

MUNICIPAL FTTH DEPLOYMENT SNAPSHOT

Greenlight – Wilson, N.C.

In Wilson, N.C., Greenlight means “go” – very, very fast. This fiber-to-the-home network, which offers 100 Mbps symmetrical services citywide and customized services for businesses, has proven popular with residents and serves a large segment of the business community. Our thanks to David Baumgartner of Greenlight for providing the information for this profile.

– BBC Editors

BACKGROUND

Network operator: Greenlight

Owner: City of Wilson, N.C.

FTTP service area: Wilson

Number of premises in FTTP service area: 20,634

Current number of subscribers: 5,715

Overall take rate: 28%

Operator’s prior history as a broadband provider: None

Competitive landscape: Time Warner Cable and CenturyLink both provide broadband services in Wilson.

NETWORK PROFILE

Year deployment started: 2007

Year services began: 2008

Time to complete buildout: 18 months

Network architecture: GPON

Other strategic technology choices: Partnership with Momentum Telecom (wholesale provider) for voice services; RF video rather than IPTV

Business model: The municipality is the retail service provider.

Services offered: A triple play of voice, video and Internet access is offered to all customers. Government and utility applications of the network include the following:

Remote training: The city’s firefighters do nonphysical training from their assigned stations instead of driving elsewhere; that keeps response times among the best in North Carolina.

Security: Local businesses requested that the city install surveillance cameras in public parking lots. The fiber network cut the costs of such projects by approximately 90 percent, making them affordable.

Smart Grid: The city’s electric distribution system is testing the use of the fiber network for smart-grid and smart-meter technologies. These technologies can help manage the electric distribution system more efficiently and give consumers tools that aid in reducing their consumption of electricity.

Education: Greenlight constructed a fiber ring linking all county schools through a network that will offer increased speeds and redundancy.

Wi-Fi Hotspots: The downtown district, train station, athletic complex, airport and library all now have free Wi-Fi available.



Highest-tier Internet access: 100 Mbps x 100 Mbps for \$149.95 is the fastest service generally available; business services can be customized.

Take rates for specific services: Internet 26%, Video 25%, Voice 24%

ECONOMIC DEVELOPMENT

Greenlight is now providing services to nearly 400 businesses, including most of the large employers in the community. Several major employers are using the fiber optic network to provide redundant Gbps-capable metronet connectivity between facilities.

A planned bandwidth increase for commercial customers will benefit both medical providers that regularly transfer large files between facilities and residential customers who can opt in to this service and telecommute from home.

Greenlight’s ability to offer the latest and greatest technology and to customize service to meet businesses’ specific needs allows it to address the growing needs of tech-savvy businesses that want the fastest speeds available.

DEPLOYMENT DETAILS

Design/Engineering: Uptown Services

Construction: Quanta

Installation: Quanta, Ball Cable, in-house technicians

Aerial or underground? Both, using mole boring and directional boring for underground installation.

All cable is placed in pipes.

Method for connecting fiber: Fusion splicing

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OPERATING EQUIPMENT AND SOFTWARE

Central office and video headend: Alcatel-Lucent, Motorola, Cisco, SeaChange, RGB, IPG, Sencore

Fiber cables: AFL

Fiber distribution cabinets and other outside plant:

AFL cabinets, PLP enclosures, Pencil vaults

Testing equipment: Sunrise, JDSU, EXFO

ONTs: Alcatel-Lucent

Power supply: CyberPower Systems

Residential gateway: TP-LINK

Set-top boxes: Cisco, TiVo

B/OSS: ETI Triad

Video conditional access software: DNCS

NETWORK OPERATION

Number of central-office personnel: 10

Number of OSP personnel: 14 employees, 3 contractors

Number of CSRs: 5

CHALLENGES

Greenlight's greatest challenges were political. As soon as the city decided to build its FTTH network, a bill was proposed in the state legislature that would have placed onerous restrictions on any municipal broadband system in the state. Noting that telecom lobbyists at a hearing outnumbered the legislative committee by two to one, the then-mayor of Wilson, Bruce Rose, compared his situation to "David fighting Goliath and all his cousins." Wilson rallied its supporters – including other municipalities – and the legislation was defeated. However, it was reintroduced year after year and passed in 2011. The two existing fiber communities, Wilson and Salisbury, were exempted from the bill that was finally enacted, but other municipalities in the state are now effectively barred from providing modern broadband for their citizens.

SUCCESSES

Greenlight's greatest successes:

- Revenues exceeded expenditures after the third year of operations.
- A countywide school network now serves all county school facilities.
- 1 Gbps metronet service is available to one of the community's largest employers.

- The city's existing GIS infrastructure was integrated with ETI Triad to provide an enhanced monitoring and management tool for Greenlight's operations. This system facilitates tasks as diverse as targeting marketing, managing outages and reclaiming unused equipment and fiber infrastructure in the field. ❖

Contact Masha Zager at masha@bbcmag.com if you would like **BROADBAND COMMUNITIES** to feature your municipal fiber deployment.