



*Perspectives from FSF Scholars*  
*February 12, 2021*  
*Vol. 16, No. 8*

**Hiding the Subsidy:  
The Financial Transparency Problem With Municipal Broadband Systems**

by

**Theodore R. Bolema \***

**I. Introduction and Summary**

Despite convincing evidence compiled over the years that many municipal broadband networks have been, and remain, financially troubled, there are those that continue to advocate for them almost without qualification. But the general lack of useful financial data to assess the true merits of municipal networks is highly problematic.

Significantly, one of the main drivers of this lack of useful financial data is that most governments that also provide electricity fail to provide separate financial records for broadband vs. electricity services. The financial records for the relatively few governments which do not combine broadband financials and electricity financials show that the broadband operations usually are not viable on their own and are being subsidized by the municipalities' electricity services. Thus, the failure to keep separate financial records for the broadband operations has the effect, whether intended or not, of hiding a cross-subsidy.

A municipality's electricity service is usually a monopoly, so the ratepayers have no choice but to get their electricity from the local government. Municipal broadband services, however,

compete in many markets against private sector providers. Thus, when a city's broadband Internet service is not covering its costs, the city has a strong incentive to raise electricity rates rather than broadband prices, because broadband customers can switch to a private provider while electricity customers have nowhere else to go.

The problems with municipal broadband systems have been well documented. There is no inherent reason to believe that government employees can run broadband Internet networks more effectively and efficiently than private companies. Instead, there are many reasons, supported by plenty of examples, to expect that governments, in fact, will not run broadband networks as effectively and efficiently as private companies.

Some of the reasons to be skeptical about local governments running Internet networks well include (1) their inability to take advantage of economies of scale; (2) their lack of profit incentives to operate efficiently; (3) their tendency to exempt the municipal operations from the regulatory requirements imposed on private companies; (4) their common practice of giving access to city-controlled rights-of-way to their own operations without granting equivalent access to private companies; and (5) the likelihood that the presence of a municipal Internet provider will discourage future private companies from entering the market.

Free State Foundation scholars have taken the position that any entry by local governments into the Internet services market should be limited to instances in which private sector providers are not already serving the relevant market and have shown no inclination to enter. If these conditions are not met, a government-run broadband system will lead to a loss of consumer welfare and to costs imposed on taxpayers who do not subscribe to the municipal broadband services. Even then, local governments should carefully consider how to avoid, to the extent possible, the perverse effect of deterring entry by private firms that might otherwise consider offering broadband service in the market.

The poor financial performance by actual government-run broadband systems shows that the risks have often far outweighed the rewards. A 2017 study by Professor Christopher S. Yoo of the University of Pennsylvania, as well as many other studies, found that financial distress is common among municipal fiber projects.

Perhaps not surprisingly, municipal broadband supporters have criticized the sample sizes used by Professor Yoo and others, claiming that using a small sample is likely to lead to statistically insignificant, misleading, or incorrect conclusions and predictions. Of course, to the extent these sample sizes in these papers are relatively small, it is not due to lack of effort by the authors in trying to gather as much data as they can. The authors examined data from far more municipal broadband systems than they could include in their samples because the data from the systems they excluded lacked transparency.

The larger point, however, is that if there is a problem with too little data being available on the performance of municipal broadband systems, the burden should not be on researchers like Professor Yoo to overcome it. Given the record of financial failure of municipal broadband operations and the known financial risks that fall to taxpayers, it is not good enough for decisionmakers to criticize small sample sizes in reports by those trying to investigate the issue. Rather, the burden should be on those pushing for more municipal broadband systems to show

that the systems will not become a burden on their communities and local taxpayers. That the data from the vast majority of municipal networks doesn't allow researchers or local taxpayers to evaluate their performance is troubling.

Local taxpayers and electricity ratepayers have a right to know the extent to which their government broadband networks are being subsidized by electricity customers. This current lack of financial transparency that is widely prevalent makes it difficult in many instances for taxpayers and ratepayers of local communities to assess how well the government-run broadband networks are performing. The burden should be on the municipal broadband advocates to remedy this information deficiency problem.

## **II. Financial Failure Is a Common Problem for Municipal Broadband**

Free State Foundation scholars and many others have documented the problems with municipal broadband systems. There is no inherent reason to believe that government employees can run broadband Internet networks more effectively and efficiently than private companies. Instead, there are many reasons, supported by plenty of examples, to expect that government will, in fact, not run a broadband network as effectively and efficiently as private companies. Some of the reasons to be skeptical about local governments running Internet networks well include (1) their inability to take advantage of economies of scale; (2) their lack of profit incentives to operate efficiently; (3) their tendency to exempt the municipal operation from the regulatory requirements imposed on private companies; (4) their common practice of giving access to city-controlled rights-of-way to their own operations without granting equivalent access to private companies; and (5) the likelihood that the presence of a municipal Internet provider will discourage future private companies from entering the market.<sup>1</sup>

Free State Foundation scholars have taken the position that any entry by local governments into the Internet service market should be limited to instances in which private sector providers are not already serving the relevant market and have shown no inclination to enter. If these conditions are not met, a government-run broadband system will lead to a loss of consumer welfare and to costs imposed on taxpayers who do not subscribe to the municipal broadband service. Even then, local governments should carefully consider how to avoid, to the extent possible, the perverse effect of deterring entry by private firms that might otherwise consider offering broadband service in the market.<sup>2</sup>

The poor financial performance by actual government-run broadband systems shows that the risks have often far outweighed the rewards.<sup>3</sup> Professor Christopher Yoo and Timothy

---

<sup>1</sup> See, e.g., Theodore R. Bolema and Michael J. Horney, "[The Problem with Municipal Broadband and Solutions for Promoting Private Investment](#)."

<sup>2</sup> This position is explained by Free State Foundation President Randolph J. May in "[Self-Evident Self-Dealing: A Municipal Broadband Bill Speaks](#)."

<sup>3</sup> In July 2016, the Taxpayers Protection Alliance published a study profiling twelve failed municipal broadband projects. These projects include the municipal fiber-optic network in Provo, Utah, which cost \$39.5 million to build, but failed to keep up with consumer demand and technological innovation and ultimately was sold to Google for \$1. Similarly, the municipal network in Tacoma, Washington, currently loses about \$9 million a year and is projected to run a deficit of \$37.4 million over the next five years. "The Dirty Dozen: Examining the Failure of America's Biggest & Most Infamous Taxpayer-Funded Broadband Networks," Taxpayers Protection Alliance (July 2016), available at: <https://www.protectingtaxpayers.org/assets/files/TPA-Dirty-Dozen-Report-July2016.pdf>. These failures

Pfenninger of the University of Pennsylvania find that financial distress is common among municipal fiber projects:

Of the 20 municipal fiber projects that reported the results of their municipal fiber operations separately, eleven generated negative cash flow. Unless operations improve substantially, these projects cannot continue to operate over the long haul, let alone cover the capital costs needed to establish operations. Of the others, five are projected to take more than 100 years to recover their costs, and two others are projected to take over 60 years. Only two are on track to break even, and one of those is based on a highly urban, business-oriented model that few other cities are likely to be able to replicate, and the other includes data from two years of stronger performance when it offered only DSL service.<sup>4</sup>

Similarly, a study by Sarah Oh of the Technology Policy Institute performs a statistical analysis of the impact of municipal broadband systems on three important economic development indicators. Her study finds no evidence that municipal broadband yields benefits in household broadband subscriptions, unemployment rates, or labor force participation rates.<sup>5</sup>

### **III. Lack of Transparency in Data Reported by Municipal Broadband Operators**

Municipal broadband proponents often claim that government-provided Internet tend to be more transparent, at least in their pricing policies, than services provided by private companies.<sup>6</sup> Whether this is true or not is debatable. What is much clearer is that the records of actual performance by government-run Internet services are usually far from transparent. Two prominent statistical studies of municipal broadband systems reveal how this problem of lack of transparency is the norm rather than the exception.

Yoo and Pfenninger explain how this lack of financial transparency forced them to drop over 78 percent of the municipal broadband systems they initially identified in their sample:

---

were revisited in a 2020 study by the Taxpayer Protection Alliance, which found even more examples of unsuccessful or questionable government-run broadband projects. David E. Williams, Johnny Kampis, and Chip Baltimore, "GON with the Wind: The Failed Promise of Government Owned Networks Across America," Taxpayer Protection Alliance, May 2020, at 44, available at: <https://www.protectingtaxpayers.org/wp-content/uploads/Broadband-Report-May-2020-1.pdf>.

<sup>4</sup> Christopher S. Yoo and Timothy Pfenninger, "Municipal Fiber in the United States: An Empirical Assessment of Financial Performance," University of Pennsylvania Law School's Center for Technology, Innovation and Competition (May 2017), p. 23, available at: <https://www.law.upenn.edu/live/files/6611-report-municipal-fiber-in-the-united-states> (internal citations omitted).

<sup>5</sup> Sarah Oh, "What Are the Economic Effects of Municipal Broadband?" Technology Policy Institute, Working paper posted July 30, 2019, available at: <https://techpolicyinstitute.org/wp-content/uploads/2019/11/OhTPRC2019.pdf>.

<sup>6</sup> See, e.g., John Lund, "Municipal Broadband Providers Are Good for Communities," *Greenfield Recorder*, December 21, 2020 ("Municipal broadband providers are also far more transparent in their pricing practices."), available at: <https://www.recorder.com/Municipal-broadband-providers-good-for-communities-37827761>; Karl Bode, "More Than 750 American Communities Have Built Their Own Internet Networks," *Vice*, January 23, 2018, ("[C]ommunity broadband network pricing tends to be more transparent and less intentionally confusing than offers from incumbent ISPs like Comcast or AT&T," available at: <https://www.vice.com/en/article/a3np4a/new-municipal-broadband-map>).

Our principal source is the January 2015 report by the Executive Office of the President, called *Community-Based Broadband Solutions*. We augment this list by consulting a variety of trade and scholarly publications . . . Together these sources identify 88 local governments as having deployed FTTH [fiber to the home Internet service]. . . .

Many of the providers aggregate their broadband and electric power operations into a single set of financial results instead of reporting the results of their broadband and electric power operations separately. Consequently, separate financial data is available for only 20 of the 88 U.S. fiber projects sponsored by local governments.<sup>7</sup>

Similarly, Sarah Oh's 2019 report explains how she started from sources identifying at least 528 municipalities with publicly-funded broadband systems, but of those, only 71 (or less than 14 percent) provided adequate data, and of those, only 22 (or about 4% of the original 528) could be matched with the census data she was using for other variables:

I start with a dataset of American towns and cities with municipal broadband from lists published by the Institute of Local Self-Reliance (ILSR) and Broadband Communities Magazine. The ILSR maintains a crowd-sourced database of localities that operate their own broadband networks. In one dataset, the ILSR includes 528 municipalities with publicly-funded broadband. The Broadband Communities Magazine cites 210 municipal providers with fiber-to-the-home broadband service in a Fiberville dataset.

From these lists, I searched for municipal providers that filed Form 477 data with the Federal Communications Commission (FCC). Form 477 data is self-reported by service providers at the census block level. Providers record details of their service offerings, including whether they offer business or commercial service, their maximum advertised and actual speeds, holding company names, doing-business-as names, and types of technology used to deliver broadband. I conducted queries on Form 477 data on provider names, town names, and other identifying information on each of the 528 municipalities in the ILSR list and the 210 providers in the Fiberville dataset. Of the 528, I found only 71 municipal providers who filed data in 2014, 2015, and 2016. . . .

Of 71 municipal providers with Form 477 data, 14 are located in 22 places with ACS data. . . . With provider data, subscription rates, and employment data, I have observations for a total of 385 places, 22 of which have municipal broadband and 363 of which do not.<sup>8</sup>

Perhaps not surprisingly, municipal broadband supporters have criticized the sample sizes used in these statistical analyses of municipal broadband systems. For example, Eric Null and Amir Nasr of the Open Technology Institute in their rebuttal to the Yoo and Pfenninger paper claimed:

---

<sup>7</sup> Christopher S. Yoo and Timothy Pfenninger, "Municipal Fiber in the United States: An Empirical Assessment of Financial Performance," University of Pennsylvania Law School's Center for Technology, Innovation and Competition (May 2017), p. 5, available at: <https://www.law.upenn.edu/live/files/6611-report-municipal-fiber-in-the-united-states> (internal citations omitted).

<sup>8</sup> Sarah Oh, "What Are the Economic Effects of Municipal Broadband?" Technology Policy Institute, working paper posted July 30, 2019, available at: <https://techpolicyinstitute.org/wp-content/uploads/2019/11/OhTPRC2019.pdf>.

Due to a focus on a limited data set, the report makes faulty and unpersuasive conclusions. For one, the report reviewed only a small number of fiber networks. According to the report, there are 88 municipal fiber projects, yet the report reviewed only the 20 networks that disclosed financial data for the broadband offering alone. The study thus reviewed data from less than one-quarter of the total municipal fiber networks in the U.S. Review of such a narrow dataset, regardless of whether it reflects a bias against municipal fiber networks, is likely to lead to statistically insignificant, misleading, or incorrect conclusions and predictions.<sup>9</sup>

Of course, to the extent these sample sizes in these papers are relatively small, it is not due to lack of effort by the authors in trying to gather as much data as they can. As the authors explained in the passages above, they examined data from far more municipal broadband systems than they could include in their samples because the data from the systems they excluded lacked transparency.

The larger point, however, is that if there is a problem with too little data being available on the performance of municipal broadband systems, the burden should not be on researchers like Yoo and Oh to overcome it. Given the record of financial failure of municipal broadband operations and the known financial risks that fall to taxpayers, it is not good enough for decision-makers to criticize small sample sizes in reports by those trying to investigate the issue. Rather, the burden should be on those pushing for more municipal broadband systems to show that the systems will not become a burden on their communities and local taxpayers. That the data from the vast majority of municipal networks doesn't allow researchers or local taxpayers to evaluate their performance is troubling.

#### **IV. Lack of Transparency Often Hides Subsidies From Other Municipal Operations**

Most municipal broadband systems are being built by cities that also offer electricity. One reason for this, which I have discussed elsewhere in this paper, is that the local government can share its rights-of-way with the broadband service. For example, Ed Rice, the Director of Electric Utilities for Marshall, Michigan, gave an unusually candid explanation to a local newspaper for how his city could launch a municipal broadband network while other providers were not serving the entire city:

"The city had an advantage because we are a municipal electric utility," Rice said. "It was pretty straightforward to get the fiber attached to the poles, because sometimes that could be a pretty convoluted process."<sup>10</sup>

As Free State Foundation President Randolph May and I have explained, this is not a true economic advantage for the municipality, because if the justification for the city offering broadband service is the lack of private providers, the first step for the city should be to share those rights-of-way with any provider rather than keep them as a self-dealing advantage for their

---

<sup>9</sup> Eric Null and Amir Nasr, "Christopher Yoo's Municipal Broadband Report Misleads on Viability, Success of Municipal Fiber Networks," Open Technology Institute Blog Post, July 9, 2017, available at: <https://www.newamerica.org/oti/blog/christopher-yoos-municipal-broadband-report-misleads-viability-success-municipal-fiber-networks/>.

<sup>10</sup> Kalea Hall, "Internet Service in Marshall Was Slow, So the City Built Its Own Fiber-Optic Network."

own operation.<sup>11</sup> In the case of Marshall, the city could easily have shared its rights-of-way with private providers to encourage them to enter the market, but instead chose to start its own service to compete with the several private providers already operating in the city or operating nearby and poised to enter.

The other reason why municipalities providing electricity are the main government entrants into broadband is because the electricity operations can be used to subsidize a money-losing Internet service. Even the Chattanooga, Tennessee, network, often touted by municipal broadband proponents as one of the most successful government-run networks, received substantial subsidies from the federal government and from the city's electrical utility.

As Professor Yoo documents, the Chattanooga network cost \$323 million to build, but had the advantage of receiving a \$50 million subsidy from the municipal electric power operations and also received \$111 million in federal stimulus funds, a subsidy that seems unlikely to be available for future municipal broadband projects. Even if these massive subsidies are ignored and only the \$173 million in funding that was not covered by subsidies is considered, Professor Yoo found that the Chattanooga network is barely cash-flow positive and its rate of return is so small that it will take 412 years to break even.<sup>12</sup>

Another example can be found from how Tacoma Power funds have been subsidizing Click!, its unprofitable Internet service. Those challenging the legality of the subsidy won their case at the trial court in the State of Washington, but that verdict was overturned in a split decision by the appeals court, and may be appealed to the state supreme court. What is not disputed, however, is that ratepayers of Tacoma Power are subsidizing Click! The judge writing the majority opinion acknowledged that this subsidization is occurring, but claimed that was acceptable because it was somehow good for the city's electrical operations:

The fact that Click! is currently not independently profitable does not necessarily render it no longer a betterment. Rather, the City is attempting to maximize use of its resource, the telecommunications system, by utilizing the system's excess capacity to sell cable TV and internet service. Because Click! is a betterment of Tacoma Power, we conclude that it does not violate the Tacoma City Charter.<sup>13</sup>

However, the dissenting judge objected to how the majority failed to consider the economic impact of the subsidization:

Because ratepayers of the City of Tacoma's electrical utility must, under current practices, subsidize the distinct endeavors of Internet service access and cable television

---

<sup>11</sup> See Randolph J. May, "[Self-Evident Self-Dealing: A Municipal Broadband Bill Speaks](#)," Theodore R. Bolema, "[Local Governments Find New Ways to Evade State-Level Municipal Broadband Restrictions](#)," Theodore R. Bolema, "[Municipal Broadband Proponents Falsely Claim No Harm to Taxpayers](#)."

<sup>12</sup> Christopher S. Yoo and Timothy Pfenninger, "Municipal Fiber in the United States: An Empirical Assessment of Financial Performance," University of Pennsylvania Law School's Center for Technology, Innovation and Competition (May 2017), available at: <https://www.law.upenn.edu/live/files/6611-report-municipal-fiber-in-the-united-states-an>.

<sup>13</sup> Alex Krell, "Tacoma Gets a Win in Click Lawsuit, but a Higher Court Might Have the Final Say," Kiro7, available at: <https://www.kiro7.com/news/south-sound-news/tacoma-gets-win-click-lawsuit-higher-court-might-have-final-say/HGCJQ2QRXFF6JB6PJUWNGLRUXO/>.

delivery, Tacoma must cease these unprofitable activities or at least stop charging expenses of such services to ratepayers. . .

Characterizing Click! as the same undertaking or public service industry as the electrical utility allows a pet project of some politicians to survive despite its onus on electricity ratepayers. The onus particularly inflicts economic harm on the poor since Tacoma Power enjoys a monopoly when transmitting electricity, an essential service for all residents of Tacoma, and the poor pay a higher percentage of their income on utilities.<sup>14</sup>

The dissenting judge is making a very important point. The city's electricity service is a monopoly, so its ratepayers have no choice but to get their electricity from the city. Economists describe this as an inelastic demand for Tacoma Power, since monopoly electricity rates can be raised higher and the utility will not lose many sales, even from poorer residents. Meanwhile, Tacoma's broadband service competes with private Internet providers, so demand for its service is much more elastic. Thus, if Click! is not financially viable, the city has a strong incentive to raise electricity rates rather than Internet prices, because Tacoma Power customers have nowhere else to go while Click! customers can switch to a private provider.

A study by Steve Pociask of The American Consumer Center for Citizen Research found that this kind of subsidization of the more price-sensitive municipal broadband customers, at the expense of the less price-sensitive municipal electricity customers, is quite common:

As my review of municipal ventures shows, once a municipal-owned network provider enters a market, they can lose money and still survive by pushing financial losses to other municipal services and to taxpayers. Municipal broadband providers lose money and shift costs. This means that the effective price paid by consumers is much higher than advertised. Because broadband services are relatively price elastic, increases in cost can result in repressed demand. The combination of higher prices and lower demand means that municipal-run broadband network produce lower consumer welfare than their private counterparts.<sup>15</sup>

The current experience of Charles City, Iowa's plan to provide municipal broadband provides a useful insight into how municipal broadband systems often will not be financially viable without subsidies from another source of revenue from the government. Charles City does not have a municipal electrical utility and has been trying to proceed with plans for a city-run Internet service. But the project has been delayed due to the inability to raise financing for the project. Chip Baltimore, a former Iowa legislator, has criticized the city for its lack of financial transparency during the course of the project, and recently pointed out how the city is having trouble arranging financing more than two years into the project:

This all leaves the Charles City Telecommunications Utility and the City Council in a tough spot. Without a municipally-owned electric utility to subsidize a significant portion of the cost, the financing needle through which this increasingly costly project must be

---

<sup>14</sup> *Id.*

<sup>15</sup> Steve Pociask, "Government Failure as a Broadband Service Provider," The American Consumer Center for Citizen Research, August 8, 2017, available at: <https://www.theamericanconsumer.org/2017/08/government-failure-broadband-service-provider/>.



threaded is getting tinier and tinier. Even if the Telecommunications Utility by some miracle does get initial financing, the Utility will still have to get something along the lines of 70-80 percent of the entire internet market share just to break even. This is a risk that very few, if any, prudent banks or lenders will take on, especially over a 20- or 25-year repayment period.

And if the financing miracle doesn't happen, Charles City's taxpayers will pay dearly for this dead-end project. The city has already loaned the Utility more than \$800,000 to pay the consultants that got them into this predicament in the first place. Those funds were initially paid to the city in the form of property taxes. If the Telecommunications Utility can't get financing for this project, the city's property taxpayers will have to eat that loan, because it's quite clear the consultants won't be giving their fees back.<sup>16</sup>

To their credit, the Chattanooga and Tacoma systems are among the few that provide transparent financial data sufficient to evaluate the financial performance of their broadband services, and the Charles City financial challenges are for stand-alone Internet operation. More typically, as Yoo points out, municipalities with electricity or other operations consolidate the Internet service financial data with other operations, making it impossible to determine whether it is succeeding, whether it is being subsidized in ways hidden from ratepayers and taxpayers in the community, and whether it is at risk of financial failure.

## V. Conclusion

The general lack of useful financial data to assess the true merits of municipal networks is highly problematic. One of the main drivers of this lack of useful financial data is that most governments that also provide electricity fail to provide separate financial records for broadband vs. electricity services. Moreover, the financial records for the minority of governments, like Tacoma and Chattanooga, which do not combine broadband financials and electricity financials show that the broadband operations usually are not viable on their own and are being subsidized by the municipalities' electricity services. Thus, the failure to keep separate financial records for the broadband operations can have the effect, whether intended or not, of hiding a cross-subsidy.

A municipality's electricity service is usually a monopoly, so the ratepayers have no choice but to get their electricity from the local government. Municipal broadband services, however, compete in many markets against private sector providers. Thus, when a city's broadband Internet service is not covering its costs, the city has a strong incentive to raise electricity rates rather than broadband prices, because broadband customers can switch to a private provider while electricity customers have nowhere else to go.

Local taxpayers and electricity ratepayers have a right to know the extent to which their government broadband networks are being subsidized by electricity customers. This current lack

---

<sup>16</sup> Chip Baltimore, "Accidental Transparency Shows Fiscal Folly of Taxpayer-Funded Broadband," *The City Square*, August 12, 2020, available at: [https://www.thecentersquare.com/iowa/op-ed-accidental-transparency-shows-fiscal-folly-of-taxpayer-funded-broadband/article\\_63f7d8a2-dcba-11ea-ad64-9fd436a80712.html](https://www.thecentersquare.com/iowa/op-ed-accidental-transparency-shows-fiscal-folly-of-taxpayer-funded-broadband/article_63f7d8a2-dcba-11ea-ad64-9fd436a80712.html). See also, Bob Steenson, "Charles City Broadband Board Regroups, Looks for a Way Forward," *Charles City Press*, December 22, 2020, available at: <http://charlescacitypress.com/charlescacitypress/front/2020/12/10/charles-city-broadband-board-regroups-looks-for-a-way-forward/>.

of financial transparency that is widely prevalent makes it difficult in many instances for taxpayers and ratepayers of local communities to assess how well the government-run broadband networks are performing. The burden should be on the municipal broadband advocates to remedy this information deficiency problem.

\* Theodore R. Bolema is a member of the Free State Foundation's Board of Academic Advisors and Executive Director of the Institute for the Study of Economic Growth at Wichita State University. The Free State Foundation is an independent, nonpartisan free market-oriented think tank located in Rockville, Maryland.

### **Further Readings**

Theodore R. Bolema, "[Municipal Broadband Proponents Falsely Claim No Harm to Taxpayers](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 41 (July 27, 2020).

Theodore R. Bolema, "[Local Governments Find New Ways to Evade State-Level Municipal Broadband Restrictions](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 33 (June 18, 2020).

Randolph J. May, "[Don't Regulate the Internet as a Public Utility!](#)" *Perspectives from FSF Scholars*, Vol. 15, No. 29 (June 3, 2020).

Randolph J. May, "[Self-Evident Self-Dealing: A Municipal Broadband Bill Speaks](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 5 (January 27, 2020).

Theodore R. Bolema, "[Municipal Broadband's Titled Playing Field: Advantages Created by City Self-Dealing](#)," *Perspectives from FSF Scholars*, Vol. 14, No. 30 (October 10, 2019).

Theodore R. Bolema and Michael J. Horney, "[Big City Municipal Broadband: Repackaging Net Neutrality Arguments Won't Fly](#)," *Perspectives from FSF Scholars*, Vol. 13, No. 25 (June 25, 2018).

Theodore R. Bolema, "[Panelist at FSF Conference Highlights Demand-Side Problem with Municipal Broadband](#)," *FSF Blog* (May 24, 2018).

Theodore R. Bolema, "[Concord Municipal Network Wrongly Claims to Protect Free Speech and Net Neutrality](#)," *FSF Blog* (May 3, 2018).

Theodore R. Bolema, "[Testimony before the Communications Technology Committee, Michigan House of Representatives](#)" (October 24, 2017).

Theodore R. Bolema, "[Why Municipalities Should Stop Trying to Subsidize Broadband Access](#)," *Perspectives from FSF Scholars*, Vol. 12, No. 25 (August 1, 2017).

Theodore R. Bolema and Michael J. Horney, "[The Problem with Municipal Broadband and Solutions for Promoting Private Investment](#)," *Perspectives from FSF Scholars*, Vol. 12, No. 21 (June 21, 2017).