



# The Case For Municipal Broadband

The historical context, the law, the technology, and the future imperative

By Carl Kandutsch ■ *Ph.D., J.D.*

There are 2,007 municipalities in the United States that provide electric service to their residents. By 2004, at least 621 of these provided some sort of communications services to residents as well.<sup>1</sup> This number represents a 37 percent increase in municipal communications since 2001. The number, of course, is expected to increase. Where economically feasible, municipal networks tend to use a fiber-to-the-premises (FTTP)<sup>2</sup> or hybrid fiber/coax architecture to ensure sufficient capacity and versatility and to support next-generation high-bandwidth applications. Many municipal systems use a less expensive, easier to implement wireless architecture. Not surprisingly, the gathering momentum of public networking has generated a powerful backlash from private communications companies, which want to preserve dominance in the market.

In 2004, the United States Supreme Court ruled that states can enact laws limiting or prohibiting cities and towns from offering telecommunications services. This was despite the fact that Section 253 of the 1996 Telecommunications Act preempts any state law that “may prohibit or have the effect of prohibiting the ability of *any entity* to provide interstate or intrastate telecommunications services.”<sup>3</sup>

As a result lobbyists for biggest telephone and cable companies have set up satellite offices in the hallways of state legislatures all across the country. They seek to explain to state lawmakers why their state should join the 14 others that

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currently bar or limit municipal participation in local telecommunications markets. This lobbying campaign is well financed, with private telecommunications companies acting in concert and outspending their local community counterparts by a ratio of ten to one.<sup>4</sup> Incumbent local telephone and cable companies have successfully lobbied for legislation banning or severely restricting municipal communications in Arkansas, Florida, Missouri, Minnesota, Nebraska, Nevada, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, Washington and Wisconsin. Anti-municipal legislation is currently being debated in a number of other states.<sup>5</sup>

Because few municipalities budget large allocations for high-priced lobbyists, it is important for local governments interested in telecommunications to arm themselves with effective and factually accurate arguments to counter the incumbent media giants.

This article attempts to provide the background for understanding why municipalities should be interested in this debate, to outline some of the prominent arguments supporting the movement toward municipal broadband, and to evaluate some of the central arguments against it.

## **Historical Precedents in the Electric Power Industry**

To provide some context for the movement toward municipal broadband, and to dispel any suggestion that this movement constitutes a radical departure from historical practice, we begin with a brief sketch of the developments that led to the formation of municipal electric utilities that supply electric power to some 40 million Americans today.<sup>6</sup>

The historical example of electric power is enlightening for many reasons. But in this brief sketch, we need only point out that the electric power industry has many of the same physical and economic characteristics as a communications network (large sunk costs, small marginal return). There's another similarity as well: While initially seen as a luxury service, electric power quickly evolved into an essential public service. That change in perception brought changes in business and regulatory models in its wake, similar to the changes we are now seeing in the communications industries.

When electric power first came into the mainstream late in the 19<sup>th</sup> century, privately owned utilities deployed their facilities in a piecemeal fashion, concentrating their investment in the most profitable markets – serving large cit-

ies, established businesses and wealthy homes.<sup>7</sup> As a result, the early history of electric power in the United States featured two prominent characteristics that are now displayed in communications markets. First, there was a high degree of market concentration in the hands of a small number of vertically and horizontally integrated companies. Second, vast segments of the market, especially rural and low-income areas, were being literally left in the dark.

This situation spurred establishment of publicly owned municipal electric utilities. The first came in the 1880s, but the idea really took off following the start of the Great Depression. Following an extensive investigation of the anti-competitive practices of the private utilities, industry reform was an important factor in the 1932 election of Franklin D. Roosevelt, who said in a speech:

“Where a community, or a city, or a county, or a district, is not satisfied with the service rendered or the rates charged by the private utility, it has the undeniable right as one of its functions of government ... to set up ... its own governmentally owned and operated service ... the very fact that a community can, by vote of the electorate, create a yardstick of its own, will, in most cases, guarantee good service and low rates to its population. I might call the right of the people to own and operate their own utility a birch rod in the cupboard, to be taken out and used only when the child gets beyond the point where more scolding does any good.”

Today, the public power industry provides electric service to one of every seven Americans and generates annual revenues of more than \$32 billion.<sup>8</sup>

The same forces that shaped the electric power industry are currently shaping the communications industry in America. Relentless vertical and horizontal consolidation, together with the economic characteristics of network economies (which tend toward natural monopoly), allow the largest communications firms to lock up local markets and to focus on large population centers, while leav-

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ing the less lucrative rural areas under-served or not served at all. The same factors that inspired the early movement toward public ownership of electric utilities – namely, the need of under-served communities to self-provision an essential public service when the private sector has failed to fill the gaps – is currently fueling the movement toward municipal broadband.

### **Contemporary Rationales for Municipal Broadband**

The early municipal electric utility movement was driven by two themes: Market failure, and the need for electric power as a precondition for economic development. In this section we examine how these same themes are now fueling the movement toward municipal broadband.

**Market Failure.** It is widely acknowledged that the Telecommunications Act of 1996 has failed to achieve its goal of bringing effective competition to the communications industries, especially to cable television and to local and long-distance telephone. The fact that Congress is now engaged in a comprehensive revision of the Act is a stark admission of its failure. For example, only 2 percent of local cable markets have more than one wire-line provider, and in those competitive markets, prices are on average 15 percent lower than in the other 98 percent where little or no competition exists.<sup>9</sup>

Most local markets are dominated by duopolies consisting of a single large franchised cable operator and a single incumbent local exchange carrier (ILEC), each of which uses its market power to deliver over-priced services and spotty customer care. The federal agency responsible for overseeing competition in communica-

tions markets has spent the past four years trying to make it even easier for the media giants to further consolidate their power, while disclaiming any active regulatory role for itself over almost anything related to broadband. There is no sign that the FCC will change course in the foreseeable future.

Surely, the strongest motivator for municipal involvement in communications is the failure of private firms to provide a full array of broadband services to consumers at competitive prices. This common sense proposition is demonstrated by empirical evidence showing that the municipalities are much less likely to become involved in communications in markets where there are one or more incumbent private broadband providers (cable or DSL or both).<sup>10</sup> The fact that municipal entry into communications tends to occur in under-served markets confirms the testimony of municipal officials that the primary incentive for municipal involvement is the absence of a competitive private sector market.<sup>11</sup> This market failure may occur in the provision of infrastructure or in the provision of services, or both.

Due to the high sunk costs associated with deployment of advanced communications infrastructure, the major private providers of cable modem and DSL Internet connectivity tend to invest in highly concentrated urban and wealthy suburban areas where return on that investment may be recovered most quickly. Both the Department of Commerce's *A Nation Online Reports*<sup>12</sup> and the FCC's *Broadband Deployment Reports*<sup>13</sup> confirm that the “digital divide” between urban and rural broadband infrastructure deployment is being bridged only very slowly. For example, the Commerce Department reports that whereas



40.4 percent of urban households have broadband connections,<sup>14</sup> in rural areas only 24.7 percent had such connections in 2004.

These numbers reflect the sound business judgments of cable and telephone companies regarding where and how to spend their investors' money. From the viewpoint of local communities, however, they reflect a failure of the market in the provision of what are, in the digital age, increasingly perceived as essential services. Where the private market has failed, a community's decision to self-provision broadband infrastructure represents not one path among others into the Information Age, but rather the only path.

Even where advanced communications infrastructure exists, consumers in most communities must purchase their broadband services from monopoly or duopoly providers – either the local franchised cable company or the local telephone monopoly – a “take it or leave it” environment not conducive to healthy competition. Municipal provisioning of broadband services can break the monopoly/duopoly lock on the market, resulting in more competitive pricing and better service.

Recent history only enhances the credibility of the market failure rationale. The years since 2000 have seen a global recession in the communications industries, resulting in (among other effects) the collapse of much of the CLEC (competitive local exchange carrier) industry, and a failure by some of the large incumbents

to follow through on their promises to upgrade networks. America now ranks *sixteenth* (slipping from third in only a few years, and thirteenth in 2004) in the world in terms of percentage of premises served by broadband, lagging behind Far Eastern and some European countries, including Singapore.<sup>15</sup>

**A Matter of Economics**

Current economic trends confirm doubts about the private sector's incentives to invest in local markets. This very uncertainty, in a kind of vicious circle, increases the likelihood of market failure in the future. Finally, it is possible, if not likely, that next-generation transmission facilities, specifically fiber-to-the-home (FTTH), could end up a natural monopoly if left to the private sector. Public FTTH networks offer a way for communities to stave off market failure while “future-proofing” their communications infrastructure for generations to come.

Given the empirically verifiable lack of effective competition in certain communications markets, it is certainly understandable why municipalities are increasingly taking the initiative and participating in the market themselves, in lieu of waiting for vague, politically motivated and often chimerical promises of massive investment and universal service to materialize. From this perspective, municipal broadband appears not as a public-sector intrusion that threatens to undermine free market principles, but as a last-ditch effort to preserve a market for genuine competition on behalf of consumers.

**Economic and Social Development.** Globally, nationally, and locally, competitive commerce today depends on advanced communications infrastructure. Therefore, ensuring access to up-to-date communications services is widely considered an essential precondition to economic development.

Kentucky Governor Ernie Fletcher recently summed up the thoughts of many leaders of under-served communities as follows: “There is an increasingly large gap between those who have technology and those who do not. Kentucky remains on the wrong side of this digital divide. While Internet access on its own is not a silver bullet solution for prosperity, adequate access to the global marketplace through broadband infrastructure enables knowledge-based economic development and has the ability to enhance the lives of our citizens and businesses. The future of our economy depends on our success and we owe it to our children to deliver.”<sup>16</sup>

Availability of broadband services impacts local economic activity in a range of ways. The impact may be direct, by encouraging investment by firms that rely on sophisticated communications technology in their day-to-day business, or it may be indirect, by enhancing the educational, technological and worldly sophistication of residents, and thus creating a pool of potential workers for new corporate residents.

It should be emphasized that the “economic development” rationale for municipal broadband is based on verifiable data. On the national level, a 2002 study by the TeleNomic Research consulting firm, for instance, concludes that deployment of a nationwide broadband network would expand United States employment by 1.2 million permanent new jobs, directly and indirectly.<sup>17</sup> Similarly, Technet estimates that universal access to high-speed Internet connections could inject an estimated \$300 billion into the U.S. economy each year.<sup>18</sup> These figures are consistent with the conclusions of a 2003 study by Criterion Economics, which estimates that anticipated

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investment in broadband will result in a cumulative increase in gross domestic product (GNP) of \$179.7 billion, and the potential creation of more than 1.2 million new jobs.<sup>19</sup>

On the local level, the Cedar Falls Communications Network in Iowa provides an instructive case study. In 1994, the Cedar Falls City Council, representing a community of about 36,000 people, voted to form one of the country's first municipal communications utilities, managed by the Cedar Falls Utility Board of Trustees.<sup>20</sup>

The Cedar Falls system consists of a citywide municipal fiber optic network providing high-speed fiber connections via cable modems, Fiber-to-the-Business (FTTB) and T1 through DS3 level services, including voice, data and video programming. The tangible economic benefits that the municipal communications network has brought to the community are demonstrated in an empirical study comparing Cedar Falls to the neighboring city of Waterloo using criteria pertinent to economic development.<sup>21</sup> The study found, for example, that:

- Although real estate in Cedar Falls is valued higher than property in Waterloo, Cedar Falls enjoys lower property taxes.
- Since the deployment of the municipal network, new construction valuations are significantly higher in Cedar Falls than in Waterloo, setting a county record during year 2002.
- Cedar Falls is attracting new businesses much faster than Waterloo, thereby increasing property values and the availability of good jobs.
- The population of Cedar Falls is increasing faster than that of Waterloo.
- The Cedar Falls School District uses the municipal fiber optic network to provide students with high-speed Internet access as well as multi-media capability such as streaming video. This communications infrastructure provides Cedar Falls students and teachers with instantaneous low-cost access to the most current and advanced education resources available anywhere in the world.

- Cedar Valley hospitals are interconnected via a statewide, state-administered fiber optics network, ensuring that the most up-to-date health care information is available to the local population.

Cedar Falls is far from unique: Mu-

nicipal involvement in communications has had similarly beneficial effects on local economies in many other communities. For example, a recent econometric study of Lake County, Florida concludes that direct municipal investment in fiber-based broadband infrastructure has

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resulted in 100 percent greater growth in economic activity relative to comparable Florida counties lacking such investment.<sup>22</sup> Similarly, the small rural city of LaGrange, Georgia, in partnership with cable company Charter Communications, financed and built a hybrid coax/fiber optic network in the late 1990s. The availability of this advanced public network attracted SITEL Corp., a national telemarketing firm, to set up a local facility. This created more than 100 new jobs. Tax revenues for the city have increased dramatically since the public infrastructure was deployed. In 2000, the World Teleport Association of New York named LaGrange the “Intelligent City of the Year.”<sup>23</sup> Similar results are attributed to community-based networks in Oregon and many other localities.

### Arguments Against Municipal Broadband

When considering the arguments presented against municipal broadband, it is important to bear in mind the context in which they are presented. Specifically, the incumbent cable operators and ILECs are presenting these arguments in state legislatures across the country, urging lawmakers to enact laws prohibiting or limiting municipal participation in telecommunications markets in the wake of the Supreme Court’s decision in *Nixon v. Missouri Municipal League* (2003).<sup>24</sup>

As mentioned at the outset, *Nixon* held that Section 253 of the 1996 Telecommunications Act – which bars a state from enacting any law that directly or indirectly prohibits “the ability of *any entity* to provide interstate or intrastate telecommunications services” – does not preempt state laws that block or

limit *municipal entities* from providing telecommunications services. In other words, “any entity” does not include municipal entities.

As important a case as *Nixon* is, it is just as important to keep in mind what the Supreme Court did *not* say. Specifically, the fact that a state may prohibit a municipality from offering *telecommunications services*, does not imply that a state may prohibit a municipality from offering communications services that are not “telecommunications services,” such as *information services*.

The 1996 Telecommunications Act defines “telecommunications” as “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.”<sup>25</sup> It defines “telecommunications service” as “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available to the public, regardless of facilities used.”<sup>26</sup>

An “information service” is “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control or operation of a telecommunications network or the management of a telecommunications service.”<sup>27</sup>

There are two points to be made in connection with these legal definitions. First, due to the government’s reluctance to impose any regulatory burden on next-generation broadband services, the list of communications services that

fall within the definition of (regulated) “telecommunications services” has been steadily shrinking, as the list of services encompassed under (unregulated) “information services” has been steadily growing. Second, the FCC has made it crystal clear that “information services” are presumptively subject to exclusive federal jurisdiction and not subject to regulation by the states. For example, the FCC insists that “federal authority has already been recognized as preeminent in the area of information services, and particularly in the area of Internet and other interactive computer services, which Congress has explicitly stated should remain free of regulation.”<sup>28</sup>

Accordingly, the FCC has held that Internet access via cable modems and DSL is an unregulated “information service” (despite the fact that in both cases, such access makes use of “telecommunications”), and most forms of Internet telephony (VoIP) are “information services” as well.<sup>29</sup> Insofar as most current and emerging broadband services are classified as “information services,” the authority of municipalities to provide those services is unaffected by *Nixon*, and presumably states are preempted from interfering with the municipal provision of services based on Internet Protocol.<sup>30</sup> To the extent that states are not preempted from the regulation of “information services” (a subject likely to be litigated in the coming years), municipal authority to provide non-telecommunications broadband services would be determined by the extent of a municipality’s inherent authority under state law.<sup>31</sup>

### Assessing the Arguments Against Muni Systems

In this section, we summarize and evaluate the most prominent arguments that have been presented by opponents of municipal telecommunications at the FCC and in state legislatures, city councils and other public forums. It is interesting to note that most of these arguments are not new, but rather re-formulations of arguments that were made and rejected in the electric power industry many years ago.

**Unfair Advantage.** A common objection to municipal involvement in telecommunications is that it will undermine the “level playing field” of the competitive market, because municipal entities (such as municipal utilities) have unfair advantages not available to private firms. These include the ability to obtain tax-free financing, the authority to regulate private sector competitors, and lower costs due to exemptions from fees and taxes.

As a general matter, this objection presupposes the existence of a competitive market that provides the standard against which the “unfairness” of any public-sector “advantage” must be judged. In other words, to take this objection seriously, one must ignore the evidence of market failure, which as discussed above constitutes the single greatest incentive for municipal involvement in communications in the first place. That is, if there were a healthy competitive market for communications services either nationally or locally, municipalities would not be motivated to involve themselves in the market. Thus, Congress would not have seen fit to enact the 1996 Telecommunications Act in a mostly unsuccessful attempt to restore competition to monopolized communications markets.

With regard to specific alleged “unfair advantages,” it is generally not true that telecommunications providers are regulated by local governments; rather, such regulation is, for the most part, reserved for the FCC and state public utility commissions. While public rights of way and cable franchises are managed at the municipal level, federal law requires that such management be reasonable, fair and competitively neutral among all providers.<sup>32</sup>

Regarding the cost savings allegedly enjoyed by municipal networks, the “advantages” conferred by virtue of these savings are significant only if, within the overall context of the balance sheet, they enable the municipal utility to undercut rivals in terms of pricing. They are “unfair” (from a policy perspective) only if the harms associated with those advan-

tages outweigh any resultant social benefit to consumers.

On the first point, the tax-free financing and tax exemptions available to municipal utilities must be balanced against the additional burdens carried by those utilities as public entities, including payments in lieu of taxes, private use tax restrictions, the provision of free service to public buildings, multiple restrictions on the ability to contract with employees and private entities, civil service requirements, and limitations on areas of service.

### Who Really Has the Advantage?

The municipal balance sheet must then be compared with that of private firms existing actually or potentially in the relevant market, taking into account the often huge tax breaks granted to private sector communications firms, the economies of scale conferred on incumbents from ownership of pre-existing infrastructure and nationwide or international service areas, the freedom to contract with any other entity on any terms within the limits of the law and so on.

Assuming that the lower prices offered by municipal communications providers are attributable to advantages not available to private firms (a proposition that is open to debate<sup>33</sup>), the issue is whether this state of affairs is unfair, and if so, to whom? In localities that have been neglected or underserved by the private sector – that is, in localities where municipalities are likely to involve themselves in communications – the private firms have presumably made a well-informed decision that they cannot justify to their stockholders the provision of service where the high cost of provisioning would undermine their ability to offer services at competitive prices.

Why, then, is it “unfair” to allow a public entity to take advantage of its own economies to provide affordably priced communications services to consumers who have not been well served by the “level playing field” of the private sector market? That is, even if it were proven

that municipalities have significant economic advantages over private communications firms, why would that, in and of itself, imply that the resultant “unfairness” outweighs the social benefit of having affordable communications services available to consumers, at least in areas that have historically been under-served?

### Business Models Differ

As a third response to the “unfair advantage” objection, it should be pointed out that the objection is based on the assumption that the business model for municipal communications is similar to that of the private cable and telephone companies raising the objection. That is, the objection argues that a municipal telecommunications provider would have unfair advantages in head-to-head competition with vertically integrated media companies that provide everything from physical infrastructure to internet access to programming and content. That assumption is unrealistic because the “retail service model” – under which the provider offers retail communications services to consumers over an infrastructure that it owns and operates – is only one model for municipal involvement in communications, and not even a dominant model.<sup>34</sup> The less a municipal communications provider looks like AOL Time Warner or SBC (for example), the less valid the “unfair advantage” argument appears.

Under a “wholesale service model,” the municipality owns and operates a local access network, which is leased for use by retail ISPs and other communications service providers. The municipally owned network may be a regional backbone, a local access network (middle mile) or a last mile access network, but the municipal entity is not providing communications services directly to the public, and therefore not competing with private service providers. Instead, it offers private sector retail providers access to and use of the network on a non-discriminatory basis. The municipal role is focused on competition in content and services rather than on control over the end-user



through ownership of infrastructure. In this model, consumers benefit from service level competition, and private service providers benefit from having access to publicly financed infrastructure.

Not surprisingly, there is empirical evidence that wholesale municipal broadband actually stimulates rather than stymies private investment, and thus enhances competition in local markets. A recent study concludes, “we find statistically significant evidence of more private firm entry in markets where municipalities operate [a] communications network (a 63% increase).”<sup>35</sup> This implies that legislation precluding or restricting municipal communications reduces the overall level of competition in the market. Grant County’s public communications network in Washington State<sup>36</sup> and Utah’s UTOPIA (Utah Telecommunications Open Infrastructure Agency) project<sup>37</sup> provide ambitious and successful examples of municipal communications (both utilizing fiber-to-the-premises technology) on the wholesale model.

**Inefficiency.** Another objection to municipal communications is that municipal agencies are less efficient than private firms, and are not capable of operating complex communications utilities; therefore, the objection concludes, municipalities should not be permitted to enter the very risky telecommunications market.

First, the question of organizational efficiency is an empirical question and therefore must be supported by verifiable data.<sup>38</sup> But this logical requirement does not stop proponents from presenting the “inefficiency” objection as if government inefficiency relative to the private sector were a self-evident truth. Among recent corporate meltdowns in the communications industry, one need only look at the Worldcom scandal, Enron, and Adelphia to see private-sector analogs to government mistakes.

More importantly, the inefficiency argument ignores the fact that modern municipal electric utilities already operate sophisticated communications technology that is successfully used for usage

metering, billing, monitoring the power grid and so on. Moreover, those utilities have a mountain of experience in the provision of technical and customer service. For these reasons, municipal entry into communications is more accurately viewed as a logical extension of their current practices than as a risk-ridden dive into unfamiliar waters.

Second, the objection falsely assumes that municipalities are somehow shielded from the consequences of inefficiency when competing as public enterprises in the private sector market. To begin with the obvious, one wonders how municipal electric utilities, if they are indeed inherently inefficient, are able to successfully compete with investor-owned utilities by charging prices that are generally lower than those offered by the private sector. Moreover, whereas private firms are permitted to operate behind closed doors, municipal utilities must comply with numerous open-records requirements, and must secure public approval for all significant decisions. The level of public scrutiny under which a municipal utility operates ensures that significant operational inefficiencies will be short-lived, and that utility officials are politically accountable for their decisions.

### Conclusion

The essence of the objection to municipal involvement in communications is that public intervention will undermine the private sector due to the cost advantages uniquely available to governmental entities, thus creating a barrier to private entry. As we have shown, however, this objection fails in two ways: First, municipalities tend not to become involved in communications in markets characterized by effective competition; and second, where municipalities do become communications providers, private entry into the market tends to be stimulated rather than suppressed. Both of these points are supported by empirical evidence cited in this article. But if that is the case, the question is why the objections are so vehemently presented, as if the

future of the communications industries were at stake?

We conclude with the thought that perhaps something very important is at stake, something that deeply affects the future of the industry and the societal values it embodies. Underlying the debate over municipal broadband there is a philosophical division regarding the nature of the communications media.

Since broadband became widely available to residential consumers in the mid-1990s, services based on high-speed Internet connectivity have been offered on a broadcast model. By that, I mean the one-way transmission of content owned and distributed by a small number of vertically integrated private firms that also control the transmission infrastructure, to a large number of passive consumers.

But as broadband communications are increasingly perceived as an essential service, not unlike water, sewers and electricity, a different model threatens the broadcast model. That model conceives of communications infrastructure as a community or public resource, by means of which end-users can actively publish and exchange content that is not centrally controlled.<sup>39</sup>

Even more than a desire to protect the market power of huge media conglomerates from competition, the opposition to municipal broadband may be grounded in an anxiety over the long-term demise of the industry’s broadcast model for communications in the United States.

While in the final analysis, private firms answer only to their shareholders, it is the duty of community leaders to mold their judgments to the shape of history on behalf of their constituents. ♦

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### About The Author

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## Footnotes

<sup>1</sup> See Electric Power Statistics page at <http://www.appanet.org/aboutpublic/index.cfm?ItemNumber=2691&sn.ItemNumber=2039>.

<sup>2</sup> As used here, “FTTP” encompasses any network architecture that extends fiber optic infrastructure as close to the customer premises as possible, including fiber-to-the-home (FTTH), fiber-to-the-curb (FTTC) and so on.

<sup>3</sup> 47 U.S.C. § 253(a). The Supreme Court case is *Nixon v. Missouri Municipal League* (No. 02-1238, 2004). The decision was based on a federalism (“state’s rights”) rationale rather than on communications policy; thus, under *Nixon*, a state may of course also authorize (rather than prohibit or limit) municipal telecommunications.

<sup>4</sup> *The Wall Street Journal*, Friday, August 17, 2001, A1, quoted in Kelly, “Old Snake Oil in New Bottles: Ideological Attacks on Local Public Enterprises in the Telecommunications Industry,” (APPA, Oct. 2001), p. 20.

<sup>5</sup> States currently considering bans or restrictions on municipal communications include Colorado, Florida (further restrictions), Illinois, Iowa, Texas (further restrictions) and Ohio.

<sup>6</sup> This historical sketch is largely based on three sources: Rudolph and Ridley, *Power Struggle: The Hundred-Year War Over Electricity* (1986); Baller and Stokes, “The Public Sector’s Authority to Engage in Telecommunications Activities,” 1:1 *Journal of Municipal Telecommunications* (1999); and Osorio, “Bits of Power: The Involvement of Municipal Electric Utilities in Broadband Services,” Master’s Thesis, Massachusetts Institute of Technology, June 2004.

<sup>7</sup> Rudolph and Ridley, *op. cit.*, pp. 30-31.

<sup>8</sup> Figures provided by the American Public Power Association, <http://www.appanet.org/files/PDFs/Numelecproviderscst2003.pdf>.

<sup>9</sup> U.S. General Accounting Office, *Telecommunications: Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, GAO-04-8 (Oct. 8, 2003), p. 10. While direct broadcast satellite (“DBS”) video provides some competition for cable, there is little evidence that the existence of DBS affects cable pricing in most markets.

<sup>10</sup> Gillett, Lehr and Osorio, “The Municipal Role in U.S. FTTH Market Growth,” (2004) available at <http://itc.mit.edu/>, pp. 11-13.

<sup>11</sup> “The county was in a bind before we built out our fiber infrastructure,” says David Jones, business manager of Kitsap PUD. “Despite being a major suburb of a high-tech hub (Kitsap is about a 30 minute drive from Seattle), we had spotty access to broadband and onerous phone charges. Just one call across the street could have been long distance due to three phone companies having four service area boundaries.” Now, he says, those providers are suddenly cooperating, faced with the reality of the FTTH network that blankets four cities and five unincorporated towns, providing up to 1 Gb/s bandwidth. Basically, the service providers can continue to service their customers via the new FTTH

network but suddenly – through the wonders of VoIP – they also face potential competition.” “FTTx Deployments Ring the Pacific,” *TelecomWeb* (March 30, 2005), <http://www.telecomweb.com/news/1112031816.htm>.

<sup>12</sup> Available at [www.ntia.doc.gov/reports/anol/NationOnlineBroadband04.htm](http://www.ntia.doc.gov/reports/anol/NationOnlineBroadband04.htm).

<sup>13</sup> Available at [www.fcc.gov/web/latd/comp.html](http://www.fcc.gov/web/latd/comp.html).

<sup>14</sup> The FCC defines “broadband” as services and facilities with speeds of over 200 kbps in at least one direction.

<sup>15</sup> *Broadband Reports.com*, [www.broadbandreports.com/shownews/62949](http://www.broadbandreports.com/shownews/62949); [http://www.technet.org/technetissues/broadband\\_hawley/](http://www.technet.org/technetissues/broadband_hawley/).

<sup>16</sup> “Governor Ernie Fletcher Unveils Prescription for Innovation,” (PR Newswire, Oct. 7, 2004), viewed at <http://www.innovations.harvard.edu/news/2777.html>. See also, Lisa Eckelberger, “High-Speed Services Critical for Growth,” *Telegram & Gazette* (Jul. 27, 2004); McGregor McCance, “Broadband Service Seen as Economic Stimulus for Rural Virginia Communities,” Knight Ridder Tribune Business News (Mar. 4, 2003); various news releases archived at <http://www.muniwireless.com/>.

<sup>17</sup> <http://www.newmillenniumresearch.org/event-02-25-2002/job-spaper.pdf>.

<sup>18</sup> [http://www.technet.org/press/Press\\_Releases?newsReleaseId=2527](http://www.technet.org/press/Press_Releases?newsReleaseId=2527).

<sup>19</sup> Crandall, Jackson and Singer, “The Effect of Ubiquitous Broadband Adoption on Investment, Jobs, and the U.S. Economy” (Criterion Economics, L.L.C., September 2003), available at [http://www.criterioneconomics.com/docs/ubiquitous\\_broadband\\_adoption.pdf](http://www.criterioneconomics.com/docs/ubiquitous_broadband_adoption.pdf).

<sup>20</sup> Cedar Falls Utilities provides electric, natural gas, water and now communications services to residents.

<sup>21</sup> Doris J. Kelley, *Economic & Community Benefits of Cedar Falls, Iowa’s Municipal Telecommunications Network* (Oct. 2, 2003), available at [http://www.dynamiccity.com/PDF/CedarFalls\\_wp.pdf](http://www.dynamiccity.com/PDF/CedarFalls_wp.pdf). Another version of this study appeared as Doris Kelley, “Telecommunications Infrastructure and Economic Development,” in the December 2004 issue of *Broadband Properties*.

<sup>22</sup> Ford and Koutsky, “Broadband and Economic Development: A Municipal Case Study from Florida,” *Applied Economic Studies* (April 2005), p. 4, available at <http://www.freepress.net/communityinternet/reports>.

<sup>23</sup> <http://www.techlinks.net/news/L20Aug00142516.cfm>.

<sup>24</sup> 541 U.S. 125 (2004).

<sup>25</sup> 47 U.S.C. § 153(43).

<sup>26</sup> 47 U.S.C. § 153(46).

<sup>27</sup> 47 U.S.C. §.

<sup>28</sup> Memorandum Opinion and Order, *In the Matter of Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications nor a Telecommunications Service*, WC Docket No. 03-45 (rel. Feb. 9, 2004), ¶ 16.

<sup>29</sup> On VoIP, see *id.* The FCC’s classification of cable modem service as a federally regulated information service can be found in Declaratory Ruling, *In the Matter of Inquiry Concerning High-*

*Speed Access to the Internet Over Cable and Other Facilities*, 17 FCC Rcd 4798 (rel. March 15, 2002), and the similar classification of DSL service is in Notice of Proposed Rulemaking, *In the Matter of Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, 17 FCC Rcd 3019 (rel. Feb. 15, 2002). The FCC has recently ruled that States are preempted from regulating DSL service for most purposes. Memorandum Opinion and Order, *In the Matter of BellSouth Telecom. Inc. Request for Declaratory Ruling*, WC Docket No. 03-251 (rel. March 25, 2005).

<sup>30</sup> The FCC’s recent Notice of Proposed Rulemaking on “IP-enabled services” (meaning services and applications making use of Internet Protocol) seeks comment on the question of whether “one or more classes of IP-enabled service should be deemed subject to exclusive federal jurisdiction...” *In the Matter of IP-Enabled Services*, WC Docket No. 04-36 (rel. March 10, 2004).

<sup>31</sup> In states incorporating “home rule,” municipalities may perform any action not specifically prohibited by state law, and in states using “Dillon’s Rule,” municipalities may only engage in activities expressly or impliedly authorized by state law. Federal law specifically authorizes municipalities to provide cable television services. The author will publish an article on this subject in an upcoming issue of this magazine.

<sup>32</sup> 47 U.S.C. § 253(c).

<sup>33</sup> This question is the subject of John Kelly’s “Paying the Bills, Measuring the Savings: Assessing the Financial Viability and Community Benefits of Municipally Owned Cable Television Enterprises,” (APPA, Mar. 2005), available at <http://www.appanet.org/files/PDFs/PayingtheBills.pdf>. In place of the “unfair advantage” explanation for low municipal communications rates, Kelly advances the common sense explanation that public utilities can offer lower rates because they are nonprofit enterprises.

<sup>34</sup> Other alternatives to the retail service model for municipal communications are discussed in this author’s article, “Regulatory Environment for Municipal FTTH,” in the April issue of this publication.

<sup>35</sup> Ford, “Does Municipal Supply of Communications Crowd-Out Private Communications Investment? An Empirical Study,” (*Applied Economic Studies*, Feb. 2005), available at <http://www.aestudies.com/library/crowdout.pdf>.

<sup>36</sup> <http://www.gcpud.org/zip.htm>.

<sup>37</sup> <http://www.utopianet.org/>.

<sup>38</sup> A majority of published empirical studies suggest that if there is any difference, public provision of utility services is more efficient than private provision. See, for example, Hausman and 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: 414-42.

<sup>39</sup> The best analysis of the conflict between the “user” and “consumer” paradigms for communications industries can be found in the work of Yochai Benkler, especially “From Consumers to Users: Shifting the Deeper Structures of Regulation Towards Sustainable Commons and User Access,” 52 *Fed. Comm. L.J.* 561 (2000), available at <http://www.benkler.org/Pub.html#Commons>.