

Municipally Owned Broadband Networks: A Critical Evaluation

By Joseph L. Bast¹

During the late 1990s, many experts and industry spokesmen confidently predicted the rapid spread of high-speed access to the Internet via cable modem, fiber-optic cable, or telephone lines to virtually every business and household that wanted it. Now, as 2002 comes to a close, major cities are “wired” for broadband but many smaller communities still are not. Adding insult to injury, low-quality cable service often tops the list of complaints heard by municipal elected officials.

Three communities in Illinois (Batavia, St. Charles, and Geneva), located west of Chicago, have responded to complaints by their residents and businesses by proposing to build a municipally owned broadband network, using some of the assets and expertise gained by operating existing municipally owned electric utilities. The Tri-Cities debate presents a case study and precautionary lesson for other communities with similar plans.

Summary of findings

- # Access to broadband services is more plentiful than advocates of municipalization claim or admit. The real issue is not availability but *price* and who should pay it.
- # The benefits of immediate broadband access are being oversold. The costs of speeding up access by six months or a year probably outweigh the benefits for all but a small number of individuals and companies, who can probably afford to buy access now but prefer to lobby for subsidized service.

¹ Joseph Bast is president of The Heartland Institute, a national nonprofit research organization based in Chicago. A brief biography appears on page 23. Neither the author nor The Heartland Institute has a financial interest in the outcome of this debate and neither has received funding or any promise of funding to produce this report.

- # Very few other cities attempt to build and own their own broadband telecommunications networks because the costs and financial risks are too great.
- # Less expensive and less risky alternatives to municipalization are available that would bridge the gap between today's limited access and the much greater access private companies will soon provide.
- # Public provision of telecommunications services is unlikely to be as efficient as private provision.

Generally speaking, municipal ownership of broadband networks is probably not in the best interests of residents and most businesses even in communities not well served by private companies.

- # Bankruptcy of municipal broadband networks is likely as major players such as AT&T and the Baby Bells return to the playing field.
- # Municipally owned broadband networks, when created, should be structured in such a way as to permit their sale to a private company (or consortium) in a few years.
- # National public policies responsible for delaying the spread of broadband were changed in early 2002, further reducing or eliminating the need for municipal involvement.

- # Generally speaking, municipal ownership of broadband networks is probably not in the best interests of residents and most businesses even in communities not well served by private companies.

1. Why consider municipal ownership?

For the past two years, city officials from the Tri-Cities have been discussing ways to improve telecommunications services – telephone and cable as well as Internet access. The major providers of these services – AT&T and SBC Ameritech – have been slow to make the three main types of broadband access – DSL, cable modem, and fiber optic – available in the communities. City officials express concern that this delay is discouraging businesses from moving to the area or expanding, discourages telecommuters from buying homes in the area, and deprives residents of high-quality services available in other communities.

Other cities around the country are experiencing disappointment as financial, legal, and regulatory problems have slowed the roll-out of broadband services nationwide.² Unlike most cities, however, the Tri-Cities own and operate their own electric utilities. This means they have personnel and assets that could be used to reduce the cost and risk associated with building and maintaining a municipally owned broadband system. James Volk, an alderman from Batavia, summarizes the possibility:

² Christopher Conte, "The Great Broadband Heist," *Governing*, August 2002, pp. 35-39.

... there is no high-speed Internet access, and the quality of cable television services is not that good. ... Due to the manner in which the large telecom companies, AT&T, SBC Ameritech etc., have divided up the world there is little to no competition in these markets. They do complain about regulation by the State and Federal governments but at least to me it seems they want rules that prevent any form of competition instead of opening up the systems to other players. ... I see no reason why the Cities should not supply this service. There is a need and private industry is not stepping forward to fill that need.³

Similarly, Peter Collins, Information Systems Supervisor for the City of Geneva, writes:

The fact, pure and simple, is this: the tri-cities are underserved by the local incumbents (AT&T and SBC Ameritech) when it comes to telecommunications, specifically high-speed Internet access.

The tri-cities, unlike most communities, own their electric utilities. The rights-of-way and the poles are owned and maintained by the cities themselves. We can build and run our own facilities much easier than towns without such an infrastructure. And if you're building facilities to serve Internet and data services to residents and businesses, you might as well offer cable and telephone services also. It's an economy of scale.⁴

In May 2002 city officials from the Tri-Cities agreed to pay \$97,500 to United Telesystems Inc. (UTI), a Georgia-based consulting firm, to study the feasibility of the municipalities constructing and managing their own broadband infrastructure system.⁵ The UTI report was due in 90 days, but had not yet arrived at the time this *Heartland Policy Study* was written. However, between UTI's proposal to the Tri-Cities and the systems in place in half-a-dozen cities visited by Tri-Cities staffers and elected officials as part of their research efforts, the outline of the plan under consideration is easily deduced.

UTI will describe the costs and risks associated with creating and managing "a fiber optic based broadband system to provide cable television service, high-speed Internet, telephone services, and

"[I]f you're building facilities to serve Internet and data services to residents and businesses, you might as well offer cable and telephone services also. It's an economy of scale."

– Peter Collins
City of Geneva

³ James Volk, "Broadband systems and Batavia," memorandum posted on Batavia's Web site, dated April 1, 2002.

⁴ Peter Collins, "Underserved in Internet," letter to the editor, *The Kane County Chronicle*, June 29, 2002.

⁵ Tona Kunz, "Tri-Cities to study plan to create its own cable company," *Daily Herald*, May 7, 2002.

other services to residential and commercial customers in the cities of Batavia, Geneva, and St. Charles.”⁶ The new system would “utilize and expand upon existing fiber infrastructure to offer the services” to business and residential customers.⁷ Municipal officials expect to run the system “as an enterprise fund just like the sewer, water and electric. It must be able to pay its own way without support from taxes.”⁸ The system would be similar to one in Spencer, Iowa, a community of 11,000 that spent some \$17 million installing fiber optic and coaxial cables and now offers long-distance telephone service, cable television, and broadband Internet access.⁹

2. Access and price of broadband services

Advocates of municipalization have claimed access to broadband services in the Tri-Cities is extremely limited or, as the quotation from James Volk cited earlier claims, absent altogether. Batavia

The system would be similar to one in Spencer, Iowa, a community of 11,000 that spent some \$17 million installing fiber optic and coaxial cables and now offers long-distance telephone service, cable television, and broadband Internet access.

assistant city administrator Randy Recklaus told the *Kane County Chronicle* in December, “there is a desire and need in the community for broadband services. ... The quality of service and introduction of new products, by our current service provider, has been disappointing to our residents.”¹⁰

These city officials were not entirely wrong. The *Daily Herald* reported in May that interruptions to cable service in Geneva “flooded aldermen’s offices with calls from angry homeowners [and] reinforced the need to study

ways to get cable without buying it from AT&T. Outages, poor reception, poor customer service, a lack of channels and a lack of high-speed Internet access have been complaints from residents for years about the telecommunication giant.”¹¹ AT&T, the area’s cable company, does not yet offer cable

⁶ J. Allen Davis, president of United Telesystems, Inc., “Re: Feasibility Study and Support Services,” letter to the Tri-Cities, March 5, 2002.

⁷ Ibid.

⁸ James Volk, *supra* note 3.

⁹ James Volk and Randy Recklaus, “Re: Tri-City Broadband - Spencer Iowa Site Visit,” Memorandum on the Batavia Web site dated January 22, 2001; Marie-Anne Hogarth, “Tri-Cities consider offering own broadband service,” *Courier News*, January 17, 2002; Eric Schelkopf, “Batavia eyes plan for tri-city cable service,” *Kane County Chronicle*, January 15, 2002.

¹⁰ Quoted in Eric Schelkopf, “Tri-cities may offer Internet, cable combo,” *Kane County Chronicle*, December 12, 2001.

¹¹ Tona Kunz, *supra* note 5.

modem service. But poor cable service and customer resistance to paying for services that may be available but expensive do not mean the Tri-Cities need a municipally owned broadband system.

An August 2001 survey of residents in all three of the Tri-Cities¹² showed 79.3 percent had cable service and 77.4 percent had Internet services. Of those with Internet access, 95.2 percent relied on dial-up modems, which by definition is not high-speed access. Cable typically costs \$31/month, approximately the same as the national average,¹³ and Internet access costs about \$16/month. Local phone service is available from either SBC Ameritech or US West for about \$27 per business line.

ISDN (Integrated Services Digital Network) is available to anyone with telephone service in the Tri-Cities. ISDN moves data over existing regular phone lines at speeds of roughly 128,000 bits-per-second. ISDN can be used to connect to many different locations, one at a time, just like a regular telephone call, as long the other location also has ISDN. ISDN pricing ranges from about \$45/month to \$90/month plus a usage charge, or a flat fee of approximately \$140 - \$175/month for “always on” service.

Poor cable service and customer resistance to paying for services that may be available but expensive do not mean the Tri-Cities need a municipally owned broadband system.

T-1 service is also available throughout the Tri-Cities over existing telephone lines. T-1 service is commonly used to connect large LANs to the Internet via a leased-line connection capable of carrying data at 1,544,000 bits-per-second, about 12 times the ISDN bandwidth. T-1 “always on” service is available for as little as \$700/month, typically for business applications, and that price is falling rapidly.

DSL (Digital Subscriber Line) service, which uses conventional phone lines to deliver high-speed access to the Internet, is currently available from SBC Ameritech to most of Geneva and parts of Batavia and St. Charles.¹⁴ DSL allows downloads at speeds up to 768,000 bits-per-second and uploads at speeds of 128,000 bits-per-second. This arrangement is called ADSL (Asymmetric Digital Subscriber Line) and is typically used for residential service and costs between \$29 and \$89/month. A configuration more commonly used by business is SDSL (symmetrical), which provides up to 1,544,000 bits-per-second in both directions and sells in the Tri-Cities for between \$139 and \$379/month.

¹² Eric Schelkopf, “City explores cable needs,” *Kane County Chronicle*, August 21, 2001.

¹³ As of December 2001, according to the National Cable Telecommunications Association, http://www.ncta.com/industry_overview.

¹⁴ Without signal boosters, DSL service is limited to within 3.3 miles of a switching station. SBC Ameritech’s switching station is located on James Street in Geneva, and virtually the entire city is within reach of the station.

“AT&T has started upgrading the routing system in West Chicago. It also has begun pulling permits in Batavia, North Aurora and Aurora to lay a fiber backbone from West Chicago to Yorkville. Upgrades to individual homes and businesses come later.”

– *Daily Herald*, March 16, 2002

Cheaper and faster access to broadband services is on its way to Tri-Cities residents. According to a news report in March 2002, AT&T plans to upgrade cable in “all Fox Valley towns to high-speed Internet capability by December 31. However, AT&T representatives acknowledged that the final towns wouldn’t be upgraded until April 2003, at the latest. Although work is going on simultaneously across the Fox Valley and DuPage County, the Tri-Cities fall at the end of the turn-on list.”¹⁵

The same news article also said “AT&T has started upgrading the routing system in West Chicago. It also has begun pulling permits in

Batavia, North Aurora and Aurora to lay a fiber backbone from West Chicago to Yorkville. Upgrades to individual homes and businesses come later. ‘I would say in the summer we should be pretty far along,’ [Patricia] Keenan [vice president of communications for AT&T] said.”

In June 2002, the *Daily Herald* provided the following update:

[Geneva] City Administrator Phil Page said he expects the work in the Geneva area to begin in July with upgrades possibly ready by this time next year. Prior to the merger [of AT&T and ComCast], AT&T was wary of even promising upgrades by 2005. ‘I think it’s a credible commitment at this point to get it done in a year,’ he said. The cable company has not yet taken out city permits to lay fiber-optic cable for broadband capability, but it has started on a network backbone that travels down Fabyan Parkway. Crews are working their way up from Aurora connecting local homes and business to the backbone lines.¹⁶

Meanwhile, SBC Ameritech is expanding DSL service in Elgin¹⁷ and is capable of extending it beyond the areas it now serves in the Tri-Cities.

Wireless access to broadband services is also an option. Direct Broadcast Satellite (DBS) service is available throughout the Tri-Cities from DirecTV and EchoStar. Satellite service has emerged as a serious competitor to cable in recent years. Nationwide, DirecTV and EchoStar have 17.7 million subscribers; DirecTV alone has more subscribers than all but two cable operators (AT&T and AOL Time Warner). Woodstock-based Other World Computing offers a

¹⁵ Tona Kunz, “Plan puts cable upgrade in place by end of year,” *Daily Herald*, March 16, 2002.

¹⁶ Tona Kunz, “Geneva decides flickering cable is better than no service at all,” *Daily Herald*, June 18, 2002.

¹⁷ Kara Spak, “Elgin residents among those getting high-speed Internet,” *Daily Herald*, June 9, 2002.

satellite dish, installation, receiver card for a computer, five email accounts, and technical support for high-speed Internet access for between \$29.95 and \$149.95 a month.¹⁸

Another form of wireless broadband service, called MDS (multipoint distribution service) or wireless cable, involves using antennas mounted on water towers or high buildings to deliver high-speed Internet access to users. South Elgin, for example, has contracted with St. Charles-based MCC Technology to place antennas on four municipally owned water towers, giving virtually the entire village access to broadband. Rates are expected to range from \$69.95 to \$149/month.¹⁹

Not all of these broadband services are as fast or reliable as the fiber-optic network envisioned by advocates of a municipally owned broadband network, and some may cost more than a typical small business owner wants to spend. But they are widely available now to residents and businesses in the Tri-Cities at affordable prices, often for much less than they cost just one and two years ago. More choices and even lower prices are less than a year away as AT&T expands its cable network into the area and SBC expands its DSL service.

These broadband services are widely available now to residents and businesses in the Tri-Cities at affordable prices, often for much less than they cost just one and two years ago.

Why, then, should the city invest now in an expensive fiber-optic broadband infrastructure? One can guess that the purpose is to subsidize a small number of community residents and businesses who want the highest quality broadband services but aren't willing to pay the full price for them. As the discussion below shows, this indeed is the only plausible justification for taking on the expense and risk involved in building a municipally owned broadband network.

3. What are the benefits of a municipal broadband network?

Advocates of doing whatever it takes to speed up access to broadband say the economy of the Tri-Cities is at risk with every week and month that passes without it. Access to broadband is an important consideration to high-tech businesses choosing to relocate or expand, they say, and to high-tech workers looking to telecommute. Peter Collins, Geneva's information systems supervisor, wrote in a letter to the editor of a local newspaper, "The Kane County Economic Development Board commissioned a study to assess telecommunications assets throughout the country. That study ... to no one's surprise, found a lack of affordable telecommunications assets and in fact encouraged what the Tri-Cities are trying to accomplish."²⁰

¹⁸ S.A. Mawhorr, "Satellite dish speeds up Internet connection," *Daily Herald*, August 26, 2002.

¹⁹ Tom O'Konowitz, "S. Elgin pushes along plans for high-speed Internet," *Daily Herald*, February 26, 2002.

²⁰ Peter Collins, *supra* note 4.

Another report that appears on Batavia's Web site, edited by John Garvey for Convergence Research, Inc., makes a similar argument:

As medium and smaller sized municipalities struggle to compete with large cities, and as metropolitan suburbs compete with the city core, access to broadband is increasingly necessary to retain current businesses and attract new start-ups. Lack of high-speed Internet access – a reality and a dilemma in rural communities and in outlying suburban areas – contributes to the difficulty municipalities have in recruiting engineering firms, software houses and other businesses that rely on broadband access.²¹

One can guess that the purpose is to subsidize a small number of community residents and businesses who want the highest quality broadband services but aren't willing to pay the full price for them.

Garvey's report pumps the case for municipal ownership, but there's a conflict of interest: Convergence Research, Inc. is a consulting firm that specializes in advocating municipalization and makes money by acting "as the primary operator offering reliable cable and telephone communication services to residents over this publicly owned network."²² The for-profit firm, which operates out of a post office box in Geneva, apparently has

produced just one publication, the "white paper" advocating municipalization.

Advice on economic development from consulting firms, whether from Garvey's firm or the one used by the Kane County Economic Development Board, should be steeply discounted. Virtually all such firms tell their clients they can become high-growth areas for high-tech companies by investing, or investing more, in subsidies to new businesses. Today it's telecommunications infrastructure; yesterday it was workforce training and free land (remember Diamond-Star and Sears Roebuck?). A decade ago, SRI International made millions of dollars by convincing scores, perhaps hundreds, of communities that they could become "the next Silicon Valley" by dangling subsidies in front of corporate CEOs. Today, McKinsey & Company is doing the same thing, producing in 2001 a report for the City of Chicago titled "A New Economy Growth Strategy for Chicagoland."

In fact, econometric research consistently finds subsidies to corporations – whether in the form of cheap access to broadband, skilled labor, or land – are an unreliable and often counterproductive strategy for economic development. Cities and states that make these expenditures do not create jobs or increase personal income at higher rates than cities and states that don't.²³ Edwin Mills, professor

²¹ John Garvey, "Municipal Broadband Networks: Unleashing the Power of the Internet," Convergence Research, Inc., March 2002, p. 4.

²² Convergence Research, Inc.'s Web site.

²³ Timothy J. Bartik, *Who Benefits from State and Local Economic Development Policies?* (Kalamazoo, MI: W.E. Upjohn Institute, 1991); Joseph and Diane Bast, eds., *Coming Out of the Ice* (Chicago, IL: The Heartland Institute, 1990), pp. 39-48.

emeritus of real estate at Northwestern University and one of the country's leading urban economists, recently wrote about Chicago's aspirations to attract high-tech firms:

By any reasonable definition, high-technology research, development, and manufacturing are the most footloose of industrial sectors. By and large, they locate where their highly educated and high-paid employees want to live. Mostly that is not adjacent to inner-city universities – a fact many local governments have learned at some cost to them. High-tech activities tend to locate in distant suburbs of metropolitan areas with fine universities (Route 128, Silicon Valley, Research Triangle Park).

Econometric research consistently finds subsidies to corporations – whether in the form of cheap access to broadband, skilled labor, or land – are an unreliable and often counterproductive strategy for economic development.

Almost no high-tech concentrations have been mainly the result of government planning. (Research Triangle Park is a partial exception.) More often, governments have jumped on the wagon after the band has been formed and most employment growth has finished.²⁴

The efforts of James Volk, Peter Collins, Randy Recklaus, and others may have prompted AT&T to move up its deadlines and SBC to restart Project Pronto. But now that AT&T and SBC are moving forward and wireless alternatives are available, having a municipal broadband network would benefit only a small number of high-end users of broadband services. Do the expected private benefits of a few users justify the cost of connecting every business and household in the community with fiber-optic cables? Does their desire for cheap broadband access justify public funding and public indebtedness? Most objective viewers would probably say the benefits are no longer worth the cost and risks of creating and managing a municipal broadband system.

5. Few cities attempt to build their own broadband networks

Other municipal utilities have experimented with providing telecommunications services. According to John Garvey's "white paper," "there are over 650 counties, cities and villages with publicly owned utility systems which each serve 5,000 or more households."²⁵ Of these, Garvey says the following number provide the specific services described:

²⁴ Edwin S. Mills, "Dreams, Plans & Reality: A Critique of Chicago Metropolis 2020," *Heartland Policy Study* No. 97, February 2002.

²⁵ John Garvey, *supra* note 21, p. 4.

Number of communities	Type of telecommunications service provided
109	provide cable television services
61	offer Internet access services
58	lease fiber to private-sector companies
32	offer high-speed data services
18	provide local telephone services
10	provide long-distance service

Why, if municipal creation and ownership of broadband networks is such a good idea, is it so rare?

The Tri-Cities' municipally owned utilities already make them unusual, since only about 8 percent of counties and local governments with more than 5,000 residents manage their utilities this way.²⁶ Municipal cable systems are even rarer – just 1.3 percent. And offering Internet access,

according to Garvey's numbers, is rarer still – 0.7 percent. Why, if municipal creation and ownership of broadband networks is such a good idea, is it so rare?

Building and operating a broadband infrastructure is an expensive endeavor. Spencer, Iowa, population 11,000, spent \$17 million to create its fiber-optic network and run coaxial cable to 4,500 homes. This is \$1,545 per resident and \$3,777 per household. Like the Tri-Cities, Spencer started with a municipal electric utility and an existing fiber network linking public buildings.²⁷

Funds used for the municipal broadband network cannot be used for roads, parks, police, and other public goods and services that may benefit more people than high-speed Internet access. While surveys conducted in Spencer prior to the decision to create the broadband network showed strong public support, one wonders how many homeowners knew it would cost them nearly \$4,000. The previously mentioned UTI feasibility study will presumably produce a reliable cost estimate for the Tri-Cities, but one would be surprised if it was less than what Spencer had to pay.

Spencer expected (and still expects) to “break even” on its investment by charging residents and businesses for telecommunications services. Recently, 1,700 households had signed up for municipal cable service and 500 had signed up for telephone service. Spencer may very well accomplish its goal, but this is a risky plan. The local cable company cut its rates more than 50 percent in order to compete with the municipal cable service, forcing the city to consider cutting its own prices. The cable company is also suing the city over the way the municipal service is being financed, which could further interrupt receipts. Price-cutting and legal action by Chicago-area cable providers can be expected to be at least

²⁶ There are about 8,300 counties and local governments with populations greater than 5,000, according to *Statistical Abstract of the U.S.*, 1996, Table 470.

²⁷ Spencer's municipal utility had reserve funds sufficient to loan the new entity \$8 million and to spend \$8 million itself on the fiber network, which it owns. The new entity leases the fiber from the utility. James Volk and Randy Recklause, *supra* note 9.

as fierce, driving down likely revenues for a Tri-Cities municipal broadband entity.²⁸

Bigger threats to a municipal broadband network's financial health are changing state and federal regulations, new technology, and falling prices. Earlier this year the FCC and a federal appeals court removed some of the open access requirements that have kept SBC from expanding and aggressively promoting its DSL service and AT&T from investing aggressively in upgrading its cable networks. Wireless high-speed Internet access, either by satellite or ground-based broadcasting, costs far less to install and operate than a fiber-optic network and may render the municipal network obsolete within a few years.

Price-cutting and legal action by Chicago-area cable providers can be expected to be at least as fierce, driving down likely revenues for a Tri-Cities municipal broadband entity.

Major electric utilities, including Con Edison in New York, Southern Company in Georgia, and Pepco near Washington DC, are testing a long-awaited technology called Power Line Communication (PLC), which allows Internet access over household electricity lines.²⁹ Such technology would allow Internet service providers to reach every house and business in the Tri-Cities using the existing (municipally owned) power grid, perhaps causing the municipal electric utilities to become competitors with the new municipal broadband service.

Monthly charges for DSL, T1, and wireless broadband services are falling, making them competitive with cable modems. Prices for these services and long-distance telephone service are almost certain to continue falling over time. While fiber-optic service may be technologically superior to cable and wireless, it isn't clear most business or residential users need or would pay more to get fiber-optic service. The smaller the number of likely users of the new system, the less justification there is for the municipal investment in the first place, and the less likely it is the system will be self-financing.

If the new broadband entity is structured to be self-financing, what happens when technological change, deregulation, and competition cause receipts to fall short of projections? The municipal entity cannot be subsidized without triggering legal challenges under Section 253 of the 1996 Telecommunications Act.³⁰ The only alternative is sale of the assets to a private firm and/or bankruptcy. Will Tri-Cities taxpayers get their investment back by selling fiber to a market with such a wide variety of inexpensive alternatives?

²⁸ As Batavia Alderman Norm Hagemann has said, "You'll be competing against people much bigger than in Des Moines." Marie-Anne Hogarth, "Tri-Cities consider offering own broadband service," *Courier News*, January 17, 2002.

²⁹ David LaGessee, "Piggybacking on power lines," *U.S. News & World Report*, August 12, 2002, p. 51; Judith B. Warrick, "Are You Ready for the Revolution?" *Global Electricity Strategy*, Morgan Stanley Dean Witter, April 12, 2001.

³⁰ 47 U.S.C. §253(a). "In General – No State or local statute or regulation or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."

If the new broadband entity is structured to be self-financing, what happens when technological change, deregulation, and competition cause receipts to fall short of projections?

The feasibility study being conducted by United Telesystems Inc. is likely to brush off these and other concerns, first because UTI's job is to help government officials sell the idea of a municipally owned broadband network to banks and constituents, and second because UTI stands to profit most if the city builds such a network. In its proposal to the Tri-Cities, UTI President J. Allen Davis writes: "Should the Tri-

Cities elect to move forward to pursue the opportunity set forth in the Feasibility Study, UTI is also available to help the Tri-Cities obtain all necessary approvals and to initiate and close municipal revenue bond issues to capitalize the project."³¹

Davis assumes the "opportunity" will require municipal revenue bonds. Similarly, he writes: "Should the Feasibility Study operating and capital budgets be approved, the Cities will be positioned to move immediately to capitalize or secure financing and to take bids for the construction of the networks along with the procurement of network electronics and equipment."³² It is difficult to understand why this language would appear in the letter if municipalization weren't a foregone conclusion.

The UTI feasibility study may be a high-quality and useful document. Simply commissioning the study may have forced AT&T and SBC to step up their plans for bringing broadband to the Tri-Cities, in which case the \$97,500 paid to UTI will have been money well spent. City officials may review the "opportunity" identified by UTI and decide it is too costly, too risky, or (the strongest argument) no longer necessary. What is certain, though, is UTI cannot be relied on to objectively report either the costs or the potential risks of building and operating a municipally owned broadband network.

6. Alternatives to municipalization are available

Some elected officials in the Tri-Cities or their most vocal constituents may insist the cities "do something" to move up by six months or one year the date bountiful and inexpensive broadband access arrives. There are alternatives to municipalization that would bridge that gap for far less than the \$17 million spent by Spencer, Iowa, or the ongoing costs associated with running a municipal broadband network. Consider what is happening in **South Elgin**:

³¹ J. Allen Davis, letter of March 5, 2002 to the Cities of Batavia, Geneva, and St. Charles, p. 4.

³² Ibid., p. 4.

By next month, pretty much every neighborhood and business in South Elgin finally will have access to wireless high-speed Internet access. ... On May 20, the village voted to allow MCC to install similar antennas, which are small, on top of the town's two water towers and eventually its third on the far east side. The antennas should be installed by the end of June and will serve the majority of South Elgin. ... And the town will get 5 percent of MCC Technology's gross sales of the service in South Elgin.³³

Naperville is also moving forward without municipalization:

WideOpenWest is offering high-speed cable modem service in Naperville. "Already, more than 2,000 Naperville houses subscribe and another 2,000 have pending installations," [Julia] McGrath [senior vice president of WideOpenWest] said.

Both those figures have doubled in the last two to three weeks, said Gary Karafiat, Naperville's community relations manager. WideOpenWest has partnered with other contractors, some from out-of-state, to assist with the demand and they're working 7 days a week. They plan to roll out a commercial product between June and mid-July.³⁴

There are alternatives to municipalization that would bridge that gap for far less than the \$17 million spent by Spencer, Iowa.

Nearby **Huntley** is deploying a novel wireless system:

The Huntley village board on Thursday unanimously approved an agreement to bring a high-speed wireless Internet service developed by Motorola to the village. ... because of high infrastructure costs associated with burying cables needed for cable or DSL, no viable options came until Canopy, trustees said. ... Canopy, which was released earlier this summer by Motorola, is a line-of-sight system that requires no expensive underground cables. Fox Valley Internet, which will actually provide the service, will install an antenna on four Huntley water towers strategically placed around the village. ... The company will pay the village \$300 a month per installed antenna. Depending on how much subscribers pay – prices start at about \$30 a month – they could receive the Internet at varying speeds.³⁵

Elgin's Technology Action Team in September 2000 released a plan for "e-Elgin" that called for matching grants to businesses that upgrade their connections to high-speed Internet service and other

³³ Tom O'Konowitz, "High-speed Internet lands in South Elgin this summer," *Daily Herald*, May 30, 2002.

³⁴ Denise Raleigh, "Watch for pitfalls of high-speed Internet," *Daily Herald*, April 19, 2002.

³⁵ Patrick Garmoe, "High-speed Internet in the air in Huntley," *Daily Herald*, August 9, 2002.

“Canopy, which was released earlier this summer by Motorola, is a line-of-sight system that requires no expensive underground cables. Fox Valley Internet, which will actually provide the service, will install an antenna on four Huntley water towers strategically placed around the village.”

– *Daily Herald*, August 9, 2002

electric infrastructure and abatement of the municipal portion of property taxes to encourage development and improvement of existing structures. This market-driven and highly targeted approach seems more likely to succeed than building an expensive municipally owned broadband network and hoping it will attract new businesses seeking cheap access to the Internet.

Another alternative to building its own broadband network would be for the Tri-Cities to boost true demand (that is, businesses willing to pay the full cost of high-quality broadband services) in the area by taking the lead in repealing regulations that limit the advertising and

sale of certain products over the Internet. For example, laws in all 50 states ban auto sales over the Internet unless they involve local franchise owners, at least 30 states preclude wine sales over the Internet, 17 states require online mortgage brokers to have a physical office in the state, and many states limit online competition for products ranging from contact lenses to funeral caskets. Nationwide, these regulations may cost consumers more than \$15 billion a year.³⁶

What if the Tri-Cities announced it would support businesses located in its area that challenge such laws, perhaps joining them in litigation, lobbying, and appeals to state officials and the Federal Trade Commission? The Tri-Cities could be for Internet businesses what Delaware is for companies looking to incorporate ... a safe haven from anti-competitive regulations. Private telecommunications companies would rush to the Tri-Cities if it were home to thriving Internet businesses demanding broadband services.

7. Public versus private provision: efficiency considerations

Kathryn Grondin, a writer for the *Daily Herald*, believes a municipally owned broadband network would benefit consumers because “without shareholders to satisfy, savings can go to the customer.”³⁷ James Volk, speaking for members of his pro-municipalization group, told a reporter, “We are looking at it as a business and will make business decisions on whether we go forward.”³⁸

³⁶ Federal Register Notice, “Public Workshop: Possible Anticompetitive Efforts to Restrict Competition on the Internet,” Federal Trade Commission, July 19, 2002.

³⁷ Kathryn Grondin, “St. Charles to survey businesses on need for fiber optic network,” *Daily Herald*, October 14, 2000.

³⁸ Tona Kunz, “Why officials from Tri-Cities visited a small town in Iowa,” *Daily Herald*, January 17, 2002.

Would a municipally owned broadband network really be more efficient than any of the competing private broadband services in existence now or coming on the scene?

Offering telephone and cable service is far more complex and difficult than collecting trash or cleaning parks. Telephone service requires switching equipment, secure facilities, backup power generation, and a trained staff of customer service agents. Customers don't simply sign up on their own: Advertising campaigns must be managed, billing systems and debt collection procedures put in place, and prices set and revised competitively.

Would a municipally owned broadband network really be more efficient than any of the competing private broadband services in existence now or coming on the scene?

Cable is surprisingly difficult to provide, too. Small cable firms – many of them many times larger than what the Tri-Cities is envisioning – have gone out of business because they couldn't negotiate terms as favorable as those given to such giants as AT&T and Comcast (and now that AT&T and Comcast are merging, that competition will be even stronger). Maintenance and service calls are labor intensive and expensive.

The Tri-Cities have some expertise in these areas that other towns do not have, thanks to their municipally owned utilities, but there is a big gap between running a monopoly electric power system and a competitive telecommunications network. Some of this expertise can be bought – by contracting out various parts of the services – but even this requires skilled oversight and management.

More broadly, can elected officials and public employees run a government enterprise as efficiently as a business? Answers to this question often are motivated by ideology (conservatives tend to say no, liberals tend to say yes) or based on a few favorite anecdotes. What do the data say?

Research on the costs and quality of public services produced via municipal ownership versus private provision is extensive and conclusive.³⁹ Activities and services that have moved from public to private provision since 1980 include such sophisticated enterprises as multi-billion-dollar insurance funds, airports, hospitals, ports and harbors, prisons, railroads, and water works. They also include parks, golf courses, sports stadiums and arenas, police and fire services, and building maintenance.

³⁹ Geoffrey Segal, editor, *Privatization 2002: Sixteenth Annual Report on Privatization* (Los Angeles, CA: Reason Foundation, 2002); William D. Eggers and John O'Leary, *Revolution at the Roots: Making Our Government Smaller, Better, and Closer to Home* (New York, NY: Free Press, 1995); General Accounting Office, *Privatization: Lessons Learned by State and Local Governments* (Washington, DC: U.S. General Accounting Office, 1997); Robert Poole, *Cutting Back City Hall* (New York, NY: Universe Books, 1980); Carl F. Valente and Lydia D. Manchester, *Rethinking Local Services: Examining Alternative Delivery Approaches*, Management Information Service Special Report No. 12 (Washington, DC: International City Management Association, 1994); Charles Wolf Jr., *Markets or Governments: Choosing Between Imperfect Alternatives* (Cambridge, MA: The MIT Press, 1988); E.S. Savas, *Privatizing the Public Sector* (Chatham, NJ: Chatham House Publishers, Inc., 1982); E.S. Savas, *Privatization and Public-Private Partnerships* (New York, NY: Chatham House Publishers, 2000).

Often the switch is attributable to complaints of high costs and poor service, making continued reliance on the public sector a liability for elected officials.

Extensive research shows privatization delivers significant cost savings, greater accountability and responsiveness to consumers or elected officials, and a level of quality equivalent or superior to public-sector delivery. A comprehensive survey of more than 100 independent studies of privatizations in a wide variety of fields, conducted by John Hilke for the Reason Foundation, found cost reductions of between 20 and 50 percent.⁴⁰ Other surveys have documented average savings in the same range.⁴¹

E.S. Savas, Barbara Stevens, and other experts identify less bureaucracy and higher worker productivity attributable to better supervision, less paid time off, and superior equipment as the reasons why private-sector firms are typically able to produce higher-quality goods and services at a lower cost than government agencies.⁴² These policies are more common in the private sector because firms must compete to produce higher quality and lower costs or they lose business to more efficient competitors. Because they do not need to compete to survive, government agencies can remain indifferent to these considerations.

A comprehensive survey of more than 100 independent studies of privatizations in a wide variety of fields ...found cost reductions of between 20 and 50 percent.

One lesson to be learned from Spencer, Iowa is that competition is more important in determining price than the providers' average operating costs. Faced with a municipal competitor, Spencer's private cable provider slashed its prices and improved its programming. A municipal broadband network for the Tri-Cities could have had the same effect ...if it had arrived three or four years ago. Now, with

broadband access expanding rapidly and with price competition taking place, it is no longer necessary for the Tri-Cities to play this card.

8. Bankruptcy of the municipally owned broadband network may be inevitable

Earlier parts of this *Policy Study* explained how substituting municipal employees for private-sector

⁴⁰ John Hilke, *Cost Savings from Privatization: A Compilation of Study Findings* (Los Angeles, CA: Reason Foundation, 1993).

⁴¹ James T. Bennett and Manuel H. Johnson, *Better Government at Half the Price* (Ottawa, IL: Caroline House Publishers, Inc., 1981); T.E. Borcharding, ed., *Budgets and Bureaucrats: The Sources of Government Growth* (Durham, NC: Duke University Press, 1977); E.S. Savas, *Privatization and Public-Private Partnerships*, supra note 39, Chapter 6.

⁴² E.S. Savas, supra note 39; Barbara Stevens, *Delivering Municipal Services Efficiently: A Comparison of Municipal and Private Service Delivery* (New York, NY: Ecodata, Inc., 1984), pp. 15ff.

entrepreneurs and workers, and taxpayers for private shareholders, is a risky endeavor. Still, a case can be made that with telecom companies on the bench due to miscalculations by policymakers, investors, and entrepreneurs, municipalities have emerged as less-handicapped players able to take to the field faster and perform better until the veterans are able to play again.⁴³

The unintended consequences of the Telecommunications Act of 1996 left telecom companies burdened with billions of dollars of debt, delayed service roll-outs, and made mergers rather than competition the rule.⁴⁴ Nevertheless, the “veterans” are already starting to return to the field. AT&T’s and SBC Ameritech’s new interest in the Tri-Cities was reported earlier. The merger of AT&T Broadband and Comcast, a Philadelphia-based cable services company, will allow AOL Time Warner to offer early next year a high-speed version of America Online to some 22 million cable TV customers nationwide.⁴⁵

EchoStar Communications Corp., which operates the Dish Network, is reporting rapid growth in its subscribers and recently reported its first quarterly profit since the company went public in 1995.⁴⁶ Action by the FCC to settle spectrum licensing issues will uncork billions of dollars in investments in wireless Internet access, too.

The technological revolution during the past two decades has made telecommunications a national and global service. Network dependencies, enormous economies of scale, and extremely low marginal costs mean local prices for telecommunication services cannot be kept significantly higher than national or global prices, and those prices can be reduced nearly to zero for extended periods of time for particular regions or groups of consumers by competitors hoping to generate revenue from services other than access to the Internet.

Prices can be reduced nearly to zero for extended periods of time for particular regions or groups of consumers by competitors hoping to generate revenue from services other than access to the Internet.

What will happen to municipally owned broadband networks when private competitors return to the field? A municipal broadband network may start service by charging “competitive” or even below-market fees, but once full-spectrum (DSL, cable, and wireless) competition arrives, prices for access will fall to the cities’ operating costs or less, leaving them unable to pay off the bonds issued to cover

⁴³ This is essentially the case made by John Garvey, *supra* note 21.

⁴⁴ Liberals and conservatives alike share this assessment of the reform effort. See Molly Ivins, “Untangling the dereg mess,” *Chicago Tribune*, July 15, 2002; “Another Telecom Fiasco,” editorial, *Wall Street Journal*, August 21, 2002.

⁴⁵ Julia Angwin, “Cable Deal Brings Expansion to America Online – at a Price,” *Wall Street Journal*, August 21, 2002.

⁴⁶ Andy Pasztor, “EchoStar Sends Strong Signal by Posting \$45.8 Million Profit,” *Wall Street Journal*, August 16, 2002.

the up-front investment in fiber. Businesses and residents cannot be treated as captive customers and charged more than what competitors would charge, first because of the existence of technological alternatives to the fiber-optic network and second because municipalities are barred from subsidizing their public telecommunications enterprises. Bankruptcy is a likely scenario.

To avoid bankruptcy, most municipalities will have to sell their broadband networks to private companies or consortiums shortly after full-spectrum competition arrives in their area. Because a fiber-optic network has technological advantages over other types of broadband access, the network will be worth *something*, though less than what the municipality paid to have it installed. Residents will benefit by having another option for broadband access that they wouldn't have had without going through the municipalization stage ...but that option will have come at a high price.

9. Public policies that contributed to the delay are being revised

According to James Volk, SBC Ameritech has already built nodes in the Tri-Cities that would allow it to extend DSL service beyond the 3.3 mile limit as part of its "Project Pronto," but in a memo describing a March 2002 meeting with SBC spokespersons, Volk writes:

SBC stopped construction on Project Pronto in Illinois to avoid having to share the lines. ... The ICC has issued a re-hearing order and SBC is reviewing the order and their position on un-bundling. ... Until the ICC rules against un-bundling their service, SBC will not proceed with Project Pronto. ... There are areas of St. Charles and Batavia that are ready to offer DSL if the ICC rules that they do not have to un-bundle.⁴⁷

On March 14, the FCC ruled that cable companies are exempt from requirements that they make their lines available to competing Internet service providers.

Volk ends the memo saying "I do not feel we should jump on [SBC's] bandwagon and support their plea with the ICC and FCC to allow them sole access. They are not offering any great leap forward in broadband access to the home."⁴⁸

On March 14, just a week after the meeting between Volk and SBC Ameritech, the FCC ruled cable modems are an "information service" rather than a form of "telecommunications" or "video," and therefore cable companies are exempt from requirements that they make their lines available to competing Internet service providers. This was a victory for AT&T and other cable giants, which say they now can justify investing billions of dollars upgrading their cable networks for cable modem service without fear that unaffiliated ISPs would free-ride on their investments. Reacting to the news, National Cable & Telecommunications Association president Robert Sachs said, "the classification of cable modem service as an 'information service,' and not a telecommunications service, sends a strong signal

⁴⁷ James Volk, "Meeting with SBC Ameritech on Project Pronto," a memorandum posted on Batavia's Web site, no date but referencing a meeting that took place on March 6, 2002.

⁴⁸ Ibid.

that cable Internet services will be able to continue to develop in a business environment that favors competition over regulation and encourages new investment.”⁴⁹

On May 24, 2002, the U.S. Court of Appeals for the District of Columbia struck down rules requiring SBC Ameritech and other Regional Bell Operating Companies (the so-called “Baby Bells”) to share with competitors their lines for high-speed Internet access. The ruling was reaffirmed in September 2002 by a three-judge panel of the appeals court.⁵⁰ Such regulations required the Baby Bells to charge competitors regulated rates called TELRIC, for “total element long-run incremental costs.”

Economists have long been critical of TELRIC. George Gilder, for example, writes “like any price-control scheme, TELRIC choked off supply, taking the profits out of the multibillion-dollar venture of deploying new broadband pipes. ... No entrepreneurs will invest in risky, technically exacting new infrastructure when they must share it with rivals.”⁵¹

Foot-dragging by AT&T and SBC Ameritech in communities such as the Tri-Cities is exactly what Gilder and other experts warned would result from attempting to mandate open access to broadband networks. And contrary to what some Tri-Cities officials apparently believe, the decisions in March and May are likely to speed up rather than slow down the roll-out of broadband services in the area. Forcing open access on telecommunications companies – whether telephone companies, cable companies, or satellite broadcasters – is counterproductive. Then-Federal Trade Commission chairman Robert Pitofsky explained why during a 1997 discussion of using antitrust laws to compel open access:

Foot-dragging by AT&T and SBC Ameritech in communities such as the Tri-Cities is exactly what Gilder and other experts warned would result from attempting to mandate open access to broadband networks.

Antitrust rarely mandates access for several reasons:

- (1) If access is too easy, companies will be inclined to lay back and take no risks on the assumption that they can free ride on the earlier investment and energy of their competitors;
- (2) Permitting easy access for competitors can dampen the incentives for firms to undertake risky and costly investments in the first place, unless there are countervailing first-mover advantages; and

⁴⁹ Quoted by Pamela McClintock, “More On FCC Action: Internet Ruling Enables Cable,” *BroadbandWeek Direct*, March 15, 2002.

⁵⁰ Reuters, “Court won’t reopen shared-line case,” September 5, 2002.

⁵¹ Quoted in Adam Thierer, “Implications of the Supreme Court’s Verizon v. FCC Decision,” *techknowledge* Issue #37, May 17, 2002.

(3) It achieves little to mandate access unless there is also provision to insure that price and other conditions of sale are “reasonable,” otherwise the monopolist can grant access but introduce terms that are so onerous that as a practical matter it is unavailable. But regulating price and other terms of sale on a continuing basis is exactly the thing that antitrust (as opposed to the regulatory agency with ongoing oversight of firms in the industry) is ill-equipped to manage.⁵²

“If access is too easy, companies will be inclined to lay back and take no risks on the assumption that they can free ride on the earlier investment and energy of their competitors.”

– Robert Pitofsky
Former FTC chairman

Members of Elgin’s private-sector Technology Action Team took a different tack than Volk, and perhaps as a result got their town put on the fast-track for expanded DSL service. “When they did roll out Project Pronto, they knew we wanted it,” Ruth Munson, a member of Elgin’s Technology Action Team and the owner of a downtown Elgin software company, told the *Daily News*. “They knew just because we’ve been keeping in touch with them on all kinds of levels. It paid off for us in the long run.”⁵³

Conclusion

Generally speaking, municipal ownership of broadband networks is probably not in the best interests of residents and most businesses, even in communities not well served today by private providers. Access to broadband services in the Tri-Cities is more plentiful than advocates of municipalization claim or admit, suggesting the real issue is not availability but *price* and who should pay it.

The chief advantage of a municipal broadband network is that it would speed up access to high-quality broadband services by six months or a year and subsidize this access for the small number of businesses and individuals who most want it. It is unlikely that more than a small number of residents would benefit from this speed-up, that their benefits would justify the steep cost, or that it is fair to force other residents and businesses to subsidize them.

Very few other cities attempt to build and own their own broadband networks because the costs and financial risks are too great. Cities that have, such as Spencer, Iowa, simply serve to illustrate the riskiness of the venture. Alternatives to municipalization, such as those being applied in Naperville, Huntley, and South Elgin, are much less costly (or even generate revenue for the communities) and can bridge the gap between today’s limited access and the much greater access likely to be available tomorrow.

Public provision of services tends to be less efficient in the long run than private provision.

⁵²Robert Pitofsky, *Competition Policy in Communications Industries: New Antitrust Approaches* (Glasser LegalWorks Seminar on Competitive Policy in Communications Industries, March 10, 1997).

⁵³ Kara Spak, *supra* note 17.

Telecommunications services are unlikely to be an exception to this rule. Claims that consumers would benefit because governments don't make profits, or that public officials can run government agencies "like businesses," simply aren't plausible in light of the record.

Building and operating a fiber optic network would be expensive and risky. Because of large economies of scale, the telecommunications industry is dominated by national and global companies. The Tri-Cities would be competing with giants such as AOL Time Warner and DirecTV and technologies that require less up-front investment than fiber optic. AT&T, SBC, and other competitors could easily cut their prices and thereby reduce the municipal entity's revenues. Bankruptcy of the municipal entity in a few years is a real possibility.

Threatening to build a municipal broadband network may have been a good strategy to prompt AT&T and SBC to make good on past promises. Following through with municipalization, however, is probably not in the best interests of Tri-Cities residents or the business community.

City officials would have to be prepared to quickly sell the network – at a loss – once competition emerges. It appears to be inevitable that such competition will emerge, thanks in part to the removal of regulatory barriers by the FCC and the courts.

Elected officials in the Tri-Cities should be commended for moving cautiously so far. They have discussed their options with companies in their area, studied other cities, and commissioned a study of the municipalization option. They will need to greet the finished study with healthy skepticism, since the consultants have a financial interest in advocating municipalization, but the report should provide some valuable guidance nonetheless.

Threatening to build a municipal broadband network may have been a good strategy to prompt AT&T and SBC to make good on past promises. Following through with municipalization, however, is probably not in the best interests of Tri-Cities residents or the business community.

©2002 The Heartland Institute. Distributed by **The Heartland Institute**, a nonprofit and nonpartisan public policy research organization. Nothing in this report should be construed as reflecting the views of The Heartland Institute, nor as an attempt to aid or hinder the passage of legislation. Additional copies of this study are available for \$10 from The Heartland Institute, 19 South LaSalle Street #903, Chicago, IL 60603; phone 312/377-4000; fax 312/377-5000; email think@heartland.org; Web <http://www.heartland.org>.

About the Author

Joseph L. Bast is president and CEO of The Heartland Institute, a national nonprofit research center founded in 1984 and located in Chicago, Illinois. He is the coauthor of five books, including *Rebuilding America's Schools* (1990), *Why We Spend Too Much on Health Care* (1992), and *Eco-Sanity: A Common-Sense Guide to Environmentalism* (1994). His writing has appeared in *The Wall Street Journal*, *Investor's Business Daily*, *USA Today*, *Human Events*, and many of the country's largest-circulation newspapers.

Mr. Bast was the founding publisher of four serial publications: *Intellectual Ammunition*, a bimonthly magazine on public policy issues; and three monthly newspapers: *School Reform News*, *Environment & Climate News*, and *Health Care News*. He has been recognized frequently for his contributions to public policy research and debate, including being named one of "The 88 to Watch in 1988" by the *Chicago Tribune*; recipient of the 1994 Roe Award from the State Policy Network; commissioned a Kentucky Colonel by Gov. Paul E. Patton on June 19, 1996; and recipient of the 1996 Sir Antony Fisher International Memorial Award. He and his wife, Diane, reside in Palatine, a suburb of Chicago.

The Heartland Institute

19 South LaSalle Street #903

Chicago, Illinois 60603

phone 312.377.4000 **g** fax 312.377.5000 **g** e-mail: think@heartland.org

Web: <http://www.heartland.org>

\$10