

Utility vs. Commodity: Framing the Provision of Broadband

John Anderson  
Institute of Communications Research  
University of Illinois at Urbana-Champaign

228 Gregory Hall  
810 S. Wright St.  
Urbana, IL 61801

(217) 766-1250

[phlegm@diymedia.net](mailto:phlegm@diymedia.net)

Abstract:

The importance of broadband connectivity is growing, and while universal service is a national priority incumbent telecommunications service providers are not moving in this direction. This leads to public and non-profit entities working to correct this market failure. Incumbents have responded with a political offensive swiped largely from the playbook of the electric power industry some 100 years ago. Ultimately, the question of broadband provision may be settled at the national level.

### Utility vs. Commodity: Framing the Provision of Broadband

As information flows of myriad conveyances converge into a more-or-less unified packet-based network of communication, the importance of broadband connectivity to everyday life grows. Availability of and access to broadband connectivity are important factors to the health of any community: plentiful connectivity has been proven to lure economic development,<sup>1</sup> and the digital divide that still exists over access to personal computers themselves is exacerbated by disparities in the availability of broadband connectivity.<sup>2</sup> Today in the United States, access to broadband is primarily limited to just two options: provision from the incumbent telephone company or the cable company. Both options operate from the primary orientation of maximizing profit, and as a duopoly of sorts they are only motivated to make the infrastructure investments necessary to compete with each other; neither provide any semblance of universal service in the context of broadband. The very notion of ubiquitous broadband has been clearly defined as a national priority,<sup>3</sup> but the fact that private telecommunications providers do not subscribe to ubiquity as a fundamental operating principle represents an important market failure.

This situation has a historical parallel: when the technology to generate and distribute electric power matured to a marketable state, private utilities took root in major U.S. cities, but left much of the rest of the country in the dark. The federal government stepped in with major public works projects to electrify rural regions, and municipal and cooperatively-run utilities were formed to wire communities considered too big for rural electrification but too small to be profitably served by a private utility. Growing support for the public provision of electricity in the early 20th century threatened the long-term profitability of private provision. Private power companies responded by flexing political muscle to fashion a favorable regulatory environment that would privilege their existence over that of public utilities; they found the most favorable purchase at the state level. The industry also undertook a multiyear, multithreaded strategic communications campaign to shape public perception of electricity as a commodity, properly

provisioned by private means. Tactics in this campaign included everything from research-for-hire to a practice now called “astroturfing,” or the manufacture of grassroots support for or against a given issue. Nearly 100 years later, private provision is the dominant model of electrical provision, controlling clear majorities of the national power production/distribution marketplace and consumer base.

History stands to repeat itself with regard to the provision of broadband. Frustrated and unwilling to wait for incumbent telecommunications service companies to provide connectivity, municipalities and not-for-profit organizations are stepping in to launch what in many ways are broadband utilities. In doing so they have discovered what their predecessors in electric power already know: it is possible to provision service of equal or better quality compared to the private sector at a competitive price. However, communities are not duplicating existing private telecommunications infrastructures: they are utilizing new technologies that threaten to leapfrog incumbent private providers in terms of growth capacity.<sup>4</sup> Dismayed by the rise in popularity of the public provision of broadband, incumbent phone and cable companies are liberally borrowing from the hundred-year-old political playbook of the electric power industry. They seek state-level regulation of broadband provision that privileges their operational model; they make their case with purchased “research” and by mimicking the mobilization of public support for private provision.

Local, nonprofit initiatives that provide for the public provision of broadband are worthy not for just filling in existing service gaps left by private provision, but for the competitive pressure they exert on private providers to invest in and expand their own networks in the direction of universal service. The commodification of broadband prevents its ubiquity: policymakers should keep foremost in mind the concept of broadband as a utility when crafting the regulatory environment for its provision, for it is this frame which is most likely to advance this goal.

Examining recent state-level struggles over the regulatory framing of the provision of broadband in the historical context of electric power provides a glimpse at how the future development of this infrastructure of growing importance might unfold. This paper additionally seeks to provide further insight into exactly how incumbent telecommunications companies are

working to stymie or prevent outright the public provision of broadband. Case summaries of recent legislative/regulatory battles fought over the provision of broadband in selected states illustrate a range of outcomes. In another similarity to the past, the federal government has noticed the faltering deployment of ubiquitous broadband. Congress may ultimately determine whether the options of public and private provision are given equal opportunity to flourish. Thus, in a dynamic environment of policymaking, where much of the proffered “analysis” is of dubious origin and unabashedly biased, this type of research takes on additional important goals: to attempt to prevent the misguidance of policymakers and bring, at the very least, a patina of public interest to the entire process.

In 1882, as Thomas Edison brought his Pearl Street generating station online in New York city, Fairfield, Iowa installed and powered up a rudimentary night-lighting system. Within six years another 52 cities and towns would create their own municipal power distribution networks.<sup>5</sup> By 1888 numerous cities in Massachusetts asked the state legislature to specify a home-rule prerogative that gave local governments the ability to create their own publicly-owned power systems. Private utilities reacted with dismay: “Patrick Collins, an attorney for the Boston Gas Light Company, called the proposal an ‘excursion into the dark socialistic jungle.’” This touched off the first state-level political skirmish between the public versus private provision of electricity. In 1891 the Massachusetts legislature passed a law forbidding municipalities from building their own utilities, though it did permit them to buy out private providers.<sup>6</sup>

By 1890, more than 150 small towns across America had their own public power utilities, and in the ensuing 20 years that number would multiply several-fold. By 1912, municipal utilities operated one-third of all electric generating facilities in the nation.<sup>7</sup> As public power systems proliferated, private utilities consolidated: Commonwealth Edison reached monopoly status over Chicago’s electrical network in 1897, and ten years later Consolidated Edison did the same in New York.<sup>8</sup> Although Electricity was looked upon with revolutionizing potential, typical early private provision first went to businesses, then to the wealthy, who considered it a luxury. It would be 20 years from electricity’s popular debut before “the homes of common people living in the cities” would begin to be wired into the grid. This left smaller communities and those living in rural areas with little choice but to start their own electric utilities if they wanted

to harness its potential.<sup>9</sup>

Between 1897 and 1907 the growth of publicly-owned electric utilities outpaced that of the private sector - on average, over the period, one new public power system was founded every four days. Private utilities realized the threat of public provision early on: in 1898, Samuel Insull, “one of the most influential of the leaders of private electric utilities” as CEO of Commonwealth Edison, proposed a method by which public power could be marginalized and private power made the norm in the provision of electricity. He argued that “electrical service should be treated as a ‘natural monopoly.’ Insull proposed that franchises be granted to only a single entity in each geographical area and that state agencies fix rates and establish standards of performance” for each private franchise. Under such a regulatory framework, the private utilities “realized that they could overwhelm the staffs of state regulatory commissions and effectively eviscerate state control by pouring vastly more technical and financial resources into state rate proceedings than their opponents could afford and then recover their expenses through rate increases.” In support of the creation of a state-level regulatory framework for the provision of power, private utilities created the National Electric Light Association (NELA), which “maintained a network of state and regional ‘committees for public information’ that carried out extensive jointly funded propaganda and lobbying campaigns to elect political candidates, weaken attempts at regulation, and above all prevent public control of their monopolies.”<sup>10</sup>

Eight years later, *Moody's Magazine and American Investor* published a two-issue “symposium” to debate the notion of public versus private provision of services like water, electricity, and transportation. Everett W. Burdett, an attorney for the Edison Electric Illuminating Company, made the case for state-level regulation coupled with proactive public relations activities as the solution to “quiet the agitation” for the public provision of power. “[I]f they [private utilities] will acquiesce in the principle of public supervision and control,” wrote Burdett, “and take an open and honest part in trying to formulate it within lines fair to all parties concerned, they can, in most instances, succeed in getting pretty nearly what they want - or, at any rate, which they ought to be reasonably satisfied with.”<sup>11</sup> Henry Clews, identified as a “prominent Wall Street Banker,” condemned proponents of the public provision of power as “prophets of unrest” and claimed municipal ownership of utilities would result in the rampant

corruption of politics, as jobs and spoils are traded for political favors.<sup>12</sup> Arthur Williams, president of the National Electric Light Association, openly termed municipal control of power provision an “insidious form of Socialism.”<sup>13</sup> Finally, W.W. Freeman, Vice President and General Manager of Edison Electric of New York, compared two streetcar systems, one publicly and one privately-owned, and noted that the privately-owned company paid “six times” more in taxes than the publicly-owned company made in profit.<sup>14</sup> There is no comparison, however, of the streetcar fares between the two systems, nor is there any mention of whether the publicly-owned system operated on a primarily not-for-profit basis, as is the case with many (if not most) publicly-provisioned services, whose primary operational goal is universal provision of service, not stockholder satisfaction. This sort of apples-to-oranges comparative tactic would become commonplace in the strategic communications campaign to cast the private provision of power as the norm.

*Moody's* defenders of public provision included Calvin Tomkins, former president of the Municipal Art Society of New York. He characterized municipal ownership as a concept with “social, but not socialistic, significance” which was best implemented only after a careful overview of a community's specific political and social dynamic.<sup>15</sup> Responding the charge that public provision invited political corruption, Cleveland mayor Tom Johnson replied, “It is the buyer of privilege, rather than the seller, who corrupts our city politics. It is not politics that soils and pollutes business, but business that prostitutes politics.”<sup>16</sup> John Ford, a former New York state senator, compared the “excessive charges” of private power utilities to “a tax levied upon the public for private purposes, and thus indirectly our public-service corporations exercise the power of taxation without representation.”<sup>17</sup> Frank Parsons, a professor listed by *Moody's* as a “well-known Authority on Public Ownership,” dismissed the S-word as an overhyped misnomer: “municipal ownership of municipal monopolies is not socialism any more than New York City is the United States, or a journey from Boston to Albany is Chicagoistic.”<sup>18</sup>

Between 1907 and 1921, every state save Delaware created a state utility commission.<sup>19</sup> During this period, the growth of public power systems was cut by half.<sup>20</sup> By 1923 growth ground to a halt and then began to decline.<sup>21</sup> The state regulatory commissions that resulted ended up by and large being underfunded and understaffed, outgunned on policy debates by the

industry they were charged with supervising. It did not help matters that the seats on most state utility commissions were appointed positions, which made them plum picking for patronage: a trait that remains quite true in many states today.<sup>22</sup> These conditions have allowed utilities to shepherd through rate increases for items and services whose cost has no business being passed onto the consumer, including political-related expenses.<sup>23</sup>

Several million dollars were spent in the years following the state-level regulatory push to favorably influence public perception of the private provision of electricity. This campaign commenced in earnest following the First World War, and included

flooding grade schools, high schools, colleges, libraries, and civic organizations with literature; investing heavily in newspaper and radio advertising; lavishing entertainment on media executives to ensure the dissemination of favorable news stories; subsidizing advantageous research at leading universities; and enlisting thousands of industry executives and employees as speakers on utility matters.<sup>24</sup>

Common themes couched electricity as a commodity, provided as a good to the public - not so much as a public good. The public provision of electricity was characterized as less efficient than private provision, a risky investment to make with taxpayer money. Industry leaders saw all of this as “necessary to strike down misinformation and to keep dangerous political agitators in a strait jacket,”<sup>25</sup> code for marginalizing the notion of public provision as a viable alternative to the quickly-solidifying status quo.

By the late 1920s the “power trust” had consolidated into 15 companies which collectively controlled 85% of the country’s electrical grid. The public provision of power was viewed even then more as an effect of rather than an alternative to private provision: Gifford Pinchot, Governor of Pennsylvania, remarked in 1925 that

if the people...ever turn to...public ownership of electric utilities, it will be because the companies have driven them to it. It will be directly and only because the utility companies have so opposed and prevented reasonable and effective regulations by the states and by the Nation that the only choice left was between servitude to a gigantic and unendurable monopoly and the ownership and operation of that monopoly by the people.<sup>26</sup>

Senator George Norris of Nebraska, who would later author rural electrification legislation, including the creation of the Tennessee Valley Authority, declared in 1926 that state utility regulation “can no more contest with this gigantic octopus than a fly could interfere with the onward march of an elephant.”<sup>27</sup>



These sorts of sentiments led the Federal Trade Commission in 1928 to open a major investigation into the corporate, political and public relations practices of electric companies. Four years and 84 volumes of findings later, it confirmed the concerns of Senator Norris: given the multinational nature of power companies, there was no way any single state could hope to properly oversee its “natural monopoly.”<sup>28</sup> It also reported that the National Electric Light Association spent up to a million dollars every year to keep public debate on power oriented toward the private sector: it “funded news agencies, sponsored research, held conferences, endowed scholarship funds, organized letter-writing campaigns, encouraged the rewriting of school textbooks, and made noninterest-bearing deposits in banks to secure their support.”<sup>29</sup> For at least two decades, these efforts included activity designed to construe those who supported the public provision of power as socialist.<sup>30</sup> At the same time, a Canadian public power project to electrify rural Ontario was “so successful that the NELA found it necessary to fund and then publicize studies showing it had been a failure.”<sup>31</sup>

This sort of turbulence - public discomfort with the fact that such an essential service could be open to such exploitation - has kept the concept of public provision alive in the context of power to this day.<sup>32</sup> The FTC findings in large part spurred the federal government to undertake rural electrification and make major upgrades to national generation capacity.<sup>33</sup> In the fallout, the National Electric Light Association was disbanded, to be reincarnated as the Edison Institute.<sup>34</sup> Samuel Insull, architect of the industry-favored state regulatory model, would eventually lose his empire in the stock market crash and ensuing depression and, for a time, become a fugitive from the law.<sup>35</sup>

However, nothing could blunt power companies’ resistance to the attempted creation of publicly-owned and operated electric utilities. No tactic was off limits: in 1934, Muncie, Indiana considered establishing a municipal power system. One of the incumbent company's representatives “hysterically” proclaimed at a town meeting on the issue, “It looks as if these advocates are wanting to more and more nationalize our business, and it looks too much to me like a trend toward Soviet Russia.” The utility trotted out similar themes in full-page magazine and newspaper advertisements: “Where shall the line be drawn? Why not municipal ownership of lumber yards and grocery stores too?” Ultimately the utility got a court to enjoin the city from

holding a referendum on municipal power.<sup>36</sup> Other tactics included the mass deployment of employees as spokespeople and the creation of citizen front-groups designed to dilute public support for public power.<sup>37</sup> Private providers would also use their size, clout, and interconnectivity to try and starve rural cooperatives into assimilation or out of business.<sup>38</sup>

Even against such spirited opposition, some communities forged ahead with public power systems as a tactic to prod their privately-held “natural monopolies” toward more affordable rates and/or increased service quality. Major cities to undertake such projects include Austin and San Antonio, Texas; Los Angeles, California; Memphis and Nashville, Tennessee; and Seattle, Washington.<sup>39</sup> It would be several more years, though, before public power systems would band together and form their own trade association to argue their merits. In 1948 the American Public Power Association conducted the first comprehensive quantitative comparison of operational costs, rates, and tax/fee assessments between some 150 public and 300 private electric utilities. The analysis showed public utilities generally offered lower rates, contributed more to local governments than private utilities paid in taxes, and had higher administrative efficiency (costs relative to revenue) than private power companies.<sup>40</sup> The study was drowned in a sea of industry-sponsored school curriculum, “studies and reports” from the Edison Institute and its subsidiaries, and traditional advertising extolling the virtues of private power. The John Birch Society's American Economic Foundation carpet-bombed schools, colleges, and workplaces with “educational” materials about the benevolence of private power. According to Richard Rudolph and Scott Ridley, “[b]etween 1943 and 1965 material from the AEF had been used in economic training programs for 3.5 million workers in 2,000 corporations, 171 teachers' institutes, and workshops for primary and secondary school teachers. AEF films were prominently placed in more than 7,000 schools in 41 states.”<sup>41</sup> In the 1950s the power industry was so secure in its dominance over the nation’s electrical infrastructure that it labeled public power proponents “bolsheviks.”<sup>42</sup>

During the 1960s the cost of power generation declined as utilities invested in larger, more efficient plants. In many places, electric rates even declined for a time. In 1969 private utilities successfully lobbied Congress to approve measures exempting them from several federal taxes. However, consumers continued to be charged to cover a now-nonexistent cost.<sup>43</sup> Fortunes

reversed in the 1970s as inflation and spikes in fuel prices sent the cost of generation skyward. Proposals to build public power systems or engineer local public takeovers of private utilities multiplied as consumer frustration with rate hikes mounted. The industry spared nothing in its defense. In Hilton, New York, population 4,400, Rochester Gas & Electric spent more than \$6 per vote to campaign against a referendum on public power; RG&E employees canvassed door-to-door against the idea.<sup>44</sup> Pacific Gas and Electric staved off two public takeover attempts in Berkeley, California by flooding the community with anti-municipalization public relations, including using “PG&E meter readers as election canvassers” and creating a proxy “citizen's committee” to campaign against the idea.<sup>45</sup> In Massena, New York, Niagara Mohawk mobilized employees to drive voters to the polls against a 1975 referendum on a public takeover, although its effort ultimately failed.<sup>46</sup>

The public provision of power continues to exist as a service option simply because it works for many communities. In 1996 John Kwoka conducted what amounts to the definitive empirical analysis of cost and price efficiencies between public and private utilities, using data covering 90% of the U.S. electric market. He also examined 13 prior empirical analyses, which utilized a variety of methodologies to compare the financials of public versus private provision of power. Of those, eight favored public provision, four found little difference between public and private provision, and just one favored private provision.<sup>47</sup> Kwoka himself concluded that public provision clearly provided “both cost and price benefits” to all types of electrical consumers, although the greatest benefits accrued to residential consumers.<sup>48</sup> This was primarily due to the fact that public utilities typically do not strive to make a profit - an important source of pressure that drives the behavior of private utilities and makes their operational tendencies fundamentally different.

Over the course of a little more than a century some 3,000 public electric utilities have been created. About a third were ultimately sold to private interests, by and large, because they were founded as public works projects to be left to market forces once the need (electrification) had been met and the initial investment recouped.<sup>49</sup> 75% of those public utilities left today serve communities of 10,000 or less.<sup>50</sup> Yet public provision of electric power still demonstrates significant advantages over private provision. In 2002, the average rate paid by public power

utility customers was 13% lower than those charged by private electric companies.<sup>51</sup> That same year, the median net percentage of revenue that public utilities contributed to their parent local governments in lieu of taxes was 5.8%. In comparison, investor-owned utilities paid just 4.9% of their revenues in taxes.<sup>52</sup> In fact, Between fiscal years 2001 and 2003, some 82 companies paid zero federal income tax or received rebates (resulting in a *negative* tax rate). Of these, one in five hail from the energy and telecommunications sectors. Number one on the list was Pepco Holdings, a conglomerate of electric utilities, one of which serves Washington, D.C.<sup>53</sup>

This is but a sketch of how the private provision of electricity in the United States has trumped the public (municipal or cooperative) option over time. It began with the crafting of a regulatory environment that favored private provision over public, and was more or less solidified as the national status quo by a steady diet of public relations and political machinations. Disparagement of public power involved claims of inefficiency, tax bias, and the painting of the concept itself as socialistic or otherwise un-American. Where necessary, industry actively resisted electoral notions of public provision. This created a situation that John Donahue calls “engineered ignorance,” when “technical and organizational barriers” are put in place “that deny the public a complete picture of what is being done in its name.”<sup>54</sup> In this instance, it meant opaque, weak regulation and the squelching of meaningful electrical generation, distribution, and regulatory alternatives. Even so, general economic consensus on the place of public provision in the context of power rests primarily on the conditions of the local marketplace, far from a declaration of victory for either option given the numerical disparities between them.<sup>55</sup>

Utilities have been considered natural hosts for the deployment of broadband information networks for many years. Electric utilities began deploying their own fiber-optic communications networks in the 1980s for the purpose of real-time monitoring and metering of the power flow over the “local” grid. Such intra-utility information utilized a scant 3% of the capacity of the fiber laid for the task.<sup>56</sup> A few early adopters recognized the potential for the rest of that fiber capacity: in 1989, Glasgow, Kentucky christened the first municipal fiber information services network, under the auspices of the city’s electric utility.<sup>57</sup> In the years immediately preceding passage of the 1996 Telecommunications, Act, James Baller argued that public electric utilities were “ideally positioned” to build out a national broadband infrastructure:

local infrastructure was already in place; an “ethic of universal service” existed among public utilities; and they would act as new competition to incumbent telecommunications service providers.<sup>58</sup> Broadband was not a priority among private telecom companies: in January of 1994 the office of Representative Edward Markey (D-MA) surveyed “20 major telephone and cable companies” and asked them about their willingness to provide free or low-cost “high-capacity” data lines to elementary and secondary schools in the territories they served. Only three expressed any interest in the idea.<sup>59</sup>

By the time the city of Lynchburg, Virginia began construction on its own fiber network in 1997, today’s internet was in full-on growth mode. Within a couple of years Lynchburg’s network was so popular that the city considered opening it to commercial and residential use. This sparked a lobbying battle in the state legislature and led to the passage of a law restricting the ability of Virginia municipalities to own or lease their own telecommunications networks.<sup>60</sup> By 1999, nine state legislatures had enacted laws to prohibit or restrict the public provision of broadband network services. These laws are somewhat patchwork in fashion: Tennessee allows municipalities to provision telephone service but not cable television or internet service. “Virginia authorizes only the Town of Abingdon, the home of a prominent member of Congress, to provide telecommunications service,” and the rest of the state is barred from doing so. Nevada bans communities with populations of over 25,000 from partaking in the public provision of broadband.<sup>61</sup> Through it all, interest in public telecommunications provision has remained high: A 2000 study of the success record of local ballot initiatives in Iowa on the question of forming public telecommunications utilities noted 30 were voted up and two down; those approved, more often than not, had margins of victory larger than 80%.<sup>62</sup>

In the rest of the states, the development of public broadband provision has been left primarily to the whims of two judicial forces. The first is a state’s subscription to a judicial maxim (“Dillon’s Rule”) that prohibits local governments from engaging in any act or service not expressly permitted by the state. In these instances, unless states enact laws granting municipalities the ability to offer broadband access they may not do so.<sup>63</sup> The second force has been federal in nature. While opponents to public provision assert that the Telecommunications Act expressly advocates for the private expansion of broadband networks, this qualifier does not

exist in the statutory language.<sup>64</sup> The FCC's position, after careful consideration, is that there is nothing in federal statutes that prohibits public entities from offering broadband connectivity, but it will not preempt state-level rulemaking on the issue.<sup>65</sup> This position has been affirmed by the Supreme Court, which itself "explicitly noted" that its ruling should have no impact on the viability of the public provision of telecommunication services, including broadband connectivity.<sup>66</sup>

To lay the groundwork upon which to lobby for state-by-state restrictions on the public provision of broadband, private providers have needed "research" upon which to sell such policy. This work has appropriated themes from the anti-public power campaigns of the past: public provision is a risky use of taxpayer money; public provision is inherently inefficient; and public provision is "unfair," in that it upsets the orderly functioning of competition in the marketplace.<sup>67</sup> This "research," most notably published by the Progress and Freedom Foundation,<sup>68</sup> Heartland Institute,<sup>69</sup> New Millennium Research Council,<sup>70</sup> and telecommunications investment analysts,<sup>71</sup> do not necessarily make a case for the advantages of private provision of broadband as much as attack public provision as a flawed policy idea. This is attempted using a variety of analytical tools, some of which are methodologically misapplied.<sup>72</sup> That the organizations which produce this work receive compensation from telecommunications companies must also be kept in mind when considering its fundamental objectivity and accuracy.<sup>73</sup>

Most importantly, however, is the way in which this "research" attempts to frame the debate over the concept of provision itself. All of it makes three critical presuppositions in comparing public versus private provision of broadband connectivity that fundamentally skew the terms of the debate away from public provision as normative. The first presupposition holds public providers to the same economic standards as private providers: as many public utilities are not-for-profit in nature this distorts subsequent economic analysis. The second assumes competitive advantages that governments supposedly can bring to bear on a broadband marketplace that do not actually exist, like tax immunity,<sup>74</sup> public financing,<sup>75</sup> and the ownership of rights of way.<sup>76</sup> The third presupposes a competitive marketplace for broadband connectivity, which for the vast majority of U.S. residents, if they are lucky, involves a duopoly - the phone

company or the cable company. Evidence exists that utility-like intervention into a marketplace positively stimulates competition, as measured by both service rates and investment criteria.<sup>77</sup>

Therefore, what essentially takes place when states address the expansion or restriction of the public provision of broadband is not so much a debate about absolute facts relevant to the particulars of provision, but rather an ideological argument over whether provision itself is a service or commodity. What state-level policy battles over the provision of broadband connectivity represent are primarily corporate-driven attempts to veto the provision of broadband connectivity as a public service.<sup>78</sup>

Contemporary debate about public versus private provision of broadband connectivity was initially sparked by the development of fiber optic networks, but it really caught fire following the introduction of wireless technology. Wi-fi (and its descendent protocols) lowers barriers to entry into the broadband marketplace by obviating the need to provide as intricately-wired an infrastructure as that required by cable and phone networks. Communities with preexisting public power utilities already had part of the necessary infrastructure (fiber) for a broadband utility in place; wireless provides the “last mile” for connectivity to a community at large.

The very real threat of the utilization of broadband via wireless technology, in large part, spurred the most recent state-level legislative machinations designed to prohibit or marginalize the public provision of broadband. In the last couple of years, more than a dozen states have considered legislation designed to do just that. Fortunately, public interest advocates have learned from the historical debate over electrical provision to recognize and partially rebut the frame imposed by the private-sector bias that lies at the heart of such legislative activity. Unfortunately, they do not enjoy lobbying resources comparable to incumbent telecommunications service providers, and thus have experienced a scattered record when it comes to staving off attacks on the public provision of broadband. The particular legislative efforts studied herein were jump-started with help from the American Legislative Exchange Council, a pro-business lobbying consortium,<sup>79</sup> which drafted a boilerplate anti-public broadband bill for member companies to circulate in state capitals across the country.<sup>80</sup> This allowed for simultaneous attacks on public provision across several states.

Colorado's handling of the question of broadband provision provides an illustrative example of how the concept can be easily marginalized via regulation. The drive to squelch public provision became especially focused once six cities began the implementation of public wireless broadband networks.<sup>81</sup> Initially cribbed from the ALEC boilerplate, the bill that was ultimately signed into law in the spring of 2005 prohibits the public provision of broadband unless approved by local referendum; once approved, public providers must adhere to all applicable regulations that apply to their private-sector competitors, which precludes the use of tax-free financing and requires payment of all applicable taxes.<sup>82</sup> Colorado's law sets out onerous requirements that a local government or other entity must comply with before actually beginning the act of provision; events like referenda "offer a venue for a well-funded industry incumbent to launch a major public relations campaign to counter the local government."<sup>83</sup> Fortunately, a provision that would have forced existing public broadband providers to privatize or disband was deleted before passage.<sup>84</sup>

The major lobbying forces behind the legislative effort in Colorado included Qwest Communications, whose headquarters is in Denver; Comcast, the country's largest cable company; and the Colorado Cable Television Association.<sup>85</sup> Qwest and AT&T became the top lobbying spenders in the Colorado state legislature.<sup>86</sup> Analysis published by the New Millennium Research Council was used heavily to woo a mostly-uncritical press. Any public entity's desire to provide broadband connectivity was cast as a market-distorting negative,<sup>87</sup> although preexisting public broadband projects in the state were undertaken only after private providers had refused to offer service in those areas. They also had track records of offering connectivity at prices 50 to 75% lower than incumbent private providers.<sup>88</sup> The Colorado Municipal League, sensing that momentum was in not in its favor, focused its efforts "to minimize the impact" of the legislation.<sup>89</sup> Just five years previously, the state of Colorado had spent more than a half-million dollars on grants to rural communities to help them obtain broadband connectivity.<sup>90</sup>

In Florida, the public provision of broadband also faces state-imposed hurdles not applicable to private providers, but at least it is not prohibited outright. Legislation initially introduced in the spring of 2005 in the Florida state Senate would have prohibited the public provision of broadband in areas where private providers operate, and would have given private



providers right of first refusal over any public proposal to serve an unserved area.<sup>91</sup> One critic of the industry push termed it tantamount to wanting to build a public library but requiring permission from Barnes & Noble first.<sup>92</sup> After major resistance from municipalities and the Florida's well-organized public utilities council, the state Senate took up revised legislation that would have saddled public broadband providers with debilitating restrictions on financing and public approval for initial deployment. This bill, too, died before reaching a floor vote, forcing incumbent telecommunications companies to radically scale back their proposed list of restrictions on public competitors. What finally passed muster, on the last day of the legislative session, only requires public providers to file annual financial reports with the state and entertain discussions of privatization if they fail to maintain a positive cash flow.<sup>93</sup> At the time of the start of this legislative skirmish, ten Florida cities had already created public wi-fi hot spots, including the capital city, Tallahassee.<sup>94</sup> Some offer service for free; those that charge for access do so at half the cost of available DSL service.<sup>95</sup>

As was the case in Colorado, proponents of the Florida bill did not couch its passage in terms of favoring the commoditization of broadband; it was, instead, about "the role of local government" in "the rapidly-changing telecommunications industry."<sup>96</sup> Sponsors of the bill warned that "we should not be like Russia was"<sup>97</sup> and that allowing government into the business of broadband provision "create[d] an artificial level of competition."<sup>98</sup> Strains of Muncie, 1934 could be heard in the words of Verizon spokesman Bob Eleck when he remarked, "Just like government can help the hungry without opening a supermarket, it can help people without Internet access without getting into the business."<sup>99</sup> The lobbying charge was primarily led by Verizon, BellSouth, Sprint, Comcast, and Adelphia.<sup>100</sup> The incumbent telephone company in the state, BellSouth, outspent all others three-to-one.<sup>101</sup> Defenders of the concept of public provision, like the Florida League of Cities and Florida Municipal Electric Association, seemed pleasantly surprised that they averted an outright ban, especially since Governor Jeb Bush tacitly supported one.<sup>102</sup> The ability of proponents of public provision to provide convincing empirical research rebutting the dominant ideological frame of the debate most likely played a factor in the resultant weakened legislation that became law.<sup>103</sup>

Texas, on the other hand, presents an excellent case study of how a wide variety of constituencies, when mobilized in time, can beat back even the most impressive lobbying of incumbent telecommunications interests. During the spring of 2005 the Texas legislature considered a wholesale revision to the state's telecommunications laws;<sup>104</sup> included was an amendment which would have prohibited any local government from providing public wireless broadband connectivity.<sup>105</sup> But the omnibus bill became stalled when the Texas House and Senate ended up approving different versions; the Senate's did not include the anti-municipal wi-fi provision, thanks in large part to opposition from large technology companies with a stake in the state, like Dell, Intel, and Texas Instruments.<sup>106</sup> Differences between the two bills initially proved insurmountable and the legislative session expired in May without reconciliation.<sup>107</sup>

Subsequently, Texas Governor Rick Perry called two special sessions during the summer, ostensibly to deal with pressing budget and tax issues. Lobbyists from the cable and telephone industries literally invaded Austin and forced telecom reform back onto the legislative agenda, led by SBC and Verizon,<sup>108</sup> though SBC outspent Verizon by more than six-to-one.<sup>109</sup> At one point there were more lobbyists for telecommunications companies working in the state capitol than there were lawmakers.<sup>110</sup> In September, Governor Perry signed a telecommunications "reform" law, but it contains no prohibition on public provision.<sup>111</sup> State Representative Phil King, who sponsored the failed amendment to ban the public provision of wireless broadband, helped himself to a vintage talking point: "I've had some municipal folks say, 'Well, we want to bridge the digital divide, and the Internet is too expensive.' Well, cars are too expensive. Should cities open up car dealerships and sell them cheaper? What about groceries? Should the city get involved with that?" King termed the conception of broadband as a utility "such a slippery slope."<sup>112</sup> But this did not fare well in the face of concerted resistance that refused to engage in that frame.<sup>113</sup> At the time of this legislative debate, of the 254 counties in Texas, 16 had no access to broadband connectivity, and another 93 had just a single provider that did not necessarily provide countywide service.<sup>114</sup>

Those who successfully staved off the prohibition attempt in Texas take special pride in the accomplishment because it occurred in the face of the heaviest corporate lobbying campaign in state history, largely due to the fact that Texas is home to SBC (now AT&T)'s corporate

headquarters. That the provision debate occurred within the context of larger political dialogue on wholesale reform of state telecommunications law, however, made the issue one of several policy planks in play. The broad coalition of interests who mobilized to defend the concept of public provision most likely affected incumbents' strategic decisions on where to focus their lobbying resources for maximum gain; banning the municipal provision of wireless connectivity apparently did not seem worth the effort in the face of such resistance.

At present 15 states have enacted some sort of barrier to public provision (although not all have banned it outright); another one is considering such a barrier; and 7 have rejected incumbent-led attempts to build one. Given that incumbent private telecommunications providers have spent more than \$80 million on state-level lobbying over the last two and a half years, the investment has only been marginally successful, relative to the historic success of power companies. This is especially notable when preexisting state laws restricting the public provision of telecommunications are separated from the most recent legislative flurry.<sup>115</sup>

In those states where local votes are required to move ahead with the public provision of broadband, incumbent telecommunications interests have made strenuous efforts to try and defeat them. A very good example of this type of intervention occurred in Lafayette, Louisiana during the spring and summer of 2005. Five days after the passage of a state law requiring municipalities to conduct referenda on the public provision of broadband,<sup>116</sup> the city of Lafayette became the first community to hold such a vote: it asked residents whether or not to approve the construction of a citywide fiber-to-the-home (FTTH) network. By a 62-to-38 percent margin, residents voted to allow the city to issue up to \$125 million in bonds to finance the network's development by the Lafayette Utility System.<sup>117</sup> This approval did not come easy: the city's two incumbent broadband providers, BellSouth and Cox Communications, conducted a major advertising and public relations campaign against the referendum. However, it ran up against the rest of Lafayette's business community and well-mobilized citizen's groups, who were frustrated with incumbents' reluctance to provide meaningful broadband service citywide.<sup>118</sup> This did not stop BellSouth and Cox from using paid volunteers to spike public meetings with anti-fiber sentiment;<sup>119</sup> publishing misleading direct mail;<sup>120</sup> telephonic "push polling" to try and convince residents to vote against the plan;<sup>121</sup> and threatening community job loss should public

competition arise.<sup>122</sup> BellSouth and Cingular Wireless employees in the area were counseled by their employers to vote no.<sup>123</sup> The Heartland Institute was enlisted to dress up an economic critique of the Lafayette fiber plan, which was riddled with misstatements and questionable mathematics.<sup>124</sup> Others from similarly-sponsored “research” institutions were flown in to Lafayette for a “forum” to discuss the negatives of the city’s plan.<sup>125</sup> The vote itself would not have been necessary had telecom incumbents not gone to court to force a special referendum, prior to the passage of the state law requiring one.<sup>126</sup> Having lost at the polls BellSouth is suing to stop the network’s construction.<sup>127</sup> Earlier in 2005, a state-sanctioned commission released a report lamenting the state of broadband penetration in Louisiana and recommended several incentives to hasten network development; these included “state investments in broadband technology” and the establishment of “public/private partnerships” for access provision.<sup>128</sup>

Lafayette’s experience is, in some ways, a stunning reversal of fortune for local decision-making about the deployment of broadband network infrastructure. In the “Tri-Cities” area of west-suburban Chicago (Batavia-Geneva-St. Charles), two consecutive advisory referenda in 2003 and 2004 on the buildout of a public fiber network were defeated after full-court presses by incumbent broadband providers SBC and Comcast, which projected losses of up to \$40 million per year from defecting customers.<sup>129</sup> The referenda were only considered after surveys of the communities suggested three in four residents would support the public provision of broadband,<sup>130</sup> and repeated entreaties to incumbent private providers to offer adequate service were rebuffed.<sup>131</sup> In 2003, voters were asked whether or not the cities should finance construction of a fiber-optic network; they disapproved by an average 60-40 margin. In 2004, the question was revised to prohibit public financing of the project, but it still failed, albeit by a closer vote.<sup>132</sup>

Pro-fiber advocates in the Tri-Cities were smothered in an avalanche of incumbent campaigning against the plan. SBC and Comcast spent more than \$300,000 to oppose the 2004 referendum, while pro-fiber forces mustered just \$4,000.<sup>133</sup> Much of that money went into full-page advertising in local newspapers and a slick direct mail campaign,<sup>134</sup> although push-polling was deployed here as well.<sup>135</sup> The time spent by company employees and retirees, bussed in from Chicago and other suburbs to campaign against the referenda, has not been quantified.<sup>136</sup> The

Heartland Institute was drafted to produce research critical of the Tri-Cities fiber network.<sup>137</sup> Following the election it became known that a columnist for one of the suburban newspapers worked for Comcast on the side doing public relations consulting work. SBC used quotes from his newspaper's editorial against the 2004 referendum in a full-color mailer urging a “no” vote.<sup>138</sup> Though the referenda were defeated, the agitation did stimulate the incumbent providers to upgrade their existing broadband infrastructures,<sup>139</sup> and citizen advocates for the public provision of broadband in the Tri-Cities area continue their education campaign in hopes of making a third run at a “yes” vote. In the meantime, Geneva, Batavia, and St. Charles have agreed to take part in a consortium of communities looking to lease dark fiber from the state of Illinois to create a regional public-sector broadband backbone.<sup>140</sup>

Given the checkered political record of the public provision of broadband at the state and local levels, many communities appear to, at least in part, be abandoning the notion of public provision in exchange for a public-private partnership model. For example, the city of Philadelphia is considered the catalyst for national interest in public wireless broadband connectivity for proposing to establish a free, citywide wireless mesh network in 2004. The announcement led Comcast and Verizon to undertake a state legislative crusade to severely restrict the public provision of broadband in Pennsylvania.<sup>141</sup> While the new law exempts communities with active public broadband projects from the restrictions, including Philadelphia, it was an incontrovertibly bruising experience for all involved. A year later, Wireless Philadelphia seems to have given up on the goal of providing ubiquitous broadband connectivity for a “low income” access tier that costs \$10 per month, operated in conjunction with private provider Earthlink, which has agreed to finance initial network construction.<sup>142</sup> Utility-esque rhetoric about the provision of wireless broadband from other major cities, like Chicago, San Francisco, and Houston, has been similarly watered down to requests for proposals from companies interested in a franchise-like arrangement, where any free access tier will come with a significant speed penalty and/or encumbered with mandatory advertising.<sup>143</sup> The city of New Orleans, in an attempt to stimulate resettlement and redevelopment following the devastation of hurricane Katrina, is the only city to announce plans to deploy a truly free wireless broadband network in the spirit of universal service. It can only do so, though, because it operates under a

state of emergency and can otherwise ignore a state law would limit the network to sub-broadband capacities.<sup>144</sup>

Though the notion of the public provision of broadband may be bruised, several communities, frustrated with watching the promise of broadband connectivity pass them by like the railroads once did, are launching bona-fide public broadband utilities, often (but not always) on the foundation of long-standing public power utilities, citing the need to give incumbent telecommunications companies a competitive “kick in the pants.”<sup>145</sup> Out of 32 referenda on the creation of broadband utilities in cities and towns across Iowa in November of 2005, more than half passed, thanks in part to an advocacy campaign captained by a former telecommunications executive,<sup>146</sup> and despite a \$1.4 million media blitz against the referenda by the state’s incumbent cable provider, Mediacom.<sup>147</sup> It should also be noted that citizens themselves are attempting to create their own provisions for broadband connectivity. This is also most apparent in the realm of wireless technology, where universities, public library systems, nonprofit organizations, and other grassroots groups work to provide neighborhood-level free access to broadband. Some of these initiatives, like the nonprofit OneCleveland network, actually seek to provide free wireless connectivity to large swaths of the city using fiber loops it already owns as the network backbone.<sup>148</sup> Others, like the Champaign-Urbana Community Wireless Network, use neighborhoods as testbeds for new low-cost wireless networking technology that citizens may eventually deploy as they see fit.<sup>149</sup>

While debate over the provision of broadband continues to rage at the state and local levels, Congress may end up deciding the issue for the entire nation. In 2005, three bills began circulating on Capitol Hill that directly addressed the issue of broadband provision. Representative Pete Sessions (R-TX) introduced the Preserving Innovation in Telecom Act of 2005, which proposed a blanket ban on any new public provision of broadband.<sup>150</sup> Such a drastic proposal is not that surprising considering its source: a 16-year former employee of SBC Communications, who held more than \$500,000 worth of SBC stock options when he introduced the PITA, and whose wife still works for SBC’s Internet Services division.<sup>151</sup> The Broadband Investment and Consumer Choice Act of 2005, sponsored by Senator John Ensign (R-NV), would have required communities to secure the permission of incumbent telecommunications

providers before moving ahead with any public broadband network-building, similar to the regulatory system incumbent telecom companies once hoped to set up in Florida. More critically, it would have frozen the growth of existing public broadband utilities by preventing them from making future network and service upgrades.<sup>152</sup> The third bill, the Community Broadband Act of 2005, would have preempted all state and local regulations that prohibit the public provision of broadband, effectively guaranteeing the continued existence of the option, but not necessarily its adoption. The legislation, sponsored by Frank Lautenberg (D-NJ), attracted the most bipartisan support of all three bills.<sup>153</sup> It also had support in the House: at least one Congressman, Mark Udall (D-CO), compared the challenge of bringing broadband to America's rural communities a task tantamount to rural electrification, and suggested government be the catalyst to make it happen.<sup>154</sup> At a certain level, this is already taking place: a descendent program of the Rural Electrification Administration, currently housed in the Department of Agriculture, has approximately \$3 billion this budget cycle to invest in low-interest loans to rural broadband service providers.<sup>155</sup> However, it has actually committed less than half of it, and the loan program's administration is severely hampered by understaffing.<sup>156</sup> Hundred year-old talking points were redeployed in the fight on Capitol Hill: at a February 2006 Senate Commerce Committee hearing on municipal ownership of telecommunications networks, Douglas Boone, representative of the United States Telecom Association,<sup>157</sup> lambasted the public provision of broadband. "Government owned networks are not akin to other public utilities," he told the panel. "In fact, government networks are more akin to City Hall opening a chain of grocery stores or gas stations."<sup>158</sup>

During the second session of the 109th Congress, reform of the 1996 Telecommunications Act became a prime legislative imperative of the Republican majority. Several contentious issues, of which the public provision of broadband is one, became entangled. As was the case in Texas, incumbent private providers redirected their lobbying efforts to other issues, which allowed the House of Representatives to approve a "reform" bill in June which preempts all state prohibitions on the public provision of broadband, yet requires public providers be afforded no special treatment over privately-owned competitors.<sup>159</sup> The Senate's Commerce Committee recently favorably reported out its own omnibus telecommunications

legislation which incorporates the Community Broadband Act.<sup>160</sup> This would seem to suggest a bright future for the public provision of broadband, at least as an option for communities to consider. However, the House and Senate omnibus bills are disparate enough that they will need to be consolidated into a compromise version via conference committee. In such committees there is the chance that legislative provisions protecting the public provision of broadband could be horse-traded away,<sup>161</sup> though this is unlikely given that nearly-identical provisions exist in the House and Senate bills. In fact, the House and Senate bills are disparate enough in other respects that attempts to consolidate them may fail before Congress' scheduled adjournment in early October. If this occurs, it can be expected that state- and community-level legislative/electoral skirmishes will continue.

Meanwhile, other federal stakeholders have given tacit support to the public provision of broadband. In September of 2005 Federal Trade Commissioner Jon Leibowitz told a conference of public broadband service providers that, in his view, the arguments incumbents provide in favor of raising entry barriers to public competition in the broadband arena were “neither illuminating nor persuasive nor consistent...[S]peaking solely for myself,” he said, “the interests of consumers and competition seem squarely aligned with your efforts.”<sup>162</sup> Perhaps the most positive sign that momentum in the struggle between public versus private provision of broadband has shifted away from the path taken by the provision of power comes from those who have been the most consistently critical of public provision. A special working group of the Progress and Freedom Foundation now specifically recommends no federal legislation to restrict or prohibit public provision of broadband, and even recognizes that circumstances exist where public provision may be desirable.<sup>163</sup>

There are several parallels to be found between the gradual privatization of the provision of power and the attempted privatization of broadband connectivity. Private electric utilities chose the state level as the place on which to focus regulatory efforts so that they could overwhelm state regulators and in effect assert a form of oversight control over the resultant regulatory environment. In doing so they helped establish regulatory regimes which disfavored the public provision of power. This was augmented by methodical and involved public relations and education campaigns which cast private utilities as “normal” and the public provision of



power as uneconomic, ill-advised, even unwholesome at a certain level. Although thorough and objective analysis is in somewhat short supply, what is available seems to suggest that the public provision of power is as or more efficient than private provision. However, the public provision of power has not survived just because it may have an economic edge, but because the communities who engage in public provision subscribe to the civic belief that power is better managed as a public resource as opposed to a simple commodity. Incumbent power companies have fiercely resisted the creation of public competitors, although when they form the affected marketplaces find a new equilibrium - one that generally consists of improved service at competitive rates.

Incumbent broadband service providers, working from the playbook of electric power, first chose the states as the place to try and craft a favorable regulatory environment for the provision of broadband. The incumbents have tried to do away with public provision as a competitive option by prohibiting it in fact of law. Where that is not possible, they seek special regulation of public provision so as to make it onerous and otherwise undesirable to undertake. Given the potential economic growth that the ubiquitous deployment of broadband may provide,<sup>164</sup> and the fact that incumbent private providers are unwilling or unable to commit to fostering such deployment, communities - like those who wanted power when power companies wouldn't wire them - are taking matters into their own hands. They view broadband like their predecessors did power.<sup>165</sup> Incumbent telecommunications companies may have spent tens of millions of dollars in the last couple of years to try and stymie the public provision of broadband, but cities and towns are conservatively expected to spend some \$700 million over the next three years to provide connectivity, either directly in the guise of a utility or in franchise-like agreements, where a private company manages a community network.<sup>166</sup> In the places where it is allowed to flourish, public provision of broadband is likely to raise the standard of what is considered adequate service, especially if ubiquity is retained as a goal. Public-private partnerships are favored by federal regulators and many major municipalities are subscribing to this model, which may mollify state-level regulatory intervention. Coalitions of public entities working together may also provide future bastions of broadband provision.<sup>167</sup>

Despite a seemingly concerted beginning, incumbents' efforts to construct state

regulations in a quasi-standardized structure of their choosing are not finding the same success their predecessors in power did a century ago. State-by-state and locality-by-locality, regulatory structure is in such flux that there exists a definitive opportunity for national standardization in the direction of ubiquitous deployment of this promising resource. Allowing public provision to act as an unfettered competitor to incumbent telecom companies appears to be the only way to spur true movement toward universal service in the digital age: the condition at which many of the projected benefits of broadband are most likely to be realized. Any federal statute protecting the right of public broadband provision might still be subject to judicial review, but such hassle is less likely the more clearly Congress articulates its intent.<sup>168</sup>

Much like the public provision of electricity, the public provision of broadband stands to play an important role in the deployment of such networks. Traditional market failure drives the demand for systems of broadband provision that are not exclusively private. An important distinction between them is that public entrants into broadband provision are not simply duplicating incumbents' networks: fiber and wireless stand to supersede copper in the ground, whether it be twisted-pair or coaxial, in terms of growth capacity. The desire to milk all possible revenue out of existing infrastructures explains some of the energy behind incumbents' resistance to the public provision of broadband. Such resistance threatens to keep the U.S. trapped in the last century in the context of connectivity. If incumbents refuse to recognize the utility of broadband, and to treat it as such, communities should have the right to implement public provision to fulfill unmet connectivity needs, spur competition among communication services, and lead the drive toward ubiquity and its potential rewards.

## Notes

1. William H. Lehr, Carlos A. Osorio, Sharon E. Gillett, and Marvin A. Sirbu, "Measuring Broadband's Economic Impact," paper presented at the 33rd Research Conference on Communication, Information, and Internet Policy (TPRC), Arlington, VA, revised as of January 17, 2006, available online at [http://cfp.mit.edu/groups/broadband/docs/2005/MeasuringBB\\_EconImpact.pdf](http://cfp.mit.edu/groups/broadband/docs/2005/MeasuringBB_EconImpact.pdf) (July 8, 2006).
2. See Robert W. Fairlie, *Are We Really A Nation Online? Ethnic and Racial Disparities in Access to Technology and Their Consequences*, Report for the Leadership Conference on Civil Rights Education Fund, September 20, 2005, online at <http://www.freepress.net/docs/lccrdigitaldivide.pdf> (July 8, 2006), and S. Derek Turner, *Broadband Reality Check: The FCC Ignores America's Digital Divide*, August 2005, online at [http://www.freepress.net/docs/broadband\\_report.pdf](http://www.freepress.net/docs/broadband_report.pdf) (July 8, 2006).
3. See White House, "Promoting Innovation and Economic Security Through Broadband Technology," March 26, 2004, online at [http://www.whitehouse.gov/infocus/technology/economic\\_policy200404/chap4.html](http://www.whitehouse.gov/infocus/technology/economic_policy200404/chap4.html) (July 8, 2006).
4. Unlike the provision of electricity, where competition may occur but is restricted to a single common infrastructure (buildings are not wired with separate outlets for competing utilities), the provision of broadband can take place via several distribution mechanisms. Most of it occurs over telephone and cable TV wires, but provision via satellite, wireless networks, and even power lines themselves has been demonstrated to be viable. However, these alternative provision models are still several years from reaching any meaningful competitive maturity. The most common alternative infrastructures being deployed by public broadband providers are fiber-optic networks and wireless clouds.
5. Richard Rudolph and Scott Ridley, *Power Struggle: The Hundred-Year War over Electricity* (New York: Harper & Row Publishers, 1986), p. 32.
6. *Id.*, p. 34.
7. Steven C. Carlson, "A Historical, Economic, and Legal Analysis of Municipal Ownership of the Information Highway," 25 *Rutgers Computer and Technology Law Journal* 1 (1999): 25.
8. James Baller, "The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure: A Historical Perspective," paper presented to the American Public Power Association Annual Telecommunications Conference, Nashville, Tennessee, October 31-November 1, 1994, online at <http://www.baller.com/library-art-history.html>. (July 8, 2006).
9. *Id.*
10. Rudolph & Ridley, p. 10-11.
11. Everett W. Burdett, "Cause of Municipal Ownership Agitation," *Moody's Magazine and American Investor*, October, 1906, p. 503.

12. Henry Clews, "Municipal Ownership a Delusion," *Moody's Magazine and American Investor*, October 1906, p. 515.
13. Arthur Williams, "Municipal Ownership Costly and Dangerous," *Moody's Magazine and American Investor*, November 1906, p. 646.
14. W.W. Freeman, "Municipal Ownership Uneconomic," *Moody's Magazine and American Investor*, October 1906, p. 521.
15. Calvin Tomkins, "Municipal Ownership a Business Problem," *Moody's Magazine and American Investor*, October 1906, p. 517.
16. Tom L. Johnson, "Municipal Ownership for All Public Utilities," *Moody's Magazine and American Investor*, November 1906, p. 650.
17. John Ford, "Reasons for Municipal Ownership," *Moody's Magazine and American Investor*, October 1906, p. 543.
18. Frank Parsons, "Public Interest Demands Public Ownership," *Moody's Magazine and American Investor*, November 1906, p. 641.
19. Baller, "The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure."
20. Rudolph & Ridley, p. 38-41.
21. Id., p. 47.
22. See John Dunbar, "Nice Work If You Can Get It," *Well Connected*, Center for Public Integrity, November 17, 2005, online at <http://publicintegrity.org/telecom/report.aspx?aid=762> (July 8, 2006).
23. Rudolph & Ridley, p. 186-192.
24. Baller, "The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure."
25. Rudolph & Ridley, p. 48-51.
26. Quoted in Richard Morgan, Tom Riesenber, and Michael Troutman, *Taking Charge: A New Look at Public Power* (Washington, D.C.: Environmental Action Foundation, 1976), p. 4.
27. Quoted in Id., p. 7.
28. Baller, "The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure."
29. David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge, MA: The MIT Press, 1990), p. 340.

30. Morgan, Riesenberg, and Troutman, p. 8.
31. Nye, p. 297.
32. Rudolph & Ridley, p. xi.
33. John M. Eger and Arthur M. Becker, *Telecommunications and Municipal Utilities: Competition and Cooperation in the New Economy*, paper prepared for American Public Power Association, September 2000, p. 29, online at [http://www.appanet.org/files/PDFs/eger\\_telecom\\_report.pdf](http://www.appanet.org/files/PDFs/eger_telecom_report.pdf) (July 8, 2006).
34. See Rudolph & Ridley, p. 12-13, which details the various “spin-off” institutes Edison has incubated over the years: the Committee for Energy Awareness, Atomic Industrial Forum, North American Electric Reliability Council, and Electric Power Institute.
35. For more on Insull see Forrest McDonald, *Insull: A Biography* (Chicago: University of Chicago Press, 1962).
36. Rudolph & Ridley., p. 134.
37. Id., p. 84.
38. Nye, p. 302.
39. Jim Baller and Sean Stokes, “The Case for Municipal Broadband Networks: Stronger Than Ever,” *Journal of Municipal Telecommunications Policy*, vol. 9, iss. 3 (Fall 2001): 19, online at <http://www.baller.com/library-art-natoa.html> (July 8, 2006).
40. Carlton L. Nau, *Public Power Pays!* (Washington, D.C.: American Public Power Association, 1948), p. 4-5.
41. Rudolph & Ridley, p. 126.
42. Baller, “The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure.”
43. Morgan, Reisenberg, and Troutman, p. 19. This has a direct corollary to the present: see Bruce Kushnick, *The \$200 Billion Broadband Scandal* (New Networks Institute, 2006), online at <http://www.newnetworks.com/broadbandscandals.htm> (July 8, 2006).
44. Id., p. 60-61.
45. Id., p. 64-65.
46. Id., p. 67.
47. John E. Kwoka, Jr., *Power Structure: Ownership, Integration, and Competition in the U.S. Electricity Industry* (Boston: Kluwer, 1996), p. 19, table 2.1.
48. Id., p. 119.

49. Baller, "Deceptive Myths About Municipal Broadband," *Broadband Properties*, May 2005, p. 14.

50. American Public Power Association, "Advanced Communications Services," Issue Brief, July 2005, p. 1.

51. American Public Power Association, "Community Broadband: Separating Fact from Fiction," January 2004, online at <http://www.appanet.org/files/PDFs/BroadbandFactFiction.pdf> (July 8, 2006).

52. American Public Power Association, *Payments and Contributions by Public Power Distribution Systems to State and Local Governments, 2002 Data* (Washington, D.C.: American Public Power Association, 2004), online at <http://www.appanet.org/files/PDFs/PilotReport2002.pdf> (July 8, 2006).

53. Robert S. McIntyre and T.D. Co Nguyen, *Corporate Income Taxes in the Bush Years* (Washington, D.C.: Citizens for Tax Justice and the Institute on Taxation and Economic Policy, September 2004), p. 4, online at <http://www.ctj.org/corpfed04an.pdf> (July 8, 2006).

54. John D. Donahue, *The Privatization Decision: Public Ends, Private Means* (New York: Basic Books, 1989), p. 32.

55. John Kelly, "Old Snake Oil in New Bottles: Ideological Attacks on Local Public Enterprises in the Telecommunications Industry," American Public Power Association, October 2001, p. 22-23, online at <http://www.appanet.org/files/PDFs/Revisedtelecom.pdf> (July 8, 2006). Incidentally, there are fewer than 4,000 electric utilities in the United States, and while private power providers serve the majority of U.S. residents, on the level of raw numbers of utilities the majority fall into the publicly-owned category. See Kwoka, p. 140.

56. Eger & Becker, p. 7.

57. Carlson, p. 7-8.

58. Baller, "The Essential Role of Consumer-Owned Electric Utilities in Developing the National Information Infrastructure."

59. Id.

60. Baller & Stokes, "The Case for Municipal Broadband Networks."

61. Baller & Stokes, "The Public Sector's Authority to Engage in Telecommunications Activities," *Journal of Municipal Telecommunications*, vol. 1, iss. 1 (April 1999), online at <http://www.baller.com/library-art-public.html> (July 8, 2006).

62. American Public Power Association, "Community Broadband: Separating Fact from Fiction," p. 15.

63. Carlson, p. 53-55.

64. American Public Power Association, "Community Broadband: Separating Fact from Fiction," p. 5-6.

65. Baller and Stokes, "The Public Sector's Authority to Engage in Telecommunications Activities."

66. See *Nixon v. Missouri Municipal League*, 541 U.S. 125 (2004) and Gregory Rose, Mark Cooper, and Ben Scott, *Connecting the Public: The Truth About Municipal Broadband*, April 2005, p. 11, online at [http://www.mediaaccess.org/MunicipalBroadband\\_WhitePaper.pdf](http://www.mediaaccess.org/MunicipalBroadband_WhitePaper.pdf) (July 8, 2006). Although the FCC declared a distinction between the classification of the underlying physical infrastructure used by incumbent providers of broadband connectivity, which subsequently affected the potential for competition on that infrastructure (in that cable TV networks provide "information services" and thus are not required to open their networks to competitors, while broadband over telephone lines is a "telecommunications service," which until recently required phone companies to allow competitors access to their wires), this is not extremely important in the context of the debate between public and private provision, which typically involves the construction of entirely new physical infrastructure to compete with incumbents.

67. See Carl Kandutsch, "The Case For Municipal Broadband," *Broadband Properties*, May, 2005, p. 18-25, online at [http://www.broadbandproperties.com/2005issues/may05issues/Carl\\_Kandutsch\\_The\\_Case\\_for\\_Muni\\_Broadband.pdf](http://www.broadbandproperties.com/2005issues/may05issues/Carl_Kandutsch_The_Case_for_Muni_Broadband.pdf) (July 8, 2006).

68. See Jeffrey A. Eisenach, "Does the Government Belong in the Telecom Business?" *Progress on Point* 8.1 (January, 2001), online at <http://www.pff.org/issues-pubs/pops/pop8.1govtintelecom.pdf> (July 8, 2006) and Thomas M. Lenard, "Government Entry into the Telecom Business: Are the Benefits Commensurate With the Costs?," *Progress on Point* 11.3 (February, 2004), online at <http://www.pff.org/issues-pubs/pops/pop11.3govtownership.pdf> (July 8, 2006).

69. See Joseph L. Bast, *Municipally Owned Broadband Networks: A Critical Evaluation (Revised Edition)*, 2004, online at <http://www.heartland.org/Article.cfm?artId=15840> (July 8, 2006). The first edition was published in 2002.

70. See Braden Cox, Tom Giovanetti, David P. McClure, Steven Titch, Ron Rizzuto, David G. Tuerck, *Not in the Public Interest: the Myth of Municipal Wi-Fi Networks*, New Millennium Research Council, February, 2005, online at <http://newmillenniumresearch.org/archive/wifireport2305.pdf> (July 8, 2006).

71. See Michael J. Balhoff and Robert C. Rowe, *Municipal Broadband: Digging Beneath the Surface*, self-published September, 2005, online at <http://www.balhoffrowe.com/pdf/Municipal%20Broadband--Digging%20Beneath%20the%20Surface.pdf> (July 8, 2006).

72. See Kelly, "Old Snake Oil in New Bottles"; Ben Scott and Frannie Wellings, *Telco Lies and the Truth About Municipal Broadband Networks*, April, 2005, online at [http://www.freepress.net/docs/mb\\_telco\\_lies.pdf](http://www.freepress.net/docs/mb_telco_lies.pdf) (July 8, 2006); Baller, "Response to Progress & Freedom Foundation Paper of February 2004," June 16, 2004, online at [http://www.baller.com/pdfs/baller\\_response\\_to\\_pff.pdf](http://www.baller.com/pdfs/baller_response_to_pff.pdf) (July 8, 2006); Baller, "Responses to SBC's Examples of Supposed Municipal 'Failures,'" October 5, 2004, online at [http://www.baller.com/pdfs/baller\\_response\\_to\\_SBC.pdf](http://www.baller.com/pdfs/baller_response_to_SBC.pdf) (July 8, 2006); and Fiber for our Future, "Broadband Failures," August 12, 2004, online at <http://www.tricitybroadband.com/failures.htm> (July 8, 2006).

73. The Progress and Freedom Foundation counts among its sponsors BellSouth, Comcast, MCI, SBC, Sprint-Nextel, Quest, and various telecom trade groups: see "About PFF," *Progress and Freedom Foundation*, 2005, <http://pff.org/about/supporters.html> (July 8, 2006). The New Millennium Research Council is a wholly-owned subsidiary of Issue Dynamics, Incorporated, "a consumer and public affairs consulting firm" designed to win "legislative and regulatory campaigns" for its clients, who include Ameritech, BellSouth, Comcast, Pacific Bell, Qwest, and Verizon, among others; see "About NMRC," *New Millennium Research Council*, 2005, <http://newmillenniumresearch.org/about/> (July 8, 2006) and "Issue Dynamics, Inc. - About Us," *IDI.net*, 2005, <http://www.idi.net/about/clients.vtml> (July 8, 2006). The Heartland Institute no longer makes its funding public, citing scrutiny: see "Who funds the Heartland Institute," *heartland.org*, 2005, <http://www.heartland.org/FAQArticle.cfm?faqId=7> (July 8, 2006). Balhoff & Rowe make their living advising companies on telecommunications investment opportunities; see "Services," *balhoffrowe.com*, 2005, <http://www.balhoffrowe.com/services.htm> (July 8, 2006). *Municipal Broadband: Digging Beneath the Surface* was partially sponsored by Qwest. Additionally, these entities often cross-breed and co-publish research, as is evidenced by collaboration between Heartland and NMRC.

74. See MSB Energy Associates, Inc., *Major Tax Breaks for Investor-Owned Telephone Companies In the Year 2000*, report prepared by MSB Energy Associates for the American Public Power Association, January 2002, online at <http://www.appanet.org/files/PDFs/Revisedtelecom.pdf> (July 8, 2006).

75. See Florida Municipal Electric Association, "The Case for Municipal Broadband in Florida," March 2005, p. 14, online at [http://www.baller.com/pdfs/fmea\\_white\\_paper.pdf](http://www.baller.com/pdfs/fmea_white_paper.pdf) (July 8, 2006), and Baller, "Deceptive Myths About Municipal Broadband," p. 15.

76. See Baller & Stokes, "The Public Sector's Authority to Engage in Telecommunications Activities," wherein it is noted that such anticompetitive behavior is explicitly forbidden by the Telecommunications Act of 1996.

77. See George S. Ford, "Does Municipal Supply of Communications Crowd-Out Private Communications Investment: An Empirical Study," *Applied Economic Studies*, February, 2005, online at <http://www.aestudies.com/library/crowdout.pdf> (July 8, 2006), and Kwoka, p. 134-135.

78. Reza Dibadj, "Monopoly v. Municipality," *The National Law Journal*, vol. 27, no. 72 (February 14, 2005), p. 26.



79. ALEC calls itself a “membership organization,” but does not note that its members are primarily corporations, see People for the American Way, “American Legislative Exchange Council,” n.d., online at <http://www.pfaw.org/pfaw/general/default.aspx?oid=6990> (July 8, 2006) and Joshua Holland, “Creating a Right-Wing Nation, State by State,” *Alternet*, November 15, 2005, online at <http://www.alternet.org/story/28259/> (July 8, 2006). The Treasurer of ALEC’s “Private Enterprise Board” is a lobbyist for BellSouth, while its Chairman Emeritus hails from Verizon Communications; see American Legislative Exchange Council, “ALEC National Board of Directors,” n.d., online at <http://www.alec.org/about/alec-national-board-of-directors.html> (July 8, 2006).

80. See Esme Vos, “Do-it-yourself anti-municipal broadband kit,” *Muniwireless.com*, December 20, 2004, <http://www.muniwireless.com/archives/municipal/504> (July 8, 2006); the ALEC boilerplate itself may be viewed at <http://www.muniwireless.com/reports/docs/antimunicipalbroadband.doc> (July 8, 2006).

81. See Steven K. Paulson, “Lawmakers seek ways to expand wireless internet access,” *Associated Press*, April 3, 2005, BC Cycle.

82. See Senate Bill 05-152 (as enrolled), online at [http://www.leg.state.co.us/clics2005a/csl.nsf/fsbillcont3/FA216226F45192FE87256F41007B483C?open&file=152\\_enr.pdf](http://www.leg.state.co.us/clics2005a/csl.nsf/fsbillcont3/FA216226F45192FE87256F41007B483C?open&file=152_enr.pdf) (July 8, 2006).

83. See Free Press, “Community Internet - Colorado,” *freepress.net*, 2005, <http://www.freepress.net/communityinternet/=co> (July 8, 2006).

84. Dennis Webb, “Bill no longer threat to city broadband,” *Glenwood Springs Post Independent*, March 3, 2005, online at <http://www.freepress.net/news/7060> (July 8, 2006).

85. Editorial Board, “Solution in search of problem,” *Denver Post*, May 2, 2005, p. B-7.

86. See Center for Public Integrity, “Well Connected In Your State - Colorado,” *publicintegrity.org*, <http://www.publicintegrity.org/telecom/iys.aspx?st=CO> (July 8, 2006) and Kimberly S. Johnson, “Telecoms big political donors,” *Denver Post*, September 29, 2005, P. C-8.

87. See David Harsani, “Lawmakers get wind of wi-fi. Uh-oh.,” *Denver Post*, April 7, 2005, p. B-1; Will Shanley, “Whose Wi-Fi is it?” *Denver Post*, May 4, 2005, P. C-1; and Editorial Board, “Bar government from telecom biz; Veiga’s bill a good start,” *Rocky Mountain News*, February 5, 2005, p. 14C.

88. See John Norton, “House panel passes Internet bill to require votes by governments,” *Pueblo Chieftain*, April 6, 2005, via Lexis-Nexis.

89. Colorado Municipal League, “House amends, passes telecom bill,” *Statehouse Report*, April 19, 2005, p. 8.

90. Marylou Doehrman, “Rural broadband service aided by federal spending,” *Colorado Springs Business Journal*, September 10, 2004, via Lexis-Nexis.

91. See SB 2072, online at [http://www.publicpower.com/telecom\\_study/sb2072.pdf](http://www.publicpower.com/telecom_study/sb2072.pdf) (March 15, 2006) and SB 1714 / HB 1325, online at <http://www.leg.state.fl.us/data/session/2005/Senate/bills/billtext/pdf/s1714.pdf> (July 8, 2006).

92. See George Ford in Editorial Board, "Don't Cut Cities' Data Cables," *Tampa Tribune*, April 13, 2005, p. 12.

93. See SB 1322 (engrossed), online at [http://www.flsenate.gov/cgi-bin/view\\_page.pl?Tab=session&Submenu=1&FT=D&File=sb1322er.html&Directory=session/2005/Senate/bills/billtext/html/](http://www.flsenate.gov/cgi-bin/view_page.pl?Tab=session&Submenu=1&FT=D&File=sb1322er.html&Directory=session/2005/Senate/bills/billtext/html/) (July 8, 2006).

94. See Editorial Board, "Give cities wi-fi option," *Palm Beach Post*, March 28, 2005, p. 14A.

95. See Beatrice E. Garcia and Erika Bolstad, "Industry opposes cities' Internet service," *Miami Herald*, May 5, 2005, via Lexis-Nexis.

96. Jim Saunders, "Bill puts limits on cities that offer Internet Access," *Daytona Beach News-Journal*, May 13, 2005, online at <http://www.freepress.net/news/8276> (July 8, 2006).

97. Joe Follick, "Telecom bill worries smaller cities," *Sarasota Herald-Tribune*, Manatee Edition, May 3, 2005, P. BM1.

98. Will Rodgers, "Bill Would Restrict Municipal Telecoms," *Tampa Tribune*, March 22, 2005, sec. Moneysense, p. 1.

99. Quoted in Robert Perez, "Cities, Internet giants fight over turf," *South Florida Sun-Sentinel*, March 24, 2005, online at <http://www.freepress.net/news/7393> (July 8, 2006).

100. Editorial Board, "Cities Handicapped In Telecom Service," *Lakeland Ledger*, May 5, 2005, p. A8; Rocky Scott, "Small town set to jump on net," *Tallahassee Democrat*, February 23, 2005, online at <http://www.freepress.net/news/6881> (July 8, 2006); and Scott, "Bill targets public broadband," *Tallahassee Democrat*, February 18, 2005, online at <http://www.freepress.net/news/6828> (July 8, 2006).

101. See Center for Public Integrity, "Well Connected In Your State - Florida," *publicintegrity.org*, <http://publicintegrity.org/telecom/iys.aspx?st=FL> (July 8, 2006).

102. Kristi E. Swartz, "Packed telecom bill passes," *Palm Beach Post*, May 7, 2005, online at <http://www.freepress.net/news/8102> (July 8, 2006) and Jacob Ogles, "Will bill hang up on city?" *The Daily Commercial*, March 6, 2005, online at <http://www.mywebpal.com/news/partners/701/public/news615623.html> (July 8, 2006).

103. See Florida Municipal Electric Association Executive Director Barry Moline letter to Governor Jeb Bush, February 21, 2005, online at [http://www.freepress.net/communityinternet/FMEA\\_Letter\\_to\\_JBush\\_2.21.05.pdf](http://www.freepress.net/communityinternet/FMEA_Letter_to_JBush_2.21.05.pdf) (July 8, 2006); Rocky Scott, "Cities cite studies in Internet fight," *Tallahassee Democrat*, April 12, 2005, via Lexis-Nexis; and Editorial Board, "Broad competition: Don't ban cities' high-speed services," *Daytona Beach News-Journal*, March 26, 2005, online at <http://www.freepress.net/news/7472> (July 8, 2006).

104. See the Texas Legislature's online database summary of HB 789 including a record of its iterations, at <http://www.capitol.state.tx.us/cgi-bin/db2www/tlo/billhist/billhist.d2w/report?LEG=79&SESS=R&CHAMBER=H&BILLTYPE=B&BILLSUFFIX=00789> (July 8, 2006).

105. Available online at <http://www.capitol.state.tx.us/data/docmodel/79r/amndtext/faspdf/HB007891236.PDF> (July 8, 2006).

106. See Chip Rosenthal, "Save Muni Wireless Archives," 2005, *savemuniwireless.org*, <http://www.savemuniwireless.org/blog/archives.html> (July 8, 2006) and "Muni Network Documents," *savemuniwireless.org*, March 22, 2005, <http://savemuniwireless.org/blog/000813.html> (July 8, 2006) for a large collection of fact sheets and information on the coalition that opposed the prohibition on public wireless. Part of Intel's support for public provision of broadband can be seen in its "Digital Communities" initiative, online at <http://www.intel.com/business/bss/industry/government/digital-communities.htm> (July 8, 2006). Also see Giselle Greenwood, "Dell Stumps for Free Wi-Fi," *Austin Business Journal*, April 29, 2005, online at <http://www.bizjournals.com/austin/stories/2005/05/02/story2.html> (July 8, 2006).

107. See Claudia Grisales, "Phone companies' TV plan is dead," *Austin American-Statesman*, May 29, 2005, online at <http://www.tfa-wireless.ece.rice.edu/statesman.pdf> (July 8, 2006), and Grisales, "Telecom bills may avoid Senate debate," *Austin American-Statesman*, May 11, 2005, online at <http://www.freepress.net/news/8114> (July 8, 2006) for exploration as to how the bill was condemned.

108. See Terry Maxon and Sudeep Reddy, "Bill would clear way for TV by phone line," *Dallas Morning News*, August 10, 2005, and Grisales, "Telecom measure awaiting Perry's action or inaction," *Austin American-Statesman*, August 11, 2005, p. C1.

109. See Center for Public Integrity, "Well Connected In Your State - Texas," *publicintegrity.org*, <http://publicintegrity.org/telecom/iys.aspx?st=TX> (July 8, 2006).

110. See David Baumgarten, "More Cities Offering Wireless Internet Access," *Well Connected*, Center for Public Integrity, September 29, 2005, online at <http://publicintegrity.org/telecom/report.aspx?aid=743> (July 8, 2006), and AARP, Consumers Union, Common Cause, Texas ISP Association, Save Muni Wireless and Technology for All, "Texas Consumers to Elected Leaders: 'Please Listen to Us,'" August 9, 2005, online at <http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/08-09-2005/0004085470&EDATE=> (July 8, 2006).

111. For more on the overtime push in Texas on telecom reform, see Free Press, "Defend Local Access - Texas," September 8, 2005, <http://www.freepress.net/defendlocalaccess/=TX> (July 8, 2006).

112. Quoted in Bobby White, "Debate arises over municipalities' actions on wireless networks," *Dallas-Fort Worth Star-Telegram*, August 24, 2005, via Lexis-Nexis.

113. See David Deans, "On Texas House Bill 789," *Muniwireless.com*, February 22, 2005, <http://www.muniwireless.com/archives/guests/568> (July 8, 2006); Glen Fleishman, "Texas Rep Makes Case Against His Own Bill," *Wi-Fi Networking News*, April 5, 2005, <http://wifinetnews.com/archives/005095.html> (July 8, 2006); Jeff Tonn, "Will the Lege Shut Down Public Broadband?," *Austin Chronicle*, April 22, 2005, online at [http://www.austinchronicle.com/issues/dispatch/2005-04-22/pols\\_feature6.html](http://www.austinchronicle.com/issues/dispatch/2005-04-22/pols_feature6.html) (July 8, 2006); and Editorial Board, "Bill Leaves Rural Texas in Dark," *The Daily Texan*, March 4, 2005, online at <http://www.dailytexanonline.com/media/paper410/news/2005/03/04/Opinion/Viewpoint.Bill.Lev.Rural.Texas.In.Dark-885605.shtml> (July 8, 2006).

114. Claudia Grisales, "Municipal broadband faces limits," *Austin American-Statesman*, March 2, 2005, online at <http://www.freepress.net/news/7082> (July 8, 2006).

115. See John Dunbar, "Former Bells Dial Up Big Numbers in Statehouses," *Well Connected*, Center for Public Integrity, September 29, 2005, [publicintegrity.org](http://publicintegrity.org), <http://publicintegrity.org/telecom/report.aspx?aid=744#> (July 8, 2006).

116. See SB 126, online at <http://www.legis.state.la.us/billdata/streamdocument.asp?did=316835> (March 15, 2006). Legislative history available at <http://www.legis.state.la.us/billdata/history.asp?sessionid=05RS&billid=SB126> (July 8, 2006). The legislation was sponsored at the explicit behest of the cable industry; see Claire Taylor, "Legislation could delay fiber project," *Lafayette Daily Advertiser*, April 16, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050416/SPECIALSECTION03/504160339/1054> (July 8, 2006).

117. Marguerite Reardon, "Voters approve citywide fiber project," *CNet News.com*, July 18, 2005, [http://news.com.com/Voters+approve+citywide+fiber+project/2100-1033\\_3-5792387.html?tag=nefd.top](http://news.com.com/Voters+approve+citywide+fiber+project/2100-1033_3-5792387.html?tag=nefd.top) (July 8, 2006).

118. See Claire Taylor, "Groups back fiber plan," *Lafayette Daily Advertiser*, June 25, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050625/SPECIALSECTION03/506250323/1054> (July 8, 2006), and Nick Pittman, "How LUS Beat the Big Guys," *The Acadiana Times*, August 3, 2005, online at <http://www.timesofacadiana.com/apps/pbcs.dll/article?AID=/20050803/NEWS01/508030309/1002> (July 8, 2006).

119. See John St. Julien, "Abusing the Town Hall Meetings," *Lafayette Pro-Fiber Blog*, July 13, 2005, <http://lafayetteprofiber.com/Blog/2005/07/abusing-town-hall-meetings.html> (July 8, 2006).

120. See St. Julien, "Misinformation Alert: Mail Piece," *Lafayette Pro-Fiber Blog*, July 15, 2005, <http://lafayetteprofiber.com/Blog/2005/07/misinformation-alert-mail-piece.html> (July 8, 2006).

121. Taylor, "Fiber foes' poll annoys, tickles respondents," *Lafayette Daily Advertiser*, May 4, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050504/SPECIALSECTION03/505040318/1054> (July 8, 2006), and Taylor, "BellSouth says it took part in survey," *Lafayette Daily Advertiser*, May 6, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050506/SPECIALSECTION03/505060348/1054> (July 8, 2006). BellSouth's financing of the poll can be found in documents filed with the Louisiana Ethics Board, available online at <http://www.ethics.state.la.us/cgi-bin/laimg/?F503853+0> (July 8, 2006).
122. See Taylor, "BellSouth denies local job threat," *Lafayette Daily Advertiser*, February 26, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050226/SPECIALSECTION03/502260345/1054> (July 8, 2006).
123. See Taylor, "Fiber debate turns tense," *Lafayette Daily Advertiser*, July 13, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050713/SPECIALSECTION03/507130333/1054> (July 8, 2006).
124. See Steven Titch, "Municipal Broadband: Optimistic Plan, Disappointing Reality," June 20, 2005, available online at <http://www.heartland.org/Article.cfm?artId=17260> (July 8, 2006) and Jim Baller, "Response to the Heartland Institute's Attack on the Lafayette Fiber Plan," June 23, 2005, online at [http://www.baller.com/pdfs/lafayette\\_response\\_heartland\\_6-23-05.pdf](http://www.baller.com/pdfs/lafayette_response_heartland_6-23-05.pdf) (July 8, 2006).
125. See Mike Stagg, "A Look at the 'Academic Broadband Forum,'" *Lafayette Pro Fiber*, August 2005, <http://lafayetteprofiber.com/FactCheck/Academic%20Forum.html> et seq. (July 8, 2006).
126. See Taylor, "Cox asks PSC to reconsider fiber rules," *Lafayette Daily Advertiser*, October 15, 2005, available online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20051015/SPECIALSECTION03/510150324/1054> (July 8, 2006).
127. See Taylor, "Two lawsuits filed to stop LUS' fiber-to-the-home project," *Lafayette Daily Advertiser*, October 8, 2005, available online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20051008/SPECIALSECTION03/510080312/1054> (July 8, 2006).
128. Mike Hasten, "Council: A lot of work and money needed to bring broadband to rural La.," *The Shreveport Times*, March 23, 2005, available online at <http://www.shreveporttimes.com/apps/pbcs.dll/article?AID=/20050323/NEWS01/503230318/1002/NEWS> (July 8, 2006).
129. Lee Murphy, "Broadband static in Fox Valley towns," *Crain's Chicago Business*, March 3, 2003, p. 3.
130. Patrick Waldron, "Tri-Cities leaders to pursue more broadband studies," *Chicago Daily Herald*, August 23, 2001, p. 1.

131. Erica Meltzer, "Tri-Cities leaders frustrated with AT&T's delays," *Chicago Daily Herald*, April 13, 2001, p. 1.
132. The margin is disputed: see Garrett Ordower, "Broadband vote in limbo," *Chicago Daily Herald*, November 20, 2004, p. 1.
133. Garrett Ordower, "Broadband quest cost \$300,000," *Chicago Daily Herald*, February 2, 2005, p. 1.
134. See Patrick Waldron, "Tri-Cities' mayors unite in favor of broadband," *Chicago Daily Herald*, March 25, 2003, p. 9. An archive of these ads and mailings exists online; see Fiber for our Future, "Incumbent Misinformation Mailers," <http://www.tricitybroadband.com/mailers.htm> (July 8, 2006).
135. Dan Chanzit, "Broadband Survey 'A Lie,'" *Kane County Chronicle*, February 21, 2003, online at <http://www.tricitybroadband.com/news1.htm> (July 8, 2006), and "Comcast, SBC say surveys 'legitimate research,'" *Kane County Chronicle*, February 22, 2003, online at <http://www.tricitybroadband.com/news2.htm> (July 8, 2006).
136. Taylor, "Fiber battle could get ugly," *Lafayette Daily Advertiser*, March 20, 2005, online at <http://www.theadvertiser.com/apps/pbcs.dll/article?AID=/20050320/SPECIALSECTION03/503200327/1054> (July 8, 2006).
137. See Bast, *Municipally Owned Broadband Networks: A Critical Evaluation*, first ed.
138. Mark Fitzgerald, "Post-Election Fallout at 'Kane County (Ill.) Chronicle' Over Columnist's Role," *Editor and Publisher*, November 9, 2004, online at <http://www.freepress.net/news/5328> (July 8, 2006).
139. Gala M. Pierce, "SBC unveils service coverage plan for Batavia," *Chicago Daily Herald*, July 7, 2004, p. 4.
140. Linda Haugsted, "Dark Fiber Paves Ill. Net," *Multichannel News*, February 14, 2005, <http://www.multichannel.com/article/CA503522.html?display=Top+Stories&referral=SUPP> (July 8, 2006).
141. See Jesse Drucker, "Law restricts municipal wi-fi networks," *Wall Street Journal*, December 1, 2004, online at <http://www.freepress.net/news/5593> (July 8, 2006), and Matt Richtel, "Pennsylvania limits cities in offering Net access," *New York Times*, December 2, 2004, p. 6.
142. Deborah Yao, "Wireless Philadelphia deal found hard to refuse, but risks abound," *Associated Press*, October 6, 2005, BC Cycle.
143. See Gary Washburn, "Chicago ponders citywide 'Wi-Fi' network," *Chicago Tribune*, March 9, 2005, via Lexis-Nexis; Lisa Neff, "San Francisco moves forward on citywide wi-fi plan," *Associated Press*, August 16, 2005, BC Cycle; and John C. Roper, "Going Wireless," *Houston Chronicle*, November 15, 2005, p. 1.

144. See Jonathan Krim, "New Orleans's New Connection: City-Owned WiFi System To Be Announced Today," *Washington Post*, November 29, 2005, p. D1.

145. See James S. Granelli, "Impatient cities supply their own broadband," *Los Angeles Times*, November 13, 2005, Sec. Business, p. 1.

146. Frank Vinluan, "Both sides of telecom utility vote see success," *Des Moines Register*, November 10, 2005, online at <http://desmoinesregister.com/apps/pbcs.dll/article?AID=/20051110/BUSINESS04/511100381/1029/BUSINESS> (July 8, 2006).

147. David Pitt, "Mediacom spends more than \$1 million to defeat telecom issue," *The Associated Press*, November 7, 2005, BC Cycle.

148. For more information see <http://onecleveland.org> (July 8, 2006).

149. For much more information see <http://www.cuwireless.net/> (July 8, 2006).

150. See H.R. 2726 via *Thomas*, May 26, 2005, <http://thomas.loc.gov/cgi-bin/bdquery/z?d109:h.r.02726>: (July 8, 2006).

151. See Pete Sessions, "Financial Disclosure Statement for Calendar Year 2003," filed May 17, 2004, online at [http://opensecrets.org/pfds/pfd2003/N00005681\\_2003.pdf](http://opensecrets.org/pfds/pfd2003/N00005681_2003.pdf) (July 8, 2006), and "Financial Disclosure Statement for Calendar Year 2004," filed May 13, 2005, online at [http://opensecrets.org/pfds/pfd2004/N00005681\\_2004.pdf](http://opensecrets.org/pfds/pfd2004/N00005681_2004.pdf) (July 8, 2006).

152. See S. 1504 via *Thomas*, July 27, 2005, <http://thomas.loc.gov/cgi-bin/bdquery/z?d109:s.01504>: (July 8, 2006).

153. See S. 1294 via *Thomas*, June 23, 2005, <http://thomas.loc.gov/cgi-bin/bdquery/z?d109:s.01294>: (July 8, 2006).

154. Mark Udall, "Connecting America's rural areas to broadband," *The Hill*, October 20, 2005, online at <http://thehill.com/thehill/export/TheHill/News/Frontpage/102005/ssudall.html> (July 8, 2006).

155. See U.S. Department of Agriculture, "Rural Broadband Development Loan and Loan Guarantee Program," online at <http://www.usda.gov/rus/telecom/broadband.htm> (July 8, 2006).

156. See Vikas Bajaj, "Money is there to aid rural Internet, but loans are hard to get," *New York Times*, November 29, 2005, available online at <http://www.freepress.net/news/12553> (July 8, 2006).

157. USTA is the primary lobbying organization for phone companies in Washington, D.C.

158. Testimony of Douglas A. Boone, Hearing on State and Local Issues and Municipal Networks, United States Senate Committee on Commerce, Science and Transportation, February 14, 2006, online at <http://commerce.senate.gov/pdf/boone-021406.pdf> (July 8, 2006).

159. See H.R. 5252, Communications Opportunity, Promotion, and Enhancement Act of 2006, Title IV, Sec. 401, "Government Authority to Provide Services," passed June 8, 2006, via *Thomas*, <http://thomas.loc.gov/cgi-bin/bdquery/z?d109:h.r.05252>: (July 8, 2006).

160. See S. 2686, Communications, Consumer's Choice, and Broadband Deployment Act of 2006, Title V, "Municipal Broadband," approved by committee June 28, 2006, via *Thomas*, <http://thomas.loc.gov/cgi-bin/bdquery/z?d109:s.02686>: (July 8, 2006).

161. See Marilyn Geewax, "Congress Shaping Telecom Law in Private," *Austin American-Statesman*, May 7, 2006, online at <http://freepress.net/news/15363> (July 8, 2006).

162. Federal Trade Commissioner Jon Leibowitz, "Municipal Broadband: Should Cities Have a Voice?," Remarks to the National Association of Telecommunications Officers and Advisers (NATOA) 25th Annual Conference, Washington, D.C., September 22, 2005, p. 5, 7, online at <http://www.ftc.gov/speeches/leibowitz/050922municipalbroadband.pdf> (July 8, 2006).

163. Progress and Freedom Foundation: *Digital Age Communications Act: Report from the Working Group on Federal-State Framework*, Release 2.01, October 2005, p. 30-31, online at [http://www.pff.org/issues-pubs/books/051026daca\\_fed\\_state\\_report2.01.pdf](http://www.pff.org/issues-pubs/books/051026daca_fed_state_report2.01.pdf) (July 8, 2006).

164. David Kirkpatrick, "Could Universal Broadband Add \$500 billion to the GDP?," *Fortune*, October 21, 2005, online at <http://www.freepress.net/news/12133> (July 8, 2006).

165. Marguerite Reardon and Jim Hu, "Cities hook up in broadband battles," *ZDNet*, May 6, 2005, [http://news.zdnet.com/2100-1035\\_22-5697760.html](http://news.zdnet.com/2100-1035_22-5697760.html) (July 8, 2006).

166. Esme Vos, "2005 Municipal Wireless State of the Market Report," *Muniwireless*, September 26, 2005, summary online at <http://muniwireless.com/municipal/reports/841> (July 8, 2006).

167. Terrence P. McGarty and Ravi Bhagavan, "Municipal Broadband Networks: A Revised Paradigm of Ownership," working paper for the MIT Internet and Telephony consortium group (Merton Group, 2002), p. 34, online at [http://itc.mit.edu/itel/docs/2002/Municipal\\_Broadband.pdf](http://itc.mit.edu/itel/docs/2002/Municipal_Broadband.pdf) (July 8, 2006).

168. See Drew Clark, "Court Ruling May Shape Municipal Broadband Debate," *National Journal's Insider Update*, August 17, 2005, <http://www.njtelecomupdate.com/lenya/telco/live/tb-EPZX1124309966916.html> (July 8, 2006).