

**INNOVATION &  
TECHNOLOGY**

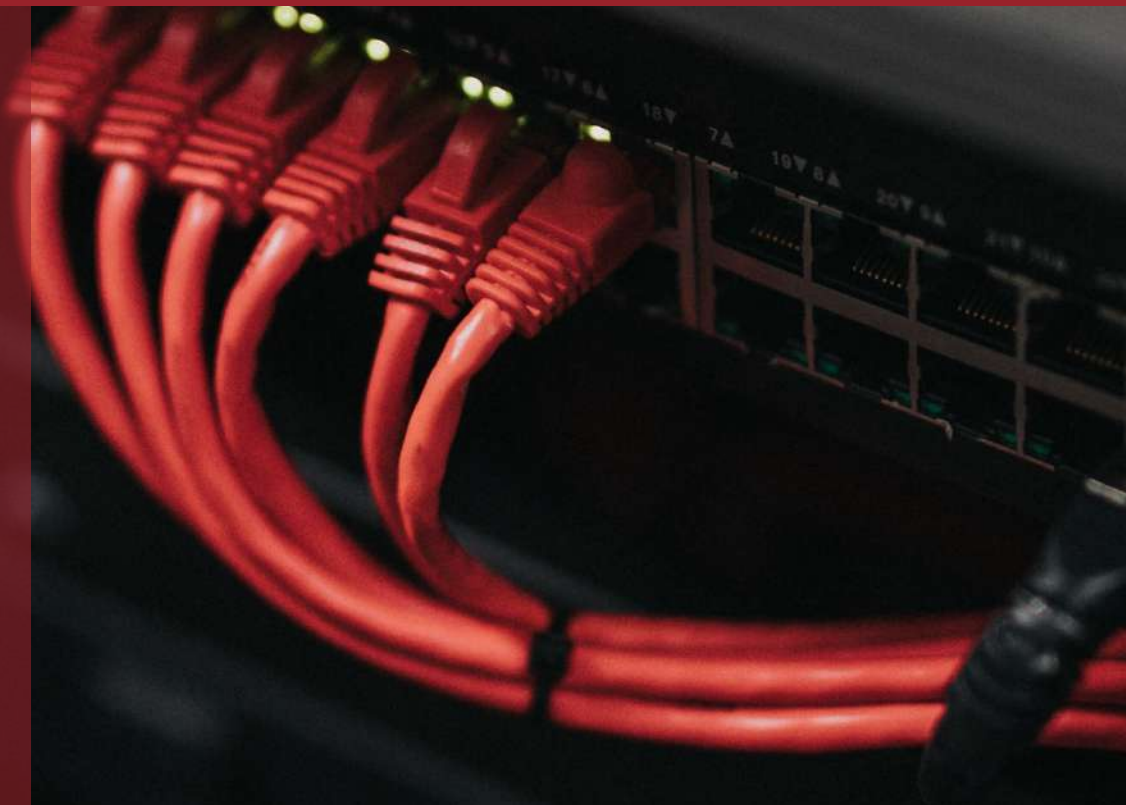
# Plugged in: Five keys to expanding broadband coverage

By Sebastian Griffin  
Junkermier Center for  
Technology & Innovation

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**MOUNTAIN STATES**  
POLICY CENTER





# Plugged in – Five keys to expanding broadband coverage

By Sebastian Griffin  
Research Director, Junkermier Center for Technology and Innovation

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## KEY INFORMATION COLUMN

States are being provided billions of dollars by the federal government to expand broadband.

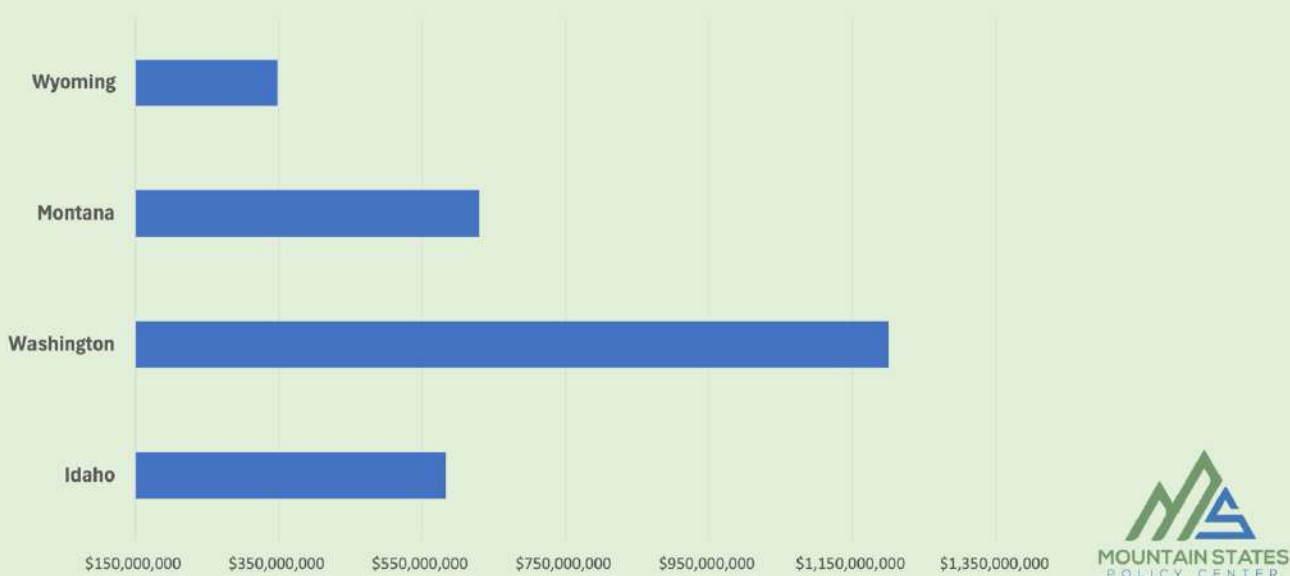
### Introduction

In today's rapidly evolving economic landscape, access to high-speed internet is critical for small businesses and education opportunities. After the enactment of the Telecommunications Act of 1996, the contemporary form of the Universal Service Fund (USF) has witnessed the allocation of over \$100 billion in support of telecommunications, specifically broadband since 2011, within rural regions of the United States.<sup>1</sup> As part of the Infrastructure Investment Bill and American Jobs Act (IIJA), passed in 2021, states are being provided billions of additional dollars by the federal government to help expand broadband.<sup>2</sup>

Each state and territory have been awarded different amounts, from a low of \$27 million for the U.S. Virgin Islands to a high of \$3.3 billion for Texas.<sup>3</sup> Idaho will have a big opportunity to expand broadband the right way with \$583 million in federal funding.

## Broadband expansion funding

Infrastructure Investment Bill & American Jobs Act



<sup>1</sup> "Connecting Every American: The Future of Rural Broadband Funding," Testimony of Scott Wallsten, Technology Policy Institute, September 2023, available at <https://techpolicyinstitute.org/wp-content/uploads/2023/09/Wallsten-Written-Testimony-Hearing-Connecting-Every-American-The-Future-of-Rural-Broadband-Funding.pdf>

<sup>2</sup> "Fact Sheet: Biden-Harris Administration Announces Over \$40 Billion to Connect Everyone in America to Affordable, Reliable, High-Speed Internet," White House, June 2023, available at <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/26/fact-sheet-biden-harris-administration-announces-over-40-billion-to-connect-everyone-in-america-to-affordable-reliable-high-speed-internet/#:~:text=Today%2C%20the%20Department%20of%20Commerce,Infrastructure%20Law%20and%20administered%20by>

<sup>3</sup> "US to spend \$42 billion to make internet access universal by 2030," Reuters, June 2023, available at <https://www.reuters.com/world/us/biden-detail-plans-42-billion-investment-us-internet-access-2023-06-26/>

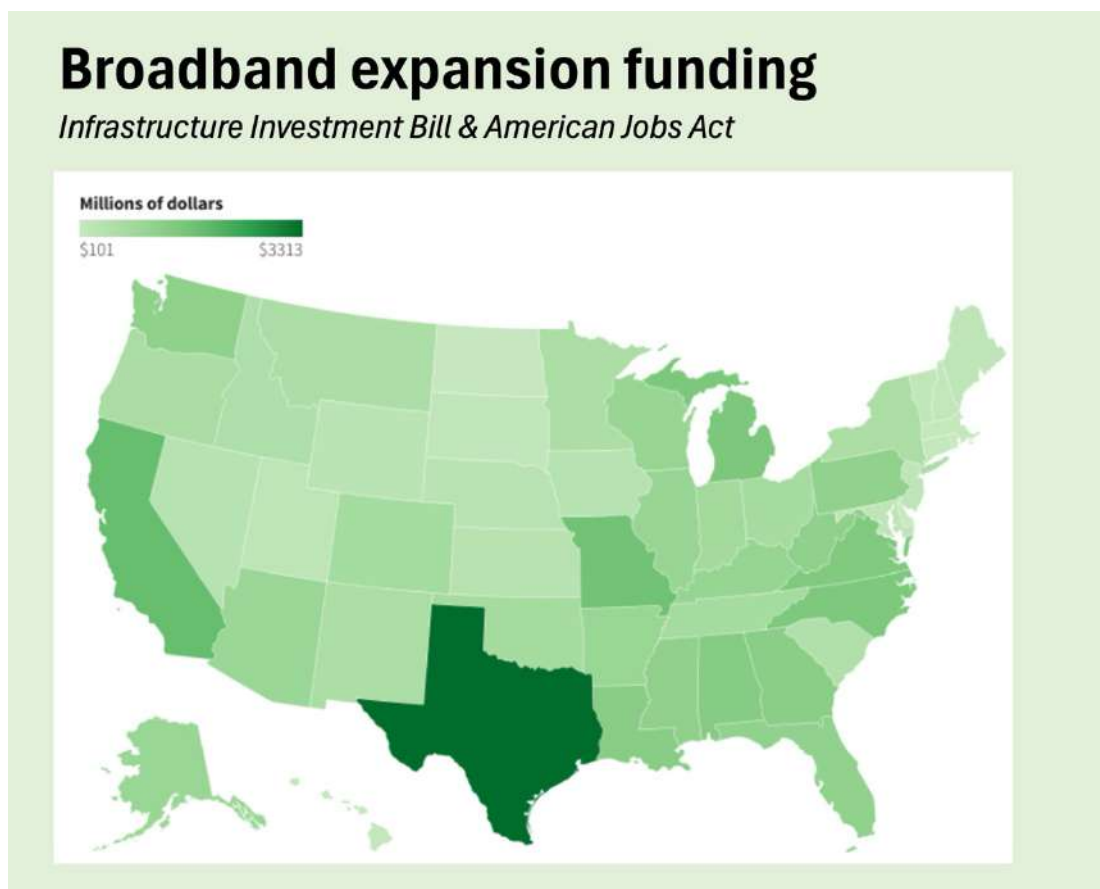
## KEY INFORMATION COLUMN

According to the Idaho Department of Commerce:<sup>4</sup>

*“Over the next six months, the Idaho Office of Broadband will work diligently with stakeholders and local communities to further develop the State’s initial proposal for how these funds should be used and dispersed.”*

Neighboring states are also receiving substantial federal broadband funding with Washington state being allocated \$1.2 billion, Montana \$629 million, and Wyoming \$348 million.<sup>5</sup>

*Texas will receive the most broadband expansion funding.*



As policymakers utilize these federal funds, they should focus on best practices to ensure they are taking a free-market approach that expands broadband to the greatest number of people in the most efficient way possible.

<sup>4</sup> "Idaho Awarded \$583 Million to Expand Broadband Access in the State," Idaho Department of Commerce, June 2023, available at <https://commerce.idaho.gov/press-releases/idaho-awarded-583-million-to-expand-broadband-access-in-the-state/>

<sup>5</sup> "Biden-Harris Administration Announces State Allocations for \$42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda," National Telecommunications and Information Administration, June 2023, available at <https://www.ntia.gov/press-release/2023/biden-harris-administration-announces-state-allocations-4245-billion-high-speed>

As of 2021, approximately 97% of urban Americans had access to broadband, compared to about 78% of rural Americans, highlighting the urban-rural digital divide.

## What is broadband?

Broadband expansion refers to efforts aimed at increasing the availability and accessibility of high-speed broadband internet services in areas where they are currently limited or unavailable. It involves extending the reach of broadband infrastructure to reach more communities, homes, and businesses.

Broadband expansion is critical for several reasons:

*Digital accessibility: It ensures more people have access to the internet, bridging the digital divide. Without broadband access, individuals and communities can be left behind in terms of education, employment, healthcare, and civic engagement. As of 2021, approximately 97% of urban Americans had access to broadband, compared to about 78% of rural Americans, highlighting the urban-rural digital divide.<sup>6</sup>*

*Economic development: Broadband expansion is seen as a driver of economic growth. It enables businesses to reach broader markets, facilitates remote work, and attracts investments in underserved regions. According to a 2020 study, broadband expansion can lead to significant economic growth. For every percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2% to 0.3%.<sup>7</sup> For example, a study from the Hudson Institute found that broadband and its related industries contributed over \$150 billion in economic impact and supported over 700,000 jobs in the U.S. in 2015.<sup>8</sup>*

*Education: Access to broadband is crucial for remote learning and education choice options, especially living in a post-COVID-19 world. According to the Federal Communications Commission, "Nearly 17 million school children lack internet access at home."<sup>9</sup>*

*Healthcare: Telehealth and remote healthcare services rely on broadband access. Expanding broadband can improve healthcare access, especially in rural and remote areas.*

*Government services: Many government services and information are now provided online. Broadband expansion ensures citizens can access government services efficiently.*

<sup>6</sup> "Some digital divides persist between rural, urban and suburban America," Pew Research Center, August 2021, available at <https://www.pewresearch.org/short-reads/2021/08/19/some-digital-divides-persist-between-rural-urban-and-suburban-america/>

<sup>7</sup> "U.S. Broadband Policy and Competitiveness," Council on Foreign Relations, May 2013, available at <https://www.cfr.org/background/under/us-broadband-policy-and-competitiveness>

<sup>8</sup> "The Uncertain State of the Biden Economy," Hudson Institute, February 2023, available at <https://www.hudson.org/economics/uncertain-state-biden-economy>

<sup>9</sup> "Homework Gap and Connectivity Divide," Federal Communications Commission, accessed on December 2023, available at <https://www.fcc.gov/about-fcc/fcc-initiatives/homework-gap-and-connectivity-divide>

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*In the rapidly evolving digital age, understanding the broadband market is paramount for any stakeholder, be it an elected official, educator, or learner.*

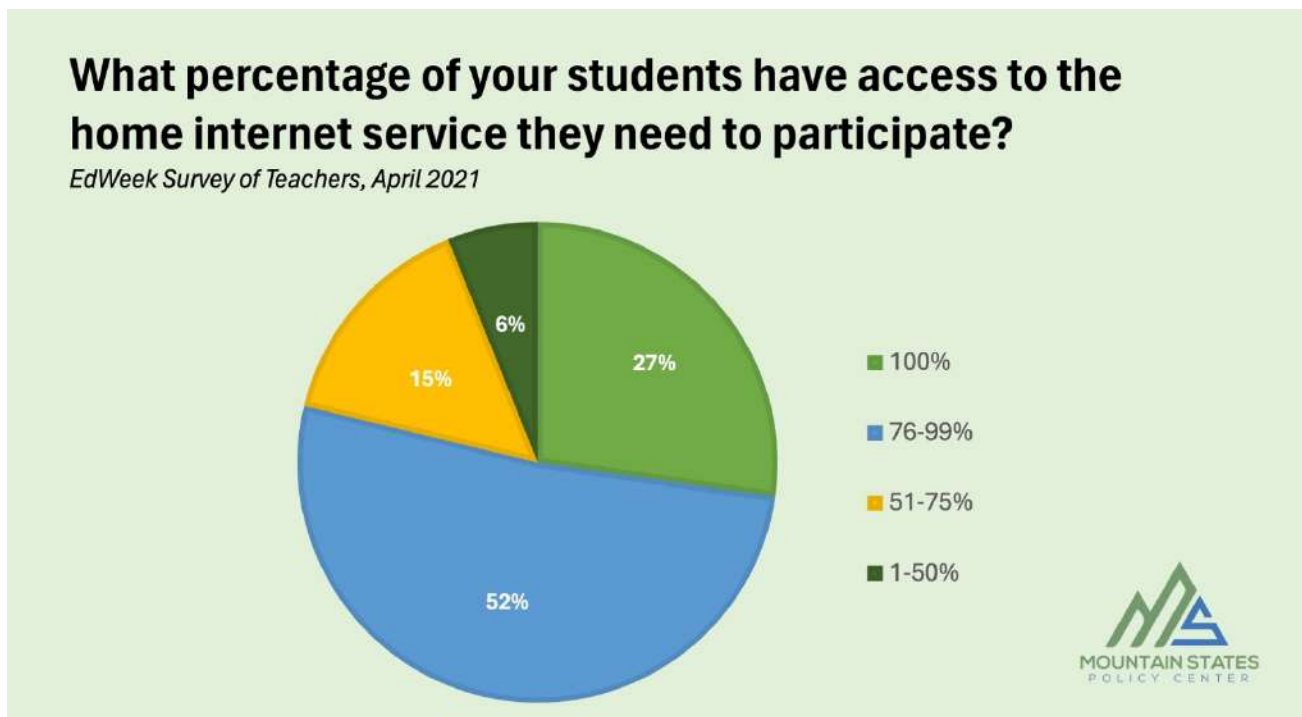
This publication will focus on five steps policymakers should use to help ensure a successful broadband expansion implementation.

**Step One: Understand Your Market**

In the rapidly evolving digital age, understanding the broadband market is paramount for any stakeholder, be it an elected official, educator, or learner. Broadband, with its high-speed internet capabilities, has become an indispensable tool, weaving its way into the very fabric of our daily lives and operations.

At the heart of this digital revolution are households. Families rely on broadband for a myriad of purposes, from entertainment and education to telecommuting and maintaining connections with distant loved ones. But the reach of broadband doesn't stop at our doorsteps. Businesses, both large and small, harness the power of high-speed internet to operate with efficiency, tap into global markets, and drive innovation across sectors.

Educational institutions are no longer confined to brick-and-mortar boundaries; they leverage broadband to offer e-learning platforms, conduct research, and facilitate virtual classrooms. In this post-COVID world, many students have turned to online learning. According to a recent EdWeek survey of teachers, 75% said their students had adequate internet access at home.<sup>10</sup>



<sup>10</sup> "Most students have home internet, but what about those who don't?", by Mark Lieberman, EdWeek, April 20, 2021, available at <https://www.edweek.org/technology/most-students-now-have-home-internet-access-but-what-about-the-ones-who-dont/2021/04>

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*Teachers say roughly 25% of children may not have access to the internet they need to be successful.*

Unfortunately, every 5% who don't translate into more than two million children without the online access they need to be successful.

Healthcare providers, too, have embraced the digital shift, utilizing broadband for telehealth, maintaining patient records, and pioneering medical research. Even governments have recognized the potential, employing broadband to streamline services, disseminate crucial information, and foster engagement with their citizenry.

Providing education for our elected officials and learners about this market is not just beneficial—it's essential. Workshops and seminars can be organized to shed light on the significance of broadband in driving socio-economic growth. We have seen said workshops being implemented in states, like Idaho. Real-life case studies can paint a vivid picture of its transformative impact. Site visits to local broadband providers or infrastructure hubs can offer a tangible, firsthand experience of the technology at work.

Engaging industry experts can provide invaluable insights into the latest advancements, challenges, and the promising future of broadband. Moreover, the use of interactive digital platforms, videos, and infographics can make the learning process more engaging and repeatable, especially for younger learners. Collaborative projects, where elected officials partner with local educational institutions or community centers, can foster a community-wide understanding and appreciation of the broadband market.

More than anything else, we must remember to keep our approach aligned with a free-market approach. It will benefit not only the consumers but the industry as well.

### **Step Two: Find The Right Projects**

The Mountain States is a region of vast landscapes, from rugged coastlines and dense forests to expansive plains and towering mountain ranges. While its natural beauty is undeniable, this geographical diversity presents unique challenges for broadband implementation.

State legislatures and local municipalities in these states often grapple with the question: How do we prioritize our resources for broadband projects effectively to help reach that elusive "last mile" of service delivery?

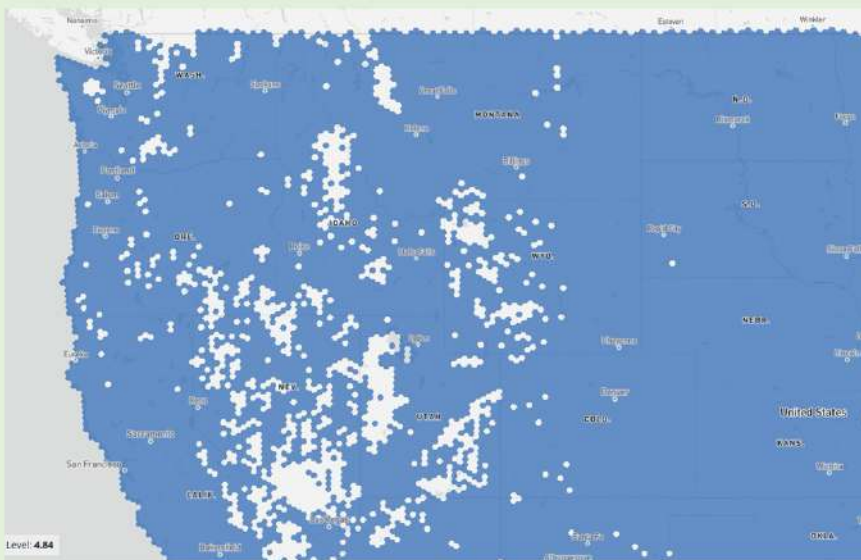
Understanding the demographics and topography is the first step. States like Montana and Wyoming, with their sprawling rural areas, face challenges in connecting remote communities. According to the Federal Communications Commission, as of 2021, nearly 23% of rural Montanans and 20% of rural

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Wyomingites lacked access to broadband at the benchmark speed.<sup>11</sup> In contrast, states like Washington, with tech hubs including Seattle, have urban areas with higher broadband penetration but still face challenges in their rural and mountainous regions.

### Fixed Broadband Coverage – Residential

Any technology, speeds of 25/3 Mbps or greater – Source: FCC



*Idaho's Broadband Task Force has been instrumental in identifying underserved regions, guiding the state's efforts in bridging the digital divide.*

To address these disparities, state and local governments often rely on comprehensive broadband mapping. These maps, developed in collaboration with the FCC or independent organizations, provide detailed insights into areas lacking adequate broadband access. For instance, Idaho's Broadband Task Force has been instrumental in identifying underserved regions, guiding the state's efforts in bridging the digital divide.

Another crucial strategy is community engagement. Local municipalities, being closer to their constituents, often have a clearer understanding of specific needs. Town hall meetings, surveys, and public forums can provide invaluable feedback. In Washington, grassroots movements and local cooperatives have played a pivotal role in driving broadband projects, especially in regions where major ISP's might not see immediate profitability.

Collaboration with the private sector is essential. This may be a given, but it cannot be stated enough. Public-private partnerships can leverage the strengths of both sectors, combining governmental oversight with the

<sup>11</sup> "Seventh Broadband Progress Report," Federal Communications Commission, accessed on December 2023, available at <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/seventh-broadband-progress-report>



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*Voters and elected officials need to interact with their state broadband offices since those are the main points of connection between NTIA and these new funds that are becoming available.*

*Depending on rural household participation rates, states could provide monthly vouchers ranging from \$20 to \$80, guaranteeing providers a reliable income stream over the exclusive contract period.*

innovation and resources of private companies. Collaborations have led to the expansion of broadband in challenging terrains, ensuring that even remote ranching communities stay connected.

Additionally, communication and outreach to policymakers and industry leaders is essential. Voters and elected officials need to interact with their state broadband offices since those are the main points of connection between NTIA and these new funds that are becoming available.

One idea proposed by the Mercatus Center is to consider vouchers to expand broadband access for the low-income. This recommendation builds on the UK's successful rural broadband program and suggests transforming the FCC's current rural broadband initiative into a voucher program for rural households. Under this model, rural residents, not broadband providers, control the funds, creating a simple and effective way to distribute financial resources.

Broadband vouchers provide a stream of income to providers for each rural household address, with states and cities specifying a payout period, typically a five-year exclusive contract. This approach streamlines decision-making for consumers, ensures traceability of expenditures, and self-enforces progress monitoring, as providers only receive compensation upon completing network expansions. This simplicity benefits federal stakeholders, private network providers, and states aiming to avoid the complexities and costs associated with managing broadband programs.

As an example, Pennsylvania proposed a five-year, \$210 million annual broadband voucher plan, supplemented by \$50 million annually in state funds. Depending on rural household participation rates, states could provide monthly vouchers ranging from \$20 to \$80, guaranteeing providers a reliable income stream over the exclusive contract period. Despite upfront connection costs varying by technology, the voucher program offers a straightforward solution for addressing rural broadband challenges.<sup>12</sup>

### **Step Three: Maximize investments**

In an era of fiscal responsibility and the need for prudent resource allocation, adopting a thoughtful approach to broadband development in these regions becomes paramount. Several strategies can ensure cost-effectiveness while maximizing the value of every dollar spent on broadband expansion.

Before embarking on any broadband project, a thorough needs assessment is crucial. By understanding which areas are most underserved and identifying the

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<sup>12</sup> "What Should States and Cities Do with the New Broadband Money from DC?," Mercatus Center, November 2022, available at <https://www.mercatus.org/research/policy-briefs/what-should-states-and-cities-do-new-broadband-money-dc>

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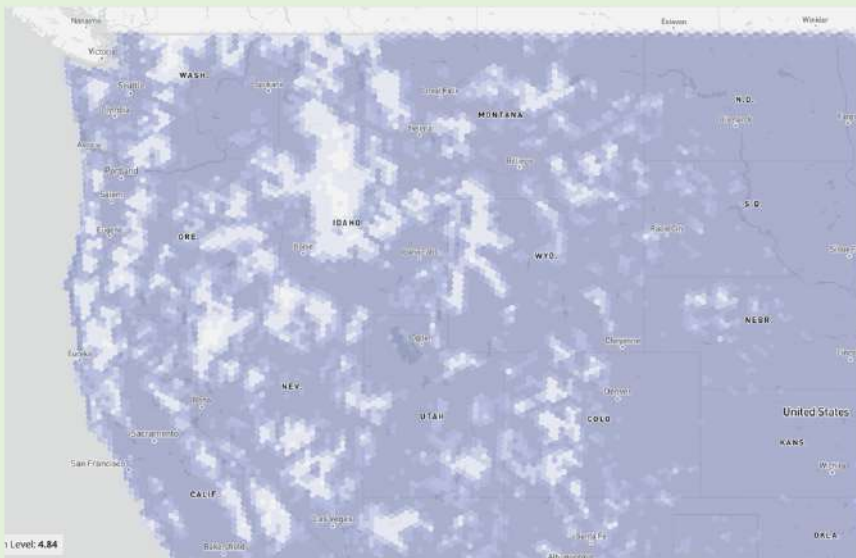
*Engaging the private sector can lead to shared financial responsibility and risk. ISPs, with their technical expertise and resources, can be invaluable partners.*

specific needs of these communities, resources can be directed more efficiently. This avoids the pitfalls of over-investment in areas with adequate coverage or neglecting regions in dire need.

Engaging the private sector can lead to shared financial responsibility and risk. ISPs, with their technical expertise and resources, can be invaluable partners. By offering incentives, such as a streamlined permitting process, states can attract private investment, ensuring that public funds are supplemented and stretched further. By encouraging multiple ISPs and contractors to bid, states can ensure they receive the most cost-effective proposals. Regular audits and oversight can further ensure that projects stay within budget and deliver on their promises.

### Mobile Broadband Coverage – Outdoor stationary

4G, (5/1 Mbps) – Source: FCC



*Traditional fiber-optic networks, while effective, have been found to not always be the most cost-efficient solution for remote areas.*

Broadband infrastructure can serve multiple purposes. For instance, while laying down fiber for internet connectivity, provisions can be made for smart transportation systems or emergency communication networks. By integrating multiple services into a single project, the cost per service is reduced, maximizing the value derived from the investment.

Traditional fiber-optic networks, while effective, have been found to not always be the most cost-efficient solution for remote areas. Exploring alternative technologies, such as fixed wireless, satellite internet, or low-power wide-area networks, can offer more economical solutions for challenging terrains or low-density regions. Companies like SpaceX's Starlink are aiming to provide

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*A one-size-fits-all policy may not suit the diverse landscapes and demographic nuances of different regions.*

*It is important to remember that federal guidance should serve as a starting point for collaboration rather than a checklist for compliance.*

broadband access via low-Earth orbit satellites. This could be a game-changer for remote and underserved areas.

Several federal programs and grants aim to support broadband expansion in rural and underserved areas. By actively seeking out and securing such funding, states can supplement their budgets, ensuring that local funds are stretched even further.

### **Step Four: Don't Treat Federal Suggestions as Mandatory**

While federal guidelines are designed to ensure a uniform approach to broadband expansion, local legislators and implementers need to know they have the strategic autonomy to adapt these suggestions to the community's specific needs. A one-size-fits-all policy may not suit the diverse landscapes and demographic nuances of different regions. By leveraging federal guidance as a foundational framework, local entities can innovate and develop more context-sensitive approaches that better address their unique challenges.

In a recent interview, Ramón Hobdey-Sanchez, Idaho's State Broadband Office (IOB) Manager, articulated the careful considerations that go into selecting broadband expansion projects.<sup>13</sup> He explained how the department prioritizes not just by need, but by sustainability and impact. The office's strategy involves a collaborative effort with local leaders, mapping out underserved areas and projecting the long-term benefits of each proposed project.

Hobdey-Sanchez addressed the complexities of adhering to federal guidelines while trying to maintain state autonomy. He discussed specific strategies for aligning federal aid with state objectives, such as leveraging local policies and advocating for state-level discretion in the application of funds.

It is important to remember that federal guidance should serve as a starting point for collaboration rather than a checklist for compliance. For example, in response to a question about requiring a union workforce to expand broadband, Idaho told the federal government “the IOB has opted not to require applicants to have a unionized workforce.”<sup>14</sup>

The willingness of state policymakers to make the distinction between hard federal requirements and other non-mandatory suggestions that may unnecessarily increase costs and not fit with the needs of the local community will be essential to help the efficient and timely expansion of broadband.

<sup>13</sup> “Insights from Idaho’s Broadband Trailblazer, Ramón Hobdey-Sanchez,” Mountain States Policy Center, November 2023, available at <https://www.mountainstatespolicy.org/insights-from-idaho-s-broadband-trailblazer-ram%C3%B3n-hobdey-sanchez>

<sup>14</sup> “Public comment period guide sheet - BEAD Initial Proposal Vols. I & II,” Link Up Idaho, September 2023, available at <https://linkup.idaho.gov/wp-content/uploads/2023/09/ID-Vol-II-Final-Draft-Post-for-Public-Comment-9.29.23.pdf>

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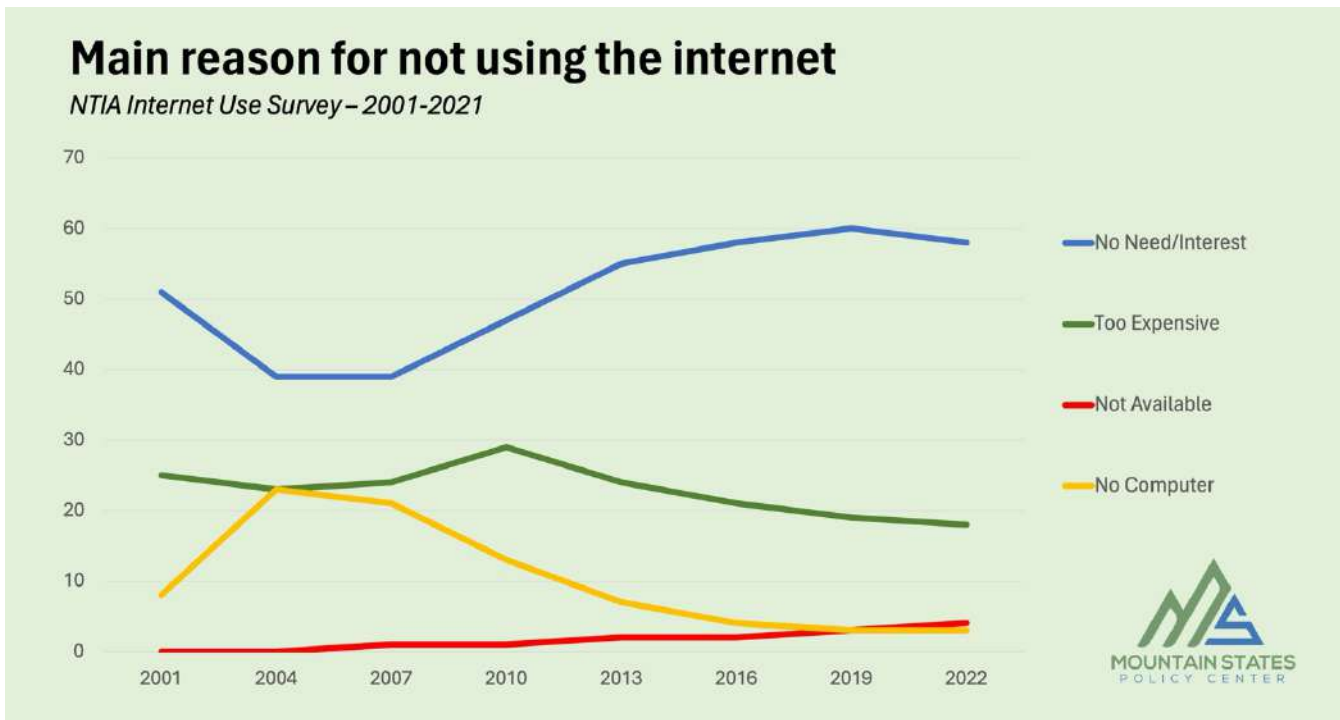
*Policymakers should not attempt to create their own broadband utilities or institute price caps.*

**Step Five: Limit Government Overreach**

As local legislatures and municipalities grapple with the challenges of expanding this essential infrastructure, a pivotal concern emerges about how to achieve widespread connectivity without excessive government intervention. A conservative approach to this dilemma offers a focus on the private sector's role, minimizes bureaucratic hurdles, and ensures that community voices guide the way. Policymakers should not attempt to create their own broadband utilities or institute price caps.

Instead of heavy-handed government-led projects, the emphasis is on creating an environment where private entities are motivated to invest and expand. This can be achieved through a range of incentives, such as streamlined permitting processes. These measures not only reduce the financial burden on public resources but also harness the innovation and technical expertise inherent in private Internet Service Providers (ISPs). The model of public-private partnerships stands as a testament to the potential of collaborative endeavors. By sharing responsibility, these partnerships combine the strengths of both sectors, ensuring robust oversight without stifling entrepreneurial spirit.

This is all rooted in the heart of the government's control: regulations. Excessive and cumbersome regulations can act as deterrents, hindering private initiative and inflating project costs. By simplifying regulatory frameworks and ensuring transparent, competitive bidding processes, local governments can pave the way for efficient and equitable broadband projects.



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*Traditional broadband infrastructure, while effective, might not always be the most pragmatic solution, especially for challenging terrains or sparsely populated areas.*

Such measures not only make it more attractive for private companies to participate but also guard against potential government favoritism, ensuring a level playing field. Collaborations with utility companies to utilize existing poles, conduits, or even public buildings can significantly reduce project costs. More importantly, this strategy minimizes the scope and scale of government-led initiatives, ensuring a restrained approach.

This approach underscores the importance of grassroots engagement. By actively involving residents in decision-making processes, municipalities can ensure that broadband projects resonate with community desires and needs. This bottom-up approach acts as a safeguard against top-down, government-imposed solutions that may not align with local realities. The same standard our government was based on.

Lastly, technological flexibility is key. Traditional broadband infrastructure, while effective, might not always be the most pragmatic solution, especially for challenging terrains or sparsely populated areas. By being open to alternative technologies, municipalities can explore cost-effective solutions that require minimal direct government intervention.

### **Conclusion**

Policymakers now have a generational opportunity to expand high-speed internet in their states with federal broadband funds to help improve digital accessibility, economic development, education opportunities, healthcare access, and government services.

By focusing on these five steps: 1) understand the market, 2) pick the right projects, 3) maximize investments, 4) don't treat federal suggestions as mandatory and, 5) limit government overreach, government officials will be able to ensure a successful and cost-effective broadband expansion implementation in their states.

**Nothing contained in this publication shall be construed as an attempt to aid or hinder the passage of any legislation.**

# ABOUT THE AUTHOR

Sebastian Griffin is a 5th generation Idahoan and Nampa native. He current serves as MSPC's Marketing and Communications coordinator, and is the lead researcher for MSPC's Junkermier Center on Technology and Innovation.

He is married to his high school sweetheart and has a daughter named Wyld. Sebastian graduated from Nampa High, CWI with an associate's degree in liberal arts, and Boise State with is bachelors in Political Science and American Government.

He has been involved in the policy making process in Idaho for the last 5 years starting as a Senate Page and most recently as a Legislative Candidate in District 12. Sebastian currently serves on his local city council.

