

THE FUTURE IS PUBLIC: WORKING PAPER 8

USA: Communities providing affordable, fast broadband internet

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In the United States, one of the fastest growing areas of municipalization and local public ownership is high-speed broadband internet networks. This is due, in part, to the failure of the highly concentrated, corporate dominated telecommunications sector to provide fast and affordable service in many parts of the country – especially rural areas, smaller towns and cities, and communities with low levels of income and economic development. In the modern, information-driven economy, this has profound implications for economic development, social and economic equality, and ecological sustainability. Just as they did with the critical backbone economic infrastructure of the twentieth century – electric systems, roads and bridges, water and sewer systems, airports, ports, mass transit, and so on – communities across the country are starting to use public ownership to build and operate the digital infrastructure needed in the twenty-first century. Data from the Institute for Local Self-Reliance (ILSR) shows that in the past several years, more than 800 communities (including cities, towns, and counties) have established community owned broadband networks.¹ Of these, 500 are publicly owned.² Moreover, more than 150 of these communities (in 29 states) have super-fast networks of at least 1Gbps and 20 (in four states) offer 10Gbps networks, which is hundreds of times faster than the average US internet connection.

Supporting the development of local, publicly owned broadband networks has also become a mainstream national political issue. In early 2015, President Barack Obama visited the site of one such publicly owned network (Cedar Falls, Iowa) and announced several steps his administration would be taking to bolster public and community broadband networks.³ As discussed further below, a centerpiece of this effort was an attempt to stop state governments enacting corporate-backed laws impeding communities from establishing such networks. This effort ultimately failed due to the limits of executive branch powers and the election of Donald Trump in 2016. However, in August 2019, Senator and Democratic Party presidential candidate Elizabeth Warren unveiled a \$85 billion plan to aid in the development of such networks (along with cooperative and non-profit networks), especially in rural areas.⁴ Critically, for-profit corporations would be excluded from receiving these funds. The plan also calls for legislation to remove state-level limitations on local networks. One of her challengers, the more centrist Pete Buttigieg, has unveiled a similar plan.⁵

Slower speeds, limited access

Many people probably assume that in the twenty-first century, the world's largest economy would also have the best access to high-speed internet. However, that simply isn't the case. According to recent estimates by the Federal Communications Commission (FCC), 21.3 million Americans (more than the total population of the Netherlands) do not have access to an internet connection with download/upload speeds of at least 25Mbps/3Mbps (considered by the government to be the bare minimum to qualify as broadband service). Meanwhile, 138 million people do not have access to a connection with speeds of at least 250Mbps/25Mbps.⁶ When considering these numbers, it is also worth remembering that first and foremost, they are likely an underestimate, and second, just because a person may have access to high speed internet, doesn't mean they can afford it. As Senator Warren points out in her plan, nearly 30 per cent of households in some urban areas, like Detroit and Cleveland, do not have any internet access, and this is primarily due to cost. On top of this, internet in the United States is far slower and more expensive than most other advanced countries. According to recent estimates, the United States may be as low as

15th in the world when it comes to average speeds; and 56th when it comes to cost per Mb.⁷

A corporate oligopoly in the telecommunications sector is a major reason wide swathes of the country (both geographically and socio-economically) are left with inferior or unaffordable service. “Given that duopolies presently dominate both the wired (Comcast, Time Warner) and wireless (Verizon, AT&T) U.S. markets,” University of Pennsylvania professor Victor Pickard writes, “it is reasonable to assume that a lack of competition plays an important role in this predicament.”⁸ Similarly, Harvard’s Susan Crawford writes that “most Americans probably believe the communications sector of the economy has room for innumerable competitors, but they may be surprised at how concentrated the market for the modern-day equivalent of the standard phone line is. These days what that basic transmission service is facilitating is high-speed access to the Internet. In that market, there are two enormous monopoly submarkets – one for wireless and one for wired transmission. Both are dominated by two or three large companies.”⁹ These corporations have little incentive to invest in improving internet networks in sparsely populated or low-income areas, and every incentive to raise prices as much as possible in areas where they have a monopoly (or duopoly).

Simply put, many municipalities cannot rely upon a few large telecommunications corporations to provide the digital infrastructure needed to develop thriving local economies and communities in the twenty-first century. For many areas in the US, this is especially critical as a lack of economic opportunity is a major factor in the outmigration of people to large cities (and their suburban areas) and lower population growth in rural areas.¹⁰ This leads to a downward spiral of lower tax revenues, service cuts, and further population loss that has left many US communities struggling to survive.

Local ownership and control

For an increasing number of US communities, the solution to this problem has been found in municipalization. Specifically, the development and deployment of publicly owned, high-speed broadband internet networks, often established and operated by a local, publicly owned electric utility. These networks use fiber-optic cables and have the capacity to provide phone and television service in addition to internet access. They can connect a whole city or community (FTTH-Fiber To The Home), most of a city or community, or certain areas (like business or medical districts).

One of the primary motivations for establishing a municipal broadband network is access and affordability, especially as it relates to economic development and ensuring local businesses can thrive. For instance, in Thomasville, Georgia the publicly owned Community Network Services (CNS) is credited with helping to support local small businesses and a thriving downtown area. “The best part about CNS,” the company explains, “is that it is funded locally, by the cities which it serves. This means if you are a CNS customer, you are investing in your own communities, not a corporation headquartered across the country.”¹¹

Municipal broadband networks are also often credited with attracting business investment and jobs to areas that otherwise would not have been considered. Recently, EnableComp (a medical claims processor) announced that it will be setting up an office with around 200 jobs in the city of Tullahoma, Tennessee. The city’s mayor and economic development chief both credit the municipal broadband network LightTUBe (run by the publicly owned Tullahoma Utilities Authority, which is also responsible for the city’s water, electricity, and wastewater services) for the decision. According to Lisa Gonzalez of the ILSR, “before the city invested in the network, job growth in Tullahoma lagged behind the rest of the state, but within two years after the city began offering broadband, that statistic changed. Job growth in the city doubled Tennessee’s statewide rate.”¹²

Many communities, especially those not served or underserved by the few large telecommunications corporations, have established publicly owned broadband networks in order to ensure further-

reaching or more reliable service. For instance, because of its remote location, residents of the small town of Mount Washington, Massachusetts were forced to rely on unreliable and expensive satellite internet service. In 2013, the town began to explore the potential for municipalization. After receiving an exemption (due to its small size) from state laws that require such networks to be run by a publicly owned Municipal Light Plant (electric or gas utility), the municipality established the Town of Mount Washington Fiber Network in 2017. The town received financial support in this endeavor from the Massachusetts Broadband Initiative, a state agency.¹³

Poor service and affordability were also reasons that the City of Wilson, North Carolina established a city-wide municipal broadband network called Greenlight in 2006. The success of Greenlight has forced Time Warner Cable (now known as Charter Spectrum) to keep its prices down to compete. Between 2007 and 2009 Time Warner raised its rates in non-competitive neighboring jurisdictions by as much as 52 per cent but kept prices stable in Wilson.¹⁴ Faster and more reliable internet for residential customers also has an economic component as it supports small home-based businesses and entrepreneurs, telecommuting options for larger businesses, and general quality of life improvements that make local areas attractive to businesses.¹⁵

While many municipal broadband networks offer faster than average service, some municipal broadband networks are starting to roll out 10Gbps service. One example is in Chattanooga, Tennessee, where the city's publicly owned utility (EPB – Electric Power Board) has been operating a fiber network since 2009. It was the first location in the United States to offer 1Gbps service and has subsequently upgraded to 10Gbps. ILSR reports that from 2011 to 2015, the network has been responsible for adding around 2,800 new jobs and \$1 billion to the local economy.¹⁶ It is also one of the larger publicly owned networks in the country, serving not only the roughly 180,000 residents of Chattanooga, but also those in the neighboring jurisdictions of East Ridge, Ridgeseide, Signal Mountain, Lookout Mountain, Red Bank, Rossville (Georgia), Flintstone (Georgia), and Wildwood (Georgia).

While many municipal broadband networks are owned and operated by a single municipality, a few communities have joined together in public-public partnerships. This allows municipalities, especially those that are smaller in size or density, to overcome certain hurdles related to scale and the cost of providing service. For instance, Community Network Services (discussed above) is a partnership between the City of Thomasville and the cities of Cairo, Camilla, and Moultrie. In 1997, these municipalities formed the South Georgia Governmental Services Authority, through which CNS was subsequently formed. In 2015, CNS expanded into two additional communities (Doerun, where it took over operations of another, small publicly owned utility; and Norman Park, where it purchased a for-profit cable company) Another similar network is ECFiber in East Central Vermont. Comprised of 24 communities ill-served by corporate providers, ECFiber partnered with a non-profit internet service provider (ISP) called ValleyNet to deliver “fast, reliable, and affordable Internet to every home, business, and civic institution in our territory.” As of June 2019, ECFiber has connected 3,500 residents in 22 of the towns (with eight fully covered). “If private business cannot or will not create the infrastructure needed to support the Vermont lifestyle,” the network states, then “local government and community-based organizations such as ECFiber can and will.”¹⁷

Three variations on this theme of partnership are public-public partnerships between local public enterprises and services *within* a municipality; “balanced” public-private partnerships with smaller, for-profit companies (and with the city retaining ownership); and municipal support for the development of multi-community cooperatives.

An example of a public-public partnership is the recent agreement between two publicly owned entities in Skagit County, Washington. The Port of Skagit and the Skagit Public Utility District (which provides

water services), are developing a fiber network that will improve access in rural areas of the county (two cities in the county, Mount Vernon and Burlington, already have municipal broadband networks).¹⁸

Westminster, Maryland is an example of a “balanced” public-private partnership. Here, the municipality is building a city-wide fiber network that will provide all residents access to a 1Gbps internet. The service is provided by a small, private ISP called Ting, which has 400 employees and operates in several small towns and cities. After a period of exclusivity, Ting will be required to provide open access to the network (meaning other companies or entities can provide service to customers).¹⁹ Unlike larger corporations, Ting prides itself on its commitment to the concept of a free and open internet (net neutrality) over the possibility of generating higher profits by prioritizing certain content and customers.

Finally, an example of municipally supported multi-community cooperatives is the RS Fiber Cooperative in south central Minnesota. The cooperative offers wireless and fiber-optic service to around 6,200 homes, farms, and small businesses in a roughly 700 square mile area. To establish the cooperative, 10 small cities and 17 townships came together and formed a Joint Powers Agreement which allowed them to sell bonds, the proceeds from which were then lent to the cooperative to start building the network.²⁰

Challenges

Due to the rapid spread of municipalization and the success of local, publicly owned broadband networks, the large telecommunications corporations and their political allies in state governments have made it a priority to block and hinder such efforts (although in recent years, as discussed below, a détente has settled in). Currently, 19 states have enacted laws that impede or impair the establishment of municipal broadband networks, often, ILSR reports, “at the behest of large telecom monopolies.”²¹ Commonly referred to as “preemption laws,” these range from outright bans in a handful of states to onerous and complicated legal and financial requirements that don’t apply to the private sector. These preemption laws have in some cases prevented new municipalizations, restricted expansion of municipal broadband networks, or forced municipalities to consider selling or closing their service.

In early 2015, during the Obama Administration, the FCC issued a ruling that attempted to use federal regulatory authority to overturn state laws restricting local municipalization efforts. As expected, hostile state governments led by Tennessee and North Carolina sued the FCC in an attempt to maintain their state-level preemption laws. In August 2016, the Sixth Court of Appeals overturned the FCC ruling, finding that only a direct act of Congress could stop state level restrictions on local publicly owned broadband networks. It is for this reason that a centerpiece of Senator Warren’s plan for supporting municipal and cooperative broadband networks is federal legislation banning such state-level laws. “We will preempt these laws and return this power to local governments,” her plan states.²²

Alongside preemption laws, corporate lobbyists in state governments are also actively trying to bar municipal broadband networks (and municipalities more generally) from receiving state investment funds for broadband development – limiting the expansion potential of municipal broadband while at the same time diverting those funds into corporate coffers. For instance, in 2018 Michigan introduced legislation that would have established a state fund to support broadband infrastructure. Municipalities would have been barred from receiving grants from the fund and the threshold for a project to qualify for grants was set at a measly 10Mbps/1Mbps. With such provisions, the law would transfer “money from the state treasury to Frontier, AT&T, and any other telco that refuses to invest in anything better than DSL [Digital Subscriber Line] in rural Michigan,” Gonzalez wrote at the time.²³ While the original bill failed, the restrictive provisions were included in appropriations legislation that subsequently became law. Tennessee and Virginia have also prevented local governments from applying for state broadband subsidies.²⁴

A bright future

While corporate lobbying and state-level preemption laws are undoubtedly an ongoing challenge, broadband municipalizations in the United States are only likely to continue in the coming years. In addition to potential future federal action that could dramatically scale up financial and legal support for the development of municipal networks, there are indications that some states are beginning to think more critically about the impact such preemption laws have on their economies and communities. The last major preemption law was enacted in 2011 (North Carolina), and since then restrictions in three states (California, Colorado, and Arkansas) have been lifted, weakened, or proven not to be a true barrier to municipal broadband development. Moreover, more than half of all states, including the populous states of California and New York, currently do not have any such restrictions.

The primary reason municipalization is likely to continue, however, is that it has a proven track record of success and is generally popular at the local level. Hundreds of US communities have decided not to abandon their fate to a handful of large corporations, and instead are taking control of their own destiny by establishing the economic infrastructure they will need to thrive in the twenty-first century. Many are already seeing the fruits of their efforts as their publicly owned broadband networks deliver jobs and economic activity (for instance, Tullahoma and Chattanooga, Tennessee), improved quality of life (for instance, Wilson, North Carolina and Mount Washington, Massachusetts), advances in health and education (for instance, EC Fiber in Vermont), and, crucially, local democratic control. For the tens of millions of Americans and thousands of local communities that continue to lack access to affordable, high-speed internet, these pioneering efforts illuminate a path to economic stability and a more equitable and prosperous future.

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Endnotes

- 1 Community Networks, (2019). Community Network Map. [online] Available at: <https://muninetworks.org/communitymap> [Accessed 4 September 2019].
- 2 Electric cooperatives own networks that serve around 300 communities. ILSR is still gathering information on networks developed by telephone cooperatives and consider the current data to be a dramatic underrepresentation of the actual number of communities served by such cooperative networks.
- 3 Obama, B. (2015). Remarks by the President on Promoting Community Broadband. [online] Obama White House Archives. Available at: <https://obamawhitehouse.archives.gov/the-press-office/2015/01/14/remarks-president-promoting-community-broadband> [Accessed 4 September 2019].
- 4 Warren, E. (2019). My Plan to Invest in Rural America. [online] Medium. Available at: <https://medium.com/@teamwarren/my-plan-to-invest-in-rural-america-94e3a80d88aa> [Accessed 4 September 2019].
- 5 Coldewey, D. (2019). Pete Buttigieg Echoes Warren with \$80B Rural Broadband Plan. [online] TechCrunch. Available at: <https://techcrunch.com/2019/08/13/pete-buttigieg-echoes-warren-with-80b-rural-broadband-plan/> [Accessed 5 September 2019].
- 6 Federal Communications Commission, (2019). 2019 Broadband Deployment Report. [online] FCC. Available at: <https://docs.fcc.gov/public/attachments/FCC-19-44A1.pdf> [Accessed 5 September 2019].
- 7 Lai, S. (2019). Countries with the Fastest Internet in the World 2019. [online] Atlas & Boots. Available at: <https://www.atlasandboots.com/remote-jobs/countries-with-the-fastest-internet-in-the-world/> [Accessed 4 September 2019]; Lai, S. (2019). Countries with the Cheapest Internet in the World – Ranked. [online] Atlas & Boots. Available at: <https://www.atlasandboots.com/remote-jobs/countries-with-the-cheapest-internet-world/> [Accessed 4 September 2019].
- 8 Pickard, V. (2015) America’s Battle for Media Democracy: The Triumph of Corporate Libertarianism and the Future of Media Reform. New York. Cambridge University Press, p. 221.
- 9 Crawford, S. (2013) Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age. New Haven. Yale University Press, p. 5.
- 10 Wharton Public Policy Initiative, (2018). Rural America is Losing Young People – Consequences and Solutions. [online] University of Pennsylvania. Available at: <https://publicpolicy.wharton.upenn.edu/live/news/2393-rural-america-is-losing-young-people-> [Accessed 4 September 2019].
- 11 Community Network Services, (2019). About CNS. [online] Available at: <http://www.cns-internet.com/Content/Default/7/426/0/cns/about-us.html> [Accessed 6 September 2019].
- 12 Gonzalez, L. (2019). LightTUBE Attracts 200 New Jobs to Tullahoma, Tennessee. [online] Community Networks. Available at: <https://muninetworks.org/content/lighttube-attracts-jobs-tullahoma-tennessee> [Accessed 4 September 2019].
- 13 Gonzalez, L. (2017). Mount Washington, MA, Makes the Next Move: Design, Construction. [online] Community Networks. Available at: <https://muninetworks.org/content/mount-washington-ma-makes-next-move-design-construction> [Accessed 5 September 2019].
- 14 The Executive Office of the President, (2017). Community-Based Broadband Solutions. [online] Obama White House Archives. Available at: https://obamawhitehouse.archives.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf [Accessed 5 September 2019].
- 15 Community Networks, (no date) Municipal Networks and Economic Development. [online] Available at: <https://muninetworks.org/content/municipal-networks-and-economic-development> [Accessed 5 September 2019].
- 16 Community Networks, (no date) Municipal FTTH Networks. [online] Available at: <https://muninetworks.org/content/municipal-ftth-networks> [Accessed 5 September 2019].
- 17 EC Fiber, (2019). [online] Available at: <https://www.ecfiber.net/> [Accessed 5 September 2019].
- 18 Gonzalez, L. (2018). Port and PUD Partnering for Fiber in Skagit. [online] Community Networks. Available at: <https://muninetworks.org/tags/tags/mt-vernon> [Accessed 5 September 2019].
- 19 Lucey, P. and Mitchell, C. (2016). Successful Strategies for Broadband Public-Private Partnerships. [online]. Institute for Local Self-Reliance. Available at: <https://ilsr.org/wp-content/uploads/downloads/2016/08/PPP-Report-2016-1.pdf> [Accessed 5 September 2019].
- 20 Carlson, S. and Mitchell, C. (2016). RS Fiber: Fertile Fields for New Rural Internet Cooperative. [online] Institute for Local Self-Reliance and Next Century Cities. Available at: <https://ilsr.org/wp-content/uploads/downloads/2016/04/rs-fiber-report-2016.pdf> [Accessed 5 September 2019]; RS Fiber, (no date). What is RS Fiber? [online] Available at: <https://www.rsfiber.coop/about-us/what-is-rs-fiber/> [Accessed 5 September 2019].
- 21 Kienbaum, K. (2019). Preemption Détente: Municipal Broadband Networks Face Barriers in 19 States. [online] Community Networks. Available at: <https://muninetworks.org/content/preemption-detente-municipal-broadband-networks-face-barriers-19-states> [Accessed 5 September 2019].
- 22 Warren, E. (2019). My Plan to Invest in Rural America. [online] Medium. Available at: <https://medium.com/@teamwarren/my-plan-to-invest-in-rural-america-94e3a80d88aa> [Accessed 4 September 2019].
- 23 Gonzalez, L. (2018). Malicious Michigan Bill in Committee December 6th. [online] Community Networks. Available at: <https://muninetworks.org/content/malicious-michigan-bill-committee-december-6th> [Accessed 5 September 2019].
- 24 Gonzalez, L. (2019). Three States, Their Local Communities, and Broadband Funding Denied. [online] Community Networks. Available at: <https://muninetworks.org/content/three-states-their-local-communities-and-broadband-funding-denied> [Accessed 10 September 2019].

This working paper is presented at The Future is Public Conference (December 2019). The draft report “The Future is Public: Towards Democratic Ownership of Public Services” and 15 working papers together form the conference resources. The Transnational Institute and co-publishers will publish the improved report and final papers as a book in 2020. To access the conference resources: futureispublic.org