available with or without voice capability. For the units without voice, of the routers were delivered within 10 business days in 2013 and 2014. For the units with voice, **(Begin Proprietary)** **(End Proprietary)** of the routers were delivered within 10 business days in 2013 and 2014. 4G LTE Broadband Router sales in Pennsylvania began in 2013.

4G USB Modem: This device is similar to the 4G LTE Broadband Router except that it connects directly into one computer using a USB port. **(Begin Proprietary)** **(End Proprietary)**[6] of the modems were delivered within 10 business days in 2013 and 2014. 4G LTE USB Modem sales in Pennsylvania began in 2013.

Chapter 30 Biennial Update Reporting Guidelines

Commission guidelines have been established for reporting in Chapter 30 Biennial Updates. In compliance with those guidelines, Verizon North reports the following:

1. **The biennial updates required pursuant to 66 Pa. C.S. § 3003(b) (6) should provide specific information on how many customers are buying broadband services. This information should be provided both by class of customer, i.e., business, residential, and institutional, and by region or geographic area within each service territory of the filing local exchange carrier ("LEC").**

A breakdown of the number of wireline broadband customers by bandwidth in rural and urban areas follows:

(Begin Proprietary)

RURAL									
	BUSINESS					CONSUMER			
Broadband Speed	Wholesale	Retail	FiOS	HSI	Total	FiOS	HSI	Total	Grand Total
DS1									
DS3									
OC3									
OC12									
OC48									
1.5Mb									
3Mb									
5Mb									
7Mb									
10Mb									

---

[6]   The provisioning intervals provided for LTE Internet (Installed), Jetpack, 4G LTE Broadband Router, and 4G USB Modem are state-wide figures.

15Mb									
20Mb									
30Mb									
50Mb									
100Mb									
1Gb									

URBAN									
	BUSINESS					CONSUMER			
Broadband Speed	Wholesale	Retail	FiOS	HSI	Total	FiOS	HSI	Total	Grand Total
DS1									
DS3									
OC3									
OC12									
OC48									
1.5M									
3Mb									
5Mb									
7Mb									
10Mb									
15Mb									
20Mb									
30Mb									
50Mb									
100Mb									
1Gb									

(End Proprietary)

Note: Business customers purchasing broadband services at more than one location in rural or urban areas, respectively, were counted only once in those areas.

For 4G LTE, Verizon North is reporting the unit sales for the following LTE devices: Internet (Installed), Jetpack, two types of 4G LTE Broadband Routers and 4G USB Modem, discussed above.[7] Beginning in May, 2012, LTE Internet (Installed) became available for customers to purchase in Pennsylvania. In 2013 and 2014 **(Begin Proprietary)** **(End Proprietary)** LTE Internet (Installed) units were sold in

---

[7] Sales are not tracked specifically by Verizon North territory. Statewide sales figures are provided.

Pennsylvania. LTE Internet (Installed) is marketed primarily to residential customers in underserved areas, which tend to be rural. In 2013 and 2014 **(Begin Proprietary)** **(End Proprietary)** Jetpack units were sold in Pennsylvania. Of the total units sold, approximately **(Begin Proprietary)** of them **(End Proprietary)** were provided to business, government and employee accounts. In 2013 and 2014 **(Begin Proprietary)** **(End Proprietary)** 4G LTE Broadband Routers (with and without voice) were sold in Pennsylvania. In 2013 and 2014 **(Begin Proprietary)** **(End Proprietary)** 4G USB Modems were sold in Pennsylvania.

2. **Using the same quantity, class, and geographic breakdown outlined in Paragraph No. 1 above, the biennial updates should report the type of broadband services customers are actually subscribing to, including information on the speed of each broadband service being offered by the LEC.**

The following provides information on the broadband services, and their respective speeds, that are currently available for customers to purchase:

HIGH SPEED INTERNET (HSI):

HSI provides high speed Internet access and is currently available at the following downstream/upstream speeds:[8]

	Downstream Bandwidth	Upstream Bandwidth
Residential	0.5 - 1 Mbps	768 Kbps
	1.1 - 3 Mbps	768 Kbps
	3.1 -7 Mbps	768 Kbps

---

[8] Only locations where HSI is capable of providing the broadband speed of at least 1.5 Mbps are counted for broadband availability purposes, but Verizon North is reporting here on all HSI services, even those at slower speeds.

	7.1-15 Mbps	768 Mbps
Business	1Mbps	384 Kbps
	3 Mbps	768 Kbps
	5 Mbps	768 Kbps
	7 Mbps	1 Mbps
	10-15 Mbps	768 Kbps

*Actual throughput speed will vary based on network
conditions and Internet congestion, among other factors.

FiOS INTERNET SERVICE

FiOS Internet provides high speed Internet access and is provisioned over

Verizon's Fiber To The Premises (FTTP) network. It is available at the following

downstream/upstream speeds:

Downstream Bandwidth*	Upstream Bandwidth*
3 Mbps	1 Mbps
15 Mbps	15 Mbps
25 Mbps	25 Mbps
50 Mbps	50 Mbps
75 Mbps	75 Mbps
150 Mbps	150 Mbps
300 Mbps	300 Mbps
500 Mbps	500 Mbps

*Actual throughput speed will vary based on
network conditions and Internet congestion,
among other factors.

ISDN PRIMARY RATE INTERFACE (PRI): IntelliLinQ® PRI is an alternative for individual local exchange access loop services, such as Direct Inward Dialing (DID), *Direct Outward Dialing (DOD), and business dial tone lines.* ISDN PRI is provisioned on the 1.544 megabit per second (Mbps) facility and uses the ISDN architecture of 23 "B" channels and one "D" channel or 24 "B" channels to provide the customer with the capabilities of simultaneous access, transmission and switching of voice, data and imaging services via channelized transport.

TRANSPARENT LAN SERVICE (TLS)[9]

TLS (a.k.a. Switched Ethernet Service) is a high-speed fiber-based network data service that uses a shared high-speed backbone to allow for the interconnection of Local Area Networks (LANs) across selected metropolitan areas. Using TLS, users at one site can quickly access information and online services located at another site. Customers may choose a TLS operating speed of 10Mbps, 100Mbps, 1Gbps, or 10Gbps and incremental Ethernet Virtual Connection (EVC) speeds of 1Mbps, 2Mbps, 3Mbps, 4Mbps, 5Mbps, 6Mbps, 8Mbps, 10Mbps, 20Mbps, 30Mbps, 40Mbps, 50Mbps, 80Mbps, 100Mbps, 200Mbps, 300Mbps, 400Mbps, 500Mbps, 600Mbps, and 1,000Mbps.

ETHERNET SERVICES

Designed to scale with customers' evolving bandwidth requirements, Verizon Business Ethernet Services deliver access to corporate networks, the Internet, and

---

[9]   In previous reports Verizon North had included Frame Relay Service and Asynchronous Transfer Mode (ATM) but those serviced are now grandfathered due to lack of vendor support and because marketplace demand is moving to next-generation technologies that provide higher bandwidths and a wider range of applications such as Ethernet and multi-protocol label switching (MPLS) network-based VPN services, which Verizon and other service providers offer.

network-based applications at ranges from 1 to 1000 Mbps (a.k.a. Gigabit Ethernet) and 10Gbps.

VERIZON OPTICAL NETWORKING (VON)

Verizon Optical Networking offers point-to-point, dedicated Ethernet private line service for intraLATA access applications. The Verizon Optical Networking platform allows the convergence of voice and data, seamlessly, so customers receive a single LAN/WAN network solution while purchasing only the bandwidth they need. High-bandwidth Ethernet transport is more robust using Verizon Optical Networking and available in a variety of speeds from 10 to 600Mbps and GigE full rate (1Gbps).

HIGH CAPACITY DIGITAL SERVICE

Verizon North's High Capacity Digital Service is a digital private line service that has the capacity for two-way transmission of data at speeds of 1.544Mbps (DS1) and 45Mbps (DS3). This transmission service is designed for exchanging heavy volumes of digital information, and for applications that demand high bandwidth between two or more business sites.

SYNCHRONOUS OPTICAL NETWORK (SONET)

SONET is a family of fiber optic transmission rates that provides the flexibility to transport many digital signals with different capacities. Various applications exist for SONET, including LAN interconnections, private networks, disaster avoidance, call centers, data imaging/mirroring, distance learning, multimedia, Internet access,

finance/banking, engineering, research, healthcare, government, education, criminal justice, economic development and telemedicine. SONET can be configured for point-to-point data transmission or in ring configurations, providing redundancy and survivability. SONET transport is offered at bandwidths of: 155.52 Mbps (OC-3), 622.08 Mbps (OC-12), 2.488Gbps (OC-48) and 9.953Gbps (OC-192).

4G LTE DEVICES

While a large array of devices, including smartphones, tablets, etc., can be used on the 4G LTE network, in this biennial update Verizon North is reporting specifically on four devices described above that would be expected to be used for home broadband access, consistent with the Joint Report between Staff and Verizon PA relating to provisioning intervals approved by Secretarial Letter dated February 28, 2013 at Docket D-2008-2056921. Verizon Wireless's 4G LTE service provides typical speeds of 5 to 12 Mbps for downloads and 2-5 Mbps for uploads.

3. The biennial updates should report present and projected upgrades to switches, fiber deployment, and intelligent signaling.

Digital Switching

Verizon North's network currently utilizes 100% digital switching technology as required under Chapter 30. Verizon North also continues to deploy increasingly higher bandwidth broadband switching capabilities. The table below shows the upgrades in broadband switching to accommodate the significant increase in broadband traffic:

(Begin Proprietary)

	Number of Switches in Service (EOY 2002)	Number of Switches in Service (EOY 2004)	Number of Switches in Service (EOY 2006)	Number of Switches in Service (EOY 2008)	Number of Switches in Service (EOY 2010)	Number of Switches in Service (EOY 2012)
Totals						

	Number of Switches in Service (EOY 2014)
Totals	

*

**

(End Proprietary)

Plans for new switches in 2015 are not yet complete.

Verizon North will continue to upgrade switching hardware and software as network

technology advances and broadband demand on the network increases.

Fiber Deployment

14

The table below shows the cumulative fiber deployment that has taken place each year since approval of the Verizon North NMP. This extensive deployment in fiber has taken place not only in interoffice facilities, but in feeder and distribution cable as well.

	2002	2003	2004	2005	2006	2008	2010	2012	2014
Sheath Miles	1,910	2,025	2,082	2,132	2,284	2,646	3,082	3,931	4,100
Fiber Miles	61,825	68,634	66,846	73,034	84,508	111,281	136,109	200,303	218,102

Note: Includes Impact of Retirements

Intelligent Network Signaling Capability

Intelligent Network Signaling technology enables a variety of call management and call processing services. In 2002, Verizon North met its commitment to serve 100% of its access lines with intelligent network signaling. As a result, CLASS services are available to 100% of the access lines in Verizon North's service area.

Interoffice Trunking

The deployment of broadband-capable facilities in the interoffice network, connecting Verizon North switching centers is essential in order to meet the commitment of universal broadband availability. As of December 31, 2005, Verizon North met its commitment for broadband facilities in all of the interoffice routes within its control.

(Begin Proprietary)

(End Proprietary)

4. **The biennial updates should explain the LEC's planned architecture for its broadband network. If the LEC's architecture has been revised substantially from the last biennial update because of changing technology or market environment, the LEC should provide a specific description of the new architecture and the reasons for the change.**

Verizon North continues to deploy xDSL technology (now known as HSI) as a means of meeting its broadband availability requirements. HSI is being deployed from central offices, remote switches and remote terminals (to customers too distant from the central office for CO-based HSI). HSI can operate at speeds of 1.544 Mbps downstream (and higher) on cable loops up to 18,000 feet. Only lines meeting the 1.544 Mbps loop length criteria have been used to calculate broadband availability.

Verizon North also relies on its FTTP network to provide broadband capability and has included FiOS Internet service (a broadband service provided on fiber) capability, where available, in its broadband availability calculations in the 2015 NMP biennial update.

In addition, Verizon North is relying on Verizon Wireless 4G LTE wireless broadband service in locations where it has been made available in Verizon North's territory and HSI or FiOS Internet are not available.[10] The current 4G LTE devices that customers would be expected to use for home Internet access are 4G LTE Internet (Installed) (previously called HomeFusion® Broadband), Jetpack® 4G LTE Mobile Hotspot, 4G LTE Broadband Router (with or without voice) and 4G USB Modem. New

---

[10] When customers have both DSL and 4G LTE broadband options available, Verizon North has identified the lines as LTE qualified.

16

devices are developed and brought to market rapidly in the wireless industry, however, and others may emerge in the future.

Verizon North plans to rely on the above three Verizon technologies to make broadband available. To the extent another technology is needed to reach required availability, Verizon North, like the ILECs CenturyLink and Windstream have indicated that they are doing in their biennial updates, is looking into using satellite technology to make satellite broadband service available as an option if the present technologies will not provide broadband access to a particular customer.

5. The biennial updates should project the LEC's deployment schedule.

(Begin Proprietary)

(End Proprietary)

6. The biennial updates should identify broadband availability in or adjacent to public rights-of-way abutting health care facilities, public schools, and industrial parks. For reporting purposes, "public schools" shall include all public school districts within the Commonwealth of Pennsylvania, all intermediate units, all charter schools, and all area vocational-technical schools.

Verizon North has facilities in place in the public rights-of-way capable of providing broadband service to all public schools (including all intermediate units,

charter schools and vo-tech schools), industrial parks and health care facilities throughout

its territory.

7. **The biennial updates should describe how the LEC is meeting the commitment made in its Chapter 30 network modernization plan to achieve reasonably balanced broadband availability to urban, suburban, and rural areas within its service territory consistent with each company's approved Chapter 30 plan.**

In its NMP approved in October 2002, Verizon North committed to a plan to

"satisfy its obligation to reasonably balance future deployment under Chapter 30 by

narrowing the difference between rural and urban broadband deployment as the Plan is

implemented." The table below shows the percentage of urban and rural lines with access

to broadband service as the Network Modernization Plan has progressed:

Begin Proprietary

	June 2002	EOY 2002	EOY 2004	EOY 2006	EOY 2008	EOY 2010	EOY 2012	EOY 2014
	% of Total Lines	% of Total Lines	% of Total Lines	% of Total Lines	% of Total Lines	% of Total Lines	% of Total Lines	% of Total Lines
Urban								
Rural								
Difference								

End Proprietary

As illustrated above, Verizon North continues to close in on the NMP

commitment target for year-end 2015.

8. **Consistent with the reporting obligations contained in 52 Pa. Code §§ 73.1-73.9, for LEC's providing telephone service with over 50,000 access lines or which have grossed intrastate operating revenues in excess of $20 million per year, the biennial updates should provide the level of capital investment being made to develop the broadband network. Specifically, information regarding the historical, current, and projected levels of capital investment in the network as**

18

well as updated depreciation report information should be provided. A LEC may coordinate its reporting obligations required by Chapter 73 to comply with this paragraph so long as the LEC complies with the notification requirement contained in 52 Pa. Code § 73.8(6).

Verizon North continues to make significant infrastructure investments in order to deliver broadband services to its customers in Pennsylvania. Since the 2013 biennial NMP update, Verizon North has made capital investments in the wireline broadband network of **(Begin Proprietary)** **(End Proprietary)**

The table below demonstrates the significant historical capital investment in Verizon North's broadband network:

(Begin Proprietary)

2003	2004	2005	2006	2007	2008	2009

2010	2011	2012	2013	2014

(End Proprietary)

Projected 2015 capital investment levels are under constant review and subject to change. The current budget view plans for an investment of nearly **(Begin Proprietary)**

(End Proprietary) for the wireline Chapter 30 program, HSI deployment, fiber, and broadband infrastructure expansion in 2015.

The numbers above do not reflect Verizon North's and Verizon Pennsylvania's combined expenditures under the joint venture agreement for new towers to provide 4G LTE service in areas where Verizon Wireless did not otherwise plan to deploy it. These

expenditures are estimated at **(Begin Proprietary)**   **(End Proprietary)** in

2015.

Depreciation information for 2013 and 2014 is contained in Attachment A.

9. **For LEC's providing telephone service with less than 50,000 access lines or which have gross intrastate operating revenues less than $20 million per year, the biennial updates should contain information similar to what is required under 52 Pa. Code §§ 73.4 and 73.8. These small LECs may meet with Commission Staff to determine the precise information to be provided so as to balance the Commission's specific informational needs with the LEC's need to minimize any administrative burdens created by the production of this information.**

Not Applicable

10. The biennial updates should report on joint ventures.

As reported in its previous biennial update, Verizon North has entered into a

business arrangement with Verizon Wireless that allows Verizon North to make available

Verizon Wireless 4G LTE broadband service in certain areas in which Verizon North

does not currently offer wireline broadband service. More information on that

arrangement was provided in connection with the proceedings at Docket P-2012-

2323362. As of December 31, 2014, Verizon Pennsylvania and Verizon North have paid

Verizon Wireless more than **(Begin Proprietary)**   **(End Proprietary)**

under the joint venture agreement for new towers to provide 4G LTE service in areas

where Verizon Wireless did not otherwise plan to deploy it.

As discussed above, Verizon North is looking into the use of satellite technology

as an option if the present technologies will not provide broadband availability to a

particular customer. Verizon North incorporates any additional information or updates

on the use of satellite technology that may be reported in the prospective biennial update of Verizon Pennsylvania LLC.

11. The biennial updates should report on the status of products and services that enhance the quality of life for those with disabilities.

For those customers with disabilities, the following provides examples of Verizon North's offerings to address their needs:

- The Verizon Center for Customers with Disabilities is a call center for customers with disabilities with direct access via TTY (a telecommunications device for the deaf), Videophone or voice. The center is staffed with specially trained service representatives who understand the needs of customers with disabilities.

- Verizon provides directory assistance and operator privilege exemptions for those customers who are visually or mobility impaired.

- Verizon offers adaptive equipment that assists people with disabilities to connect with the telephone network. Some of the equipment includes amplified phones and large button phones.

- Intelligent network signaling offers many advantages to the disabled community, including the following service:

  o Caller ID enables customers to see or hear the number calling them.

- The deployment of broadband services, such as HSI, FiOS Internet and 4G LTE, to the residential market benefits homebound people by providing a wide range of services including instant messaging, email, video conferencing and high-speed Internet access.

- With FiOS TV, VZ North offers visual 411 to help with hearing impaired customers as well as closed captioning. VZ PA also offers a large button remote for the visually impaired.

- For the visually impaired, Verizon North provides alternate bill formats, such as Braille and large print.

- Descriptive Video Service (DVS) provides access to television for Verizon North customers who are blind or visually impaired. The service provides descriptive narration of key visual elements, such as actions, costumes, facial expressions and onscreen text, which is then inserted within the natural pauses in dialogue to help low-vision viewers to better understand the story.
As demonstrated in each section above, Verizon North is meeting, and exceeding, the commitments made under its Chapter 30 NMP.

Company: <u>Verizon North LLC</u>
Contact: Mary Segrave-Primus
Telephone: 215-466-2326
Email: mary.e.segrave-primus@verizon.com.

Biennial Network Modernization Report
Broadband Availability Status - Sheet #1
Verizon North

(As Of 12/31/14)

Exchange Availability and Qualified Lines Status									
Exchanges			Access Lines						
Exchange Name (insert) (a)	** U, S or R (insert)	Total Exchange ALs (insert) (b)	FiOS Qualified	DSL Qualified	LTE Qualified	BB Qualified ALs (insert) (c)	% BB Qualified ALs (c)/(b)*100% (d)	% BB Unavailable ALs 100%-(d) (e)	Exchange BB Qualification (Y, P, or N)* (f)
AUBURN	R								
BEACH LAKE	R								
BEAVER SPRINGS	R								
CAMBRIDGE SPRINGS	R								
CLINTONVILLE	R								
COOPERSTOWN	R								
EAST BERLIN	R								
ELKLAND	R								
FRANKLIN	R								
FRIEDENSBURG	R								
GALLILEE	R								
GRAND VALLEY	R								
HARRISON VALLEY	R								
KNOXVILLE	R								
LINCONVILLE	R								
MANTZVILLE	R								
MCKEANSBURG	R								
MIDDLEBURG	R								
MT PLEASANT MILLS	R								
NEW BEDFORD	R								
NEW WILMINGTON	R								
OIL CITY	R								
PINE GROVE	R								
PLEASANTVILLE	R								
PRINCETON	R								
SABINSVILLE	R								
SALTSBURG	R								
SAYRE	R								
SELINSGROVE	R								
SEWARD	R								
SHAMOKIN DAM	R								
SPARTANSBURG	R								
TITUSVILLE	R								

WESLEY	R									
WESTFIELD	R									
AIRVILLE	U									
AVONMORE	U									
BARBOURS	U									
BEAVERDALE	U									
BENSCREEK	U									
BERLIN	U									
BERNVILLE	U									
BOSWELL	U									
BROGUE	U									
BROOKSIDE	U									
BUFFALO	U									
CENTRAL CITY	U									
CHAPMAN LAKE	U									
CONFLUENCE	U									
CORRY	U									
DAVIDSVILLE	U									
DELTA	U									
DILLSBURG	U									
DINGMANS FERRY	U									
DOVER	U									
EDINBORO	U									
EMMAUS	U									
ERIE EAST	U									
ERIE MAIN	U									
ERIE SOUTH	U									
ERIE SOUTHEAST	U									
ERIE WEST	U									
FAIRVIEW	U									
FAWN GROVE	U									
FRYSTOWN	U									
GEISTOWN	U									
GIRARD	U									
GLEN ROCK	U									
HERSHEY	U									
HOOVERSVILLE	U									
JOHNSTOWN MAIN	U									
JOHNSTOWN NORTH	U									
JONESTOWN	U									
KEMPTON	U									
LOG TAVERN	U									
LOGANVILLE-YORK	U									
LOYALSOCK MAIN	U									
LOYALSOCK SOUTH	U									
MANCHESTER	U									
MATAMORAS	U									
MCKEAN	U									
MEYERSDALE	U									

MEYERSTOWN	U										
MILFORD	U										
NANTY GLO	U										
NEW SMITHVILLE	U										
NEW TRIPOLI	U										
NORTHEAST	U										
RALSTON	U										
RED LION	U										
ROBESONIA	U										
ROCKWOOD	U										
SALISBURY	U										
SCHAEFFERSTOWN	U										
SEVEN SPRINGS	U										
SHELLSVILLE	U										
SHOHOLA	U										
SOMERSET	U										
SOUTHFORK	U										
SPRING GROVE	U										
STEWARTSTOWN	U										
STOYSTOWN	U										
TAYLORSTOWN	U										
TROUT RUN	U										
UNION CITY	U										
VANDERGRIFT MAIN	U										
VANDERGRIFT SOUTH	U										
WATERFORD	U										
WATTSBURG	U										
WESTMONT	U										
WINDBER	U										
WOMELSDORF	U										
WRIGHTSVILLE	U										
YORK EAST	U										
YORK MAIN	U										
YORK NORTH	U										
YORK WEST	U										
(add rows as required)											
Rural											
Urban											
Totals											

* Exchange qualification is based upon % of BB qualified access lines shown in Column (d)

If Column (d) = 100% then Column (f) = Y (for 'Yes')

If Column (d) = 1-99% then Column (f) = P (for 'Partial')

If Column (d) = 0% then Column (f) = N (for 'No')

** Exchange Classification (Urban or Rural, no Suburban)

Biennial Network Modernization Report
Broadband Availability Status - Sheet #2
Verizon North
(as of 12/31/14)

(Compete Availability Sheet #1 Before Starting This Sheet)

DSL Service -- Exchange Availability	
Exchanges	
Exchange DSL Availability (Sheet 1, Column f) (a)	Number of Y/P/N Exchanges (count from Sheet 1, Column f) (b)
100% (=Y)	
Partial (=P)	
None (=N)	
Total	117

CHANGES IN INTRASTATE DEPRECIATION RATES - EFFECTIVE 1 / 1 / 2013
PROPRIETARY

					ANNUAL	2008 DEPRECIATION RATE PARAMETERS *						ANNUAL	CHANGE	ADDITIONAL
		1/1/2013	1/1/2013	2008	DEPR		GM				2008	DEPR	IN	INFORMATIC
ACCT	DESCRIPTION	INVESTMENT	RESERVE	RATE	ACCRUAL	LIFE	CURVE	RL	RR	FNS	RATE	ACCRUAL	ACCRUAL	2013 RR
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
2112	MOTOR VEHICLES													
2113	AIRCRAFT													
2114	TOOLS & OTHER WORK EQ													
2121	BUILDINGS													
2122	FURNITURE													
2123.1	OFFICE SUPPORT EQ													
2123.2	COMPANY COMMUN EQ													
2124	GEN PURPOSE COMPUTERS													
2212	DIGITAL ELECTRONIC SW													
2220	OPERATOR SYSTEMS													
2231	RADIO SYSTEMS													
2232	CIRCUIT EQ													
2362	OTHER TERMINAL EQ													
2411	POLES													
2421.1	AERIAL CABLE METALLIC													
2421.2	AERIAL CABLE NONMETAL													
2422.1	UNDRGRD CABLE METALLIC													
2422.2	UNDRGRD CABLE NONMETAL													
2423.1	BURIED CABLE METALLIC													
2423.2	BURIED CABLE NONMETAL													
2424	SUBMARINE CABLE													
2426	INTRABLDG CABLE													
2441	CONDUIT SYSTEMS													
	TOTAL													

Note:
* There were no rate changes since 2008; accordingly rate parameters are from 2008

CHANGES IN INTRASTATE DEPRECIATION RATES - EFFECTIVE 1 / 1 / 2014
PROPRIETARY

					ANNUAL	2008 DEPRECIATION RATE PARAMETERS *						ANNUAL	CHANGE	ADDITIONAl
		1/1/2014	1/1/2014	2008	DEPR		GM				2008	DEPR	IN	INFORMATIC
ACCT	DESCRIPTION	INVESTMENT	RESERVE	RATE	ACCRUAL	LIFE	CURVE	RL	RR	FNS	RATE	ACCRUAL	ACCRUAL	2014 RR
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
2112	MOTOR VEHICLES													
2113	AIRCRAFT													
2114	TOOLS & OTHER WORK EQ													
2121	BUILDINGS													
2122	FURNITURE													
2123.1	OFFICE SUPPORT EQ													
2123.2	COMPANY COMMUN EQ													
2124	GEN PURPOSE COMPUTERS													
2212	DIGITAL ELECTRONIC SW													
2220	OPERATOR SYSTEMS													
2231	RADIO SYSTEMS													
2232	CIRCUIT EQ													
2362	OTHER TERMINAL EQ													
2411	POLES													
2421.1	AERIAL CABLE METALLIC													
2421.2	AERIAL CABLE NONMETAL													
2422.1	UNDRGRD CABLE METALLIC													
2422.2	UNDRGRD CABLE NONMETAL													
2423.1	BURIED CABLE METALLIC													
2423.2	BURIED CABLE NONMETAL													
2424	SUBMARINE CABLE													
2426	INTRABLDG CABLE													
2441	CONDUIT SYSTEMS													
	TOTAL													

Note:
 * There were no rate changes since 2008; accordingly rate parameters are from 2008

VERIZON VERIZON NORTH LLC
DEPRECIATION WORKSHEET DESCRIPTION KEY

Column	Decription	Formula
a	Account Number	
b	Account Description	
c	Beginning of Year Investment Balance	
d	Beginning of Year Depreciation Reserve Balance	
e	Prior Depreciation Rate Percent	
f	Annual Depreciation Accrual based on Prior Depreciation Rate and Beginning of Year Investment Balance	columns c * (e/100)
g	Projected Account Plant Life	
h	Retirement Dispersion Curve	
i	Average Remaining Account Plant Life	
j	Accumulated Depreciation Reserve Ratio Percent	
k	Future Net Salvage Percent	
l	Depreciation Rate Percent - Calculated using traditional remaining life formula.	columns (100 - k - j) / i
m	Annual Depreciation Accrual based on New Depreciation Rate and Beginning of Year Investment Balance	columns c * (l/100)
n	Change in Depreciation Accruals Resulting From Differences in Accruals from Old Rate to New Rate.	columns m - f
o	Reporting Year Accumulated Reserve Ratio Percentage	columns (d/c)*100

From: (717) 777-3501   Origin ID: MDTA   **FedEx** Express
Stephanie Ulrich
VERIZON
303 WALNUT ST

HARRISBURG, PA 17101

E

J151215022303uv

SHIP TO: (717) 772-7777   BILL SENDER
SECRETARY'S BUREAU
PA PUBLIC UTILITY COMMISSION
400 NORTH ST
FLOOR 3
HARRISBURG, PA 17125

Ship Date: 31MAR15
ActWgt: 1.0 LB
CAD: 107103324/WSXI2600

Delivery Address Bar Code

Ref #   FXS0000029140
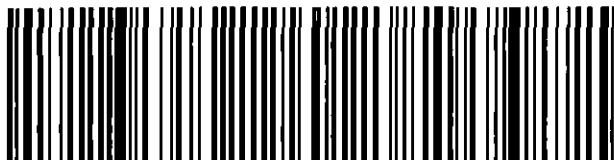Invoice #
PO #
Dept #

WED - 01 APR 10:30A
PRIORITY OVERNIGHT

TRK#   7804 2870 8103
0201
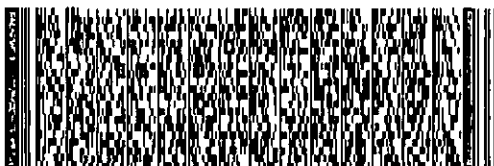
16 MDTA

17125
PA-US
MDT

537J2/8FC5/EE4B

RECEIVED

MAR 3 1 2015

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU