

POLICY PAPER

March 2009
No. 0309

Published by AMERICANS FOR PROSPERITY

Municipal Broadband's Record of Failure *A Profile in Market Intrusion*

James Valvo
Assistant for Policy and Public Affairs

The recently passed American Recovery and Reinvestment Act included over \$7 billion to stimulate broadband infrastructure development and Internet demand. The legislation intends for the funds to help both unserved and underserved areas. Unserved areas include rural communities with no existing service provider, while underserved indicates areas with low capacity or exceedingly low enrollment rates. This bill must not be hijacked to redirect funds into markets that already contain multiple private Internet service providers.

Before billions of taxpayer dollars are spent on municipal broadband projects under the guise of economic stimulus, we should consider the results of recent projects that have already been undertaken. The results, almost without exception, have been overwhelmingly negative.

The complexity of public-private structures that are employed in municipal broadband projects introduces a bureaucracy and an inertia that makes these systems poor competitors with commercial services, leading to taxpayer dollars being squandered on subsidized systems. On the whole, such hybrid relationships have not

performed as advertised.

Conversely, the private sector continues to rapidly develop new broadband services that offer higher quality and innovative services at competitive prices. Since 1996, more than \$146 billion has been reinvested by the cable industry to expand broadband services. Rapid technological advances by wireless providers has improved the speed and coverage of wireless data services, reducing the demand for WiFi services overall and even further with municipal providers in particular.

The stated goal of “free” or low-cost municipal service is to bridge the digital divide and provide poor citizens with access to the online world. However, the private sector, including charity and non-profit organizations, has proven far more adept at solving these types of issues in other areas and Internet service will certainly be no exception; see the Philadelphia example below.

Easily the biggest problem with municipal projects is that they commit taxpayer money to projects that nearly always run over budget for construction, are not financially sustainable once they are built and rely on future subsidies to provide so-called “free

Private “investors will finish building the network ... and plan to work with nonprofit organizations ... to offer services to people who don’t have Internet access.”
- IDG News Service, 06/17/2008

service.” As is always the case when governments enter the free market, distortions in price, customer service and availability hinder competition and ruin what could otherwise be a profitable venture.

This paper will examine the recent history of local governments attempting to subsidize broadband access in the face of private sector competition. This document is a compilation of available public information regarding the most significant municipal broadband projects. We examine large and small markets domestically as well as international examples in Asia and Australia.

The result of our investigation is that taxpayer-subsidized municipal broadband projects are nothing more than a record of failure.

Domestic Case Studies

Philadelphia, Pennsylvania

The Wireless Philadelphia project is a good example of how technological innovation outstrips the languid pace of bureaucracy. In 2005, the project was initially hailed as the nation’s most ambitious municipal effort to provide free citywide coverage. Philadelphia planned to use “refurbished gear [that] could build the entire project with ‘non-city’ resources.”¹ While the city struggled to get the system in place, the private sector forged ahead with innovation; in three short years the entire project was out of date and the private partner EarthLink withdrew saying, “making significant further investments in this business could be inconsistent with our objective of maximizing shareholder value.”² Additional complications with the project include:

- By 2007, the project had already run 30% over budget, while corporate partner EarthLink massively scaled back its scope.³

- As many critics had warned, EarthLink had to deploy 42 Wi-Fi access points per square mile, twice what city planners had predicted.⁴
- The New York Times reported on the unrealistic ambitions and technological glitches that are endemic when inexperienced bureaucrats venture into the technological marketplace.⁵
- In June 2008, Philadelphia Mayor Michael Nutter announced that a group of private investors were saving the project, and would complete the city network in coordination with non-profit organizations to deliver free services to those who cannot afford them, focusing on fostering adoption and getting hardware, support and training to people who need it.⁶

The Philadelphia experience should provide a clarion example to those who insist on putting government planning ahead of private sector development. In this case, the citizens of Philadelphia were lucky because the private sector ultimately rode to the rescue and saved the project.

Chicago, Illinois

In contrast to the Philadelphia project, Chicago’s foray into the municipal broadband arena was not plagued by technological inefficacy but instead fell prey to market cost structures. The city government launched an initiative to bring in private companies to compete for the citywide project. However, by the time the bidding process had ended the private Internet service providers in the area were already effectively serving the demand. The Chicago Tribune profiled the collapse of the project this way, “technology is advancing and the cost of online access for consumers is declining so dramatically that Chicago has other avenues to promote more use of the Internet.”⁷

With EarthLink rethinking their

municipal broadband activity and other bids evaporating due to price point constraints, AT&T and Sprint Nextel are both developing private projects to serve the Chicago market now that it is free of government distortion.

Houston, Texas

As EarthLink's business model fell apart due to untenable municipal cost structures, the company was forced to pay penalties for the contracts it was unable to service, once such community was Houston. An August 2007 article in the Houston Chronicle profiled the delays that the city was experiencing due to lack of interested customers. The piece quoted Craig Settles, a municipal Wi-Fi consultant, who said, "All of the numbers are pointing toward the consumer being a weak part of the financial foundation." Even with a \$2.5 million commitment from the city to serve as an anchor tenant to offset the expected low customer demand, the project was deemed unviable.

The company instead decided it was better fiscally to pay a multi-million dollar fine to walk away from the unsound investment. The city is now [using the \\$3.5 million received from EarthLink upon cancellation](#) of the project to fund hotspots in low-income areas, which will be used exclusively for publicly-funded computers in classrooms, community centers, and other public programs.⁸ These city networks will be password protected and will not be available to the general public. This is clearly not in line with the original intent.

Lompoc, California

Large cities are not the only ones who have tried unsuccessfully to manage municipal broadband as though it were a utility. Even on a small scale, like the one implemented in Lompoc, California, cities are running into

service issues. The private sector thrives because it has a vested interest in providing a high-quality, customer driven product. Municipalities fail to this effect because they are exercising a near-monopoly funded through taxes that are wrested from its citizens.

Lompoc ran into this harsh reality when it spent nearly \$3 million on a citywide municipal wireless network and [only signed up 281 customers](#) in the network's first seven months of operation.⁹ The city has reported that it needs more than 4,000 paying customers to break even, with Lompoc Utilities Director Ron Stassi admitting that that figure may be too low because the city slashed rates trying to attract more customers. It is unknown if they will ever reach the needed penetration, in the mean time taxpayers are subsidizing the venture. Stassi continued by saying "With WiFi we're in a competitive environment ... it forces us to have a high concentration on customer satisfaction to keep customers from going to a competitor." A fight the city is currently losing.

Lompoc has also been plagued by poor reception on the wireless network—a problem that is indicative of the inexperience that municipalities are grappling with when trying to enter the market. The city's Wireless Services Administrator Richard Gracyk said "[he hadn't realized how important the back-end elements were to the whole picture.](#)"¹⁰ The city has spent \$10,676 per subscriber to provide service, using currently available connection figures to get the poor performance that is making attracting and retaining customer difficult. In July 2008, Lompoc switched to a new gateway server built by Aptilo Networks. The new server provides back-end upgrades that improve customer service and network troubleshooting.¹¹ This transition has added cost to the project and further pushed back the breakeven point.

Houston provides "another case where the resulting municipal system turns out to be nothing like what was promised." - Reason Foundation, 11/12/2008

"... 24 new customers per month, far short of the number that the city needs to make the wireless Internet utility service financially viable." - Lompoc Record, 4/9/2007

The odds of Portland meeting its targeted 90% coverage are “one in a billion.” – Willamette Week Online, 3/29/2007

Portland, Oregon

Lompoc is not the only city to have poor quality connections doom their municipal Wi-Fi dreams. According to a report by Portland’s Personal Telco Project, a nonprofit committed to building a community-supported wireless network, [the city’s system has failed to meet the benchmark of 90% coverage](#) within 500 feet of a Wi-Fi access point. Instead the plan reaches just 50%.¹² The study’s authors estimated the odds of meeting the 90% threshold at “one in a billion.” The spotty coverage has put service out of reach for many would be users, dampening advertising revenue on the ad-supported free-of-charge system, forcing Portland’s corporate partner to shut down the service.

The Willamette Week Online reported that “Metro-Fi began establishing the network in December of [2006] and is responsible for its complete rollout. The network is an ad-supported, free-of-charge system and is not subsidized by tax or levy.” However, this light-duty network, which is that only type that can be supported without tax dollars, is the cause of the problems with establishing service.

In April 2008, MetroFi, contracted to develop the network, stated that [only fifteen to twenty percent of the system was operational](#), and that it did not have the necessary funds to complete the project.¹³ The company returned to the city seeking more funds but was turned away, marking an end to the saga. Officials have given the company that developed the city’s failed municipal WiFi until the end of the year to remove the equipment it installed on city utility poles.¹⁴

MetroFi was also forced to [discontinue service in Foster City, California](#) effective June 20, 2008 for similar reasons.¹⁵

Ashland, Oregon

When private companies have business models that do not perform, they go out of business as we have seen in the aforementioned examples. However, when cities engage in incursions into the marketplace that go sour, they turn to taxpayers to bail them out. Ashland, Oregon is once such example. In early 2007, when the city folded its cable TV business, which was financed by taxpayer bonds, it incurred a \$15.5 million deficit. With interest on the debt mounting, the city plans to subsidize the payments using revenues from other city departments. Some city officials are worried that these cross subsidies will result in [electric and other utility rate hikes](#), while others are considering property tax hikes to make up the difference.¹⁶

St. Cloud, Florida

Even when municipalities do get networks up and running, the service they provide is often so far below the industry standard that citizens would rather pay the higher price than suffer through government mismanagement. In St. Cloud, Florida, many educators and [residents in the 28,000-person Orlando suburb are still paying to use their own internet service providers](#), as dead spots and weak signals keep them offline and force engineers to retool the free system.¹⁷

An Associated Press story profiled a disappointed St. Cloud resident Joe Lusardi who is frustrated with the city’s administration of the system. Lusardi said he was told that he had to pay \$170 for a special wireless bridge to access the “free” network.

[From the AP article:](#)

At first, a desktop computer in Lusardi’s house could use the Wi-Fi network with no problem, but his laptop would only work outdoors.

“It’ll probably be a major challenge for some time until the technology is such that it works properly.”
- **St. Cloud Mayor Donna Hart, eSchool News 6/15/2006**

“The experience is that large-scale Wi-Fi projects have proved ineffective at meeting the needs of local businesses and the community. Most schemes sponsored by overseas governments have collapsed and require further funding to the tune of tens of millions of dollars ... I cannot expose taxpayers to that sort of risk.”

- **Eric Roozendaal, Member New South Wales Legislative Council, The Sydney Morning Herald, 5/1/2008**

Even then it was too slow and unreliable, so he kept his \$20 per month Sprint DSL service. Now the desktop doesn’t even work, and he’s completely abandoned the idea of dropping his pay service and using the network. “

It’s just total frustration,” Lussardi said. “I’m going to stay with the DSL and just forget it, because I don’t think it’s going to work. Very few people are going to use it, and they’re going to say it’s underutilized and they’re going to shut it down.

Additionally, after spending \$2.6 million to establish its poorly functioning public WiFi network, [\\$236,920 more taxpayer dollars were requested](#) from the city in order to bring service to 14 neighborhoods that “slipped through a hole in the project.”¹⁸

International Trends

Sydney, Australia

Despite a concerted effort by the local government to blanket Sydney, Australia and the surrounding areas in high-speed Internet coverage, the plan never got off the ground. In May of 2008, the Minister of Commerce announced that plans for free wireless broadband for Sydney and other major population centers [had been canceled, based upon the impracticality of fifteen proposals](#) to build the network.¹⁹

Taipei, Taiwan

The East Asian powerhouse has fallen victim to the same forces that have plagued American projects. Unreliable coverage, poor customer service and inability to compete on price have all put Taipei in the same untenable position as the American cities profiled above. [Competition from private companies has put the government-sponsored enterprise in jeopardy.](#)²⁰

A 2007 report from the Taiwan Review said, about 60,000 people signed up for free subscriptions to the Wi-Fi service during the beta testing phase. But in 2006, when people started to be charged for the service, \$12 per month or \$127 per year, only a few thousand subscribers remained. Interest has grown to over 200,000, but it is [still far from a break-even point in the business model](#), which is estimated at 500,000.²¹

Conclusion

This list of examples should serve as a cautionary tale for those designing the implementation of the broadband section of the stimulus program. Ideally, broadband services would be provided by the free market without government interference or subsidy. However, given that massive subsidies are now a reality, they should be primarily structured to encourage private Internet service in unserved rural communities. These areas are in need of service but do not have a private sector provider who will suffer from taxpayer subsidized municipal service.

A secondary priority should be underserved areas. Grants should be awarded to companies to encourage increased viability on the demand side of the equation, which has the potential to make these projects financially sustainable. However, this should not occur through the same style of so-called public-private partnerships that has produced disastrous results over the past decade.

An active government role in the broadband marketplace has produced nothing but wasted tax dollars and a record of failure.

Citations

- ¹Aarons, Barry M. "We Told You So! Continue to Say "No" to Municipal Broadband Networks" *Institute for Policy Innovation*. 6 Mar. 2009
- ²EarthLink Press Release "EarthLink Considering Strategic Alternatives for Municipal Wireless Business" 16 Nov. 2007
- ³Sharma, Amol. "Wireless -- With Strings Attached." *Wall Street Journal*. 16 Aug. 2007
- ⁴Titch, Steve. "Competition and Choice." *Reason.org*. Weblog post. Political. 11 Feb. 2009
- ⁵Urbina, Ian. "Hopes for Wireless Cities Fade as Internet Providers Pull Out." *New York Times* 22 Mar. 2008
- ⁶Gohring, Nancy. "Philadelphia Wi-Fi network saved." *IDG News Service* 17 June 2008
- ⁷Van, Jon. "City disconnecting from Wi-Fi vision." *Chicago Tribune* 28 Aug. 2007
- ⁸Titch, Steve. "Houston Free Muni Wi-Fi" *Reason.org*. Weblog post. Political. 6 May 2008.
- ⁹Nisperos, Neil. "WiFi issues plague city." *Lompoc Record* 9 Apr. 2007
- ¹⁰Lawson, Stephen. "Back-end Systems Could Save a City Wi-Fi Project." *IDG Newswire* 14 July 2008
- ¹¹See 10.
- ¹²"Portland Wi-Fi Sucks Inside and Out, says independent evaluation." *Willamette Weekly* 29 Mar. 2007
- ¹³Weiss, Todd R. "Portland muni Wi-Fi project hits hard times." *Computerworld* 23 Apr. 2008.
- ¹⁴Springer, Pete. "Portland May Have WiMAX Internet Access By End Of The Year." *OPB News* 13 Aug. 2008.
- ¹⁵Lorenz, Andra "MetroFI Discontinues Foster City Wireless Services" *Press Release* 22 May 2008
- ¹⁶Admin. "Case Study: Ashland Fiber Network." *Online posting*. 5 Feb. 2009
- ¹⁷"Pioneering Wi-Fi city faces setbacks." *eSchool News* 15 June 2006.
- ¹⁸Titch, Steve. "Another Unpleasant Muni Surprise" *Reason.org*. Weblog post. Political. 23 May 2006.
- ¹⁹Moses, Asher. "Free Sydney WiFi plan bites the dust." *Sydney Morning Herald* 1 May 2008.
- ²⁰"Cities Realize Wi-Fi Isn't Magic Pixie Dust." *Broadband DSL Reports* 10 Apr. 2007.
- ²¹Hwang, Jim. "Charting a Wireless Course." *Taiwan Review* 1 Dec. 2007.