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# **Glenwood Springs Residents Should Say No to Municipal Broadband**

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Raymond L. Gifford

&

Mark A. Walker

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# **Glenwood Springs Residents Should Say No to Municipal Broadband**

## **Raymond L. Gifford\* & Mark A. Walker<sup>+</sup>**

### **I. Introduction**

The municipal broadband debate has unfortunately devolved and “become so polarized that it has led to an oversimplification of the government-sponsored choices.”<sup>1</sup> Often the proponents and opponents of municipal broadband “have acted as if there are only two options – leave the private sector investment to unfold on its own or alternatively intervene to offer a ubiquitous government-sponsored network.”<sup>2</sup> In reality, a municipality such as the City of Glenwood Springs (the “City”) has a full spectrum of options between these two polar extremes. Before pursuing any particular option or set of options, the City should more fully understand the risks it and its residents face and critically evaluate not only the two extreme options, but also evaluate the multitude of intermediate options to determine the course of action that is in the best interest of the community.

### **II. Summary**

- The City’s present communications service providers offer a competitive and diverse offering in terms of Internet, telephone, cable-television, and mobile services.
- The financial record of municipal network operators in competitive markets is overwhelmingly poor, caused primarily by unrealistic business plans, including the inability of municipal operators to achieve the necessary scale to compete with larger network operators.
- Subsidizing municipal communications services leads to higher taxes, jeopardizes bond ratings, and increases the cost of other municipal services. It may also have the unintended consequence of entrenching inferior communications technologies.
- Comparisons of Glenwood Springs to Monmouth and Independence, Oregon are misleading and unjustified, in light of the substantial differences in the

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\* Raymond L. Gifford is head of the Communications, Internet and Intellectual Property practice area at the Denver-based law firm Kamlet Shepherd & Reichert, LLP and president of the Convergence Law Institute. He was previously President of the Progress and Freedom Foundation, a Washington, D.C.-based think tank that focuses on studying the digital revolution and its effects on law and public policy. From 1999-2003, Mr. Gifford served as Chairman of the Colorado Public Utilities Commission. Before that, he served as First Assistant Attorney General in the Regulatory Law Section under then-Colorado Attorney General Gale Norton. His expertise lies in public utilities law, principally telecommunications and energy. Mr. Gifford also serves as Chairman of the Board of the Technology Policy Institute, a think tank that focuses on the economics of innovation, technological change, and related regulation in the United States and around the world.

<sup>+</sup> Mark A. Walker is a Denver-based attorney in the Communications, Internet and Intellectual Property practice area at Kamlet Shepherd & Reichert, LLP.

<sup>1</sup> Michael J. Balhoff & Robert C. Rowe, *Municipal Broadband: Digging Beneath the Surface*, at 10 (Sept. 2005), <http://www.balhoffrowe.com/pdf/Municipal%20Broadband--Digging%20Beneath%20the%20Surface.pdf> [hereinafter *Balhoff Report*].

<sup>2</sup> *Id.*

competitive nature of the local communications markets and the characteristics of the respective cities.

- Beyond the economic risks associated with municipal communications providers, municipal operation and ownership raises considerable free speech and privacy risks.
- The City can meet the goal of increasing the availability and adoption of broadband technologies through substantial and effective alternatives to the City's provision of retail communications services, including the City's increased utilization of broadband technologies in its own operations, City incentives to residents, service providers, and community groups, and the facilitation of infrastructure to assist all service providers in their network build outs.

### III. Background

#### A. Demographics of the City of Glenwood Springs

The City of Glenwood Springs is located on the Western Slope of Colorado approximately 160 miles west of Denver along Interstate 70. The City has a population of approximately 8,500 with over 3,200 households and covers approximately 4.8 square miles, yielding a population density of approximately 1,800 residents per square mile.<sup>3</sup>

#### B. The Glenwood Springs Community Broadband Network

In 2002, the City installed a fiber optic network that presently connects directly to only businesses (often referred to as the "Glenwood Springs Community Broadband Network" or "GSCBN"). The network is owned and operated by the City and more specifically by the City of Glenwood Springs Electrical Department.<sup>4</sup> The present network was built at a cost of approximately \$3.5 million.<sup>5</sup> Over the past three years, the City has operated the network at a loss of approximately \$200,000 per year.<sup>6</sup>

In April 2008, the City secured the necessary voter approval, pursuant to COLO. REV. STAT. § 29-27-201, to provide Internet, telephone, and cable-television service (collectively, "Communications Services") directly to residents through an expanded fiber network.<sup>7</sup> Before

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<sup>3</sup> Glenwood Springs, Colorado, [http://en.wikipedia.org/w/index.php?title=Glenwood\\_Springs,\\_Colorado&oldid=282228759](http://en.wikipedia.org/w/index.php?title=Glenwood_Springs,_Colorado&oldid=282228759) (last visited Apr. 24, 2009).

<sup>4</sup> Glenwood Springs Community Broadband Network, The Community Concept, <http://gscbn.com/news.cfm> (last visited Feb. 24, 2009).

<sup>5</sup> Pete Fowler, *Fiber Optics May Connect to Some Glenwood Springs Homes Before Network Expansion*, Dec. 19, 2008, <http://www.postindependent.com/article/20081219/VALLEYNEWS/812189956>.

<sup>6</sup> Pete Fowler, *Glenwood Springs Voters Decide Today on First Step of Fiber-Optic Proposal*, Apr. 22, 2008, <http://www.postindependent.com/article/20080422/VALLEYNEWS/171333766>.

<sup>7</sup> Pete Fowler, *Glenwood Springs Voters OK Further Examination of Fiber-Optic Network Expansion*, Apr. 23, 2008, <http://www.postindependent.com/article/20080423/VALLEYNEWS/785030529>. "Before a local government may engage or offer to engage in providing cable television service, telecommunications service, or advanced service, an election shall be called on whether or not the local government shall provide the proposed cable television service, telecommunications service, or advanced service." COLO. REV. STAT. § 29-27-201(a).

the proposed network expansion can proceed, the residents of the City must still approve increasing the City's debt by approximately \$15 million to finance the expansion.<sup>8</sup> By August, the City plans to decide whether to seek approval on the November ballot for financing of the proposed network and service expansion.<sup>9</sup>

### C. Current Communications Service Offering available in Glenwood Springs

Currently, Glenwood Springs enjoys a competitive offering of communications services from a diverse group of service providers. Both Qwest, the incumbent telecommunications provider, and Comcast, the incumbent cable provider, offer competitive communications services in Glenwood Springs. Comcast's provides: (i) high-speed internet with download speeds up to sixteen (16) megabits per second ("Mbps") and upload speeds of up to two (2) Mbps, and (ii) a wide array of cable television packages including digital and high definition video service.<sup>10</sup> Furthermore, Comcast is aggressively deploying DOCSIS 3.0 throughout its national footprint. Once DOCSIS 3.0 is deployed in Glenwood Springs, Comcast will be able to offer download speeds of up to 50 Mbps and upload speeds of up to 10 Mbps.<sup>11</sup>

Qwest offers high-speed internet service with download speeds of up to seven (7) Mbps and upload speeds of up to 896 kilobits per second ("Kbps") in addition to telephone service.<sup>12</sup> Beyond traditional circuit-switched telephone service, Qwest also offers broadband voice service to residents of Glenwood Springs.<sup>13</sup>

In addition to the two incumbent wireline service providers, both terrestrial wireless and satellite services are available in Glenwood Springs. For example, DirectTV and Dish Network both offer direct broadcast satellite ("DBS") video service in competition with Comcast's cable-television offering and any eventual television offering of GSCBN.<sup>14</sup> Wild Blue provides satellite based Internet service.<sup>15</sup> Verizon Wireless and AT&T Wireless both provide mobile broadband service in Glenwood Springs.<sup>16</sup> In addition, a number of regional and local providers service the Glenwood Springs' market, including Skybeam, a fixed wireless broadband provider.<sup>17</sup> Based on the number of service providers and the breadth of service offering,

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<sup>8</sup> *Fiber Optics May Connect to Some Glenwood Springs Homes Before Network Expansion*, *supra* note 5.

<sup>9</sup> *See id.*

<sup>10</sup> Comcast, <http://www.comcast.com/> (last visited Apr. 23, 2009) (based on the address: 931 Colorado Ave., Glenwood Springs, CO 81601).

<sup>11</sup> Chloe Albanesius, *Comcast Wideband Extends to San Fran, Peninsula*, PCMAG.COM (Apr. 22, 2009), <http://www.pcmag.com/article2/0,2817,2345760,00.asp>.

<sup>12</sup> Qwest.com, [www.qwest.com](http://www.qwest.com) (last visited Feb. 17, 2009) (based on the address: 931 Colorado Ave., Glenwood Springs, CO 81601).

<sup>13</sup> *Id.*

<sup>14</sup> DirecTV, Inc., <http://www.directv.com> (last visited Apr. 25, 2009); Dish Network, LLC, <http://www.dishnetwork.com/> (last visited Apr. 25, 2009).

<sup>15</sup> WildBlue Communications, Inc., <http://www.wildblue.com/> (last visited Apr. 25, 2009).

<sup>16</sup> Verizon Wireless, Coverage Locator, <http://www.verizonwireless.com/b2c/CoverageLocatorController> (last visited Apr. 25, 2009) (based on the address: 931 Colorado Ave., Glenwood Springs, CO 81601); AT&T, Coverage Viewer, <http://www.wireless.att.com/coverageviewer/> (last visited Apr. 25, 2009) (based on the address: 931 Colorado Ave., Glenwood Springs, CO 81601).

<sup>17</sup> Skybeam, Service Areas, <http://www.skybeam.com/service-areas-all.php> (last visited Apr. 26, 2009).

Glenwood Springs enjoys a competitive service offering even in comparison to much larger cities, including Denver and Grand Junction.<sup>18</sup>

#### D. Colorado Law on Government Competition in Broadband

To minimize the potential conflicts of interest associated with a local government providing communications services in competition with the private sector, the State of Colorado has sought to ensure a level playing field for both public and private entities to compete in the provision of communications services. To this end, COLO. REV. STAT. § 29-27-301 provides in pertinent part:

(2)(a) A local government shall not make or grant any undue or unreasonable preference or advantage to itself or to any private provider of cable television services, telecommunications services, or advanced services.

(b) A local government shall apply without discrimination as to itself and to any private provider the local government's ordinances, rules, and policies, including those relating to: (I) Obligation to serve; (II) Access to public rights-of-way; (III) Permitting; (IV) Performance bonding where an entity other than the local government is performing the work; (V) Reporting; and (VI) Quality of service.<sup>19</sup>

A city, then, cannot favor itself over private competitors when providing communications services to its residents. In addition, a city that might be tempted to cross-subsidize broadband service through municipal electric rates, is prohibited from doing so. In the end, without the inherent advantage associated with local government, the City will find it more difficult to win over customers in an already competitive market.

#### **IV. The Poor Financial Record for Municipal Broadband Networks and Associated Consequences**

The poor financial record of municipal broadband deployments is well documented.<sup>20</sup> This is particularly true where a municipal operator seeks to enter a competitive communications market with large well-established service providers. The primary cause of a municipal operator's poor financial performance is the lack of scale enjoyed by the much larger network operators in the market. Simply put, larger network operators can more efficiently spread the costs of infrastructure and back office operations across a substantially larger customer base.

Three themes have emerged based on the poor financial performance of municipal networks in competitive markets. First, the business plans of municipal networks routinely underestimate and misunderstand the competitive and dynamic marketplace for Communications

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<sup>18</sup> See, e.g., Comcast, <http://www.comcast.com/> (last visited Apr. 23, 2009) (based on the address: 738 Ash St., Denver, CO 80220); Bresnan Communications, <http://www.bresnan.com> (last visited Apr. 27, 2009) (providing similar Internet, telephone, and cable-television services to Grand Junction, Colorado).

<sup>19</sup> COLO. REV. STAT. § 29-27-301(2).

<sup>20</sup> E.g., *Balhoff Report*, *supra* note 1, at 32.

Services, resulting in substantial overestimates of revenue. Second, beyond the initial construction costs, the business plans of municipal operators do not adequately account for the substantial ongoing costs associated with owning and operating a broadband network. Third, to maintain the offered communications services as losses grow, municipalities are forced to subsidize those services, leading to higher than necessary taxes and/or increased fees for other municipal services and the potential unintended consequence of entrenching inferior technologies.

In other words, the business plans for municipal networks have historically relied on unrealistic assumptions by over estimating revenues while at the same time underestimating capital and operating expenses. In turn, the municipality must cover budget shortfalls through higher taxes and/or increased rates for other municipal services.

A. Overestimating Revenues in light of the Competitive and Dynamic Nature of the Communications Marketplace

Many local governments providing municipal broadband networks have failed to understand or comprehend the competitive and dynamic nature of the communications market, leading to over estimated revenues and other unrealistic business assumptions. Fortunate for the residents of Glenwood Springs, a wide variety of service providers already offer various forms of Internet, telephone, and cable-television services in Glenwood Springs.<sup>21</sup> But, unfortunate for GSCBN, it will be entering an already competitive market where its entry will drive the various service providers to increasingly compete for a limited customer base. Customers will have increased choices, but the financial assumptions of the City are far from certain as demonstrated by the poor financial performance of other municipal networks, including Provo, Utah; Cedar Falls, Iowa; Lebanon, Ohio; and Ashland, Oregon.

1. *The Case of iProvo*

iProvo's well-documented financial troubles occurred, in large part, because of its inability to achieve its underlying business assumptions in the face of a fiercely competitive market. In 2006, the City of Provo with a population of approximately 117,000, completed construction of a fiber-to-the-home network, iProvo.<sup>22</sup> From its initial service launch, iProvo faced strong competition from Qwest and Comcast, two well established service providers that were unwilling to cede customers to the municipal upstart.<sup>23</sup>

iProvo relied on an overly-optimistic prediction of customer acquisition and revenue per customer. "As of December 2007, iProvo reported 10,265 customers, the target it had set for December 2005. Furthermore, the iProvo plan had projected that 10,000 customers would be the breakeven point. That turned out not to be the case."<sup>24</sup> iProvo's inability to break even with 10,000 customers was due, in part, to an overestimation of revenue per customer. The iProvo

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<sup>21</sup> See *supra* notes 10 & 12-17 and accompanying text.

<sup>22</sup> Provo, Utah, [http://en.wikipedia.org/w/index.php?title=Provo, Utah&oldid=273720329](http://en.wikipedia.org/w/index.php?title=Provo,_Utah&oldid=273720329) (last visited Mar. 6, 2009); iProvo, <http://en.wikipedia.org/w/index.php?title=iProvo&oldid=267325321> (last visited Mar. 6, 2009).

<sup>23</sup> Steve Titch, *iProvo Revisited: Another Year and Still Struggling*, REASON FOUNDATION, at 2 (April 2008), <http://www.reason.org/pb69.pdf> [hereinafter *iProvo Revisited*].

<sup>24</sup> *Id.*

business plan assumed 75% of subscribers would sign up for the “triple play” of telephone, Internet, and cable-television services, but as of October 2007, only 17% of customers signed up for the triple play, leading to a substantial overestimate of revenue per customer.<sup>25</sup> Such a gross overestimate completely undermined the iProvo business plan and highlights the City of Provo’s sophomoric understanding of the competitive communications market. Even if the underlying assumptions were well founded at the time the business plan was developed, the reality proved to be much different than the proffered business plan, illustrating not only the competitive nature, but more importantly the dynamic nature of the communications market.

Beyond just competing head-to-head with Qwest and Comcast, iProvo had to compete with emerging substitute service providers as well, further illustrating the dynamic nature of the communications market. For instance, wireless service had become a substitute for wired telephone service and is becoming a substitute for wired-broadband service. Like Glenwood Springs, both AT&T and Verizon provide wireless service to Provo, including mobile broadband.<sup>26</sup> In addition, DBS service providers such as DirectTV and Dish Network are a competitive substitute for the cable-television service offered by iProvo. Provo’s overly-optimistic business plan in light of the competitive and dynamic communications market explains at least in part its eventual demise and sale.<sup>27</sup>

## 2. Other Municipal Experiences

The example of iProvo does not stand alone as a municipal provider with substantial penetration rates but poor financial performance. “There is evidence that municipal cable and Internet services can achieve high penetration rates if they’re willing to lose a lot of money doing it. And this means taxpayer or ratepayer money.”<sup>28</sup> As of 2004, the municipal network operated by the City of Cedar Falls, Iowa, had video penetration of 47% and high-speed data penetration of 37%, but from the start of construction in 1995 through 2004 the municipal network had a cumulative free cash flow of *negative* \$10,543,588.<sup>29</sup> In Lebanon, Ohio, the municipal provider “achieved a penetration rate of 37 percent in its first year, despite competition from Time Warner. However, it has always shown substantial operating losses . . . , which suggests the high penetration rate flows from below-cost pricing.”<sup>30</sup> Similarly, in Ashland, Oregon, the municipal

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<sup>25</sup> *Id.* On a per-customer basis, revenue from a triple-play of services is approximately three to four times that of providing just a single service. See Moss-Adams, LLP, Monmouth Independence Network Report, at 7-19 (Nov. 17, 2008), available at <http://www.ci.monmouth.or.us/vertical/Sites/%7BCE78EAE1-6CA4-4610-BDB0-A9B3B0A8BB71%7D/uploads/%7B23A212BF-5095-4AE2-8B66-10B585E79E17%7D.PDF> (providing various price points for single and triple-play services).

<sup>26</sup> Verizon Wireless, Coverage Locator, <http://www.verizonwireless.com/b2c/CoverageLocatorController> (last visited Apr. 25, 2009) (based on the address: 1176 Elm Ave., Provo, UT 84604); AT&T, Coverage Viewer, <http://www.wireless.att.com/coverageviewer/> (last visited Apr. 25, 2009) (based on the address: 1176 Elm Ave., Provo, UT 84604).

<sup>27</sup> Steven Titch, *Money-Losing iProvo Fiber Network Sold by City to Private Firm*, HEARTLAND INSTITUTE (July 2008), [http://www.heartland.org/publications/infotech%20telecom/article/23350/MoneyLosing\\_iProvo\\_Fiber\\_Network\\_Sold\\_by\\_City\\_to\\_Private\\_Firm.html](http://www.heartland.org/publications/infotech%20telecom/article/23350/MoneyLosing_iProvo_Fiber_Network_Sold_by_City_to_Private_Firm.html).

<sup>28</sup> Jerry Ellig, *A Dynamic Perspective on Government Broadband Initiatives*, REASON FOUNDATION, at 10 (Nov. 2006), <http://www.reason.org/ps349.pdf>.

<sup>29</sup> Dr. Ronald J. Rizzuto, *Iowa Municipal Communications Systems: The Financial Track Record*, HEARTLAND INSTITUTE, at 7-8 (Sept. 2005), [http://www.heartland.org/custom/semod\\_policybot/pdf/17724.pdf](http://www.heartland.org/custom/semod_policybot/pdf/17724.pdf).

<sup>30</sup> Ellig, *supra* note 28, at 10.

provider “had a 35 percent penetration rate for cable TV and a 40 percent penetration rate for Internet service as of December 2004. However, the system has posted an operating loss of about \$1.5 million each year since 2002.”<sup>31</sup> A number of conclusions might be drawn from the overwhelming evidence of poor financial performance in light of the significant market penetration. No matter the exact conclusion, the repeated poor financial performance of municipal providers should give the City of Glenwood Springs pause before embarking on this same path.

As seen in example after example, Glenwood Springs should be highly skeptical of any business plan that downplays the financial risk associated with providing retail Communications Services. Similar to Provo, Glenwood Springs enjoys a competitive and dynamic communications market despite having less than one tenth of Provo’s population. Like Provo, Comcast and Qwest offer a full suite of communications services to the residents of Glenwood Springs, including high-speed Internet, cable-television, and telephone services. In addition, both AT&T and Verizon provide wireless service in Glenwood Springs, including mobile broadband service. Glenwood should at least have an answer as to why it will succeed, while Provo’s broadband project failed.

#### B. Underestimating Ongoing Costs

In addition to overestimating revenues, municipal providers have also regularly compounded their financial challenges by underestimating the ongoing operating, maintenance, and upgrade costs associated with a broadband network. Most importantly, municipalities fail to fully comprehend the economies of scale and the associated cost advantages enjoyed by the much larger network operators. In addition, municipal providers underestimate substantial ongoing costs associated with effectively competing in the communications market. This is due in part to misleading experiences in providing monopoly services such as water, sewer, and electricity. For those services, no competition exists and the pace of technological change is all but imperceptible. By contrast, broadband networks require constant investment and upgrading.

Even assuming a municipal operator accounts for and accurately estimates its expenses, it sits at a relative disadvantage to larger network operators because of the municipal operator’s inherent lack of scale. This is evident in terms of comparable costs for back office operations and when purchasing network equipment, such as set-top boxes. Moreover, the municipal operator is “unlikely to achieve enough scale to peer with other networks [and] realize . . . critical cost savings” in terms of interconnection and backhaul.<sup>32</sup> Similarly, in terms of video service, “the aggregate size of a municipality’s subscriber base does not warrant volume discount pricing on content” as enjoyed by larger video service providers such as Comcast, DirecTV, and Dish Network.<sup>33</sup>

Furthermore, a municipal communications provider often underestimates the cost of customer acquisition and retention. In the monopoly utility context that municipalities know and

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<sup>31</sup> *Id.*

<sup>32</sup> *Balhoff Report, supra* note 1, at 94.

<sup>33</sup> *Id.*

are used to, customer acquisition and retention costs are negligible.<sup>34</sup> In general, broadband service providers can expect a churn rate of between 2.5% to 3% per month. Over a given year, a provider can expect to lose a quarter of its customers.<sup>35</sup> For instance, iProvo had not fully anticipated the high level of customer “churn” it experienced. “[W]hile iProvo [was] adding an average of 260 customers per month, that gain [was] offset by an average of 140 customers per month” who ended service.<sup>36</sup> “At a cost of \$800 to acquire and connect one new customer,” this level of churn increased operating expenses well beyond what had been anticipated.<sup>37</sup> In short, a municipal operator must plan for substantial customer acquisition and retention costs where competitive alternatives exist.

Moreover, in a competitive communications market, all service providers, municipal and investor-owned, must continually spend to upgrade their networks to provide a competitive service offering to maintain both market penetration and revenue per customer. Price compression is a natural dynamic with respect to Communications Services due to rapid innovation and commoditized services:

[I]t should be recognized that the pace of competition is increasing and rates for data services have been falling about 20% annually, making it likely that pricing could decline more steeply than modeled. Further, the pricing for telephony appears poised to contract precipitously with the introduction of VoIP services, as average monthly revenue per line could slide from \$50, with the downward pressure applied by VoIP rates of \$35, \$30, or even as low at \$15. Many municipal models do not include price compression, as the architects of those models appear to be using regulated rate-of-return pricing or naturally occurring inflation adjustments to price.<sup>38</sup>

Without continually spending on network upgrades and improvements to counteract price compression, a service provider must expect revenues per customer to continually decline.

### C. Cross-Subsidies and Distortionary Effects

To overcome revenue shortfalls and expanding costs, local governments often turn to subsidizing their service offering with tax revenues or revenues from other municipal services, resulting in residents paying higher than necessary taxes and/or prices for electric and other municipal services. In addition to wasting taxpayer money, subsidizing municipal communications services runs the real risk of entrenching inferior technologies and distorting the incentives of a normal competitive market.

For example, the Internet, telephone, and cable-television services provided over Bristol, Virginia’s municipal broadband network, OptiNet, were provided below cost and subsidized by

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<sup>34</sup> *Id.* at 91 (“Churn can be expensive as it involves cost in disconnecting service, marketing to re-win, pricing of new services to recapture lost customers at lower margins, and reinstallation – problems that most municipal utilities have been spared with water or electric service.”).

<sup>35</sup> Ellig, *supra* note 28, at 10.

<sup>36</sup> *iProvo Revisited*, *supra* note 23, at 2-3.

<sup>37</sup> *Id.* at 3.

<sup>38</sup> *Balhoff Report*, *supra* note 1, at 92.

the City of Bristol through either higher fees for other municipal services or higher taxes, or a combination thereof, as determined by the Virginia State Corporation Commission.<sup>39</sup> Similar cross-subsidies have been documented in numerous localities where municipalities provide communication services, including Lebanon, Ohio and Provo, Utah. In Lebanon, “[t]he monthly subsidization in 2004 appears to have been \$37 per household, even without factoring capital costs or other cross-subsidizations (use of personnel or other assets).”<sup>40</sup> In Provo, “iProvo asked the City Council to approve the transfer of \$1 million from the city’s electricity reserve fund to cover the municipal network costs for fiscal 2006.”<sup>41</sup> “In addition, a government broadband enterprise could receive an implicit subsidy in the form of costless, below cost, or perhaps even exclusive access to the public rights-of-way.”<sup>42</sup>

The municipal services, typically and logically, targeted for rate increases to subsidize municipal broadband are those in which the local government is the monopoly provider, including electric, water, and sewer services. Most local governments, including Glenwood Springs, Bristol, Provo, and Lebanon, that seek to provide communications services already provide electric service to their respective communities.<sup>43</sup> Here, the residents of Glenwood Springs face a similar risk of subsidizing the municipal broadband network through increased (or at least higher than necessary) electric rates. In fact, the possibility of cross-subsidization has already come to fruition with the City covering GSCBN’s losses of \$200,000 per year through higher than necessary taxes, electric rates, or other service rates. To further compound the risk of cross-subsidization, the Glenwood Springs Electric Department presently manages and operates GSCBN. This lack of separation between the provision of electric and broadband services makes the cross-subsidization of GSCBN by the City’s electric customers, not only easy, but difficult to detect. With residents having no competitive option for electric service or other municipal services, rate increases of these municipal services are no different than an explicit tax to subsidize GSCBN.

The unintended and perverse consequence of subsidizing municipal communications services is the real potential for the municipality to entrench inferior technologies by distorting the normal incentives of a competitive market. Consider the following:

If subsidies allow a government enterprise to offer broadband service at a price that fails to cover costs, then competitors face a higher bar to successful market entry, even if they have a better technology. Suppose, for example, the

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<sup>39</sup> See Final Order, *Petition of United Telephone-Southeast, Inc.*, VA. STATE CORP. COMM’N, Case No. PUC-2002-00231, at 13 & 19-20 (Feb. 25, 2005); *Balhoff Report*, *supra* note 1, at 42.

<sup>40</sup> *Balhoff Report*, *supra* note 1, at 38.

<sup>41</sup> Steven Titch, *Spinning its Wheels: An Aanalysis of Lessons Learned from iProvo’s First 18 Months of Municipal Broadband*, REASON FOUNDATION, at 5 (Dec. 2006), <http://www.reason.org/ps353.pdf>.

<sup>42</sup> Ellig, *supra* note 28, at 18.

<sup>43</sup> City of Glenwood Springs Electric System, <http://www.ci.glenwood-springs.co.us/departments/publicworks/Electric/electric.htm> (last visited February 24, 2009); Bristol Virginia Utilities, Our History, [http://www.bvu-optinet.com/templates/default.php?pur1=about\\_us\\_history&turl=inside\\_3col\\_std\\_template.htm](http://www.bvu-optinet.com/templates/default.php?pur1=about_us_history&turl=inside_3col_std_template.htm) (last visited Feb. 25, 2009) (“Bristol Virginia Utilities is a municipally owned system, providing electric, water, wastewater and fiber-optic telecommunication and information services to the City of Bristol, Virginia.”); Provo City Power, About Us, [http://www.provo.org/util.about\\_us.html](http://www.provo.org/util.about_us.html) (last visited Feb. 25, 2009); City of Lebanon, Ohio, Electric, <http://ci.lebanon.oh.us/departments/electric/electric.html> (last visited Feb. 25, 2009).

government offers 200 kilobyte Internet access for \$10 per month, even though it costs \$20 per month to produce. Suppose further that private competitors could offer 10 megabyte service for \$40 per month. Many consumers might prefer the faster service at \$40 to the slower service at \$20, but they'll choose the slower service if it only costs \$10. If the government service is subsidized, the competitor cannot afford to introduce its faster service until further technological progress either improves the quality or reduces the cost sufficiently to let it attract consumers away from the subsidized service. Until that happens, consumers have to content themselves with the slower, subsidized service.

The point here is not just that lock-in via subsidies wastes the public's money, but also that consumers have to wait longer to get a better service, because competitors are deterred by the subsidy. Consumers would be better off if the price of the government service were not subsidized, because competitors would provide the superior combination of service and price sooner.<sup>44</sup>

As the City evaluates expanding GSCBN, it should understand the long-term effects of subsidizing its service offering, including both the additional burden on taxpayers as well as the risk of entrenching inferior technology.

## V. Questionable Comparisons to Monmouth and Independence Network ("MINET")

Parallels are being drawn between the municipal network in Monmouth and Independence, Oregon and GSCBN.<sup>45</sup> In 2006, Monmouth and Independence began offering telephone, Internet, and cable-television services to residents through a municipal fiber-optic broadband network that is owned and operated by an intergovernmental entity that is in turn owned and controlled by the two cities ("MINET"). The two cities have a combined population of roughly 17,000 and a combined area of roughly 4.3 square miles, yielding a population density of approximately 3,950 residents per square mile.<sup>46</sup> After two years of operations, MINET ran an operating loss of \$437,120, although down from \$796,865 from the prior year.<sup>47</sup> MINET has secured a desirable 40% penetration rate and expects the 2010-2011 audit to show an operating profit.<sup>48</sup>

Irrespective of MINET's long-term success, two important distinctions exist between MINET and GSCBN that create substantially more financial risk for the City of Glenwood Springs in comparison to Monmouth and Independence. First, MINET has not faced a viable competitor in Charter Communications, the incumbent cable operator.<sup>49</sup> Struggling financially, Charter has failed to make the necessary investments to update its network and service offering.

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<sup>44</sup> Ellig, *supra* note 28, at 18.

<sup>45</sup> Pete Fowler, *Glenwood Springs City Manager Helped with Fiber-optic Network in Oregon*, Post Independent, Feb. 5, 2009, <http://www.postindependent.com/article/20090205/VALLEYNEWS/902049973>.

<sup>46</sup> *Id.*; Monmouth, Oregon, [http://en.wikipedia.org/w/index.php?title=Monmouth,\\_Oregon&oldid=270166926](http://en.wikipedia.org/w/index.php?title=Monmouth,_Oregon&oldid=270166926) (last visited Feb. 26, 2009); Independence, Oregon, [http://en.wikipedia.org/w/index.php?title=Independence,\\_Oregon&oldid=268887411](http://en.wikipedia.org/w/index.php?title=Independence,_Oregon&oldid=268887411) (last visited Feb. 26, 2009).

<sup>47</sup> Justin Much, *MINET Figures Encouraging*, STATESMANJOURNAL.COM (Nov. 5, 2008).

<sup>48</sup> *Glenwood Springs City Manager Helped with Fiber-optic Network in Oregon*, *supra* note 45.

<sup>49</sup> Dawn McCarty & Kelly Riddell, *Charter to File Bankruptcy as Part of Restructuring*, BLOOMBERG.COM, Feb. 12, 2009, <http://www.bloomberg.com/apps/news?pid=20601103&sid=aRNbIGDaKBaQ&refer=news#>.

Even today, Charter still does not offer high speed Internet in Monmouth and/or Independence.<sup>50</sup> This lack of service offering provided a substantial hole in the marketplace that MINET has readily exploited. In comparison, Comcast offers a complete and competitive offering of high-speed Internet and cable-television services in Glenwood Springs. Qwest likewise offers a full-suite of broadband, television and telecommunications. Furthermore, Comcast is financially sound and continues to update its network and service offering to meet the demands of the marketplace. Qwest is similarly rolling out faster DSL service in its territory. Without a comparable void in the Glenwood Springs market, GSCBN should not expect to achieve results similar to MINET in terms of penetration rates, revenues per customer, or operating costs.

Second, the costs per resident to deploy fiber to the home as well as the costs per resident to operate and maintain the network in Glenwood Springs will be substantially greater than in Monmouth and Independence, if for no other reason than the population density of Glenwood Springs is less than half of that of Monmouth and Independence. Whether a fiber-based or copper-based network, as population density increases, the cost decreases per resident in terms of installation, operation, and maintenance.<sup>51</sup> The population density of Monmouth and Independence is approximately 3,950 residents per square mile while the population density of Glenwood Springs is less than half of that, approximately 1,800 residents per square mile.<sup>52</sup> With higher costs and greater competition, GSCBN will face substantially higher financial risks than MINET, putting taxpayer dollars and electric rates at risk.

## **VI. Free Speech and Privacy Concerns Implicated by Government Provided Communications Services**

Municipal operation and ownership of a broadband network also raises free speech and privacy concerns for its customers. Politically strong interests within the City, including parent and religious groups, may seek to exert pressure on City officials to block or filter objectionable content. For instance, these groups may not find it appropriate to subsidize Internet pornography with their tax dollars. These concerns may be justifiable in terms of indecent, obscene, or other inappropriate content. The City, however, should be concerned about potential liability if it incorporates “restrictive use policies or Internet filters that prohibit the receipt or transmission of constitutionally protected material.”<sup>53</sup> “As a general principle, the First Amendment bars the government from dictating what we see or read or speak or hear.”<sup>54</sup> Even where the intent is to block only unprotected material such as child pornography, the filters and blocking technologies are inherently over-inclusive, preventing access to constitutionally protected material and

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<sup>50</sup> Charter Communications, <http://www.charter.com/> (last visited Feb. 26, 2009) (based on service offering at 430 S. 7th St., Independence, OR 97351 and 460 E. Jackson St., Monmouth, OR 97361).

<sup>51</sup> See, e.g., Order on Remand, FNPRM, & Memorandum Opinion & Order, *Federal-State Joint Board on Universal Service*, 18 FCC Rcd. 22,559, ¶ 15 n.31 (2003) (“The cost of providing telephone service is largely a function of population density and distance. Sparsely populated, rural areas generally are more expensive to serve than urban areas because rural areas have longer telephone loops, the most expensive portion of the telephone network, and costs are spread among fewer customers.”).

<sup>52</sup> *Supra* notes 3 & 46 and accompanying text.

<sup>53</sup> Nicole A. Ozer, *No Such Thing as “Free” Internet: Safeguarding Privacy and Free Speech in Municipal Wireless Systems*, 11 N.Y.U. J. LEGIS. & PUB. POL’Y 519, 551 (2008).

<sup>54</sup> *Ashcroft v. Free Speech Coalition*, 535 U.S. 234, 245 (2002).

therefore, violating the First Amendment.<sup>55</sup> “The Government may not suppress lawful speech as the means to suppress unlawful speech. . . . [T]he possible harm to society in permitting some unprotected speech to go unpunished is outweighed by the possibility that protected speech of others may be muted.”<sup>56</sup> Understanding the legal risks of filtering technologies, some municipal service providers have even asked their customers to waive their First Amendment claims to avoid potential liability for blocking constitutionally protected content.<sup>57</sup> These waivers of liability are unlikely to stand up in court.

Beyond free speech considerations, a municipal broadband network also invokes substantial privacy concerns. “People who have committed no wrong should be able to participate online without fear that someone who wishes to harass or embarrass them can file a frivolous lawsuit and thereby gain the power of the court’s order to discover their identity.”<sup>58</sup> As an operator of a broadband network, the municipality will collect substantial information regarding its users and their online activities. This point cannot be overstated – a broadband provider has access to every aspect of a subscriber’s online experience from online banking to online research relating to “sensitive and very private issues such as health concerns or political activity . . . .”<sup>59</sup> The City should have the necessary policies and procedures in place and be prepared to litigate to avoid disclosing user information if the request is legally inadequate, irrespective of whether the request is being made by another City agency such as law enforcement or a third-party. Moreover, the City should afford the user notice, unless prohibited by court order, before disclosing to another City agency or a third-party, allowing the customer to fight the release of his or her personal information.<sup>60</sup>

## VII. Alternatives to Government Ownership

In light of the above risks, the City should recognize that there is a wide spectrum of options to drive the goal of digital inclusion, ensuring that all residents, businesses, and the City government, itself, benefit from the tools and technologies enabled by broadband service. The City is not confined to choose between building and not building a broadband network. In reality, the City has a wide range of alternative policy choices that likely include options that more efficiently use scarce resources while also minimizing the risks faced by the municipality.<sup>61</sup>

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<sup>55</sup> *E.g.*, *Center For Democracy & Technology v. Pappert*, 337 F.Supp.2d 606, 633 (E.D. Pa. 2004) (discussing the over-inclusive nature of various filtering and blocking technologies). “Even with advances in software technology, over-blocking has not abated over the years.” *Ozer*, *supra* note 53, at 552.

<sup>56</sup> *Ashcroft*, 535 U.S. at 255.

<sup>57</sup> *See Ozer*, *supra* note 53, at 552 & 554 (discussing Culver City, California’s public wireless network and its attempt to have users waive their First Amendment rights in connection with the city’s use of content filtering technology on its public wireless network to block material the city deems undesirable or unlawful).

<sup>58</sup> *Columbia Ins. Co. v. Seescandy.com*, 185 F.R.D. 573, 578 (N.D. Cal. 1999).

<sup>59</sup> American Civil Liberties Union of Northern California, Electronic Frontier Foundation, & Electronic Privacy Information Center West Coast Office, *Joint Letter on San Francisco Wireless Internet Access*, Oct. 19, 2005, <http://epic.org/privacy/internet/sfws10.19.05.html>.

<sup>60</sup> *See, e.g., id.* (discussing free speech and privacy concerns relating to San Francisco’s municipal wireless network and specifically stating that “when a government entity establishes and assumes responsibility for a system that provides public electronic communications services, that constitutes ‘state action’ for constitutional purposes and requires the City to comply with the dictates of the state and U.S. Constitutions, including the First and Fourth Amendments”).

<sup>61</sup> *Balhoff Report*, *supra* note 1, at 114.

The City's range of options to incentivize the increased offering and utilization of communications services in the Glenwood Springs derive from four distinct potential roles:

1. The City as a broadband user provides the City with the ability to aggregate and leverage demand of communications services to attract additional private investment;
2. The City as a regulator has the ability to enact or reform local regulations that influence private-enterprise activities, including "rights-of-way, utility pole attachments, construction codes, cable franchise agreements, and others;"
3. The City as a financier can provide various subsidies to investor-owned service providers to reduce the cost of network build-outs as well as subsidize end-users and community groups to drive increased demand; and
4. The City even as an infrastructure developer can take a measured approach to providing the network elements necessary to provide communications services before entering the market as a retail service provider.<sup>62</sup>

As the City takes on the roles of financier and infrastructure developer, it begins to assume increased financial risk and to jeopardize other public policy goals including long-term innovation, free speech, and privacy.

As a broadband user, the City should drive increased demand by leading through example and developing and adopting broadband applications that increase productivity and allow residents to more easily interact with the City government. The Internet should be the first resource residents turn to when they are seeking information from the City or transacting business with the City, whether researching local crime statistics or paying their electric bill. Residents and the City can benefit from the City's increased adoption of broadband applications that enable improved productivity of residents, greater transparency of local government, and increased efficiency in providing City services as well as drive increased demand for broadband service.

As a regulator, the City should revisit and reform where necessary the local regulations that influence the deployment of investor-owned broadband networks. This should include revisiting the regulatory treatment of once disparate service providers that now offer converged and competitive service offerings. The City should reevaluate its regulations to ensure parity in terms of taxation, franchising, or reporting requirements of the various service providers to minimize potential market distortions. Furthermore, the City should reevaluate its permitting process for the use of public property in broadband deployments, including public rights of way and antenna attachments. The City should seek to shorten the application process and potentially consider lower fees or providing alternative fee arrangements. Providing regulatory parity and reducing the regulatory hurdles will facilitate increased build-outs of investor-owned networks.

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<sup>62</sup> *Id.* (citing Sharon Gillett, William Lehr, and Carlos Osorio, *Local Government Broadband Initiatives* (Massachusetts Institute of Technology), at 5 (Dec. 3, 2003)).

As a financier, the City could provide direct financial assistance to residents, community groups, or service providers to increase the use of broadband technologies. For service providers, the City could offer grants, loans, or tax incentives to decrease the direct cost of broadband network build-outs. In addition, the City may also consider offering service providers one-time waivers for rights of way or licensing fees.<sup>63</sup> For residents, the City may also consider offering grants or tax-incentives for computer purchases to increase broadband demand. To further drive broadband demand, the City may also look to fund digital literacy and other educational programs offered through local community groups.

As an infrastructure developer, the City may take on a wide range of responsibilities in deploying the infrastructure necessary to provide Communications Services. For instance, the City may look to install and own the necessary ducts and conduit to facilitate the deployment of fiber to the premise. The City could also construct and own wireless towers, making it easier for wireless providers to deploy the next generation of mobile broadband technology. At the other extreme, the City may seek to own and operate a broadband network, offering retail Communications Services to residents and businesses alike. As the City's role more closely approaches that of a retail service provider, the risk to residents increases both financially and in terms of other public policy issues, as discussed above.

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Municipal entry, in a competitive communications market, creates conflicts of interest, shifts financial risk from investors to taxpayers, and jeopardizes critical public policy goals including long-term innovation, free speech, and privacy. Broadband is crucial to the economic, educational, cultural, and social structure of the nation's communities. There are many more successful - and less expensive and risky - steps that the City can take to promote broadband adoption than providing retail Communications Services.

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<sup>63</sup> *Balhoff Report, supra* note 1, at 118.