

Salisbury's Fiber-Optic Cable System

Another corporate welfare project paid for by average taxpayers

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QUICK FACTS

- The City of Salisbury recently decided to build a \$30 million fiber-optic cable system that will offer Internet, phone, and television service to Salisbury residents and businesses. The city is paying for this system with 20-year bonds.
- City officials promised subscription fees from 28 percent of city residents would cover the entire cost of the system.
- While fiber systems offer high speeds, many computer users favor laptop computers and are willing to trade lower speeds for the mobility of wireless Internet connections. Thus currently available wireless technology such as mobile broadband cards, Wi-Fi, and the rapidly growing WiMAX wireless technology could make it very difficult for the city to live up to its "paid by subscribers" promise, leaving property taxpayers to foot the bill.
- WiMAX technology works similarly to WiFi but can reach faster speeds, currently up to 10 mbps (million bits per second), and cover a greater distance, up to 30 miles. One WiMAX installation could cover the entire city of Salisbury.
- If the system cannot attract enough subscribers, city officials have stated that they will use an increase in property taxes of 9.5 cents per \$100 valuation to fund the project.

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- ♦ The average residential customer gains little from this system. Television and phone quality will not be appreciably better than private sector competitors, and the highest speeds available through fiber technology will come with a price tag too high for most residential subscribers.
- ♦ Who benefits? From the start, city officials have justified the investment by touting its economic development prospects. They hope it will bring in a younger, professional class as well as new businesses that require this type of service. If the city fails to attract the necessary number of subscribers, property taxpayers, many of whom cannot afford or do not need the system, will be left footing the bill for businesses.

BACKGROUND

In 2005, the City of Salisbury began investigating the possibility of building a fiber-optic cable network. By 2006, the city council had set a goal to “prepare and implement a FTTH [fiber-to-the-home] business plan” and voted unanimously in favor of the project. In 2008, the city council approved \$30 million for the initial costs, including the acquiring, building and installing of the fiber-optic network.¹ The city is paying for this system with 20-year bonds.²

Salisbury officials hope the construction of the network will be completed in mid-2010.³ It will initially be available through 217 miles of fiber-optic cable connecting to 14,000 homes and businesses.⁴

WHO PAYS?

The city council and staff have repeatedly said that subscription fees will cover the costs of the network. A PowerPoint presentation available on the city’s website states “No city funds would be used as working capital for system start-up or anytime.”⁵ A version of this statement has been used in city after city to ease taxpayer concerns over a city entering a new high-risk, high-tech business in competition with the private sector.⁶

Although city officials *intend* for subscrib-

ers to pay for the system, the reality is city taxpayers are ultimately responsible for paying back the debt. According to the feasibility study conducted by Uptown Services, LLC., the same consultant used by the City of Wilson for its fiber-optic cable feasibility study, the system would need to attract 28 percent of Salisbury households to raise the revenue needed for it to be self-supporting.⁷ If the system could not attract that market share, however, city officials would have to turn to the taxpayers to pay back the \$30 million loan.

The city has already indicated that it would increase the property tax rate by 9.5 cents on every \$100 of assessed value to cover any shortfall.⁸ That would represent a 16 percent increase over the current property tax rate of 59 cents per \$100 for non-downtown residents. This higher rate would give Salisbury the twenty-ninth highest rate in the state.⁹

In other words, if the system failed to attract enough subscribers to reach the critical 28 percent subscription threshold, all Salisbury residents would end up paying for the network whether they use it or not. What is worse, lower-income residents who could not afford to subscribe to the system would be subsidizing the higher-income residents who do use the system.¹⁰

There are three good reasons to believe that the city has been overly optimistic about the system achieving the 28 percent subscriber level.

1. *The wireless challenge*

City officials are banking on the faster Internet speeds available only through a fiber-optic cable to attract subscribers. After all, the system’s cable TV and phone quality are not appreciably greater than the competing technology.

While fiber-optic cable technology provides consumers with very high speeds, speed comes with a price. Salisbury has not released its pricing schedule, but it is sure that price will increase with speed. For example,

Table 1. Monthly Costs of Competing Service Providers, by Feature

<i>Service</i>	<i>Greenlight (City of Wilson)</i>	<i>Time Warner</i>	<i>Embarq with DISH Network</i>	<i>DirecTV</i>	<i>HughesNet</i>
Standard Cable	\$46.95 (81 channels)	\$49.85 (74 channels)	\$37.99 (100+ channels)	\$34.99 (150+ channels)	—
Basic Phone	\$34.95	\$49.95	\$44.95	—	—
Basic Internet	\$34.95 (10mbps)	\$46.95 (10mbps)	\$29.95 (786kbps)	—	\$59.99/\$79.99 (1 mbps)
Basic Package	\$99.95	\$99.95	\$87.89	—	—

Notes: Prices and features as of August 13, 2008.

Telephone features are similar but not the same.

Greenlight's internet service provides 10 mbps upload and download speeds. The upload speed is a significant advantage for some users who send very large files such as multiple or large format photos. For average users, however, it is much less important.

Wilson's new fiber-optic system charges nearly \$300 for an upload and download speed of 100 megabits per second (mbps), which is suitable for many businesses. When purchased as part of the Basic Package, the residential speed of 10 mbps (upload and download) in Wilson is priced comparable to current private sector cable providers (see Table 1). If the Salisbury fiber-optic system is to succeed in attracting enough customers, it will have to compete in the rapidly changing computer market where many consumers are opting for laptop computers. Many of these consumers are willing to sacrifice Internet speed for mobility because they do not want to be tied down to a cable.

Many private providers are meeting this mobility demand with wireless Internet technology. Several cellular phone companies offer mobile wireless cards that plug into laptop computers and allow subscribers to connect to the Internet from almost any location. For example, Verizon sells Internet connection cards from \$80 to \$130. Sprint and AT&T also have these cards for prices in the range of \$250 to \$350. Generally, those cards come free as an incentive for customers who agree to a two-year service contract. Monthly fees for the Internet connection contracts range from \$40 to \$60 a month. Download speeds range from 600 kbps to 1.7 mbps, while upload speeds are 350 kbps to 1.2 mbps.¹¹ Customers who purchase these

cards get fast speeds with the added bonus of mobility.

An even greater challenge to Salisbury's stationary cable technology is the World-wide Interoperability for Microwave Access (WiMAX). This is a mobile Internet connection technology similar to WiFi, but it offers much higher speeds and covers a greater area. Currently, speeds can reach up to 10 mbps and cover a distance of about 30 miles.¹² Speeds are comparable to many existing cable and DSL systems and are expected to increase dramatically as the technology advances.

In Baltimore last October, Sprint began operating its WiMAX system, called Xohm, for \$30 per month, featuring average speeds of 2 to 4 mbps and surfing speeds that can reach 10 mbps. By next year, Sprint hopes to install WiMAX systems in Chicago, Portland, Philadelphia, Washington, and Dallas/Fort Worth.¹³

Because a great number of Salisbury's residential customers would not be able to afford speeds greater than 10 mbps due to high costs, WiMAX will pose a significant threat to city-operated fiber-optic systems by providing a similar speed with greater mobility at a comparable price.

In what appears to be a critical mistake, Salisbury city staff recommended fiber-optic cable over wireless technology.¹⁴ As more and more consumers choose mobility over

Table 2. Demographics and Outcomes of Municipal Cable Systems

City	Median Household Income	Population/ Households	Initial Cost of Cable System	Subscribers Needed	Loss to Taxpayers	Result
Salisbury, NC	\$32,923	28,480/ 10,276	\$33 million	28% of households	n/a	n/a
Ashland, OR	\$32,670	19,522/ 8,537	\$5.2 million			Sold cable and phone business
Provo, UT	\$34,313	105,150/ 29,192	\$39.5 million	10,000 Subscribers	Sold for \$1.1 million more than outstanding debt	Sold
Lebanon, OH	\$46,856	16,962/ 5,887	\$1 million*	90% ^y	\$58.9 million [†]	Sold

*In 1997, Lebanon approved \$1 million in initial construction spending. The city borrowed \$3.5 million in 1998, the year before the city began selling services.

^yLebanon believed it would be able to achieve this percentage. It is unclear what the break-even point was.

[†] The system eventually cost \$77,830,369 and brought in \$18,944,123 in revenue — a loss of \$58,886,246.

speed, Salisbury's system may lose many of the residential customers it needs to pay back its loan. The city based its decision of fiber-optic rather than wireless on attracting business, not residential, subscribers.

2. Not all households have computers

Salisbury's system will have trouble meeting its subscriber level also because not all Salisbury households own computers. The U.S. Census Bureau estimated that 55 percent of homeowners in North Carolina would have computers in 2007.¹⁵ Because Salisbury has a lower median income than the state, its percentage of households with computers is probably lower than the state's average.¹⁶ If, for purposes of illustration, we assume that 50 percent of Salisbury households own computers, the number of subscribers to Salisbury's Internet service needed to pay for the system jumps from 28 percent to 56 percent of households. This makes the city's claim that subscribers will pay for the system even less likely.

3. Fiber-optic failures in other cities

City-operated fiber-optic cable systems in other parts of the country failed to attract enough subscribers to pay for their systems.

Lebanon, Ohio; Provo, Utah; and Ashland, Oregon installed fiber-optic cable systems intending for subscribers to pay for the costs. Those cities all have median household incomes on par or higher than Salisbury's, suggesting that they are better or equally situated to attract subscribers (see Table 2). All of them had problems using subscriber revenue to pay for their systems. To pay the ever-mounting deficits, they either raised property taxes or increased utility rates, or in some cases both. Unable to stem the deficits, these cities eventually sold their systems to the private sector.¹⁷

In addition, John Locke Foundation analysis shows that Wilson, NC, will likely have problems achieving enough subscribers needed to pay for its Greenlight system. Wilson, too, has already promised to use property tax increases or electric utility rate increases (or both) to make up the difference.¹⁸

WHO BENEFITS?

From the start, city officials have justified the investment by touting its economic development prospects. They hope it will bring in a younger, professional class as well as new businesses that require this type of service.¹⁹

It appears that the city's plan was flawed from the beginning, given that it is so unlikely that the system will be able to attract enough residential customers who are increasingly willing to trade speed for mobility. But one set of customers needs very high speed and are willing to be tied to a fiber-optic cable. Many businesses need the 100 or more mbps speed, and they can afford to pay for it.

Pricing in other cities with city-owned fiber-optic systems, such as Wilson, have priced the residential service at about the same price as major private sector competitors while business customers have paid substantially less than the market price. For example, Wilson business customers pay about \$300 per month for the city's 100 mbps service. Private providers charge about \$1,000 per month for the same service. If Salisbury institutes a similar pricing scheme, residential users who pay market prices will be subsidizing companies that purchase high-speed Internet well below its fair market value. Plus, if the city raises property taxes to pay for any shortfall in revenues, residents who do not even use the fiber-optic network will be forced to subsidize businesses that are receiving deep discounts. This pricing scheme had more in common with corporate welfare than a city service run like a business.

CONCLUSION

The failure of fiber-optic cable systems in other cities such as Provo, Lebanon, and Ashland should have been better indicators of how Salisbury's fiber-optic cable network would fare than rosy consultant reports, guesses about consumer behaviors and overestimations of the city's ability to deliver a new technology in a highly competitive market. Wireless Internet technologies, such as WiMAX, are competing with the city's fiber-optic system, and many Internet consumers will opt for mobility over speed. Thus city officials are risking taxpayer dollars in a highly competitive and rapidly changing high tech venture, an area where neither city council members nor city staff have expertise or experience.

By investing millions of dollars in this telecommunications project, Salisbury officials are irresponsibly risking taxpayer money. The city should be managing its essential services before taking on such risky and expensive ventures with taxpayer money. Hopefully Salisbury will be able to avoid the downfalls of other cities and benefit their citizens instead of increasing the burden on taxpayers.

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NOTES

1. City of Salisbury, "Application for Approval of Installment Purchase or Lease Contract," letter to the North Carolina Department of State Treasurer, August 7, 2008; see also Mark Wineka, "City OKs \$36 million in financing for cable utility, other projects," *Salisbury Post*, October 22, 2008.
2. "Application for Approval of Installment Purchase or Lease Contract."
3. Mark Wineka, "City officials still expect to offer best service," *Salisbury Post*, November 26, 2008.
4. Mark Wineka, "City approves \$11.7 million fiber-optic cable contract," *Salisbury Post*, December 17, 2008.
5. Presentation to the Salisbury City Council, www.salisburync.gov/ftth.
6. Matthew Shaw, "City council approves fiber contracts," *Wilson Daily Times*, July 23, 2007.
7. Presentation to the Salisbury City Council by Uptown Services.
8. Mark Wineka, "City OKs \$36 million in financing for cable utility, other projects," *Salisbury Post*, October 22, 2008.
9. North Carolina Department of Revenue, Fiscal Year 2008-2009 Property Tax Rates and Latest Year of Revaluation for North Carolina Counties and Municipalities, Preliminary Report, August 2008, www.dornc.com/publications/2008_09taxrates_prelim.xls.
10. Many of these low-income residents are renters who pay property taxes embedded in their rent.
11. Q.v., contracts available from Verizon Wireless (www.verizonwireless.com), Sprint (www.sprint.com), and AT&T (www.att.com).
12. Kara Rowland, "Sprint teams with Clearwire on WiMax; 'WiFi on steroids' promises mobile Net lifestyle," *The Washington Times*, May 8, 2008.
13. Leslie Cauley, "Mobile broadband hits the air;

Baltimore is first to get WiMax 4G wireless," *USA Today*, October 20, 2008.

14. Presentation to the Salisbury City Council, February 15, 2009, www.salisburync.gov/ftth.

15. Matthew Shaw, "Fiberoptics a big financial gamble," *Wilson Daily Times*, January 31, 2007.

16. Salisbury, North Carolina, entry, State and County Quickfacts, Salisbury, North Carolina, entry, U.S. Census Bureau, quickfacts.census.gov/qfd/states/37/3758860.html.

17. See, e.g., Steven Titch, "iProvo Sold as Fiscal Reality Hits Home," Reason Foundation, May 6, 2008, www.reason.org/outofcontrol/archives/2008/05/iprovo_sold_as.html; Marc Kilmer, "Taxpayers Take Another Hit in Lebanon," The Buckeye Institute for Public Policy Solutions, February

28, 2007, www.buckeyeinstitute.org/article/921; Vickie Aldous, "City hands over TV," *Ashland Daily Tidings*, October 20, 2006, www.dailytidings.com/2006/1020/stories/1020_afn.php; and Vickie Aldous, "AFN cables to be conduit for new phone service," *Ashland Daily Tidings*, November 2, 2006, www.dailytidings.com/2006/1102/stories/1102_afn.php.

18. Dr. Michael Sanera and Katie Bethune, "Wilson's Fiber-Optic Cable Boondoggle: City Invests \$28 Million in a Technology That Could Be Obsolete Before It's Paid For," John Locke Foundation *Policy Report*, January 2009, johnlocke.org/policy_reports/display_story.html?id=192.

19. "Fiber to the Home Feasibility Study," City PowerPoint presentation, provided to the authors by the City of Salisbury on February 2, 2009.