New Networks Institute

PART I

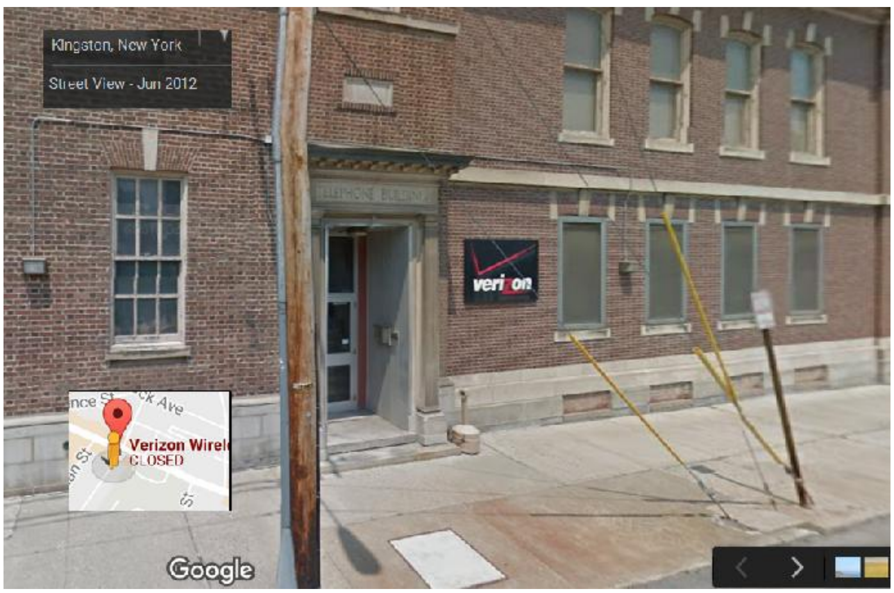
SPECIAL REPORT

HOW MUNICIPALITIES AND THE STATES CAN FUND FIBER OPTIC & WIRELESS BROADBAND NETWORKS

Proving Verizon's Wireline Networks Diverted Capex for Wireless Deployments Instead of Wiring Municipalities, and Charged Local Phone Customers for It.

Two Parts:

- **PART I:** Primary Findings Summary
- **PART II**: Data Report



Abandoned Verizon Central Office, Kingston NY (Source: Google Maps)

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This report is divided into two parts:

- **PART I:** Summary
- **PART II**: Data Report

This special report is excerpted from a larger report.

Report III: Verizon Wireline-Wireless Cross-Subsidies

History

In December, 2015, New Networks Institute launched a new report series called "Fixing Telecom" and published the first two reports. However, this project started in 2010. Most significantly, in May 2014, Public Utility Law Project, PULP, published "It's All Interconnected" written by Bruce Kushnick, with assistance from David Bergmann, Esq. This report and previous work has been used as part of a petition for investigation by the Connect New York Coalition, which was filed with the NY State Public Service Commission in July 2014 and is an open proceeding.

In April 2016, Consumer Federation of America (CFA) and NNI filed joint comments and reply comments in the special access proceedings at the FCC.

- **"Fixing Telecom", Reports, Filings** http://newnetworks.com/verizonny/
- **Joint filings with CFA** http://newnetworks.com/nnicfacomments/
- **NNI Expert Team:** http://newnetworks.com/nniexperts/

NNI is an independent expert consortium. New Networks Institute (NNI) was established in 1992 and over the last decade has gathered a team of independent experts, auditors and lawyers to work on projects.

Cover Photo (from Google Maps): Abandoned Verizon CO, featured by Daily Freeman, 9/17/2015 http://www.dailyfreeman.com/article/DF/20150917/NEWS/150919676

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SUMMARY

Verizon is now a wireless-first company. But Verizon also controls, state by state, the state-based wired utilities and business networks from Massachusetts to Virginia, with only a few exceptions. Verizon has no serious plans to upgrade or even maintain the existing retail copper wires. Even Verizon's FiOS fiber to the home deployments stopped in 2010-2012, except for areas with existing license agreements. And while Verizon claims that in Boston they are finally doing fiber to the home to deliver wireline broadband, it is a 'trial' to instead deploy and substitute wireless broadband, which still requires many wireless antennas to be connected to a fiber optic wire. (As of now, 5G is more a hyped next-generation mirage than a working service to replace fiber to the home.)

But there are more troubling issues. What should be of major concern to all Verizon municipalities and cities is that Verizon has diverted billions per state to build out its wireless networks by having the wireline state utility take over the capital expenditures' ("capex") budget, thus phone customers, pay for the capex. In just New York, Verizon built 5,515 cell towers and charged local phone customers and the state wired utility an estimated $2.8 billion for just 2010-2012. On top of this, Verizon Wireless pays a fraction of what its competitors, such as Sprint, pay for the use of the Verizon networks, known as "special access".

This diversion of funds is one of the primary reason why the work in most cities along the East Coast abruptly stopped around 2010-2012, or the municipalities were never even offered service and this lack of payment back to the wired networks is one of the primary reasons the local phone networks are 'unprofitable'; the financial books are manipulated to make local phone service pay the majority of expenses.

In fact, throughout the East Coast, from Massachusetts to Virginia, Verizon has left the majority of municipalities with a deteriorating copper network, which, depending on the state, should have been replaced with fiber optics. This has left most areas without direct, very fast broadband and thus cable competition, but also left most cities without serious upgrades of their town, or even working reliable service.

In 2015, *DSLReports* summed up the current situation based on recent calls for broadband deployment in cities across the East Coast.[1]

> "With the exception of major city franchise obligations (and even those have lots of wiggle room), Verizon all but ended their FiOS expansion plans around five years ago. With so many un-served cities still begging to be upgraded Verizon continually has to remind folks that they're simply not interested in upgrading their fixed line networks any more. If you live in one of those un-upgraded cities like Buffalo, Boston or Alexandria, that's a tough pill to swallow."

NOTE: The opening picture is of a Verizon Central Office (CO) in Kingston, New York. That is testimony of this abrupt changeover. According to union personnel, the CO could have been 'lit' to deliver service, but was never implemented. Instead, the staff was deployed to do wireless deployments. (Note: Every city has a number of Central Offices, which are buildings where the wires and services are aggregated in the community.)

Unknown to most, depending on the state, Verizon was able to manipulate the accounting to charge local phone customers extra to fund the fiber-build out as well as to pay, via cross-subsidies, for the deployment of Verizon's other lines of business, such as special access, which has unchecked 'Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA), profits. Meanwhile, "Local Service" was left holding the proverbial bag to pay most of the expenses and thus loses money.

(In fact, the lack of fiber optic broadband can be traced to changes in state laws in the 1990's to have entire states, from New Jersey or Pennsylvania, completed with 45 Mbps bi-directional services.[2])

Verizon and the other incumbent phone companies have also been able to hide the majority of access lines, all of the "special access" wires. These are the wires that go to the cell sites (sometimes called "backhaul") or carry retail data services, like alarm circuits and to ATM machines. Yet these wires are actually part of the state utility and are the same as phone wires, but, since they are under a different regulatory covenant, they have high profits because the accounting could be manipulated.

The Consumer Federation of America's 2016 report found massive special access overcharging and estimated the encompassing larger economic harms; the overcharging doesn't just harm the competitors or business users, but impacts consumers as well.[3]

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[1] http://www.dslreports.com/shownews/Communities-are-Still-Begging-Verizon-to-Expand-FiOS-135041
[2] See "The Book of Broken Promises". http://newnetworks.com/bookbrokenpromises/

> "Consumer Federation of America (CFA) estimates that large incumbent telephone companies have engaged in abusive pricing practices for high-speed broadband "special access" services, with overcharges totaling about $75 billion over just the past five years. As a result, CFA estimates that the indirect macroeconomic loss to American consumers doubles that damage to a total in excess of $150 billion since 2010."

New Networks Institute and Consumer Federation have combined analyses and filed comments and reply comments in multiple FCC proceedings pertaining to special access.[4]

We believe that the first step is to document the cross-subsidies, then stop the diversion of the billions going to fund wireless and 'redirect' it. Wireless and all other affiliates would be paying market prices, which would not only supply money to build out the networks to residential and business customers, but dramatically lower rates, especially for the low income families and the elderly that funded the wired networks and FiOS through rate increases in New York. Unfortunately, the cross-subsidies appear to have occurred in every state telephone utility, as many were set via the FCC federal cost allocation rules.

The irony is – wireless densification requires fiber optic wires. All of the "loss of lines" stories have been manipulated, as they do not count the growing special access markets—or the actual lines in service.

Why It Matters Now:

- First, the ability to block a municipality from offering services in a growing number of states has been upheld by the courts after the FCC decided to take actions to change this situation and lost. The agency has decided not to appeal.
- No city has asked for an audit of the accounting to deal with the cross-subsidies of wireline and wireless.
- Most people don't like being gouged, among other complaints. From overcharging of special access to many states raising rates multiple times, which ended up going to fund the wireless business, the customers, the state economy—and the cities throughout the East Coast, have all been harmed.
- While the cable companies have deployed more coverage areas in many states, (as opposed to the telco's broadband-TV deployments) they are also the "most hated companies in America", year after year, survey after survey. Worse, even where

[3] http://consumerfed.org/press_release/cfa-study-finds-special-access-market-concentration-cost-consumers-and-the-u-s-economy-150-billion-since-2010/

[4] http://newnetworks.com/nnicfacomments/

Verizon has rolled out its FiOS service, this is only a 'duopoly' at best; it is still not competition.

- Economic growth for the city, business and family income is missing in many cities. There are thousands of studies pertaining to the benefits in economic growth or education from high speed services. See: http://www.baller.com/library/
- Even the White House released a report **"**Community-Based Broadband Solutions: The Benefits of Competition and Choice for Community Development and High-speed Internet Access"[5]

Every Verizon State and Municipality are in the Same Boat.

- In Pennsylvania and New Jersey, Verizon has been able to get rid of the requirement to offer a wireline service and can replace it with wireless service. Pennsylvania and New Jersey stand out as they both had commitments to rewire the entire state territory with fiber optics, by 2015 and 2010 respectively, and yet were able to have the laws changed to supply a slow 'DSL equivalent', which can be wireless.
- In New York, funding for broadband build-outs by the state is being sued over as groups and companies feel that the distribution of $500 million in state funding was not properly objective.
- In Massachusetts, one of the state funds managed by the Massachusetts Broadband Institute just gave Comcast $5 million to build in underserved towns they already serve but had not build out due to low density of homes passed. In the end, Comcast will own the state funded infrastructure, paid for by the government, meaning customers or tax payers or both.
- Only a few municipalities have taken the leap to do an overbuild of the incumbent provider(s), as the expense and expertise are enormous for most cities and towns.
- Google is not going to save every city. Google has recently stated that it, too, is doing a financial cut-back and is now questioning some fiber deployments to do wireless broadband instead.

Boston Is a 'Trial' to Shut Off the Retail Networks Completely, but have the Wired Customers (and Special Access) Pay for It—Statewide.

The developing story of Boston should have cities realizing that there will be no fiber to the home or even copper maintenance by Verizon. In April 2016, Verizon announced spending $300 million on a 6 year project to bring FiOS fiber to the home to all of Boston.

[5] https://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf

Boston.com wrote:[6]

> "Verizon to build $300M fiber network in Boston"…"Verizon will bring its fiber-optic FiOS network to Boston over the next six years, city and company officials announced..."

Unfortunately, this does not appear to be true. Verizon plans only to do partial coverage of the city, not even all of the neighborhoods, or the surrounding towns and cities. The real plan is to test whether customers will buy wireless broadband – because it is so much more profitable.

At the Oppenheimer 19th Annual Technology Internet Communications Conference, August 9th, 2016, Timothy Horan, Oppenheimer & Co. Analyst asked Verizon: [7]

> "So are you deploying fiber differently now in Boston than you've done for FiOS in the past? Does each small cell need like their own fiber home run to that small cell? Are you going to be deploying a lot more fiber than you have historically?"

David Small, Verizon Communications, Inc. EVP responded:

> "Yes, we will. And so, as it relates to FiOS, we've announced a few of the suburb areas, for lack of a better word, for cities, sub cities that we are going to be building into. But beyond that, if you think about the use case for small cells and the coordination elements of the radio access network that need to occur between its corresponding home macro and the small cell, that suggests that, as a general rule, you need home runs from that small cell directly back to that coordinating macro-level cell site. And that's exactly what we are doing."

Thus, the networks will not be using the fiber optic deployments for FIOS. Instead, Verizon will do a bait-and-switch and run wireless services. And there is no proof that what they want to do—replace wireless for the equivalent of FiOS, will work. 5G is years away, if ever. Worse, Verizon will NOT be building out most cities and towns with wireline broadband, especially in areas it hasn't upgraded for the last decade+.

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[6] https://www.boston.com/news/business/2016/04/12/fiber-boston-verizon

[7] http://www.verizon.com/about/investors/oppenheimer-19th-annual-technology-internet-communications-conference

Besides getting the municipalities upgraded, it is clear that examining the cross-subsidies of wireless and the other lines of business must be done. The alternative is that America is in for less service at higher costs with Verizon et al. controlling the wires as well as the wireless business.

And the prices for services, such as local phone service, are no longer based on 'fair and just' rates on all levels including Business Data Services. This also includes the rates for a competitor to rent the wires.

We believe AT&T's plans are similar, if not identical. The plan is to claim the new fiber being installed is going to the homes publicly, but more/most goes for the wireless service. And on top if this, it is funded via the wireline budgets.

What follows is a partial summary of what we have uncovered. This is followed by PART II: Data Report, which gives additional details of the information collected.

And all of this material is excerpted from: **Report III: Verizon Wireline-Wireless Cross-Subsidies.**

Summary of What We Found:

- **Wireless Diverted Construction Budgets and Underpaid Access Services —** Verizon Wireless diverted the construction budgets of the state utility and local wired mostly copper-based phone customers pay for the wires to the cell towers. In just New York in 2010-2012, we estimate that Verizon's wired utility paid $2.8 billion for these networks. Verizon Wireless was also able to underpay for use of the networks known as "special access" or "business data services", while Sprint and others were charged multiples.
- **This Happened in All Verizon States — 4 States Spent an Estimated $5.5 Billion, 2010-2012 —** Taken from various Verizon sources for New Jersey, Pennsylvania, Massachusetts and New York, for just this three year period, it would appear that Verizon put in 12,811 cell sites (or upgrades) at a cost of an estimated $5.5 billion.
- **Local Phone Customers Were Charged for Deployments and for Losses —** Verizon New York received multiple rate increases for "massive deployment of fiber optics" and 'losses'. Local Service now pays the majority of all expenses, including special access. As we tracked, the fiber went to the cell sites as of 2010 and the losses were created because of these underpayments and cross-subsidies.
    - Based on actual phone bills, local phone rates increased by 84% as a result of multiple rate increases from 2006-to 2014, and there were increases on all related add-on charges that went up 50-300%, like inside wire or nonpublished numbers.

- **Budgets for Municipality Builds Were Diverted to Wireless —** Specifically, every New York upstate municipality that did not get upgraded or maintained was because of this transfer of construction and other expenses. All customers and the cities were overcharged, as they not only did not get upgrades but had rate increases to pay for the wireless deployments. The data shows that this happened up and down the East Coast.

- **Verizon Wireless Is Vastly Profitable and Not Paying Most Capex —** Verizon Wireless is vastly profitable and brought in estimated revenues of $7.6 billion in 2012, just in New York State, but spent only $249 million or 3% of revenues on capex. In contrast, for the same year, Local Service alone paid $1.47 billion in network costs (plant and non-specific plant) which was 116% of Local Service revenues.

- **Special Access Business Data Services and Massive Cross-Subsidies —**The FCC has a current proceeding on special access services, renamed ‘Business Data Services’, BDS. The FCC found that in 2013 revenue for BDS had reached $25 billion; most surprising, this represents 60% of special access, which is mostly based on existing copper wires.

- **Part of the State Telecommunications Utility —** Verizon’s fiber optic deployments and special access services are all classified as “Title II”, common carriage networks. In fact, all fiber being built by Verizon, including FIOS TV, are Title II and classified as business data services yet they use the identical wires that are used for phone service.

    - “Local Service” is over copper-based “POTS”, Plain Old Telephone Service lines. Verizon has stated it is no longer upgrading and maintaining these retail copper lines.
    - According to Verizon NY’s 2015 Annual Report, Local Service brought in $1.3 billion and had an EBITDA of -132%. This is in contrast to “access” services, which were $2.5 billion and had an EBITDA of 66%. (Special access was over $2 billion in 2015, about 80% of access services.)

One would think that Local Service was losing money. But examining the network costs (“plant specific and non-plant specific”) shows:

- Local Service paid a whopping $1.5 billion in network costs, yet Access services are only paying $716 million, literally ½ of what Local Service paid—i.e., Local Service paid 117% in network expenses as compared to revenue, while Access paid just 29% of revenue for network expenses.

How can Local Service be paying the majority of network expenses? And how can access services have a 66% EBITDA for mostly copper based services while the same wires used for Local Service have massive losses?

The "$200 Million Dollar" Kicker — In September 2015, the CWA filed letters in multiple states to investigate Verizon's claims that it spent $200 million in the last seven years on the copper networks.[8]

> "The Communications Workers of America (CWA) today announced it is filing letters with telephone regulators in six states and Washington, DC calling on them to open investigations into the deterioration of Verizon's copper landline networks. In July [2015], Verizon admitted in a letter to the FCC that it had only spent $200 million over the last seven years to maintain its copper landline network in eleven states and the District of Columbia."

While Verizon claims that this admission was taken out of context, the data clearly shows that Verizon's "copper networks" have been funding other lines of business, and not the maintenance and repair of the copper networks.

- **No Regulator has Examined Any of these Issues with Audits —** No regulator has even asked Verizon for total revenues in the state and total capex. There have been no audits of the affiliate transactions for over a decade+ in any state or at the FCC.

- **The Majority of the Access Lines Are Not Counted —** Verizon et al claims that they are 'losing lines', but they has been able to manipulate the accounting so that the 'special access' service lines, or the FiOS fiber optic lines or DSL, among other services, are not counted. This has been done to claim that the phone networks are unprofitable. In truth, access lines have had major growth over the last decade.

PART II: http://newnetworks.com/report2datawirelinewireless/

[8] http://district1.cwa-union.org/news/entry/cwa_calls_for_regulators_to_investigate_verizons_refusal_to_invest_in_landl-d1