

Are Federal Broadband Investments Meeting the Need?

A Snapshot of Recent Federal Broadband Funding

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KEY FINDINGS

Funding from broadband investments was generally concentrated **in a few large states in the Great Plains and other parts of the West**. This could be due to an emphasis on **rural and tribal communities**.

Some broadband programs distributed as much as **60 percent of their funding to disadvantaged counties** and nearly **80 percent to counties with low incomes**. In each case, these levels were higher than those counties' share of the national population.

Broadband programs prioritized high-need communities; **counties with lower shares of households with internet access and lower average broadband speeds** received more funding.

Funding was heavily concentrated in counties with **low population densities**.

Internet access is essential to participating in modern life. Yet 45 million Americans lack access to high-speed broadband, placing them at a significant disadvantage.¹ Without broadband, it is harder to find and apply for jobs, access online education and telehealth, and connect with family, friends, and community—potentially exacerbating social and economic inequalities. The federal government has invested billions of dollars to improve broadband infrastructure. But are these funds going to the places that are most in need? We investigate the distribution of competitive federal broadband investments since the passage of the 2021 Infrastructure Investment and Jobs Act (IIJA).

SUMMARY OF THE MAJOR COMPETITIVE BROADBAND PROGRAMS

IIJA introduced and expanded several competitive grant programs designed to enhance broadband access and efficiency. These investments prioritize previously underserved low-income, rural, and tribal areas.²

TABLE 1

Competitive Federal Broadband Programs

Amount awarded in millions of dollars, fiscal years 2022 and 2023

Federal agency	Program name	Amount
US Department of Agriculture	Rural Development Broadband ReConnect Program	\$3,294
National Telecommunications and Information Administration	Tribal Broadband Connectivity Program	\$1,101
National Telecommunications and Information Administration	Enabling Middle Mile Grant Program	\$930
Federal Communications Commission	Affordable Connectivity Outreach Grant Program	\$64
Total		\$5,389

Source: Authors' analysis of award announcements as of June 2024.

Notes: Includes major competitive broadband programs that received Infrastructure Investment and Jobs Act funding in fiscal years 2022 and 2023. Does not include formula programs awarded to states, such as the National Telecommunications and Information Administration's Broadband Equity Access and Deployment Program, household broadband assistance programs, or broadband programs that did not receive Infrastructure Investment and Jobs Act funding.

WHERE WAS FEDERAL BROADBAND FUNDING DISTRIBUTED?

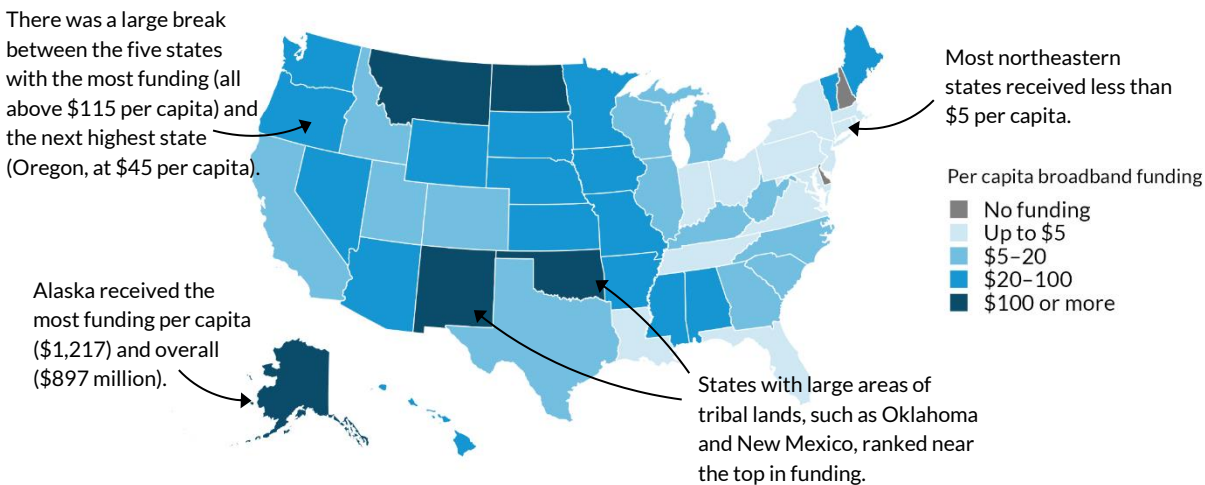
Funding from the major competitive broadband programs was concentrated in the Great Plains states and other states with significant tribal lands (figure 1). Alaska received the largest amount of funding, at \$896.7 million (\$1,216 per capita), followed by Oklahoma (\$476 million, \$121 per capita) and New Mexico (\$373 million, \$178 per capita). Meanwhile, many states in the Midwest and Northeast received less than \$5 per capita.

The difference in funding between Western and Northeastern states may make sense given federal priorities that focus broadband funding in rural and Native communities.³ States such as Alaska and Montana, which have lower population densities, may require significant federal investment to support large-scale infrastructure projects that span long distances, in contrast with more densely populated states. Furthermore, the Tribal Broadband Connectivity Program is specifically focused on improving broadband access in Native communities, which helps explain why Oklahoma (home to 14 percent of the country's Native American population) and New Mexico (9 percent) received large amounts of per capita funding.⁴ Still, many states with extensive rural areas and low levels of internet access were not heavily targeted. For instance, Indiana, Louisiana, and Tennessee all ranked near the bottom of the country in terms of internet access and per capita broadband funding.

FIGURE 1

Rural States Received More Per Capita and Total Competitive Broadband Funding Than Other Regions

Per capita funding for competitive broadband programs, fiscal years 2022 and 2023



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Source: Authors' analysis of 2022 and 2023 program award announcements from four competitive energy programs: Affordable Connectivity Outreach Grant Program, Rural Development Broadband ReConnect Program, Tribal Broadband Connectivity Program, and Enabling Middle Mile Grant Program.

Next, we explored how funding was distributed at the county level. Recipients located in 900 counties received discretionary funding from these programs during fiscal years 2022 and 2023—less than one third of all counties nationwide (table 2). Those counties accounted for 48 percent of the nation's population (this high share is due in part to the fact that the Affordable Connectivity Outreach Grant Program (ACP Outreach), which offered households with low incomes discounts on broadband services and devices, targeted some of the most populous urban counties). Of counties receiving funding, 58 percent were rural; these received substantially higher average amounts of per capita funding (\$248) than urban county recipients (\$30).

TABLE 2

Counties Winning Grants for Broadband Had Higher Shares of People of Color Than Those Without Grants

Characteristics (in 2020) of median winning and nonwinning counties

	Number of counties	People of color	Median household income	Poverty rate
Urban	1,208			
Winning	378	34.1%	\$57,180	13.7%
Nonwinning	830	24.0%	\$56,903	13.1%
Rural	2,014			
Winning	522	17.3%	\$51,001	14.6%
Nonwinning	1,492	11.4%	\$50,582	14.0%

Sources: Authors' analysis of 2022 and 2023 program award announcements and 2016–20 five-year American Community Survey estimates.

Notes: Includes funding from four competitive energy programs: Affordable Connectivity Outreach Grant Program, Rural Development Broadband ReConnect Program, Tribal Broadband Connectivity Program, and Enabling Middle Mile Grant Program.

HOW DOES BROADBAND PROGRAM FUNDING MATCH COMMUNITY CHARACTERISTICS?

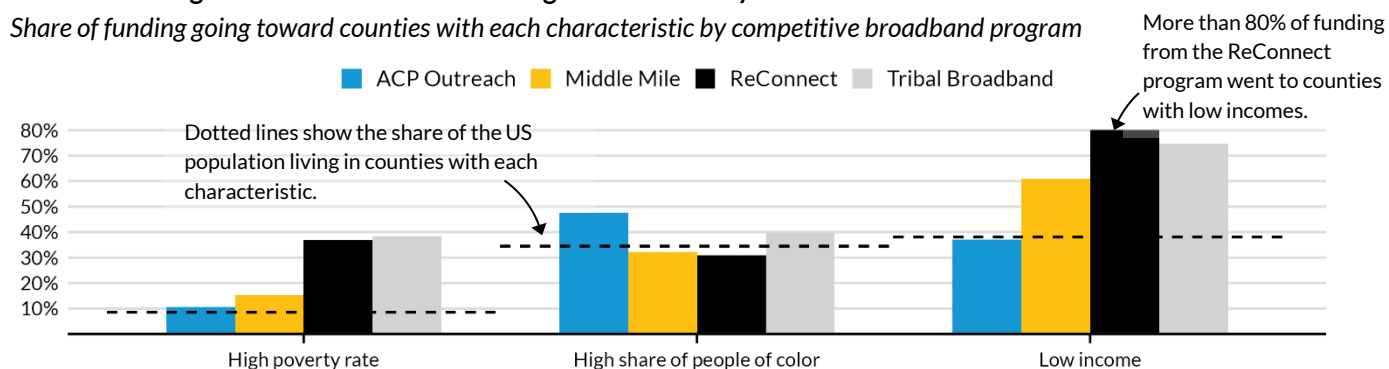
We investigated the extent to which broadband funding is supporting communities that have faced historic disinvestment, particularly communities with high poverty rates, low incomes, and high shares of people of color. Across urban and rural areas, broadband funding was distributed to counties with higher shares of people of color and slightly higher poverty rates compared with counties that did not receive funding (table 2). There was a minimal difference in median household incomes between winning and nonwinning counties.

The ReConnect, Tribal Broadband, and Middle Mile programs, which fund physical broadband infrastructure, distributed more funding to the counties with the highest poverty rates and the lowest incomes than might be expected, based on the share of the national population in those counties (figure 2). ReConnect and Tribal Broadband sent 80 and 75 percent of funds to counties with low incomes, respectively. These programs, however, distributed less funding to counties with a high share of people of color: 31 percent of ReConnect program funding went to counties with a high share of people of color, compared with the 34 percent of the US population in those counties. This may reflect ReConnect's focus on rural areas, which have larger white populations on average. Conversely, the ACP Outreach program, which aims to connect households with broadband service discounts, funded more efforts in communities with high shares of people of color but fewer in the lowest-income counties.

FIGURE 2

Broadband Programs Delivered More Funding to Economically Distressed Counties

Share of funding going toward counties with each characteristic by competitive broadband program



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Sources: Authors' analysis of 2022 and 2023 program award announcements and 2016–20 five-year American Community Survey estimates.

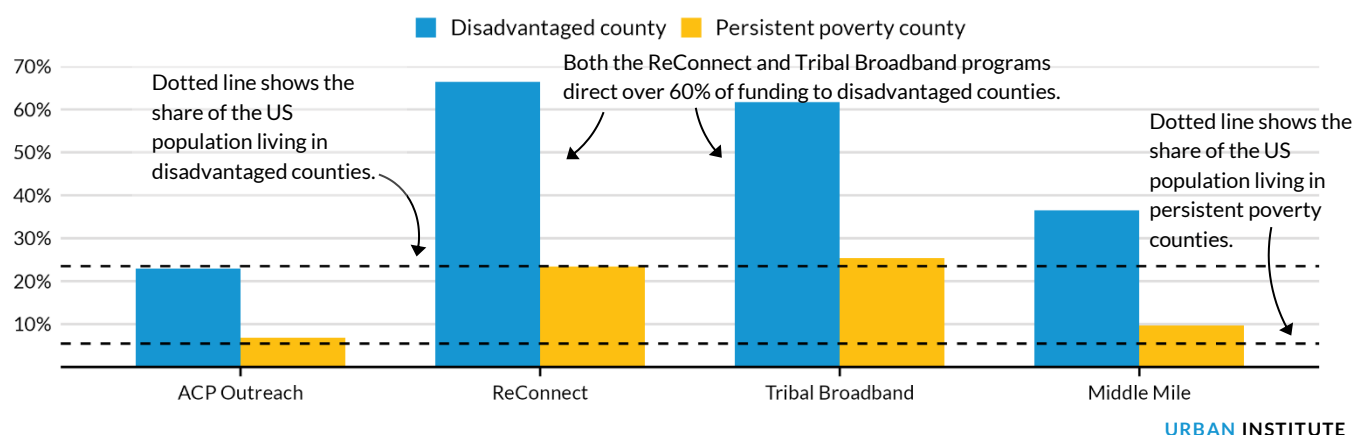
Notes: The dotted lines represent the share of the US population living in each type of county. Includes funding from four competitive broadband programs: ACP Outreach = Affordable Connectivity Outreach Grant Program; ReConnect = Rural Development Broadband ReConnect Program; Tribal Broadband = Tribal Broadband Connectivity Program; and Middle Mile = Enabling Middle Mile Grant Program. High poverty rate counties = poverty rates above 20 percent. High share of people of color = greater than 50 percent of residents are people of color (Hispanic or nonwhite). Low income = median incomes under \$60,000.

Next, we examined the share of funding distributed to disadvantaged counties—based on the federal definition of disadvantaged that was used by the Biden administration to prioritize investment during the time this funding was awarded—and persistent poverty counties, which are those that have experienced high poverty levels for more than 30 years.⁵ Three of the four programs sent a disproportionate amount of funding to disadvantaged counties relative to their national population share (figure 3). For example, about 23.5 percent of the US population lives in disadvantaged counties, but the Middle Mile program sent over 36 percent of its funding to these counties, and the ReConnect program sent over 60 percent of its funding. All four programs also awarded high shares of funding to persistent-poverty counties, with the ReConnect and Tribal Broadband programs sending nearly five times as much funding (about 23 percent) to these counties than their national population share would suggest.

FIGURE 3

High Shares of Broadband Funding Were Distributed to Disadvantaged and Persistent-Poverty Counties

Share of program funding going to each type of county, fiscal years 2022 and 2023



Sources: Authors' analysis of 2022 and 2023 program award announcements, Climate and Economic Justice Screening data from the White House Council on Environmental Quality, and persistent-poverty county data from the US Department of Transportation.

Notes: The dotted lines represent the share of the US population living in each type of county. Includes funding from four competitive broadband programs: ACP Outreach = Affordable Connectivity Outreach Grant Program; ReConnect = Rural Development Broadband ReConnect Program; Tribal Broadband = Tribal Broadband Connectivity Program; and Middle Mile = Enabling Middle Mile Grant Program. Persistent poverty counties have had a poverty rate of 20 percent or higher for three decades. Disadvantaged counties have more than 50 percent of their census tracts designated disadvantaged or more than 50 percent of the county population living in disadvantaged tracts, by federal definition. For more detail, see Yonah Freemark, Amanda Hermans, Gabe Samuels, Tomi Rajninger, Sam Lieberman, and Teddy Maginn, *Are Federal Infrastructure Investments Meeting the Need? Methodology Appendices* (Washington, DC: Urban Institute, 2025).

Next, we ranked and divided all counties in the US into quintiles of demographic metrics and broadband metrics (e.g. median household income and broadband speed). In figure 4, we compare per capita broadband spending for the four major competitive broadband programs across the distribution of counties in each quintile (e.g., the per capita ReConnect spending for the 20 percent of counties with the lowest broadband speeds). We find the following:

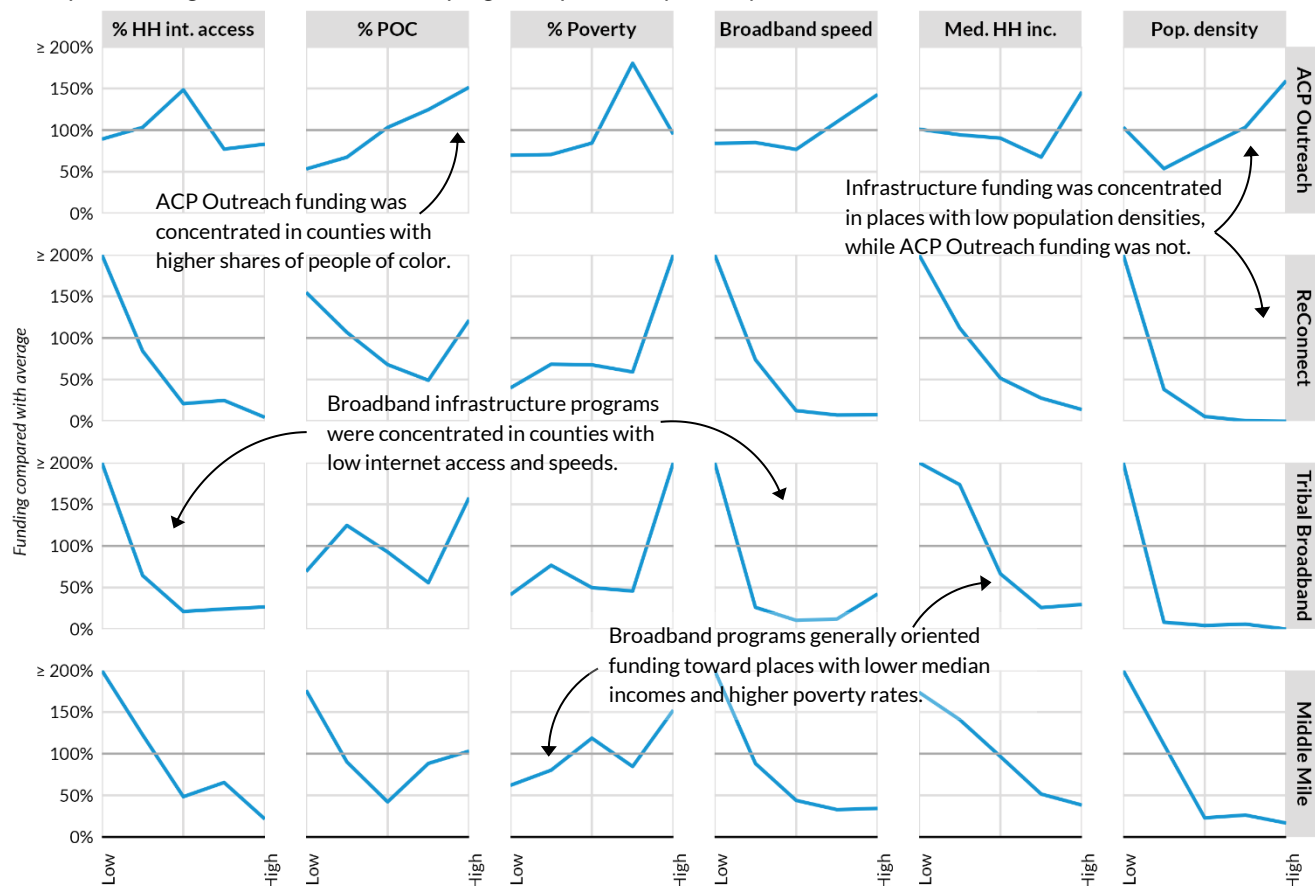
- Broadband funding was generally directed toward counties with the lowest levels of household internet access and broadband speed, targeting the most disconnected areas. But ACP Outreach funding was not. One possible explanation is that eligibility for ACP Outreach was tied to participation in other government programs, such as subsidized housing, which are more heavily used in large, urban counties that have higher *overall* broadband access, but may still have large pockets of unconnected households.⁶ This variation within counties may also explain why, on average, ACP Outreach delivered substantial funding to counties with higher median incomes, even though the program was only available to low-income households.
- All four programs delivered larger-than-average shares of funding to counties with high poverty rates; three (ReConnect, Tribal Broadband, and Middle Mile) delivered more funding to counties with lower incomes.

- ACP Outreach delivered more funding to counties with a higher share of people of color, while funding from the other programs did not display a consistent pattern.
- ReConnect, Tribal Broadband, and Middle Mile programs all sent larger-than-average shares of funding to places with low population densities, underscoring the focus on rural areas for those programs.

FIGURE 4

Comparing Broadband Spending with County Characteristics

Per capita funding for federal broadband programs, per county, fiscal years 2022 and 2023



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Sources: Authors' analysis of 2022 and 2023 program award announcements, 2016–20 five-year American Community Survey estimates, and Federal Communications Commission Form 477.

Notes: ACP Outreach = Affordable Connectivity Outreach Grant Program; ReConnect = Rural Development Broadband ReConnect Program; Tribal Broadband = Tribal Broadband Connectivity Program; and Middle Mile = Enabling Middle Mile Grant Program. % HH int. access = share of households with internet access. HH Inc. = median household income; Pct. POC = share of population who are Hispanic or nonwhite; Pct. pov. = share of population under the poverty level. Pop. density = population density.

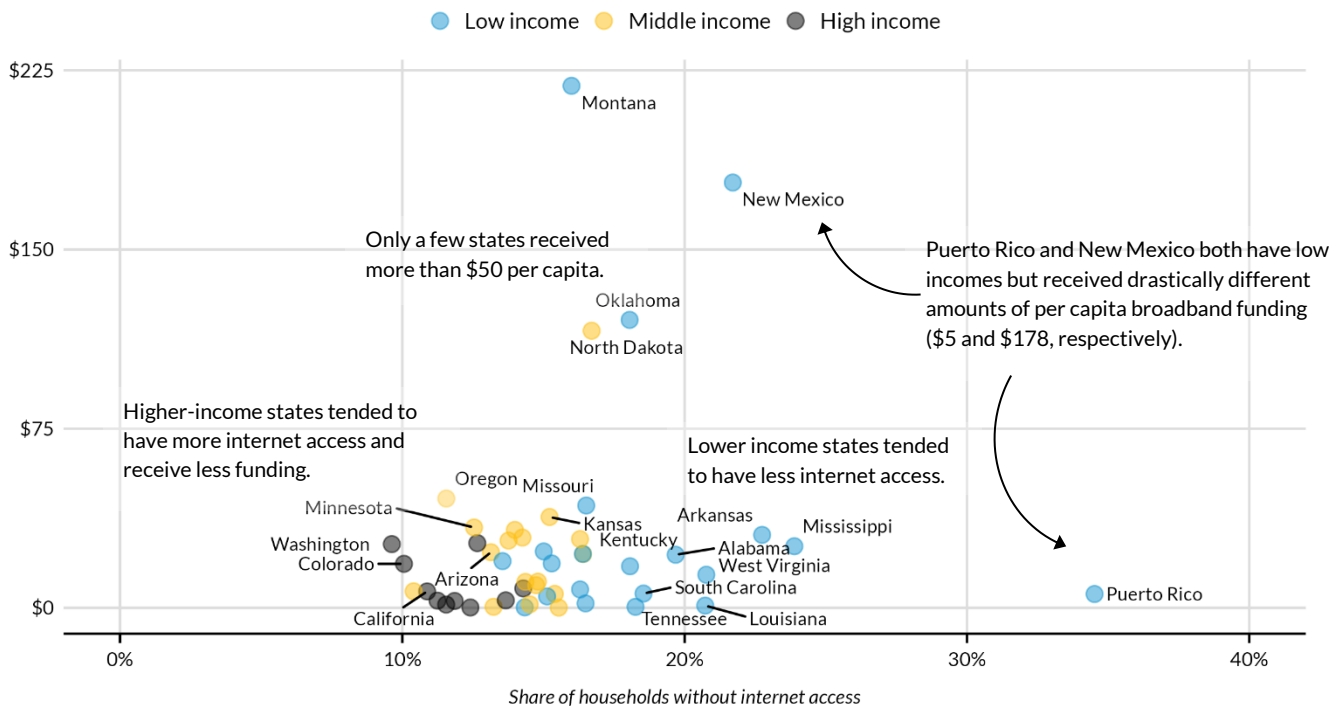
Many rural states, such as New Mexico, North Dakota, and Oklahoma, received relatively high shares of per capita broadband funding, but also had below-median shares of households with internet access, suggesting that funding was directed toward states facing challenges in bridging the digital divide (figure 5). However, many low-income states with low shares of households with internet access did not receive substantial per capita funding. For instance, Louisiana, Tennessee, and West Virginia—as well as Puerto Rico—rank near the bottom in internet access and broadband speed, yet they received relatively low amounts of broadband funding per capita. This reiterates that funding was concentrated in select Great Plains and Western rural states. Broadband funding also tended to concentrate in states with lower average broadband speeds, indicating that programs were targeting places in need

of greater broadband quality in addition to overall access. For example, Montana, New Mexico, and Oklahoma had some of the lowest average broadband speeds, yet all three ranked in the top five of states for per capita funding.

FIGURE 5

Some States with Low Levels of Internet Access Received More Funding While Others Get Left Behind

State per capita broadband funding



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Sources: Authors' analysis of 2022 and 2023 program award announcements and 2016–20 five-year American Community Survey estimates.

Notes: Alaska is not shown; its per capita broadband funding is about \$1,200. Includes funding from four competitive broadband programs: ACP Outreach = Affordable Connectivity Outreach Grant Program; ReConnect = Rural Development Broadband ReConnect Program; Tribal Broadband = Tribal Broadband Connectivity Program; and Middle Mile = Enabling Middle Mile Grant Program.

RECOMMENDATIONS

Federal broadband programs tended to support economically distressed counties with lower levels of internet access and broadband speeds, indicating that they were oriented toward places with broadband needs. However, this funding was largely concentrated in a handful of large Great Plains and Western states while many other states were left behind. While broadband funding does seem oriented toward meeting community needs, improvements can be made to continue to address gaps in the nation's broadband ecosystem through increased investment.

- Federal agencies administering broadband programs should ensure that funding reaches all areas of the country, especially those currently underserved (Junod et al. 2025). For instance, many states in the South had low levels of household internet access, yet did not receive much funding. Moreover, these states tended to be low income, which may contribute to a limited capacity of state and local government, driven by a limited tax base. Administrative capacity is correlated with the ability to apply for and win federal funding.⁷
- By deploying trusted messengers to help historically underserved communities access funds, ACP Outreach represented a unique model for improving internet access in areas of the country that may be overlooked by other programs.⁸ However, due to a lack of funding appropriated by Congress, the Affordable Connectivity

Program and its outreach initiative ended in the spring of 2024, leading to a loss of essential utility assistance for households across the country.⁹ Congress should consider reauthorizing the Affordable Connectivity Program and ACP Outreach to expand broadband access for harder-to-reach households.

NOTES

- ¹ “FCC Increases Broadband Speed Benchmark,” Federal Communications Commission, March 14, 2024, <https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf>.
- ² Daniela Mejia, “American Indian and Alaska Natives in Tribal Areas Have Among Lowest Rates of High-Speed Internet Access,” United States Census Bureau, June 18, 2024, <https://www.census.gov/library/stories/2024/06/broadband-access-tribal-areas.html>; Anna Read and Kelly Wert, “Broadband Access Still a Challenge in Rural Affordable Housing,” Pew Trusts, December 8, 2022, <https://www.pewtrusts.org/en/research-and-analysis/articles/2022/12/08/broadband-access-still-a-challenge-in-rural-affordable-housing>; Nicol Turner Lee, James Seddon, Brooke Tammer, and Samantha Lai, “Why the Federal Government Needs to Step Up Efforts to Close the Rural Broadband Divide,” October 4, 2022, <https://www.brookings.edu/articles/why-the-federal-government-needs-to-step-up-their-efforts-to-close-the-rural-broadband-divide/>.
- ³ US Department of Agriculture, “e-Connectivity for All Rural Americans Is a Modern-Day Necessity,” US Department of Agriculture, accessed November 21, 2024, <https://www.usda.gov/broadband>.
- ⁴ Ana I. Sánchez-Rivera, Paul Jacobs, and Cody Spence, “A Look at the Largest American Indian and Alaska Native Tribes and Villages in the Nation, Tribal Areas, and States,” United States Census Bureau, October 3, 2023, <https://www.census.gov/library/stories/2023/10/2020-census-dhc-a-ai-an-population.html>.
- ⁵ The federal Justice40 Initiative, which was in place when these funds were distributed, directed that 40 percent of benefits from covered programs accrue to disadvantaged communities. While none of these programs were explicitly covered by the Justice40 initiative, this is still a potentially useful indicator for understanding whether funding is being directed toward communities with higher levels of overall need. The Trump administration does not use this definition of disadvantaged. For more details on the definition of disadvantaged county and persistent poverty county, see Yonah Freemark, Amanda Hermans, Gabe Samuels, Tomi Rajninger, Sam Lieberman, and Teddy Maginn, *Are Federal Infrastructure Investments Meeting the Need? Methodology Appendices*, Washington, DC: Urban Institute, 2025.
- ⁶ Sherry Ross, “Affordable Connectivity Program,” accessed November 21, 2024, https://broadbandusa.ntia.doc.gov/sites/default/files/2023-06/Overview_of_Federal_Broadband_Funding_Programs_-_Ross.pdf.
- ⁷ Amanda Hermans and Tomi Rajninger, “Local Governments with More Staff and Bigger Budgets Are More Likely to Win Federal Infrastructure Grants,” *Urban Wire* (blog), Urban Institute, May 6, 2024, <https://www.urban.org/urban-wire/local-governments-more-staff-and-bigger-budgets-are-more-likely-win-federal>.
- ⁸ “Affordable Connectivity Outreach Grant Program,” Federal Communication Commission, accessed November 21, 2024, <https://www.fcc.gov/acp-grants>.
- ⁹ “Affordable Connectivity Program,” Federal Communication Commission, accessed November 21, 2024, <https://www.fcc.gov/acp>.

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