

CLOSING THE BROADBAND INFRASTRUCTURE GAP: STATE GRANT FUNDS AND THE DIGITAL DIVIDE

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Authors: Natassia A. Bravo and Mildred E. Warner¹

ABSTRACT

Data collected by The Pew Charitable Trusts on broadband grants awarded across 17 states shows that states are supporting regional Internet Service Providers and fiber deployment, and low-density and low-adoption areas. However, emerging disparities linked to demographic, socioeconomic and market characteristics suggest the need for broader definitions of access and digital equity that emphasize high-poverty and high-minority areas in the future allocation of state broadband grants.

INTRODUCTION

Increasing reliance on high-capacity and reliable broadband Internet access for everyday activities, makes disparities in the availability of broadband infrastructure a growing concern. Closing the digital divide is a collective effort, in which state funding can play an important role. This report examines data collected by The Pew Charitable Trusts on state broadband grants awarded to counties across 17 states from 2014-2020. It explores characteristics common among awarded projects, the criteria for grant allocation, and if funds reached communities less likely to be served by broadband - rural, sparsely populated and high-poverty.

Data

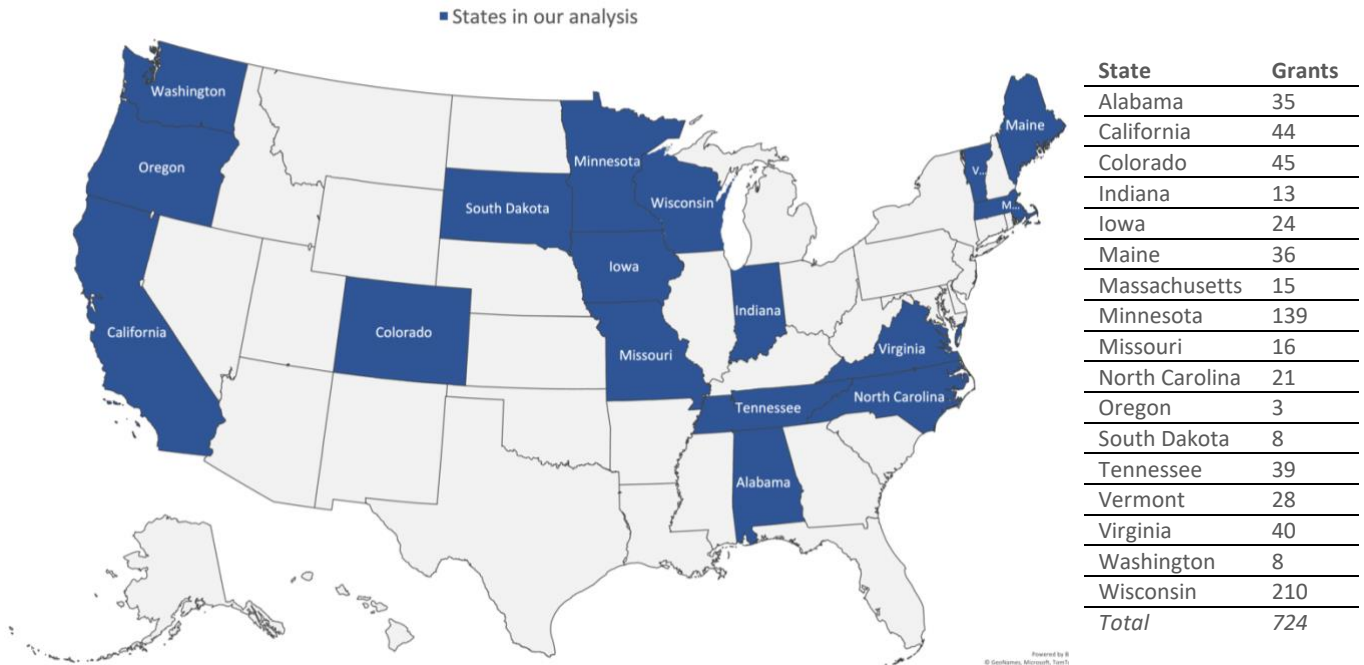
Data collected by The Pew Charitable Trusts on state broadband grants awarded between 2014 and 2020 included: the project's county location, total grant amount, the total match, number of premises passed, the provider type and size, grantee type, technology type, whether the project included middle mile infrastructure and/or was connected to a previous planning grant, and metro status. These data were combined with state-level data on state broadband program requirements and policies, including match requirements and municipal broadband restrictions. Additionally, county-level data on demographic and socioeconomic characteristics, rurality and adoption were included to assess how well grants reach rural, high-poverty and underserved communities.

¹ This project was conducted under the supervision of Professor Mildred Warner in the Department of City and Regional Planning at Cornell University. Funding support was received from the Pew Charitable Trusts and the USDA NIFA grant #2021-67023-34437 and Hatch Multi-State Project W5001. The full report can be found at labs.aap.cornell.edu/node/880.



Our analysis is based upon 724 projects, distributed across 405 counties in 17 states. These states are shown in dark blue:

Figure 1. State Broadband Programs Analyzed.



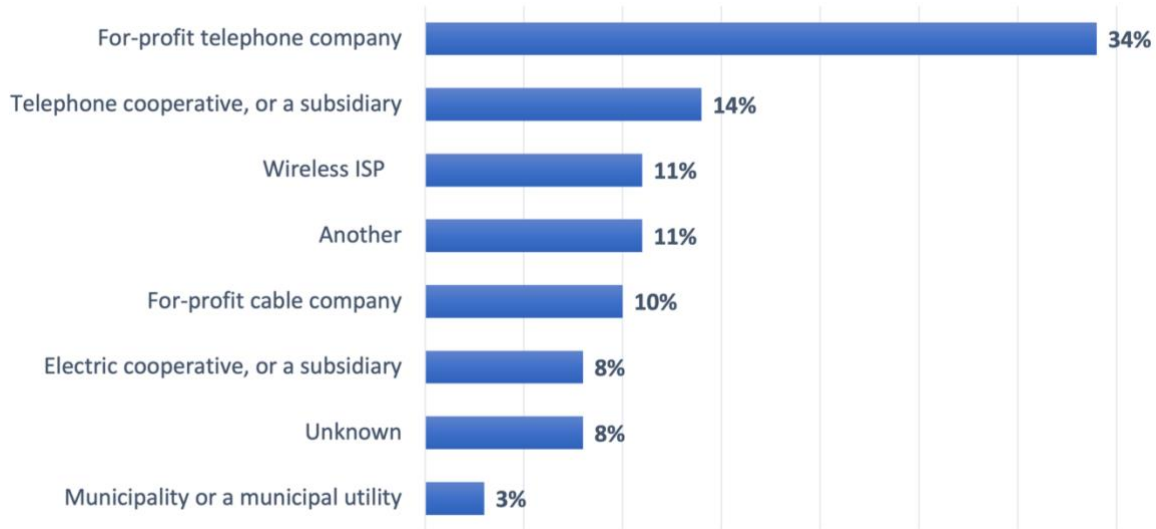
Data Source: Pew Charitable Trusts State Broadband Grants, 2014-2020

MAJOR FINDINGS

THEME 1: STATES ARE EXPANDING THE BROADBAND MARKET AND RAISING THE STANDARDS.

- States promoted the regional market: Grants to Internet Service Providers active in only one local region accounted for 74% of all grants. While states are implicitly neutral towards provider type, most of these local grantees were “traditional” providers – including for-profit telephone companies (26%), telephone cooperatives (14%) and wireless ISP’s (11%) (Figure 1).
- States are encouraging public-private partnerships, which accounted for 18% of grantees. Some states require grantees to be public-private partnerships, and local governments partner with private providers to build, operate and maintain the network.

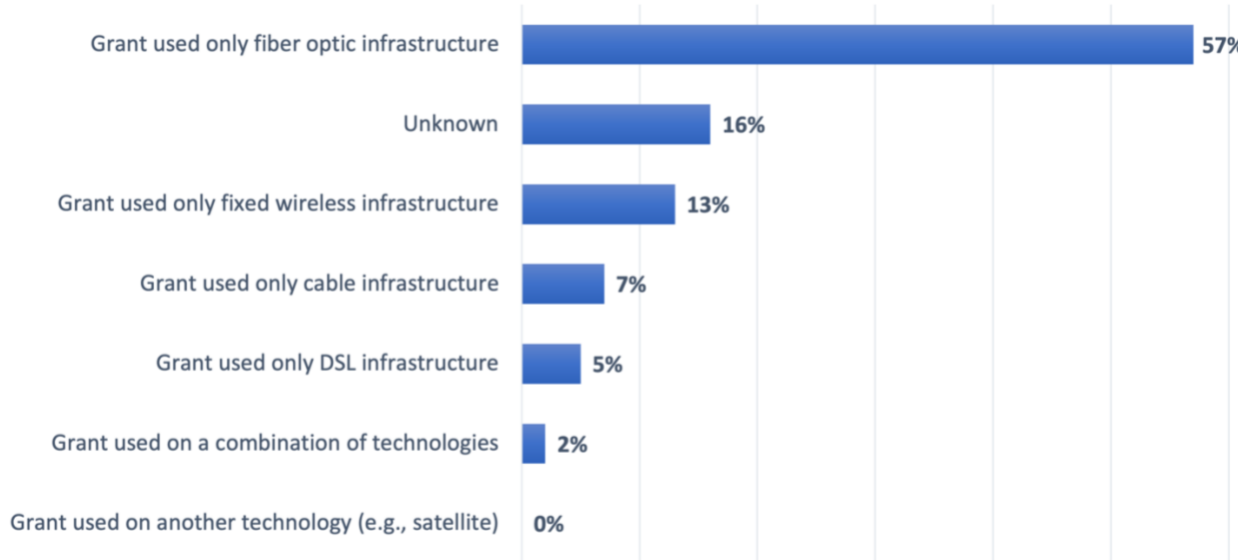
Figure 1. Types of Providers Funded



Data: Pew Charitable Trusts State Broadband Grants 2014-20, N= 724 funded projects in 17 states

- States are investing in raising the standards of service by investing in high-capacity, high-speed technologies like fiber. 57% of funded projects were fiber optic (Figure 2), and these projects were likely to receive larger grants.

Figure 2. Type of Technology Funded



Data: Pew Charitable Trusts State Broadband Grants 2014-20, N= 724 funded projects, 17 states

THEME 2: STATES ARE ADDRESSING MARKET CHALLENGES

- Non-traditional providers had a limited role. Only 8% of funded providers were electric cooperatives, and only 3% were municipalities or municipal utilities.

- There was limited funding for middle mile infrastructure and planning processes. While eleven states give weight to projects which include middle mile infrastructure and provide service to anchor institutions, only 12% of funded projects included middle mile infrastructure. Additionally, only 4% were connected to a previous planning process.

THEME 3: DO STATE BROADBAND PROGRAMS ADDRESS DISPARITIES?

We explored the impact of demographic, socioeconomic, market and state policy factors on the allocation of state broadband grants, identifying common trends and key differences between funded/unfunded counties, and metro/nonmetro funded counties.

- Low-density metro and nonmetro counties received more grants and more funds overall. State grants could help subsidize deployment costs in these areas, where broadband networks must expand across vast, sparsely populated areas to reach the highest possible number of customers.
- States are supporting buildout in nonmetro counties with low adoption rates, which received more grants. Broadband adoption is lower among rural Americans, and providing both high-speed and affordable Internet service in rural areas remains challenging.
- More efforts will be needed to reach communities that tend to lag behind in terms of access and adoption. Nonmetro (rural) counties that received more grants were more educated, had fewer minorities and less poverty. These results suggest that county capacity impacts the likelihood to be funded. Rural communities aiming to procure funding often struggle with limited resources and lack of experienced staff.

These disparities could be aggravated by state-level policy factors.

- State can require grantees to match a significant percentage of the grant amount, which could disproportionately impact grantees in rural and high-poverty areas. We found that high match requirements led to fewer grants in metro and nonmetro counties.
- Municipal broadband restrictions limit the number of provider choices, and less-profitable communities may rely on state grants to attract private providers. We found that states with municipal broadband restrictions supported rural counties with more grants, but these restrictions had a negative impact on the total amount of state funds received by metro counties.

CONCLUSION AND POLICY IMPLICATIONS

Lessons from how states have allocated broadband grants in past years have implications for how state programs will distribute funding from the \$42.45 billion Federal Broadband Equity, Access, and Deployment (BEAD) program. States are already meeting some of BEAD's higher standards by investing in fiber optic deployment and supporting buildout in low-density and low-adoption areas. However, future broadband policy will need to consider broader definitions of access and digital equity to ensure funds reach communities disproportionately impacted by the digital divide.