

Testimony of Joanne S. Hovis
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before the

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“Broadband: Deploying America’s 21st Century Infrastructure”

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Chairman Blackburn, Ranking Member Doyle, and members of the Subcommittee, good morning and thank you for inviting me to testify today.

My name is Joanne Hovis. I am the president of CTC Technology & Energy, an independent broadband technology and planning consultancy that supports public sector clients nationwide.

I am also the CEO and co-founder of the Coalition for Local Internet Choice, a national organization that represents a wide range of public and private interests who support the authority of local communities to make broadband internet choices. I believe that local internet choice is critical to enabling broadband deployment and creating broadband competition, especially in unserved and underserved areas.

I am a member of the boards of directors of the Benton Foundation and the Fiber Broadband Association (formerly the Fiber-to-the-Home Council).

At CTC, I have developed business model analysis and strategy for some of the largest public-private broadband initiatives in the country. I lead the CTC teams that advised the states of Connecticut, Kansas, Kentucky, Maryland, Massachusetts, New Mexico, and New York; the cities of Atlanta, Boston, Palo Alto, San Francisco, Seattle, and Washington, D.C.; and many other public entities.

I focus in particular on broadband public-private partnerships (P3) that enable both public and private entities to benefit from public assets and private innovation and service delivery. Among my client engagements are the pioneering broadband P3s in the Commonwealth of Kentucky and the cities of Boulder, CO; Bloomington, IN; Madison, WI; Westminster, MD, and Huntsville, AL.

Deploying Broadband Will Require Federal Infrastructure Funding, Innovative New Approaches, and Partnerships

One of the hallmarks of President-elect Trump's candidacy was a commitment to major infrastructure investment across the U.S. and to increasing the role of the private sector in such development through tax mechanisms and public-private partnerships.

Like electricity in the last century, high-capacity broadband internet access today is rapidly becoming the critical platform and driver of simultaneous progress in economic development and global competitiveness, education, health care, public safety, transportation, and much more. By working cooperatively with state and local governments, the private sector stands to benefit in multiple ways—as partners in designing, building, financing, and operating these advanced communications networks, as users of the networks to market their goods and services in the rapidly emerging information-based global economy, and as contributors to the next generation of innovations.

I make the case today for including broadband, particularly in rural areas, among the infrastructure categories in any infrastructure investment program, and recommend particular P3 and related mechanisms that can be included to increase the likelihood of the necessary capital flowing to the areas with the greatest needs.

Broadband Gaps Align with Lower Income Levels and Lower Population Densities—These Are the Areas that Would Benefit Most from Broadband P3s

Americans access the broadband internet over networks owned by phone companies, cable companies, and, in a few locations, competitors.

Broadband, like any other type of infrastructure, requires significant upfront capital for deployment of networks and services, and private capital will flow to areas where potential return is highest. In a number of densely-populated, higher-income areas, incumbent phone and cable companies have upgraded their networks to enable new services and high-speed internet access. A handful of these areas have also seen investments by new entrants seeking to outflank the incumbents in establishing 21st century broadband infrastructure.

In contrast, in less densely-populated areas and lower-income areas, the pace of progress has been much slower. Offering lower returns on private investment, these areas have seen their economies stagnate, their children move to more promising locations, their hopes for a better future ebb away. Fortunately, P3s and other collaborative public-private structures offer one promising solution.

[Broadband Public–Private Partnerships Present Opportunities for Economic Benefit in Rural and Low-Income America](#)

State and local governments are increasingly motivated to incent private sector investment in next generation broadband networks, with a focus on homes, businesses, and government users such as public safety. States and localities have experience, capabilities, and assets that enable them to build broadband infrastructure that can be made available to the private sector for competitive services and innovation, with the public entity building the infrastructure but uninvolved in the private sector role of operations and service delivery to the public. Alternatively, the state or locality can partner with the private sector for shared investment in private networks that secure public sector goals (such as service in rural areas that

seek to maintain economic viability and enable such critical practices as home-based business and home-schooling).

Private sector users could include application developers and innovators in a range of areas (home-based education, transportation, public safety, health care, etc.) as well as broadband internet service providers (ISPs) and wireless companies seeking fiber backhaul for next-generation wireless such as 5G cellular.

To maximize this possibility, I will recommend in the next section creation of a series of P3 opportunities and financing support that will have the following positive effects on the deployment of both wired and wireless broadband:

1. Increase investment in new broadband facilities by reducing borrowing costs for P3s.
2. Stimulate development of a P3 market for broadband networks, which has been limited until now (despite the interest of private entities) because of the high cost of infrastructure deployment.
3. Maximize use of existing public broadband assets by enabling states and localities to add to them, and then make them available to private sector ISPs.
4. Create investment opportunity in areas that struggle to attract capital, particularly: (1) small business areas in both urban and rural areas that are chronically underserved with business-grade broadband, and (2) smaller, remote towns and rural areas that have suffered from chronic underinvestment with respect to private broadband infrastructure.
5. Create broadband construction jobs. Construction of fiber optics and wireless towers has immediate, significant direct job creation benefit because the bulk of funding is for labor rather than materials.

6. Support workforce education and development programs to prepare America's workers to succeed and thrive in the emerging information-based global economy.

Recommendations

Even a combination of tax credits and P3s alone would be insufficient to attract investment to rural areas. All things being equal, investors will go to where the market is strongest, the returns are highest, and the revenues are likely to be most robust.

As a result, unless tax credits are geographically targeted, investors will not generally take the tax credits to rural parts of the country. Instead, investors will likely use the tax credits in markets, including through P3s, where the potential for substantial revenues is greatest – well-to-do, densely-populated areas. This is both because the market and the asset type facilitate high revenues, and because the state or locality that sponsor the P3 will probably be capable of undertaking more significant public spending or public guarantees of the P3 private revenues than state or local entities in lower-income, sparsely populated areas.

For this reason, based on my experience, I suggest that the strategies include some of the following recommendations to make the tax credits and P3s in rural areas more viable and more attractive to investors:

1. **Create financing support mechanism to reduce P3 borrowing costs.** Create financing mechanisms that would reduce borrowing costs for states, localities, and private entities to build the infrastructure, thus making the P3s more viable at modest cost to the treasury. For example, federal contribution toward/reduction of interest costs would improve viability of P3 projects.

2. **Enable use of tax-free municipal bonds to fund public infrastructure in P3 environments or for lease to private ISPs**, thus reducing municipal borrowing costs, enabling P3s, and increasing project viability at modest cost. Specifically, create exception to private use limitations for tax-free municipal bonds focused on funding broadband infrastructure that would be available for private use, or that would be managed by a private partner under a formal P3 structure. Allowing use of tax-free bonds for broadband infrastructure to be leased and/or operated by private ISPs is projected to greatly increase state/municipal interest in broadband P3s and in investment in assets for use by private entities.
3. **Enable transferability of tax benefits such that non-profits and public entities can sell tax credits or other tax opportunities on the market**—thus making tax mechanisms more viable for areas that are of less interest for private capital. By way of analogy, the New Market Tax Credits program has had consistent bipartisan support for a similar approach focused on lower-income areas. This two decade-old, proven program allows investors in economic development infrastructure to sell their investment tax benefits on the market, thus realizing cash inflows that can help finance and support the project. This bipartisan program should be renewed and enlarged as a particularly efficient way of attracting private capital to areas that otherwise offer insufficient returns on investment.
4. **Carve out funding and other support for areas where the local economy has been impaired by technology change and globalization**—and where broadband could have a disproportionate impact (relative to cost) on improving economic opportunity. Geographically-targeted incentives could include more robust funding or financial benefits for infrastructure investments in rural and low-income areas. Unfortunately, recent budget

proposals go in the opposite direction. For example, President Trump’s budget proposal would exacerbate this issue by eliminating funding for two programs that have delivered measurable benefits in the areas of digital inclusion and broadband infrastructure. His budget would zero out both the Appalachian Regional Commission (ARC) and the Department of Commerce’s Economic Development Administration (EDA). As I discuss below, my experience working with the government of Garrett County, Maryland—which has received modest ARC funding for an innovative broadband public-private partnership project—illustrates the importance of programs such as these.

5. **Include mandatory Dig Once and construction efficiency strategies in other P3 projects, in order to capitalize on opportunities presented by construction in the rights-of-way—** whether by government agencies, utilities, or private entities—to cost-effectively install fiber and conduit. For example, consider a P3 scenario for replacement of an aging municipal water system. The concessionaire could be required to simultaneously install conduit in all of the trenches dug to replace water mains and supply pipes, thus effectively constructing extensive broadband infrastructure at incremental cost. Dig Once is thus an enormous opportunity at the local level to create a multiplier effect on federal infrastructure funding.

Local Government Examples

At the moment, early actors are developing new and exciting partnerships to bring next-generation broadband to their communities. I describe some of those projects in the following brief case studies.

[City of Westminster, Maryland](#)

In this rural town, home to 20,000, a broadband P3 has emerged in which the city has invested to deploy fiber optics to every home and business—and then leased the fiber to a private ISP that committed to provide services. For small businesses, in particular, the new services have been transformative, as they previously had no Internet option above a few megabits per second.

[Garrett County, Maryland](#)

This remote Appalachian community has no broadband in some remote, mountainous areas. The county's concern arose from citizen complaints that they could not home-school their children without adequate bandwidth to download home-schooling curricula, and could not telework or run home-based businesses without broadband.

The county developed a P3 to support the deployment of a fixed-wireless broadband network, currently under construction, that will serve up to 3,000 currently unserved homes. The private partner will match the public investment with its own capital and will assume operating risk. The county contribution (which was matched with development funds from the Appalachian Regional Commission) made the economics of this opportunity attractive to the private partner.

[Huntsville, Alabama](#)

In February 2016, the city of Huntsville, Alabama, the state's northern technology hub, announced that its municipal electric utility will build a fiber network throughout its city limits (presumably, to pass all or most businesses and homes), and that Google Fiber will become the first lessee of some of that fiber in order to provide gigabit services to residences and small businesses.

As in Westminster, the Huntsville model puts the city in the business of building infrastructure, a business it knows well after a century of building roads, bridges, and utilities.

The model leaves to the private sector (in this case, Google Fiber and any other provider that chooses to lease Huntsville fiber) all aspects of network operations, equipment provisioning, and service delivery.

Swift County, Minnesota

In one innovative, shared-risk project, a state grant and a county bond issuance have enabled a private company to deploy next-generation broadband in Swift County, a rural area in west central Minnesota that has a population of only 10 people per square mile.

Swift County is no exception when it comes to the economic challenges of deploying broadband in low population density areas.

With the active support and encouragement of the county, Federated Telephone Cooperative, a phone co-op in the region, applied for and won a grant with the State of Minnesota in 2015. (Set up to promote “border to border” broadband access, the state of Minnesota has a \$35 million statewide grant program designed to help new and existing ISPs as they try to reach new customers in hard-to-reach areas.¹ According to Minnesota’s Department of Employment and Economic Development, 25 percent of the state’s rural residents lack access to high-speed broadband.)

Federated Telephone won the state’s largest award: \$4.95 million. That amount pays for only 40 percent of the project’s projected cost, however, under the terms of the grant. The balance of the project’s \$12.5 million total cost is funded by a loan from the county.

¹ “Broadband Grant Program,” Minnesota Office of Broadband Development, <http://mn.gov/deed/programs-services/broadband/grant-program/>.

To launch the project, Swift County sold \$7.8 million in general obligation bonds.² Federated provided a \$1 million cash security in the event of missed payments, and will repay the loan over 20 years.

The project is designed to expand broadband availability to 600 households, 425 businesses, and 75 community buildings.

[RS Fiber Cooperative \(Minnesota\)](#)

Construction of a new fiber optic network to residences and farms is underway in rural, south-central Minnesota thanks to a public-private partnership, called the RS Fiber Cooperative, and the state's grant program. The network will eventually pass more than 6,200 potential customers across 10 cities and 17 townships. The network will be built in phases, with the first phase expected to cost \$15 million. The state contributed \$1 million to the effort through the rural broadband grant program, and the participating municipalities have financed the rest with \$8.7 million in general obligation bonds, as well as additional bank loans. Once completed, the first phase of the network will allow the cooperative to offer better broadband than is currently available in the area using wireless transmitters. The cooperative will use the revenue it begins to generate to service the bonds and finance the construction of the last-mile portion of the fiber network.³

² Lange, Carolyn, "Swift County approves bond for broadband internet," *West Central Tribune* (May 3, 2016) <http://www.wctrib.com/news/local/4024564-swift-county-approves-bond-broadband-internet>.

³ Madsen, Nancy, "Minnesota Rural Broadband Development a Game Changer," *Government Technology* (July 20, 2015) <http://www.govtech.com/dc/articles/Minnesotas-Rural-Broadband-Development-a-Game-Changer.html>.

State Government Example: KentuckyWired

With eastern Kentucky losing coal jobs at an unprecedented rate, Kentucky developed a plan to use broadband to spur economic development. But Kentucky faced the same challenges found in rural communities across the country: Bringing high-speed internet to low-population-density areas is an expensive prospect.

The solution is a statewide P3 that will connect 1,100 government entities into a 3,400-mile fiber optic backbone that will be made available to private sector ISPs for use and development. The selected concessionaire will build, maintain, and operate the network for 30 years.

KentuckyWired has been a bipartisan effort from the outset, and originated with U.S. Rep. Hal Rogers as an economic development initiative for replacing lost coal jobs. The program has been strongly supported by state elected officials of both parties, first by former Gov. Steve Beshear and, more recently, Gov. Matt Bevin.

Conclusion

Thank you for your consideration and the opportunity to appear before you today.