



Rural Broadband Deployment in Florida: Recommendations for Reform

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Introduction

Rural broadband deployment has become an urgent policy issue in the U.S. The COVID-19 pandemic demonstrated how important broadband is for work, education, and leisure. Lacking a connection can be socially and educationally

crippling. As of 2018, over 14 million Americans living in rural areas lacked access to a fixed 25 Mbps broadband connection.¹ According to recent Census Bureau data, almost 83 percent of households in rural Florida report having a broadband Internet subscription through a wireline, satellite, or cellular provider.² This slightly exceeds the

national average, but many people have yet to be connected.

While the Federal Communications Commission (FCC) and United States Department of Agriculture (USDA) have long subsidized rural telecommunications deployments, Florida's state government plays an important role in expanding rural broadband to those who are not yet connected. The Florida legislature has taken recent steps to improve rural connectivity.³ These measures include opening access to the public right-of-way, reducing the costs of installing new pole attachments, developing broadband infrastructure along public roads in rural areas, and establishing the state Office of Broadband.

In this article, we offer our recommendations for further reforms that could help Florida close its digital divide. We propose alternatives to directly subsidizing private providers or building government-operated networks.

First, as an alternative to a provider grant program, Florida should establish a broadband voucher fund for rural households and seek flexible use of federal rural telecom subsidies for that purpose. Second, Florida should repurpose existing federal and state funds to construct “dumb infrastructure”—long-lasting, passive equipment like conduit, poles, and other street furniture—along public roads and rights-of-way. Third, the state can fortify federal legal protections and protect residents from excessive county, local, and homeowners association fees and restrictions that residents sometimes face when installing small wireless broadband antennas on their property.

Rural Broadband Vouchers

In 2020, the Florida legislature established the Office of Broadband (“office”) within the Department of Economic Opportunity,⁴ and the Florida Broadband Deployment Act of 2021 updated and expanded the office's duties.⁵ The office identifies opportunities to secure federal funding to support broadband expansion in Florida, and, to that end, maps unserved and underserved regions in the state. Further, the office has the authority to issue \$5 million annually in matching grants, subject to appropriation, to broadband projects in unserved areas that are not supported by federal programs.

The legislature's and office's goals are laudable, but we recommend that Florida take an alternative approach and create a rural broadband voucher program. A household monthly voucher credited to broadband bills would decrease rural residents' broadband bills and induce new buildout by providing rural providers a steady flow of revenue.

The office should explore the idea of transforming the existing federal subsidy programs into a block grant to establish a new state broadband fund. Florida residents pay hundreds of millions of dollars annually in federal universal service fees but most of it leaves the state. If some of those fees could be reclaimed by Florida, it could form the basis of a large rural broadband voucher program for the state.

The poor design of federal telecom programs has serious implications for Florida. Floridians pay nearly \$500 million annually in federal fees on their broadband, phone, and wireless services, money that is

pooled into the federal Universal Service Fund to be distributed nationally.⁶ In 2019, only about \$190 million returned to the state.⁷ Put simply: over \$300 million in federal telecom fees leaves Florida annually to subsidize telecom providers in other states.

Of that \$190 million returning to the state annually, about \$50 million subsidizes telecom providers serving rural Florida.⁸ Our estimates show that on a per-rural-household basis, the FCC's disbursements to Florida are less than half the national average.⁹ With the modest changes we propose to the federal program, rural households in Florida could receive around \$67 million annually in broadband vouchers.¹⁰ For illustration purposes, this would amount to \$9 monthly per rural household (given participation from 100% of rural households) to \$45 monthly per rural household (given participation from 20% of rural households). This monthly federal voucher could be supplemented by state funds.

Germany and the United Kingdom have embraced rural broadband vouchers in recent years.¹¹ Broadband vouchers eliminate significant regulatory overhead for providers and give them a steady revenue stream from new subscribers who pay a discounted rate. In the UK's popular program, for instance, rural households "pool" their vouchers to entice high-speed fiber providers to take on new deployment projects.¹² Residents who have a rural address receive a government-provided discount code to use when paying their monthly bill.

Importantly, the voucher idea avoids

the regulatory overhead, cronyism, and mapping controversies of grant and loan programs that have subsidized rural broadband projects for decades.¹³ Today's federal and state rural telecom programs require years of developing complex cost models, some involving hundreds of economic inputs.¹⁴ These programs also rely on the creation and updating of broadband maps to ensure funds go to unserved areas. These maps are often inaccurate¹⁵ and small providers shy away from these programs because of the administrative burdens. Vouchers eliminate the need for maps altogether by making all rural households—designated by the Census Bureau—eligible.

Vouchers also broaden eligibility for providers and are technology neutral. Provider grant programs have long favored or explicitly targeted fiber deployment because of the fast speeds that fiber-to-the-premise service can provide. However, for the highest cost households that remain unconnected in Florida, the costs of wireline deployment are prohibitive and installing wireless technologies are necessary. Vouchers put consumers in charge of selecting which plan satisfies their needs, meaning that fixed wireless and other technologies can benefit from this program, too. Our next two recommendations, discussed below, would encourage the deployment of wireless facilities.

Pole and Conduit Construction in Rural Areas

In some rural areas, private deployment of broadband infrastructure is not economical. One important step policymakers can take is to reduce the costs

of deploying wireless services by opening access to the public right-of-way. Florida has taken important steps on this front.

First, the 2017 Advanced Wireless Infrastructure Deployment Act allows providers to attach small wireless antennas to utility poles and other infrastructure in a county's or municipality's right-of-way along public roads.¹⁶ Annual fees are capped at \$150 to prevent unreasonable fee increases by local officials.¹⁷

Florida went further with the 2020 Broadband Internet Service Act.¹⁸ That law allows Florida's Turnpike Enterprise within the state Department of Transportation to use up to \$5 million in funding to develop "broadband infrastructure" within or next to multi-use corridors in rural areas. While a good idea, the current law doesn't define "broadband infrastructure" and would benefit if the legislature specified that the state can build only "dumb infrastructure"—long-lasting, passive assets like utility poles, fiber conduit, and underground handholes.

Arizona passed a law¹⁹ in May 2021 that allows the state DOT (by itself or via public-private partnership) to construct and lease out roadside passive infrastructure.²⁰ In particular, the Arizona law allows the state DOT to construct, manage, and lease out passive "telecommunication facilities," which is defined broadly:

“Any cable, line, fiber, wire, conduit, innerduct, access manhole, handhole, tower, hut, pedestal, pole, box, transmitting equipment, receiving equipment or power equipment or any other equipment, system or device that is used to transmit, receive, produce or distribute by wireless,

wireline, electronic or optical signal for communication purposes.”

Access to all publicly funded passive infrastructure should be non-exclusive to promote competition between telecom and smart city providers. Access to the rights-of-way and infrastructure must also be non-discriminatory, which prevents a public-private partner from favoring its affiliated or favored providers.

It's the most ambitious smart-city and telecom infrastructure deployment initiative we've seen. There have been some smaller projects involving the competitive leasing of roadside conduit and poles, like in Lincoln, Nebraska²¹ and a proposal in Michigan.

These are good examples of how state and local governments can assist broadband expansion and competition without taking on the risk of operating a broadband network. Passive infrastructure projects make it easier for multiple providers to access the rights-of-way and roadside infrastructure to deploy 5G antennas and extend fiber backhaul and Internet connectivity to rural areas.

Wireless Antennas Protections on Private Property

Some rural Internet providers, like wireless ISPs (WISPs), have difficulty getting local permits to construct small antennas on private property.²² Further, some overzealous local officials and homeowners' associations prohibit, regulate, or impose fees on homeowners who want to install small antennas on their property and self-provision TV or Internet services.²³

In January 2021, the FCC voted to give all residents new, substantial freedom to install 5G and other wireless antennas on their rooftops, balconies, and yard poles. The rule,²⁴ called the “over the air reception device” rule is sometimes called the “pizza box rule”—the FCC protects most antennas if they are smaller than 1 meter diameter and have a maximum height of 12 feet above a roofline. Generally, unless there’s a safety or historical preservation issue, local officials can’t restrict or impose fees on small antenna installations on private property, including antennas that provide wireless connections to neighbors.

However, these landowner protections would be stronger if states had similar rules. The FCC rules are a good starting point, but the FCC does not have clear authority over homeowners’ associations, for instance, and is not as responsive to local concerns as a state agency would be to residents or providers who are burdened.

In rural areas, these types of rules help get infrastructure and small broadband antennas installed quickly on private property. Many renters and landowners—especially in rural areas where wireless home Internet makes more sense—want to install wireless broadband antennas on their property, and this law protects them from local rules that would “unreasonably” delay or raise the cost of installation of antennas.

Conclusion

Florida lawmakers have made broadband deployment a priority and taken forward-looking steps to improve competition and coverage for underserved and rural residents. We recommend three further reforms to state policymakers:

1. establish a rural broadband voucher fund as an alternative to hard-to-administer provider grants,
2. construct passive infrastructure and allow access to the public right-of-way on a reasonable and nondiscriminatory basis, and
3. codify protections for property owners who wish to install small wireless broadband equipment on their private property.

Our recommendations allow the market process to drive innovation and investment in broadband provision, rather than relying on government and regulators to decide which specific broadband projects have merit. Florida lawmakers and regulators have an important role to play in encouraging deployment through the construction of basic infrastructure that greatly reduces the costs required to deploy 5G and other broadband technologies. Our recommendations empower consumer choice about broadband adoption, avoid risky investments into government-operated networks, and create generally applicable broadband policies that favor no particular provider or type of service.

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- 4 “An act relating to broadband Internet service,” CS/HB 969, 2020 Legislature, <https://www.flsenate.gov/Session/Bill/2020/969/BillText/er/PDF>.
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- 6 The annual report from the FCC about the Universal Service Fund estimated that Floridians contributed about \$495 million in fees in 2019. See Federal-State Joint Board on Universal Service, 2020 Monitoring Report, Table 1.9 – Universal Service Support Mechanisms by State: 2019 (2020), <https://docs.fcc.gov/public/attachments/DOC-369262A1.pdf>.
- 7 See Federal-State Joint Board on Universal Service, 2020 Monitoring Report, Table 1.9 – Universal Service Support Mechanisms by State: 2019 (2020), <https://docs.fcc.gov/public/attachments/DOC-369262A1.pdf>.
- 8 See Federal-State Joint Board on Universal Service, 2020 Monitoring Report, Table 1.9 – Universal Service Support Mechanisms by State: 2019 (2020), <https://docs.fcc.gov/public/attachments/DOC-369262A1.pdf>. Most of it goes to providers serving schools and libraries in Florida, and some goes to low-income Lifeline participants and rural hospitals.
- 9 Skorup and Kotrous, “Narrowing the Rural Digital Divide.”
- 10 Universal Service Funds to states will never be equal between states since some geographic areas are more expensive to deploy broadband on than others, but we think the disparities between states today is unjustifiably high. Florida would benefit somewhat in our proposed reallocation of funds. See Skorup and Kotrous, “Narrowing the Rural Digital Divide.”
- 11 Georgina Hutton. “Gigabit-broadband in the UK: Public funding.” House of Commons Library. Briefing Paper Number CBP 9207, April 30, 2021. <https://researchbriefings.files.parliament.uk/documents/CBP-9207/CBP-9207.pdf>. Evelyn Arevalo, German Minister Plans To Set Up A Voucher Program For Rural Households To Access SpaceX Starlink Broadband Service, Tesmanian, May 18, 2021, <https://www.tesmanian.com/blogs/tesmanian-blog/germany-starlink>.
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- 14 Federal Communications Commission, “In the Matter of Connect America Fund; High-Cost Universal Service Support” (DA 14-534, Federal Communications Commission, Washington, DC, April 22, 2014), 19.
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https://www.electric.coop/wp-content/uploads/2019/06/DanStelpflugWrittenTestimony_HouseSmallBusiness_BroadbandMapping_06.25.19_FINAL.pdf.
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