

## Leaping the Digital Divide: Encouraging Policies and Partnerships to Improve Broadband Access Across North Carolina

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*The article that follows is pulled from excerpts of a policy paper initiated, published and co-authored by the N.C. League of Municipalities (NCLM) as part of an effort to encourage statewide policy that better enables public-private partnerships for broadband access. NCLM views this effort as crucial to ensuring that all North Carolinians have the 21st century infrastructure they need to thrive economically and to make their communities attractive places to live and work. You can find the full report, with a range of pullout information and a foreword from Brookings Institution Fellow Blair Levin, at [www.nclm.org/broadband](http://www.nclm.org/broadband).*

### **The Case for Government Involvement in Broadband**

One of the primary functions of government is to build the infrastructure networks people need to sustain their lives and livelihoods. Today, high-speed broadband joins transportation, electric, water, and natural gas networks as a component of basic infrastructure services that Americans expect to be provided. High-speed internet service is the number-one amenity sought by multi-family residents, and the number-two amenity for single-family residents, according to a recent study. Local governments, in particular, can and should play a role in creating the infrastructure networks to provide this service, which are often too costly for private sector entities to build solely on their own.

Traditionally, when considering infrastructure networks that widely benefit the public, governments step up to build assets with a long lifespan. Whether it's a street network, electric grid, natural gas system, or drinking water treatment, all of these long-term investments are made with a goal of giving communities an edge: increased economic activity, higher educational attainment, and better health outcomes.

Broadband networks have become as indispensable as any of these other century-old infrastructure systems. And yet, as indispensable as broadband has become, N.C. public policy restricts local governments' ability to play a role in meeting today's critical infrastructure challenge. As a result, communities are being left behind and remain disconnected from the world, particularly in rural areas of the state. Look no

further than the work of the N.C. Broadband Infrastructure Office (NC BIO), which estimates that at least 637,671 North Carolinians—most of them rural residents—lack broadband service at the Federal Communications Commission’s (FCC’s) minimum speeds, a figure that likely underestimates the scope of the problem.

As was the case over a century ago, North Carolina now faces significant shortfalls with respect to which of its citizens benefit from critical infrastructure—in this case, broadband infrastructure. In particular, while all urban areas of the state contain communities that are considered underserved with respect to their broadband access, the starkest gaps are found in its rural areas.

The scope and scale of the rural shortfall is significant. North Carolina is still a place with large swaths of sparsely populated lands, and in the 2010 Census, the state measured the second-highest number of rural residents in the country (3.2 million), second only to Texas (3.8 million). According to the NC BIO, 95 percent of North Carolinians that did not have access to broadband service in 2016 at the FCC’s minimum speeds lived in rural areas. This figure translates to 607,431 rural residents who have no option for high-speed internet. Ensuring that these residents gain access to high-speed internet services will require a local grassroots response not unlike the way rural North Carolinians banded together nearly 100 years ago to form electric cooperatives.

Meanwhile, although major internet service providers (ISPs) are bringing super-high gigabit speeds to some urban areas of the state, the demand for those speeds in both urban and rural areas is likely to continue to outpace availability. The number of businesses and residential users that demand access to high-performing broadband networks is only going to grow as technology evolves. The demand comes because real dollars are at stake. For example, a recent study showed that home-based businesses served by fiber technologies averaged \$73,000 in annual earnings, in contrast to \$43,500 for home-based businesses served by cable broadband technologies. That same study found that if fiber served a \$300,000 home, it added \$10,000 in value.

Overwhelmingly, Americans want a locally-driven initiative for building broadband infrastructure. In a March 2017 Pew Research Center survey, a full 70 percent of respondents were in favor of local governments being able to build their own networks, with little difference regardless of political affiliation. State leaders should feel confident that a policy that empowers citizens and their local governments to play a role in building basic broadband infrastructure will enjoy widespread public approval.

### **Broadband Public-Private Partnerships**

As with any deal, a public-private partnership (P3) represents a way to allocate risk, benefit, and control. When it comes to broadband, while the benefits of having high-speed internet service are clear, many community leaders wrestle with the high cost of building the infrastructure needed to deliver that service, and with the responsibility of serving the network's customers. The desire to serve all parts of a community is also at the front of community leaders' minds. Meanwhile, private ISPs enjoy a long history of serving customers, yet they often struggle to make the numbers add up to build networks in all areas of a community (if they can turn a profit by building in that community at all).

Because customers pay to use broadband infrastructure—thereby creating a revenue stream—public officials have a large incentive with which to attract private interest in a partnership. As a result, public and non-profit entities such as counties, cities, school systems, and electric utilities have increasingly embraced opportunities to develop high-speed broadband networks in their communities using emerging P3 models. These models present a promising alternative to the traditional public utility models, where the local government or non-profit is both the owner and operator of the system. Instead, P3s provide a solution for communities that lack the capital or expertise to deploy and operate fiber networks, or to act as ISPs on their own.

### **New Legal Authority Needed for Partnerships**

Even if a N.C. local government succeeds in making the business case for a broadband partnership and galvanizing public support for the system, state law is not clear-cut in this area, with some arguing that it creates hurdles to broadband partnerships. Because of uncertainties about the meaning of the law, it would be beneficial for N.C. cities to have greater clarity regarding the types of investments a city may make in broadband infrastructure. The legal picture is murkier and more uncertain for counties in terms of their authority to make broadband investments, so they are also in great need of clear-cut authority to enter into broadband partnerships.

Given the lack of express statutory authority to build broadband infrastructure which some entity would utilize for profit, widespread use of the public-private partnership arrangements described above will not likely materialize in North Carolina without further changes to state law. For viable partnerships to move forward across the state, cities and counties need explicit authority:

1. To raise money for broadband infrastructure, including taxes and borrowed funds;
2. To spend money on broadband infrastructure; and

3. To lease infrastructure to the private and non-profit entities that will operate and profit from using the broadband infrastructure to provide internet service.

### **State Policy Changes**

Other policy changes that would incentivize and speed up construction of broadband systems across the state would require action by the N.C. General Assembly. If authorized under state law, these local government actions would lower costs for broadband providers:

1. Building broadband infrastructure and leasing it to private providers. Such infrastructure includes conduit, fiber, and backhaul electronics.
2. Requiring installation of fiber with all new commercial and residential construction projects. Updates to the State Building Code would be necessary to implement this policy.
3. Instituting “dig once” policies. A dig once policy requires utility providers, when they undertake a project in the right-of-way, to coordinate with the local government on the installation of extra fiber or conduit. Such policies require a high level of oversight by the local government, including advanced planning and development of technical specifications.
4. Implementing “one-touch make-ready” policies. Make-ready is a telecommunications industry term that refers to the work performed on a utility pole when providers with existing wires move those assets to make room for another entity’s wires. Typically, each provider on a pole takes responsibility for moving their own wires, which results in a slow, duplicative process before the new pole user can install their wires. One-touch make-ready policies mandate that one technician should move all wires on the pole at once.

At the state level, North Carolina can incentivize the construction of broadband infrastructure networks by instituting policies that mandate installation of underground conduit to house fiber in the future. Under such a policy, every time a state agency—such as the N.C. Department of Transportation or N.C. Railroad—dug in the right-of-way, it would install conduit at the same time. This conduit could then be leased in the future to an ISP, who could easily install fiber in the conduit, thereby saving time and money with the reduced barriers to accessing the public right-of-way. To take these policies a step further, state agencies could also install dark fiber along their managed right-of-way and lease it to ISPs.

And as with all other forms of basic infrastructure, broadband infrastructure will only become ubiquitous in North Carolina with financial support from all levels of government, including federal, state, and local.

Finally, N.C. state policy-makers can stimulate a build-out of broadband infrastructure with policies designed to incentivize customers to subscribe to the service. All ISPs—whether public, private, or non-profit—must make a business case for recouping the costs of investing in the infrastructure. Therefore, they require a minimum “adoption rate,” or number of subscribers, to meet the financial targets in the business case. State programs to educate North Carolinians about the benefits of high-speed internet service, subsidies for low-income subscribers, and other digital literacy efforts will all contribute to making the dollars and cents add up for ISPs.