Connecting the Public:
The Truth About Municipal Broadband

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Executive Summary

The President, the Congress and the Federal Communications Commission (FCC) have all identified rapid deployment of broadband networks as a national priority and a critical part of our national economic and information infrastructure. President Bush has set a deadline of 2007 to achieve broadband access for all Americans, from our most affluent suburbs to our most impoverished urban neighborhoods to our most geographically isolated rural areas.

Municipal broadband plays a critical role in making the goal of universal deployment a reality. Traditionally, local governments have proven vital in deploying necessary infrastructure. For example, local governments built municipal power systems as part of the efforts to electrify America in the first part of the 20th Century. Local governments run public transportation networks and sewage networks, maintain local roads, build schools and hospitals despite the fact that private businesses could, and in many places do, provide competing services. As broadband becomes a necessary utility for commerce, education and healthcare, hundreds of local government entities across the country have taken up their traditional role of providing needed services to residents and local businesses.

Incumbent providers have sought to prevent the entry of competing municipal systems by lobbying for legislation to stifle municipal deployments. Incumbents have sought to justify this preemption of local government by portraying municipal systems as incompetent government monopolies unfairly competing with a plethora of competitive private sector offerings. These arguments ignore the reality of broadband deployment in America today and the long history of local government involvement in deploying critical infrastructure.

As discussed in the report.

- Municipalities have a long history of building and maintaining critical infrastructure. As broadband becomes increasingly important for commerce, employment, education and healthcare, the need for local communities to have a local safety net grows. Local governments provide needed broadband services designed to address community needs. By contrast, while private enterprise does a good job of providing broadband where profitable, it does not provide timely deployment to address health, education and welfare issues. By contrast private companies, appropriately, work to maximize profit. While the profit motive often fosters innovation and deployment, it will leave vital community needs unmet unless local governments step in to fill the gap. Without the involvement of local governments, broadband deployment in the United States will continue to fall behind other developed nations – such as Canada and Korea – which permit or encourage local governments to build out broadband networks.

- Municipal networks, or even the threat of municipal entry, provide the competition necessary to keep rates low and quality of service high. Many communities have only a single provider or a cable/telco duopoly. In these communities, rates remain high and service remains poor. As the market becomes more concentrated, the threat of municipal entry becomes necessary to protect competitive services such as voice or video over IP. While an incumbent cable system or incumbent phone company has incentive to block VOIP companies like Vonage that compete with their business model, municipal systems have no such incentive. Absent federal regulation requiring network neutrality or open access, municipal systems remain the last line of defense against such practices.

- Municipal systems increase investment in local communities. Local communities with municipal systems attract new jobs and keep old ones. Communities that must wait for private sector deployment lose residents and businesses to more well-connected places.

- Municipal systems do not "crowd out" private providers any more than the New York City Subway "crowds out" private taxi cabs and car services. To the contrary, studies and anecdotal evidence repeatedly show that where municipal systems take on the expensive task of building network infrastructure, the number of private providers ***increases***.

- Local governments do not favor themselves on taxes or right of ways or otherwise compete unfairly with incumbent telecommunications and incumbent cable companies. To the contrary, private incumbents enjoy a wealth of state and federal subsidies, guaranteed rates of return, regulated rates for pole attachments, etc. In addition, local telephone companies enjoyed years of regulated monopoly status to build positions of dominance they continue to enjoy. To pretend that these local incumbents, with their subsidies and regulated access, need to "level the playing field" to protect a "free market" against local government systems flies in the face of reality.

- The allegation that local governments are intrinsically incompetent and incapable of running complex broadband systems likewise defies history and the experiences of daily life. Local governments have more than a century successfully managing electric systems and telephone systems. In addition, local governments across the country manage far more complicated systems critical to health and business. People daily trust their local governments to manage their drinking water and sewage systems, remove trash, run public transportation networks, and educate their children. Broadband networks do not create any greater challenge.

At the end of the day, local governments, accountable to local citizens understand their own needs and should have the freedom to find local solutions to local problems. We should not require citizens to beg big corporations to deploy systems when these citizens have the power to take matters into their own hands. More than 200 years ago, the founders of this country decided they were citizens able to govern themselves, not subjects of a distant king. This principle of self-governance alone would justify opposition to any legislation that prohibits municipalities from serving their residents on the grounds that corporate giants should have the right to serve them instead.

Introduction

The White House has set admirable and ambitious goals for broadband in America. The President has called for "universal, affordable access for broadband technology by the year 2007." To increase market penetration into rural areas and drive down prices to serve low-income communities, we will need highly competitive markets so that every American household has "plenty of technology choices when it comes to purchasing broadband."[1] This is a clarion call for public policy that encourages technological innovation and sparks new competition.

Without dramatic changes in broadband policy, many towns and cities will struggle to reach the President's benchmarks. The dominant providers of DSL and cable-modem service in the US not only fail to approach universal, affordable access in 2005, they are nowhere close. According to the most recent report from the National Telecommunications Information Administration (NTIA), only 20% of American households have "high speed" access, even when defined generously as a mere 200 kbps. More recent estimates suggest that this may have risen to 30%, but the vast majority of Americans still do not have broadband.[2] By contrast, over 40% of American homes do not have Internet access of any kind. Although Internet uptake rates have risen in recent years, the pace of growth is leveling off. Moreover, low-income and minority communities are far less likely to have broadband access.[3] Today, over half of all households with incomes above $75,000 per year have broadband at home, while half of all households with incomes below $30,000 do not have any form of Internet access at home.[4]

Finally, with regard to deployment in traditionally underserved communities, those communities most in need of government policy to enjoy access to broadband, our nation continues to do poorly. Low-income and minority communities are far less likely to have broadband access than high-income white communities.[5]

These results fly in the face of our national communications policy. For three quarters of a century, the Communications Act has defined a successful communications policy as fostering ubiquitous, affordable service available on a nondiscriminatory basis in competitive markets.[6] The penetration of phone service of over 90% for a quarter of a century in this country,[7] as compared to penetration rates in most of the rest of the world, was widely touted as an example of our success as a nation and as critical to maintaining a unified society in which all had access to a technology critical for health, safety, and economic advancement. The 1996 amendments to the Act embraced this traditional definition of success, extended it to advanced telecommunications services, and added that service should be available to all sectors of society in all geographic areas on an equitable basis.This is essentially the President's message today.

Unfortunately, the telco/cable duopoly that the current administration relies upon for universal deployment, and at present accounts for 98% of broadband connections, is failing miserably to accomplish this goal. Rural areas are disastrously underserved—roughly half as many Internet households have broadband compared to urban dwellers. Almost half of all non-Internet households report that they have no service because it is either not available or too expensive. [8] The network is neither ubiquitous nor affordable, and there are very few providers to choose from. In the President's native Texas, there are 16

[1] White House, "A New Generation of American Innovation," April 2004, http://www.whitehouse.gov/infocus/technology/economic_policy200404/innovation.pdf
[2] Pew Internet & American Life Project *Trends 2005* (2005), Chapter 4 shows little increase in adult Americans who use the Internet since late 2003, when the NTIA data was last collected (p. 59). It also shows that broadband in the home has increased by about 50% since late 2003 (p. 62), suggesting an increase from 20% overall penetration to 30%. Arbitron, *Internet and Multimedia 2005: The ON-Demand Media Consumer* (2005), p. 5 concludes that half of all households who have the Internet have broadband. With household penetration stable at about 60%, this suggest 30% penetration of broadband.
[3] NTIA, "A Nation Online," September 2004, http://www.ntia.doc.gov/reports/anol/ , The Pew numbers indicate that 56% of households
[4] Cooper, Mark, *Expanding the Digital Divide and Falling Behind in Broadband Falling Behind in Broadband,* (Consumer Federation of America and Consumers Union, October 2004),
[5] NTIA, "A Nation Online," September 2004, http://www.ntia.doc.gov/reports/anol/
[6] Communications Act of 1934, as amended, Section 1.
[7] U.S. Bureau of the Census, *Statistical Abstract of the United States: 2004-2005,* Table 1120.
[8] NTIA, "A Nation Online," September 2004, http://www.ntia.doc.gov/reports/anol/

counties with no broadband service at all, and 93 with only a single provider.[9] Nationally, the United States has fallen to 13th among industrialized nations in deployment of broadband.[10] Small wonder that local governments have taken the initiative to explore an alternative – municipal broadband.

In the last 18 months, hundreds of local governments have begun exploring how to provide high-speed broadband through municipal or community networks, either directly or in partnership with others. From Cerritos, California to Scottsburg, Indiana to Philadelphia, Pennsylvania, the idea is catching on. Whether building a wireless system, installing fiber directly to homes, or exploring broadband over power lines – or some combination of these options – local communities are finding they can get better service for less money if they do it themselves. A new industry of equipment makers and service providers has emerged to partner with these local government initiatives. The success stories are piling up, filling the gaps in the marketplace with innovation and ingenuity.[11] Without these municipals systems, it is clear that the gaps in the market will persist and low-income and rural communities will be left behind.

Incumbent Local Exchange Carriers (ILECs) and cable operators (MSOs) have responded aggressively to shut down municipal competitors in the marketplace. The prospect of a broadband service provider with public service values, low-cost technologies, and a business model designed to offer universal, affordable access poses a potent threat. Rather than improve their own service, the ILEC and MSO lobbyists have been dispatched to dozens of statehouses to push legislation to obstruct or prohibit municipalities from offering broadband services or partnering with private sector providers. Paradoxically, the incumbents argue that public sector broadband is both an unfair competitor *and* obviously an inferior service doomed to failure in the market. Spirited opposition has arisen to take on the industry lobby and protect the rights of local communities to choose their broadband future. These efforts take great strength from the success of municipal and public/private broadband systems as they exist today, and they look forward to an American market for high-speed connectivity that is both affordable and universal.

A great deal of misinformation has been injected into this debate by industry "fact sheets" and white papers by think tanks funded by corporate partisans.[12] This paper will therefore address not merely the positive benefits of municipal networks, but will also counter the arguments raised by incumbents and their proxies.

Government's Proper Role in Providing Public Services

A traditional role of government has been to provide essential services to citizens when competitive markets fail to do so.[13] The reasons underlying the emergence of municipal telecommunications providers are strikingly similar to those that gave rise to publicly-owned electric utilities at the turn of the century. Publicly-owned utilities first emerged in small towns that were unable to attract private providers. In the late nineteenth century, electricity was seen as more of a novelty than a necessity, but soon it came to be viewed as an essential commodity directly linked to a community's economic survival. Many rural communities were left with the choice of forming a government-owned electric utility or being left in the dark.[14] Similarly, high-speed Internet access, while viewed as a novelty only a few years ago, has become an essential service.

Broadband access has become increasingly essential to economic growth, healthcare, and education. Underserved and over-charged, rural towns and urban neighborhoods that don't have affordable broadband lose jobs. Their children suffer a serious disadvantage in college or in the workforce, where fluency with

[9] Claudia Grisales, "Municipal Broadband Faces Limits," Austin American-Statesman, 2 March 2005, http://www.statesman.com/ [see http://www.freepress.net/news/7082 for an archived copy.]
[10] ITU Internet Reports, 2004, http://www.itu.int/osg/spu/newslog/2004/09/15.html
[11] See, New America Foundation, "Profiles of Municipal and Community Broadband Networks," February 2005, http://www.newamerica.net/Download_Docs/pdfs/Doc_File_2245_1.pdf
[12] See for example: "Not in the Public Interest – The Myth of Municipal Broadband," New Millennium Research Council, February 2005, http://newmillenniumresearch.org/archive/wifireport2305.pdf
[13] Steven C. Carlson, *A Historical, Economic, and Legal Analysis of Municipal Ownership of the Information Highway*, 25 Rutgers Computer and Tech. L. J. 1, 24 (1999).
[14] *Ibid*.

computers and the Internet is increasingly assumed as a matter of course. Rural towns without broadband cannot take advantage of new breakthroughs in tele-medicine or the economic opportunities created by telecommuting. Even in crowded urban areas, the availability of broadband can vary from one neighborhood to another, stranding one neighborhood on the wrong side of the "digital divide" while two, three or even four broadband providers serve their neighbors.

Municipalities have a valuable role to play in filing this gap, continuing the tradition of providing necessary services for citizens and stimulating local businesses. Municipalities across the country have invested public money in convention centers, roadways, health clinics, and community colleges, not to make money, but to bring business opportunities, healthcare, and education to their citizens. They should have the same opportunity to offer public hotspots and broadband access. In its *Third Advanced Services Report*, the FCC found that most places outside of major metropolitan areas do not have multiple advanced telecommunication service providers.[15] In areas where competition exists, business and residential consumers have realized the benefits of lower costs for such services that their counterparts in single provider areas have not.[16] In such an environment, it makes little sense to prohibit municipalities from providing a competitive yardstick against which to measure service furnished by incumbents and from providing citizens access to essential telecommunications services that would otherwise be unaffordable or unavailable.

The histories of other distribution technologies, such as the roadways, railroad, telegraph, and telephone have repeatedly demonstrated the importance of public involvement to ensure full access at reasonable prices. These principles have been embodied in public law. Communications networks have been subject to particularly rigorous obligations because they involve speech and expression. The Communications Act of 1934 modeled our national policy for telephone and telegraph services on the same principles of common carriage and non-discrimination used to regulate railroads fifty years earlier.

Most importantly, the Communications Act set forth a vision of universal access by all the people of the United States to communications technologies critical to health, safety, quality of life, and economic development. Section 1 of the Communications Act (as amended) proudly proclaims our national policy on telecommunications:

> *[T]to make available, so far as possible, to all people of the United States, without discrimination on the basis of race, color, religion, national origin or sex, a rapid, efficient, nationwide and worldwide wire and radio communications service with adequate facilities at reasonable charges.*[17]

As our economy goes digital, with commerce moving online and telecommunications converging with mass media, the principle of nondiscriminatory access to a ubiquitous, affordable communications network becomes more important than ever. Municipal broadband systems, while not a substitute for common carriage and non-discrimination requirements, can help to spur deployment and provide needed services to all. Many of the countries that are now ahead of us – such as Canada and South Korea - have used municipal systems as one important element in their broadband strategy.[18] As a nation, we cannot afford to cut off any successful strategy if we want to remain internationally competitive.

Given this environment, it is not surprising that federal policymakers, including President Bush, have had warm words of praise for municipal broadband. Recognizing the possibilities for municipalities to serve residents and stimulate economies with municipal broadband, the President said: "Imagine if you're the head of a chamber of commerce of a city, and say, gosh, our city is a great place to do business or to find work. We're setting up a wi-fi hot zone, which means our citizens are more likely to be more productive than the citizens from a neighboring community. It's a great opportunity… [T]his is a very exciting opportunity for the country.[19] FCC Commissioner Michael Copps seconded this message: "I think we do a

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[15] *Third Advanced Services Report* at ¶ 97.
[16] *Id*.
[17] 47 USC 151.
[18] See, Birgitta Forsberg, "The Future is South Korea," *San Francisco Chronicle*, 13 March 2005, http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/03/13/BROADBAND.TMP; Michael Geist, "Let towns, cities provide cheap, everywhere broadband," *Toronto Star*, 28 Feb 2005, http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1109547019316&call_pageid=971358637177&col=Columnist1036500183695
[19] The White House, A New Generation of American Innovation (April 2004),

grave injustice in trying to hobble municipalities. That's an entrepreneurial approach, that's an innovative approach."[20] Rep. John Peterson (R-PA), the Co-chair of the Congressional Rural Caucus, has expressed his concerns about the failure of the broadband market: "The high-speed Internet is vital for any business that wants to compete in today's global marketplace, and the lack of affordable broadband is a tremendous roadblock to economic growth in rural America. Broadband technology enables hospitals and health care providers to greatly improve patient care in rural areas, and is critical for improving our rural way of life." He affirmed his support for the municipal right to offer broadband at a recent meeting of the Rural Caucus.[21]

The federal government has already begun pumping millions of dollars of funding into publicly owned broadband networks through grants from the now-defunct Technology Opportunities Program at NTIA, Rural Utility Services funds, and grants from the Department of Homeland Security for municipal public safety networks.[22] Further, the FCC's adoption of final rules for BPL technology in October 2004 has opened the opportunity for municipal electric companies to increase their role as alternative providers of broadband service to their communities. Restrictions or prohibition of municipal networks at the state level will make this investment in America's future wasted tax dollars.

The White House, FCC, NTIA, DHS and prominent Congressional leaders have a strong case behind their support for public sector broadband as the answer to our digital divide problems.

The Benefits of Municipal Networks

Municipal Networks Offer Public Service Priorities

No one questions the power of private industry operating in a competitive market to bring goods and services to consumers. Doubtless, for-profit companies will continue to roll out broadband offerings and innovations. Nevertheless, while recognizing the importance of private entrants, policy makers must also recognize their limitations. Private companies operate solely on the basis of profit motives. They have fiduciary obligations to stockholders to maximize their profits. While the profit motive often produces competition and innovation that benefits consumers, it provides no guarantee that private companies will fulfill vital public needs. The decisions of private companies may be economically rational in terms of the advantages accruing to the firm and its stockholders, but there are equally important economic and social needs and benefits completely absent from their calculations. Municipal communications networks operate with a "public motive" not a "profit motive." As one recent study aptly put it: "While a profit-centric view may be good business, it is obviously not good for communities forced to endure substandard education, poor health care, and a sluggish economy."[23]

Municipal networks are an open and accountable public service, operating at a level of government at which extensive participation by local residents is relatively easy. These networks meet vital community needs unmet by incumbent service providers and they are responsive to community input in a way that large and often distant private firms are not. A private provider may eschew low-income customers, balk at offering non-profit service to schools and city offices (including public safety), or leave a rural community isolated for years before the market develops an interest. A public network embraces these arenas as central to the mission of universal, affordable access. For example, in Jacksonville, FL, the city's electric utility is partnering

http://www.whitehouse.gov/infocus/technology/economic_policy/200404/innovation.pdf

[20] Qtd in Jim Hu, "Why our broadband policy's still a mess," *CNet*, 28 February 2005, http://news.com.com/Why+our+broadband+policys+still+a+mess/2008-1034_3-5590929.html

[21] Comm Daily CITE. Peterson's quote is taken from the press office of the Rural Caucus, see: http://www.house.gov/johnpeterson/ruralcaucus/crcnews/2004releases/111704telecomforum.htm

[22] Assistant Secretary of Commerce for Communications and Information Michael D. Gallagher, "Bucks for Broadband Summit," http://www.ntia.doc.gov/ntiahome/speeches/2005/KY_01122005.ppt (January 12, 2005); NTIA, U.S. Department of Commerce, Public Telecommunications Facilities Program Federal Funding Opportunity FY2005, http://www.nita.doc.gov/ptfp/attachments/FFP_Notice_05.html#DLAN (January 25, 2005).

[23] "The Case for Municipal Broadband in Florida," Florida Municipal Electric Association, March 2005, http://www.publicpower.com/telecom_study/telecom_report_2005.pdf, 5.

with the Nemours Children's Clinic to offer tele-medical services to low-income families with asthmatic children. The program is funded in part by a forward-thinking grant from the NTIA.[24]

Broadband has become increasingly important to healthcare, education, and other public services. But a municipality cannot trust to the profit motive to ensure service of these vital needs. For the incumbent broadband provider, hospitals, schools, and other public services are seen purely as sources of revenue. It has no interest in making investment decisions about providing services to such institutions except the monthly payment received for provision of service. If the incumbents decide that your school, your hospital, your community fails to generate the revenue they want, they will not invest in broadband infrastructure and you will be left with no broadband service. Private firms are profit-driven, not altruistic. It is naïve to expect that they will take into account a community's desire to avoid poor health care, substandard public education, or the flight of under-served businesses by upgrading to broadband unless they are able to extract enough revenue to meet their profit expectations.

By contrast, municipal networks are attentive to a wide range of community needs and interests precisely because they are owned by and accountable to the public they serve, and they can take these needs and interests into account in a way that private providers are incapable by their very nature. They do not merely provide an alternative to private broadband providers; they often provide service which private providers are unwilling or unable to make available and which would not be provided if not for municipal investment.

Municipal Networks Expand Service and Lower Rates

Private companies look at broadband service only in terms of the bottom line. If meeting a community's needs is not sufficiently profitable to the private telecommunications firm, that community's needs will not be met.

Municipal networks have often been the technology of last resort for rural communities where private businesses do not consider it sufficiently profitable to deploy. This is a serious problem in many rural areas where backhaul tariffs and the absence of competition leads to extremely high rates or no service at all. According to a recent report by the Iowa Utilities Board, over 25% of Iowa's rural and non-rural communities do not have a broadband provider. Two-thirds of rural Iowa and over half of non-rural Iowa have either one market provider or no service.[25] Where service is available, prices are high. Many Iowa towns must endure residential DSL prices up to $169.95 per month for 1 mbps or the bargain rate of $99.95 for 768 kbps of download speed.[26] In Iowa towns like Adair, Fontanelle, Milo, Prescott, and St. Ansgar, this is the only option.[27]

This situation is not unusual. Over 90 Texas counties have only a single service provider. High prices are the norm there as well. In Texas towns like Kerrville, Boerne, and Fair Oaks, 1 mbps of download speed from the local WISP costs $166.39 a month.[28] In La Grange, TX, 512 kbps of DSL connectivity costs $79.99 per month.[29] In Goldthwaite, TX, 768 kpbs costs $105.90 per month.[30]

Municipal networks have stepped into these circumstances to offer a solution. There are dozens of examples of municipal networks (wired and wireless) that have deployed successfully in pursuit of expanding service and lowering consumer rates.[31] For example:

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[24] "The Case for Municipal Broadband in Florida," Florida Municipal Electric Association, March 2005, http://www.publicpower.com/telecom_study/telecom_report_2005.pdf, 9.
[25] "Assessing High-speed Internet Access in the State of Iowa," Iowa Utilities Board, December 2004, http://www.state.ia.us/government/com/util/reports.html
[26] See the pricing charts for Iowa Telecom DSL service: http://www.iowatelecom.com/residentialservices/article.asp?id=220&PID=108&GPID
[27] These towns are all served by Iowa Telecom DSL according to their coverage list: http://www.iowatelecom.com/PDFs/DSL%20Available%20021705.pdf; and they are also listed in the IUB report as towns with only one-service provider.
[28] See: http://www.beecreek.net/htmls/services.htm
[29] See: http://www.coloradovalley.com/cvtvnet/dslfaq.htm#Cost
[30] See: http://www.centex.net/internet.php3
[31] See: Esme Vos, "Muniwireless Report," March 2005, http://www.muniwireless.com/archives/000609.html

• Allconet, a consortium of the Allegheny County, Maryland government, the local board of education, the public library system, and the City of Cumberland, serves a community which had no other options, having been refused a high-speed network by their regional telecommunications provider. The second phase of Allconet's deployment provided broadband access to more than ninety percent of Allegheny County businesses and more than eighty percent of residents.[32]

• In Kutztown, Pennsylvania, the city created a fiber-optic wide area network to provide its residents, businesses, schools, and government buildings with super high-speed connectivity. Nestled in between three larger cities and home to a university campus, Kutztown has enjoyed the benefits of attracting new business with its high-tech communications system that offers voice, video and data. As rural areas increasingly compete for economic development dollars, Kutztown has lowered cable television and telephone rates and offered state-of-the-art broadband to its residents.[33]

• The City of Scottsburg, Indiana, found similarly in 2002 that private telecommunications providers were unwilling or unable to provide the broadband service necessary to prevent relocation of major local businesses. The city, which is also Scott County's municipal electric utility, created the Citizen's Communication Corporation to create and manage a municipal network which now provides broadband access to more than ninety percent of the county's residents. [34]

• In Granbury, TX (pop. 6000), city officials have partnered with a local ISP and a wireless equipment vendor to deploy a Wi-Fi network that covers 26 square kilometers. The city's network will be shared by public safety (police, fire and emergency services), government services (building inspection and meter reading) and residential customers. This type of public/private partnership is a model that has attracted city planners in hundreds of other communities nationwide.[35]

The success of these examples does not mean that all municipalities must deploy their own networks, or that private networks should be banned in favor of monopoly government networks. It does, however, demonstrate the tremendous harm to the public of prohibiting municipal networks, even if private companies are available to provide service. Prohibiting municipalities from deploying broadband networks, or prohibiting them from expanding existing networks, removes a necessary provider and a valuable potential competitor to the private sector. Banning or restricting municipal networks, therefore, will condemn many communities to substandard service and economic backwardness merely to insulate incumbents from the prospect of competition.

Municipal Networks Increase Investment in Local Economies

Municipal networks have been invaluable in providing broadband service crucial to retaining private sector jobs in many communities. The municipal network was established in Scottsburg, Indiana as a result of demands for broadband access from two major local employers who threatened to relocate if the city could not obtain high-speed access. The case of Cooper-Standard Automotive in Auburn, Indiana, a company whose jobs were retained when the city administration decided to establish a municipal fiber-optic network is similar.

Like concerns appear at the root of the decision of several small Wisconsin communities—Sun Prairie, Waupaca, Jackson and Reedsburg—to deploy wireless and fiber optic networks. Project UTOPIA (Utah Telecommunications Open Infrastructure Agency), a consortium of eighteen cities, banded together to

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[32] "County-Wide Wireless Broadband in Allegheny, Maryland," *Muniwireless.com*, 10 May 2004, http://www.muniwireless.com/archives/000324.html; See also, http://www.allconet2.com/

[33] See synopsis in "Community Broadband: Separating Fact from Fiction," American Public Power Association, January 2004, http://www.appanet.org/legislative/index.cfm?ItemNumber=9964 34-35.

[34] See: "Scottsburg, Indiana Wireless Network Saves the Community," *Muniwireless.com*, 29 April 2004, http://www.muniwireless.com/archives/000315.html; See also, New America Foundation, "Profiles of Municipal and Community Broadband Networks," February 2005, http://www.newamerica.net/Download_Docs/pdfs/Doc_File_2245_1.pdf

[35] See: "Granbury Texas Unwired," *Muniwireless.com*, 19 October 2004, tohttp://www.muniwireless.com/archives/000474.html

establish a municipal broadband network, also arose in part from the likelihood that local employers would relocate from an area historically poorly served by private telecommunications providers.

Furthermore, there is good evidence that the establishment of municipal networks does far more than just retain existing jobs. A 2003 study, comparing Cedar Falls, which has a municipal network, and neighboring Waterloo, Iowa, which has only private broadband providers, reported that Cedar Falls set a record for construction investment in 2002—over $100 million despite an economic downturn. Meanwhile, Waterloo suffered its lowest total in eight years, coming in at $53 million.

> *Although the implementation of Cedar Falls' Communications Network is relatively young, Cedar Falls is already reaping economic and community benefits. There may be no single thing more important in a community's efforts to achieve economic well-being than to grasp the role that telecommunications plays in creating meaningful jobs, enhanced education and world class healthcare. Now, more than ever, the direct link is evident between advanced communications and productivity and economic development.*[36]

The general economic stimulus provided to private firms by the existence of municipal networks, thus, extends considerably beyond the stimulation effect such networks have on CLECs. Indeed, as internet access becomes available in public spaces, it acts as a powerful incentive to draw people to local businesses. The person surfing the web in the local park rather than at home will get coffee from the local coffee shop instead of from their kitchen, and may decide to drop in at the local bookstore. In this regard, municipal access becomes the equivalent of other municipal improvement projects designed to lure shoppers downtown. Finally, to the extent local businesses save on their communication costs it frees money for other investments.

As an added bonus, all of the revenue thus generated is kept local. Unlike a network managed by a distant corporation with centralized, outsourced call centers, local networks and the businesses they benefit create local jobs and increase local tax revenues.

Municipal Networks Increase Competition in Highly-Concentrated Broadband Markets

Broadband "competition" for most Americans consists of one cable company and one telephone company. In many places, there is not even a choice between the two.[37] Even where they happen to meet in the marketplace, they do not behave in a competitive manner. Oligopoly market control cannot and will not yield the consumer benefits of true competition. When cable networks sell high speed Internet service, they offer only themselves as an ISP. When the telephone companies sell DSL, they bundle it with their local voice service. Both cable companies and telcos are very selective in where they make their more advanced services available— focusing on wealthy neighborhoods and raising questions as to when, if ever, they will deploy in poorer (and therefore less profitable) neighborhoods.[38] Because competition has been feeble, prices have remained high and expanded deployment has not materialized, prompting the need for more competition and consumer choice.

In addition to monopoly or duopoly on the retail level, the number of wholesale sellers of internet transport is rapidly shrinking from competitive levels to unhealthy levels of concentration. Consolidation of large corporations which control key elements of the Internet backbone continues apace with the proposed acquisition of AT&T by SBC and of MCI by Verizon. In particular such consolidation presents a clear threat that such dominant private telecommunications actors could leverage smaller broadband providers by the rates they set for access to the backbone. These firms are seeking to have the obligation to provide interconnection and carriage on just, reasonable and nondiscriminatory rates, terms and conditions eliminated. Moreover, such dominant firms would be positioned to use their ability to bundle a large range

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[36] Doris J. Kelley, "A Study of the Economic and Community Benefits of Cedar Falls, Iowa's Municipal Telecommunications Network," working paper (October 2, 2003), 12-13.

[37] Such as the situation in Iowa cited earlier where 2/3 of rural communities and _ of non-rural communities have only one service provider.

[38] W. David Gardner, "Broadband 'Redlining' Issue Raised In Fiber Deployment" 11 February 2005, http://www.advancedippipeline.com/ipbusiness/60400223

of telecommunications services to effectively make it impossible for rivals to compete. This is particularly problematic for those small and mid-size cities that are not located near high-capacity inter-city lines and have limited POPs with high tariffs to choose from as middle-mile connections. In an environment of increasingly vertically-integrated incumbents, public owners of infrastructure will play a critical role in keeping backhaul rates competitive.

We have already seen the myth of competition exposed in what has followed the 1996 Telecommunications Act. The act presupposed that the Baby Bells would lease local facilities and equipment to competitors, including other regional Baby Bells and long-distance providers, who would then offer the public rates set by real competition. Instead, the Baby Bells essentially colluded, refusing to compete on each other's turf in order to protect their own, and initiated a campaign in Washington to modify the rules on network access pricing which eventually drove even giants like AT&T and MCI from the market and into mergers with the dominant Baby Bells. Internet consolidation is poised to repeat this process, threatening to put decisions not merely about who gets broadband service and at what price, but also about what services will be carried on broadband in the hands of a smaller and smaller set of huge private firms.

The recent experience of Vonage Holdings, Inc., is a cautionary tale for those who believe that competition is vital to ensure delivery of technological innovation to the public. It points to the vital importance of keeping networks open for the introduction of competitive technologies. In February of 2005, Vonage found that ILEC networks were blocking its voice-over-internet-protocol (VoIP) service, making it impossible for Vonage customers to make calls and forcing them back into the hands of the ILEC telephone exchanges.[39] Although the FCC intervened, the power and willingness of incumbent networks to use control over the physical layer to control content and applications are troubling. VoIP technology is in its infancy and hardly represents an immediate threat to the dominant telephone carriers. The fact that ILECs have chosen to use their control over data streams to attempt to block this technology at its inception sends a clear warning that the incumbents intend to use their dominant position as broadband service providers to forestall technologies which may threaten other sectors of their business in the future. Even more serious is the implication that incumbents will be able to cut side-deals with some broadband content providers which will privilege their content over that of competitors and exclude other content providers entirely from the marketplace.

Municipal networks provide an important alternative to the oligopolistic tendencies inherent in telecommunications provider consolidation. In an environment where dominant private firms are able to restrict competitors' and content providers' access to subscribers the existence of publicly-owned, unrestricted-access municipal networks becomes a guarantee that content providers will continue to have free access to the public. Further, the existence of open access public networks will serve as a deterrent, serving consumers the considerable advantages of access to applications and content that private sector competitors could choose to block.

There is an additional, often overlooked, benefit which municipal networks provide. It is inherently dangerous to a democracy for all of its telecommunications infrastructure to be held in the hands of unelected and unaccountable private actors with no obligation to behave in a nondiscriminatory manner. Municipal networks by their nature answer directly to the local community and their policies are subject to scrutiny and modification by public action, if need be at the ballot box. The preservation of a system of mixed public and private ownership of telecommunications infrastructure is essential to maintaining the free flow of information unfettered by the economic interests of dominant private actors.

Finally, municipal networks advance the goals of closing the digital divide and providing universal adoption. A recent study of European broadband provides extraordinary evidence for the importance of increasing competition in the marketplace.[40] The study concludes that broadband take-up rates increase in direct proportion to the decrease in market concentration. The study found a 40% correlation between the level of high-speed take-up and the amount of competition between different access providers. Further, the study saw a stronger, 72% relationship between the rate of change in the level of market concentration and the rate of change in the take-up rate. Over time, the study found that for every 1% decrease in market concentration, there is a 3% increase in broadband take-up. The implications of this study for municipal

[39] Jonathan Krim, "FCC Probes Blocking of Internet Phone Calls," *Washington Post*, February 17, 2005.
[40] Richard Cadman and Chris Dineen, "Broadband and i2010," Strategy and Policy Consultants Network, Ltd, 21 February 2005, http://www.spcnetwork.co.uk/uploads/20050221_broadband_analysis.pdf

entry into the broadband market are striking. As public sector players enter the market as wholesalers of infrastructure or retail access providers, the market will experience an increase in broadband consumers. The faster competition heats up, the faster the President's goal of universal access will be realized.

Indeed, anecdotal evidence suggests that even the threat of municipal entry will prompt incumbents to deploy new services or lower rates to stave off public networks. In the Tri-City area of Chicago, for example, the local municipalities have twice held a referendum on whether to construct a shared municipal broadband network. Although the referendum was twice defeated (after an enormous public relations campaign mounted by SBC and Comcast), both commercial providers have worked to improve their service to mitigate the local concerns that caused the municipalities to propose building networks in the first place. Because the broadband market remains, essentially, an ILEC/cable duopoly, only the threat of municipal entry can provide the competitive pressure to force the incumbents to lower prices and increase quality of service.

FACT vs. FICTION: Exposing the Myths of the Anti-Municipal Lobby

In the wake of the Supreme Court case dealing with municipal broadband—*Nixon vs. Missouri Municipal League*[41]—the lobbyists for the incumbent cable and telecom industries have descended on state capitols. Although the Court said merely that states *could* restrict or prohibit public broadband, the lobbyists have campaigned that they *should* and *must* prohibit them. This is despite clear evidence in the judicial and regulatory record that municipalities have strong merit as broadband providers.

For example, in the so-called *Missouri Preemption Order*, the FCC found that public entry into broadband markets would advance the pro-competitive goals of the federal statute:

> The Commission has found that municipally-owned utilities and other utilities have the potential to become major competitors in the telecommunications industry. In particular, we believe that the entry of municipally-owned utilities can further the goal of the 1996 Act to bring the benefits of competition to all Americans, particularly those who live in small or rural communities. We emphasized this fact in our August 2000 report on the deployment of advanced services…Our case study is consistent with APPA's statements in the record here that municipally-owned utilities are well positioned to compete in rural areas, particularly for advanced telecommunications services, because they have facilities in place now that can support the provision of voice, video, and data services either by the utilities, themselves, or by other providers that can lease the facilities. We are also encouraged by the comments of Missouri River, which states that it is comprised of municipally-owned utilities that serve communities with populations of less than five thousand people in Iowa, Minnesota, North Dakota and South Dakota, and that its members have installed fiber optic facilities that they could use to provide telecommunications services in markets where there are currently no competitive alternatives.[42]

The Supreme Court's opinion in *Nixon v. Missouri Municipal League* did not alter this analysis or pass negative judgments on municipal entry. Rather, the case turned on a narrow question of statutory interpretation. The Supreme Court found that when Congress created Section 253(a) of the Communications Act, and generally to preempt the Missouri barrier to municipal entry, but

The Court explicitly noted that its decision was not a ruling on the merits of municipal entry. To the contrary, The Court found that the municipalities "have at the least a respectable position, that fencing governmental entities out of the telecommunications business flouts the public interest;" that the Commission had "denounced the policy behind the Missouri statute;" and that three of the five commissioners had written separate opinions "to the effect that barring municipalities from providing telecommunications substantially disserved the policy behind the Telecommunications Act."[43]

The campaign of the incumbents to persuade state legislatures to ban municipal networks is directly contrary to the stated policy goals of the federal government. It seeks to denying consumers the social and

[41] 541 U.S. 125 (2004).
[42] *In the Matter of the Missouri Municipal League*, 16 FCC Rcd 1157 ¶10 (2001) (footnotes omitted).
[43] 124 S.Ct. 1555, 1560, 2004 U.S. LEXIS 2377 (2004).

economic benefits which the federal government foresees from rapid broadband deployment on all fronts using a broad mix of suppliers. It robs local communities of their right to democratically decide the shape and character of their digital communications future. The incumbents would rather see a sensible national policy thwarted, residents denied the opportunity for broadband service in less profitable communities, and federal tax dollars wasted than tolerate anything which impedes their plans to completely dominate broadband service so they can charge the highest rates the market will bear.

Nine states have seen legislation introduced this year that would seriously restrict or prohibit municipalities from offering broadband service: Colorado, Florida, Iowa, Illinois, Indiana, Nebraska, Oregon, Tennessee, Texas, and West Virginia. Proponents of local control, competition, and public sector entry into the communications market have mounted a considerable counter-challenge. Legislation has been defeated in Indiana. In most of the other states, the debate has been heated and the end result remains uncertain.[44] Though little light has been shed upon them, fourteen states had restrictions to municipal networking in place before this year.[45] Some of these states now look to pile on further obstacles to keep municipalities out of the broadband market.

Arguments Against Municipal Entry Have No Merit

Incumbents and their supporters have attempted to justify these legislative assaults through a variety of arguments. These arguments range from outright falsehoods, to misguided half-truths, to paternalistic red-herrings. These companies have thrived on a diet of monopoly pricing and public subsidies, including cash bribes to serve poor neighborhoods and rural areas, regulated access to public rights of way on favorable terms, and regulated rates to attach to the electric poles of power companies. Suddenly threatened with genuine competition from municipal systems, incumbents would rather regulate than compete. They have commissioned a number reports from think tank scholars – famously described by one commentator as "sock puppets of industry"[46] – designed to support the proposition that state governments should preempt local governments from deploying broadband systems.

Briefly, the incumbents have argued that municipalities should not provide broadband networks because (a) municipal systems have no place in a free, capitalist marketplace; (b) municipalities "crowd out" more efficient private players from offering competitive services, thus stunting the deployment of broadband and associated services; (c) municipalities do a poor job managing complex systems and will squander tax payer dollars; and, (d) municipal systems do not really provide a bridge over the "digital divide," but primarily benefit middle class residents with laptops and small businesses that could easily pay for the same services from commercial provider. This paper debunks each of these objections in turn.

The "Free Market" Argument.

As an historic matter, it is simply false to claim that public enterprise has no place in a free market. To the contrary, municipalities provided electricity and telecommunications services in the last century under similar circumstances as many propose to deploy broadband today. Nor is it fair to say that a free market exists in telecommunications. Most Americans remain served by a single telephone company and a single cable company in their franchise area. Despite all the talk of convergence and new technologies, the telephone and cable companies have substantial market power because they face very little competition, and can use their monopoly voice or video revenues to subsidize broadband build out and force consumers to buy expensive bundles that further subsidize the network.

[44] For more information, see: http://www.freepress.net/communityinternet/
[45] See: http://www.appanet.org/files/PDFs/TelecomFlyer.pdf?sn.ItemNumber=9965&tn.ItemNumber=10000
[46] Glenn Fleishman, "Sock Puppet Talks, Unravels," *WifiNetNews*, 8 March 2005, http://wifinetnews.com/archives/cat_sock_puppets.html

Furthermore, these private companies have insisted on a host of public subsidies as a condition of providing broadband – ranging from regulatory relief to access to rights of way to direct subsidies paid out of the public treasury. Nor do they pay their fair share of taxes. A recent study by the Florida Municipal Energy Association shows that private providers in fact pay ***less*** in taxes than municipally owned systems, while receiving ***more*** in state and federal subsidies.[47] This hardly constitutes a free market in which municipalities should not dare to tread for fear of distorting outcomes based on competition. Rather, it is the incumbents that would rather regulate than compete.

Incumbents are merely one set of government-subsidized broadband providers trying to eliminate competition from any other government-subsidized source. For years incumbent telephone companies have received billions of dollars in federal and state subsidies ILECs and cable companies have received exclusive geographic franchises from state and local governments and have accrued huge competitive advantage over other providers by virtue of longstanding government-protected monopolies. Exclusive licenses frequently continue to protect their spectrum.

It is duplicitous to suggest that the incumbents represent the "free market" against "government-subsidized" municipal networks. Incumbents are incumbents precisely because they have had the weight and resources of government to back them up for years. Furthermore, they have had backing from those levels of government - the federal and state - which are least pervious to direct participation by local residents. Municipal networks, funded by the public and accountable to the public, represent a balance to the domination of telecommunications infrastructure by huge corporations which have long enjoyed substantial government subsidy. Banning or restricting municipal networks will end this effort to create a level playing field.

The "Crowding Out" Argument.

Rather than rushing in to crowd out successful private broadband networks, municipal networks often represent a last resort by cities and counties desperate to serve their residents and keep jobs that would otherwise leave for better connected areas. For many, the choice lies not between municipal networks and private networks but between municipal networks or nothing.

Even urban areas may experience broadband famine in place of the broadband feast perpetually promised by the incumbent providers. A recent report showed that, outside of Manhattan, broadband connectivity remains expensive, non-competitive, and unavailable in many locations.[48] If even New York City can experience a broadband shortage in the absence of municipal systems, every city needs to consider whether to rely exclusively on private industry to serve the needs of its residents and businesses.

Beyond this anecdotal evidence, however, a recent study discussed below provides empirical evidence that municipal systems ***stimulate*** competitive entry by private telecom providers, rather than crowd them out. A study by George S. Ford (Applied Economic Studies, Inc.) prepared for the Florida Municipal Electric Association looked at whether municipal broadband systems stimulated competitive offerings by private companies or crowded such offerings from the market. The study found that the number of private competitive entrants rose significantly if municipalities deployed networks as compared to those local exchanges where municipalities did not deploy networks. "In fact, municipal construction of communications networks expands the number of private firms serving the same market by more than 60%. In this study, no evidence was found to support the argument ta t municipal communications systems limit private investment."[49]

The argument that municipal systems somehow monopolize or retard the development of better, private systems is therefore demonstrably wrong. To the contrary, municipal systems arise when the private market

[47] The Case for Municipal Broadband in Florida," Florida Municipal Electric Association, March 2005, http://www.publicpower.com/telecom_study/telecom_report_2005.pdf,
[48] Jonathon Bowles, "Is There a Broadband Gap for Businesses In Brooklyn?" Center for An Urban Future 10 January 2005, http://www.nycfuture.org/content/reports/report_view.cfm?repkey=149&search=1
[49] "The Case for Municipal Broadband in Florida," Florida Municipal Electric Association, March 2005, http://www.publicpower.com/telecom_study/telecom_report_2005.pdf, 10.

fails to keep pace with local needs, and stimulates new private entrants that offer ever more services at lower prices.

Incumbents frequently claim that the entry of municipal networks into provision of broadband service inhibits private investment by displacing private firms from the market. Conversely, advocates of municipal networks put forward the argument that such networks stimulate additional private investment. The crowding-out hypothesis and its implications are aptly summarized:

> One of the principal arguments against municipal provision of communications services is that this public investment will "crowd out" private investment. The logic is straightforward: if we view that market is capable of sustaining N firms, then the entry of a municipality will displace (at least) one private firm. While intuitively appealing, the argument is exceedingly naïve when applied to the communications industry. Entry into the communications industry typically requires large sunk investments in fixed assets that render non-trivial scale economies. In many cases, therefore, the municipality will be the only entrant for some communications services or in particular geographic areas, since the expected return my not be sufficient to warrant the investment by a private firm. Or, the municipality may be the only competitor to a monopoly private firm in cases where additional entry may be precluded absent the positive spillovers available to the municipality. So, in many cases, municipal entry may have no effect on private entry, but it may be an important element of a well-functioning communications market.[50]

Similarly, the stimulation hypothesis predicts:

> …in many cases, the investments made by the public sector may increase private investment since municipally run communications networks typically provide wholesale access to key components of telecommunications infrastructure. Like the unbundling obligations of the 1996 Telecommunications Act, this wholesale access to fixed and sunk assets promotes entry. So, there is a plausible argument that municipal entry may actually encourage private firm entry and investment.[51]

A recent study by George S. Ford (Applied Economic Studies, Inc.) uses data provided by ILECs and CLECs to the Florida State legislature to test the validity of the crowd-out and stimulation hypotheses empirically. The study measures the mean effect of the provision of a communications network by a city with municipally-supplied electricity on private telecommunications firms, using data on CLEC activity obtained from the Annual Report to the Florida Legislature on the Status of Competition in the Telecommunications Industry in Florida (2004), Appendix B, testing both the crowd-out and stimulation hypotheses. The author concludes:

> The model predicts that cities that self-supply electricity have approximately 7 fewer CLECs…, on average, than do similarly situated cities without municipal electricity operations (a 30% reduction). Within the group of cities self-supplying electricity…, those cities with communications networks… average about 10 more CLECs…, other things constant (a 63% increase). Relative to cities that do not have municipal electric operations, municipalities operating both electric and communications networks… have on average about three more CLECs (a 13% increase) than similarly situation cities with municipally-supplied electricity…. Our empirical model provides no support for the crowding out hypothesis…, but strong support for the stimulation hypothesis… Other things constant, the empirical model indicates that municipally operated communications lead to a 63% increase in CLEC count relative to other cities supplying their own electricity, and a 13% increase in CLEC count relative to cities with privately-supplied electricity.[52]

This empirical refutation of the crowding-out hypothesis and confirmation of the stimulation hypothesis is particularly compelling because it is based on data which the ILECs and CLECs themselves provide to the Florida state legislature. When the incumbents' own data is subjected to rigorous economic analysis, the claim that municipal networks crowd out private broadband investment is shown to be baseless and the evidence is made plain that such municipal networks in fact stimulate private investment.

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[50] George S. Ford, "Does Municipal Supply of Communications Crowd-Out Private Communications Investment? An Empirical Study," Applied Economic Studies, Inc., Working Paper (2004), 2.
[51] Id.
[52] Ibid., 7-8.

The "Incompetent Municipality" Argument

Hoping to capitalize on a distrust of public enterprise, incumbents have pushed this argument forward, relying primarily on some anecdotal evidence of municipal systems that went over budget or have not yet achieved profitability. Many of these so-called failures have been debunked by a definitive study on the economics of municipal systems put out in March 2005 by the American Public Power Association.[53] A second study by Free Press has further demonstrated that many of these so called "failures" are among the most successful municipal networks in practice.

If anything, the attempts by incumbents to use profit as the sole yardstick of failure demonstrates why municipalities must have the freedom to act. As discussed above, local governments have broad concerns for their residents. Hospitals are successful if they bring healthcare to poor people, even if they need public subsidies. A convention center is successful if it brings business to the downtown, even if it goes over budget. While cost and quality of service are clearly important to monitor, profitability cannot become the sole yardstick for success.

Even assuming that some municipal systems (like some private systems) will fail, this ignores the growing number of municipal successes. Systems such as One Cleveland, UTOPIA, and Kutztown offer speeds unmatched by the cable companies or the ILECs. In addition, the century long record in the power industry also refutes this claim. Municipal utilities have supplied power to consumers for over a century, engaging and integrating new technologies and exploring new public service opportunities.[54]

The sweeping claims that municipally-owned providers of services are inherently unable to manage complex networks and remain dependent on tax subsidies are therefore demonstrably nonsense. Municipal electric utilities have been examined in approximately a dozen studies. John Kwoka's comprehensive review of these studies finds no support for the tax subsidy claim.[55] Findings on costs and prices are mixed, but the most frequent finding is that municipal providers pass lower costs through to the public in the form of lower prices.[56]

Broadband networks are no more complicated to manage than municipal power systems, municipal telephone services, sewage systems, subways, or other complex system local governments routinely manage daily. Because we have grown used to government supplying these services efficiently – even though the private sector could supply them as well – we forget the complexity behind these systems. Yet millions of Americans rely on "incompetent" local governments to manage systems critical to health, safety and welfare involving far more complex intermeshing of employees and technology than managing a broadband system.

The argument that municipal supply of services like broadband is inefficient because government supply of services is inefficient and, thus, introduces economically-impeding inefficiencies into a community's economy more generally, is frequently deployed by incumbents. However, a considerable empirical literature on public provision of utilities indicates that public provision is more efficient than private provision.[57] There is no reason to believe that the implications of these empirical results will not also apply

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[53] John M. Kelly, "Paying the Bills, Measuring the Savings," APPA, March 2005, http://www.appanet.org/files/PDFs/PayingtheBills.pdf

[54] See: "Community Broadband: Separating Fact from Fiction," APPA, January 2004, http://www.appanet.org/legislative/index.cfm?ItemNumber=9964

[55] John Kwoka, *Power Structure: Ownership, Integration, and Competition in the U.S. Electricity* Industry (1996); John Kwoka, *Governance Alternatives and Pricing in the U.S. Electric Power Industry,* 18 J.L., Econ. & Org. 278 (2002).

[56] Kwoka, 1996.

[57] T.H. Bruggink, "Public Versus Regulated Private Enterprise in the Municipal Water Industry: A Comparison of Operating Costs," *The Quarterly Review of Economics and Business* 22 (1982), 111-125; J. Foreman-Peck and M. Waterson, "The Comparative Efficiency of Public and Private Enterprise in Britain: Electricity Generation Between the World Wars," *The Economic Journal* 95 (1985), 83-95; P. Byrnes, S. Gross Kopf, and K. Hays, "Efficiency and Ownership: Further Evidence," *The Review of Economics and Statistics* 68 (1986), 337-341; W.J. Hausman and J.L. Neufeld, "Property rights Versus Public Spirit: Ownership and Efficiency of U.S. Electric Utilities Prior to Rate-of-Return Regulation," *The Review of Economics and Statistics* 73 (1991), 414-423; S. Renzetti and D. Dupont, "Ownership and Performance of Water Utilities," *Greener Management International*, No. 42 (2003), 9-19.

to municipal provision of broadband service. Furthermore, these arguments directed at the lack of public sector incentive to maximize efficiency fail to consider that economic organizations can be motivated to achieve efficiency for reasons other than profit. Thus, municipally-owned utilities that are providing basic necessary services can be just as strongly motivated to achieve efficiency in order to achieve output maximization.[58]

We need look only as far as the evidence of existing municipal networks to judge their success in reaching the goals of expanding service, reducing rates, and attracting consumers. As of May 2004, 128 communities across the nation had installed fully operational FTTH communications networks. Ten were offered by municipalities. However, those ten served nearly a third of the homes passed by FTTH. "One reason is the nature of the municipal offering; once technology trials have passed, municipalities typically commit to serving the entire community with FTTH, not just neighborhood-sized "greenfield" deployments." These municipal networks are not only popular in the towns that enjoy them, but the exposure of a broad consumer base to high speed broadband drives innovation and demand for universal service elsewhere.[59]

Ron Sege, CEO of Tropos Networks, a popular vendor of wireless broadband equipment, challenges those who label public networks as doomed-to-failure to confront the evidence:

> The facts show, quite simply, that these networks are *today* giving citizens and businesses the low-cost broadband access they want, are saving lives, making first responders more productive, improving the efficiency of municipal workers and much more. No matter whether municipal broadband wireless networks are provisioned by a city or a carrier, regardless of whether their purpose is improved public safety, stronger economic development, or more broadband Internet access, they are working.[60]

Incumbent broadband providers frequently tout themselves as technological innovators in comparison to municipal networks, which they portray as retarding innovation and freezing existing technology in place. Nothing could be further from the truth. Municipalities usually deploy more robust and extensive networks than private providers. For example, the FCC has determined that municipal networks deploy far more fiber-to-the-home connections than the incumbents which have focused primarily on older fiber-to-the-curb technology.[61] Furthermore, municipal networks have far outdistanced the incumbents in their adoption of wi-fi and broadband-over-power-line (BPL) technologies. Indeed, incumbent providers have a history of leveraging existing networks into technological obsolescence before making new infrastructural investments. When this history is combined with decisions of incumbent providers to reduce capital investment budgets, delay rates of deployment, and adopt less advanced fiber-to-the-curb technology rather than fiber-to-the-home, it is clear that the incumbent providers themselves are a major factor in restricting technological innovation in broadband service. This point is clearly underscored by the way in which restriction on municipal power companies deploying BPL networks would cripple adoption of this technology. Restricting or banning municipal networks will only further impede important advances in development and deployment of new technology.

Finally, while it is no doubt true that some municipal enterprises will fail, the same is true of many businesses. The possibility that a muni system might fail is no reason to deny citizens the right to a municipal system any more than the state should deny municipalities the right to set up hospitals because they might not make a profit.

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[58] Henry Hansmann, *The Role of Nonprofit Enterprise*, 89 Yale L.J. 835 (1980); Richard Steinberg, *Nonprofit Organizations and the Market, in* The Nonprofit Sector: A Research Handbook (Walter W. Powell ed., 1987); Burton A. Weisbrod, *Institutional Forms and Organizational Behavior, in* Private Actions and the Public Good (Walter W. Powell and Elizabeth Clements eds., 1998).

[59] Sharon E. Gillett, "Municipal Trends," Broadband Properties, September 2004, http://www.broadbandproperties.com/2004%20issues/sept04issues/Gillett_Municipal_trends.pdf

[60] Letter written by Ron Sege to the Texas legislature, available at: http://www.muniwireless.com/reports/docs/MunicipalWirelessFacts.pdf

[61] Review of Section 251 Unbundling Obligations of Incumbent Local Exchange carriers, et al., FCC Docket Nos. 01-338, 96-98, and 98-147, Report and Order, FCC 03-36 (rel. August 21, 2003).

The "No Digital Divide" Argument

As a final argument, opponents of municipal systems argue that such systems do not really benefit those in need of connectivity. Given the paucity of broadband available in many rural and some urban areas, this argument rests on little factual evidence. To the extent those making the argument rely on whether some form of broadband – as defined in 1998 by the FCC as 200 kilobits per second – is accessible at some price in a geographic region,[62] this misses the point. Whether broadband is unavailable or unaffordable, the digital divide is no less real. Moreover, the disparities in technological access exacerbate existing social problems.[63]

Others argue that while a digital divide may exist, the true beneficiaries of municipal networks are businesses and middle class residents that could easily pay for private services. Certainly everyone benefits with a municipal network. But it is hardly a reason to prohibit municipal networks because many residents and businesses will enjoy it. To the contrary, the ability of municipal networks to accomplish many purposes – provide connectivity to the poor, stimulate small businesses, attract people to downtown shops and parks – are among the great strengths of municipal broadband systems.

Consider, by way of analogy, the New York City subway. The city heavily subsidizes it, allowing anyone to travel on it any distance for a flat fee. It is a terribly complex system employing thousands and requiring constant maintenance and upgrades. Furthermore, the city swarms with cabs and private car services? Should the government offer this subsidized subway system when private alternatives abound?

Obviously, the City of New York finds it worthwhile to do so. In fact, they rejected a switch from flat rate to metered pricing, despite the fact that such a system would have improved profits. The presence of a good mass transit system brings people downtown to shop. It alleviates crowding on the roads. It goes places private cabs and car services won't. And, despite being subsidized by tax revenues, it hasn't driven private car services out of business.

[62] The FCC, for example, looks to see if any broadband service is available anywhere in the zip code, regardless of price or general availability.
[63] NTIA, "A Nation Online," September 2004, http://www.ntia.doc.gov/reports/anol/

Conclusion

As broadband becomes a necessary utility, local governments must remain free to play their traditional role as a safety net for their residents and businesses. Just as municipalities provided power a century ago when private companies did not move fast enough, so to will local governments provide broadband in a timely manner.

Incumbent providers, grown lazy on a steady diet of public subsidies and monopoly rents, have done their best to cast this as a debate between efficient private competitors and inefficient government monopolies. But it is the incumbents that would rather regulate than compete. They resist municipal entry not because it is incompetent – no one resists incompetent competitors – or because it is unnecessary. Rather incumbents resist municipal entry because they recognize the ability of local government to offer a genuine competitive alternative to a high priced monopoly or duopoly services.

At the end of the day, local governments, accountable to local citizens, understand their own needs and should have the freedom to find local solutions to local problems. We should not require citizens to beg big corporations to deploy systems when these citizens have the power to take matters into their own hands. More than 200 years ago, the founders of this country decided they were citizens able to govern themselves, not subjects of a distant king. This principle of self-governance alone would justify opposition to any legislation that prohibits municipalities from serving their residents on the grounds that corporate giants should have the right to serve them instead.