INNOVATION OHIO EDUCATION FUND 2022 BROADBAND REPORT

EXECUTIVE SUMMARY:

The Biden Administration is aggressively working to address the digital divide and inequities caused by unequal access to broadband technologies that are becoming an increasingly essential part of modern life. With the passage of the Infrastructure Investment and Jobs Act of 2021 (IIJA), the administration has made a significant investment in broadband access and affordability. Thanks to billions in new federal funding, residents meeting basic income requirements can get $30 off a broadband plan with a participating provider through the Affordable Connectivity Program (ACP), and thanks to negotiations between the Biden administration and carriers, many providers are introducing new $30/month plans to the same customers, making service essentially free.

Nearly 40% of American households qualify for the ACP and it could result in more than 1.4 million Ohio households gaining access to affordable broadband, lowering their monthly bill or reducing their broadband cost to zero. According to the Census Bureau, over 1.2 million Ohio households lack a dedicated high speed internet connection to the home, the majority of which are low-income.This new program from the Biden administration could go a long way toward erasing digital access gaps and extending the many benefits of broadband access to more residents, and provides an easier path for communities to serve the needs of residents than the costly buildout of government-owned networks.

BACKGROUND:

Broadband is defined by the Federal Communications Commission (FCC) as high-speed internet service that delivers content to the end user at a rate of at least 25 megabytes per second, but a more commonly-accepted definition sets the bar at 100 mbps. Broadband, or high-speed internet, is essential for households to access an array of video-on-demand streaming entertainment, online games and to gain the flexibility offered by working from home, especially in households with multiple family members sharing the same internet connection.

There are multiple ways to subscribe to broadband internet services, including hard-wired connections (phone, cable or fiber) to the home, using satellite receiver, or over the air with a mobile cellular device. Broadband connections can be accessed via a computer or mobile device and can also be used to connect many other devices in the home to the internet, such as smart TVs, security cameras and smart speakers.

The Affordable Connectivity Program (ACP), part of the 2021 infrastructure package, commits $14.5 billion in federal funding to provide deeply discounted high speed internet services to residential households nationwide. The program, which is administered by the FCC will provide a $30 monthly discount ($75 per month on qualifying tribal lands) to qualified households [1] connecting to one of over 1,300 participating providers. Eligible households can also receive discounts toward the purchase of a computer, tablet or mobile device through their carrier. Information on how to qualify and apply for the ACP can be found at affordableconnectivity.gov.

[1] Household income must be equal to or below 200 percent of the federal poverty guideline

The ACP was championed by the Biden administration and is highlighted on the White House's website via getinternet.gov. Ohioans who are interested in claiming the $30 monthly benefit can visit getinternet.gov for an application and list of internet service providers. Many participating internet service providers offer plans that are $30 or less, which means that some families may have a $0 balance after the ACP benefit is applied. Internet service providers are also supportive of the program, with many advertising the free internet benefit online. The White House intends to use getinternet.gov[2] to help people learn more about program qualifications, close the digital gap for economically disadvantaged families, and celebrate the passage of the Bipartisan Infrastructure Law.

OHIO'S LINGERING BROADBAND GAP

Approximately 85 percent of Ohio households have broadband service, but nearly 700,000 still remain without a high speed connection. If you add the households where the only source of high speed internet is via a mobile device, then the number of Ohio households without high-speed internet to the home reaches over 1.2 million.[3]

Broadband gaps affect all types of communities. However, the vast majority of disconnected households can be found in Ohio's largest urban counties. In fact, more than half of Ohio's disconnected households can be found in just ten urban counties (Figure 1).[4]

2 "Get Internet." The White House, The United States Government, 19 July 2022, https://www.whitehouse.gov/getinternet/.

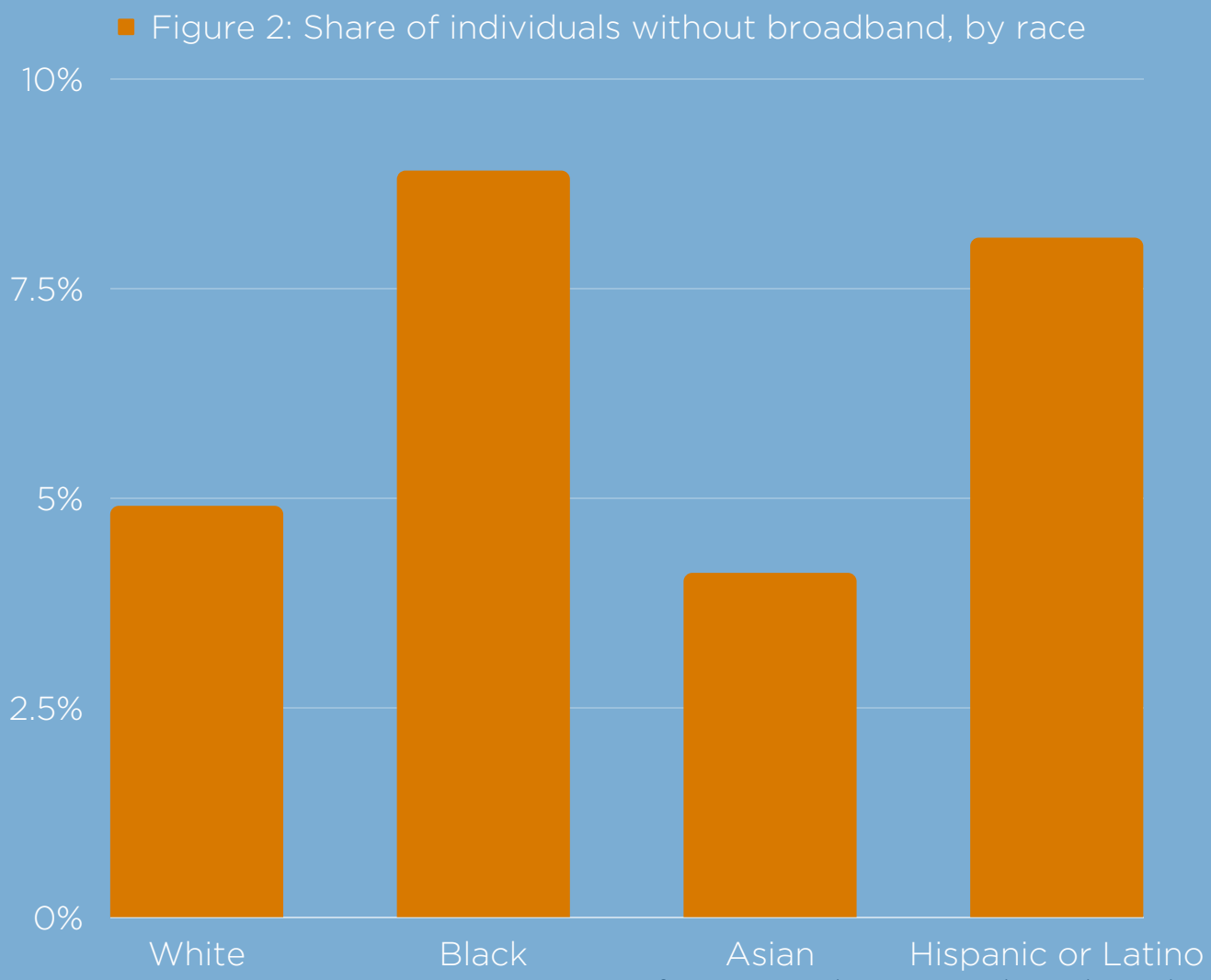
3 American Community Survey, TYPES OF COMPUTERS AND INTERNET SUBSCRIPTIONS, 2020: ACS 5-Year Estimates Subject Tables https://data.census.gov/cedsci/table?q=broadband&g=0400000US39%240500000

4 "Types of Computer and Internet Subscriptions." U.S. Census Bureau, U.S. Census Bureau, 2019, https://data.census.gov/cedsci/table?q=United+States&t=Telephone%2C+Computer%2C+and+Internet+Access&g=0100000US_0400000US39%2C39%240500000&d=ACS+1-Year+Estimates+Subject+Tables&tid=ACSST1Y2019.S2801&moe=false&tp=true.

County	Households without broadband to the home	% of all households
Cuyahoga	160,569	29%
Franklin	99,043	19%
Hamilton	75,027	22%
Montgomery	62,420	28%
Lucas	50,816	28%
Summit	50,605	23%
Stark	38,491	25%
Lorain	35,792	30%
Butler	30,507	22%
Mahoning	29,355	29%
OHIO TOTAL	**1,214,367**	**26%**

Source: American Community Survey, Type of Computers and Internet Subscriptions 2019: ACS 1-Year Estimates Subject Tables

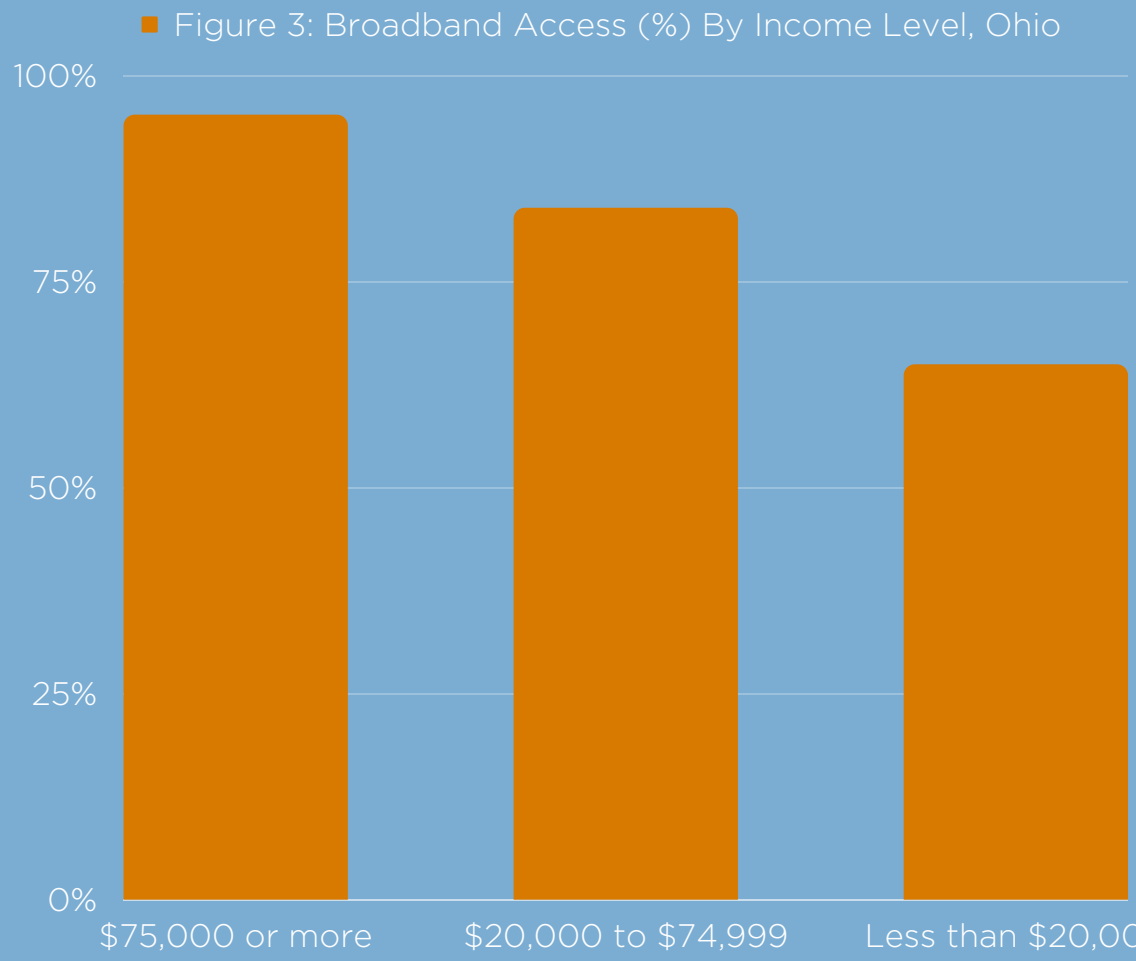
Gaps in access also exist across demographics, but are far more likely at lower income levels and among communities of color. Figure 2 shows that Black and Hispanic or Latino Ohioans are nearly twice as likely to live without broadband internet access at home as their white and asian counterparts.



Source: American Community Survey, Types of Internet Subscriptions by Selected Characteristics, 2020 5-Year Estimates [5]

[5] American Community Survey S2802 TYPES OF INTERNET SUBSCRIPTIONS BY SELECTED CHARACTERISTICS 2020: ACS 5-Year Estimates Subject Tables https://data.census.gov/cedsci/table?q=computer&g=0100000US_0400000US39&tid=ACSST5Y2020.S2802

Disparities in access to broadband are even more pronounced when comparing low and high-income households. Figure 3 shows that only 2 in 3 low-income households have a broadband connection, compared to over 95% of those at the highest income level. This is likely a result, in large part, due to the cost of broadband, which can be $100 per month or more. The ACP aims to eliminate these barriers to access by lowering the cost of subscribing.



Source: American Community Survey, Types of Internet Subscriptions by Selected Characteristics, 2020 5-Year Estimates [6]

[6] American Community Survey S2802 TYPES OF INTERNET SUBSCRIPTIONS BY SELECTED CHARACTERISTICS 2020: ACS 5-Year Estimates Subject Tables https://data.census.gov/cedsci/table?q=computer&g=0100000US_0400000US39&tid=ACSST5Y2020.S2802

These gaps in access, often referred to as the digital divide, can in turn lead to racial and income disparities in employment and earnings, education and other opportunities, as we outline further when we highlight some of the benefits of broadband access.

POTENTIAL IMPACT OF THE ACP

The Affordable Connectivity Program (ACP) could go a long way toward reducing those numbers substantially. Already, over 600,000 Ohio households have subscribed to affordable high-speed internet as a result of the program.[7] But more than 1.4 million households are still believed to be eligible.[8]

Under the ACP, households earning up to 200 percent of the federal poverty level – up to $27,180 for an individual or $46,060 for a family of three[9] – are eligible to apply for subsidized service. Families can also qualify if they participate in one of a number of government programs, including SNAP, Medicaid, housing assistance, SSI, WIC, reduced or free school lunch program or if they received a pell grant.

7 "ACP Enrollment and Claims Tracker." Universal Service Administrative Company, 19 July 2022, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/.

8 Cooper, Tyler, and Jason Shevik. "Emergency Broadband Benefit Recap." BroadbandNow, 29 June 2022, https://broadbandnow.com/internet/emergency-broadband-benefit-report.

9 ACP Enrollment and Claims Tracker." Universal Service Administrative Company, 19 July 2022, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/.

Thanks to a recently-announced agreement reached by the White House with 20 major national internet providers, many qualifying Ohio families using the ACP discount will have broadband access for free.[10] This substantial benefit will support economically disadvantaged families, children in distance learning programs, and match employers with prospective employees.

BENEFITS OF BROADBAND ACCESS

Internet access has become a necessity for everyday life, not just for entertainment and connecting with friends and family, but as a tool to improve personal and community-wide economic outcomes. This includes education, healthcare, and employment opportunities.

Access to the internet has become an almost essential part of applying for employment. In a 2015 study conducted by Pew Research, 79% of those looking for work utilized online applications and recruiting tools. In this same study, 34%of respondents said the resources and information they found online were the most useful tools they used to find a job.[11] Without access to the internet, access to employment is limited. The correlation between internet access and economic outcomes highlight the importance of addressing the digital divide.

10 "White House Announces Internet Program for Low-Income Americans." The Guardian, Guardian News and Media, 9 May 2022, https://www.theguardian.com/us-news/2022/may/09/biden-internet-discount-program-low-income.

11 Smith, Aaron. "Searching for Work in the Digital Era." Pew Research Center: Internet, Science & Tech, Pew Research Center, 30 May 2020, https://www.pewresearch.org/internet/2015/11/19/searching-for-work-in-the-digital-era/.

High speed internet access offers numerous benefits to businesses as well. E-recruiting has become the new standard for prospective employers. Soliciting job applications over the internet is cheaper and expands the applicant pool. As job-seekers increasingly rely on online tools to search for work, being disconnected can put both, employers and employees at a competitive disadvantage.

Remote work has created more diverse job opportunities and flexibility for employees. This new system of work has become so popular that 50% of workers in the United States say they would take a 5% pay cut to work from home. 75% of workers also found virtual meetings to be less stressful than meeting in person. In 2021, one out of four Americans were working remotely or in a hybrid setting to combat the spread of COVID-19.[12] Fully 25% of employees say they would quit their jobs if they were no longer able to work from home. In order to retain their workforce, employees, high-speed internet access is a necessity for modern businesses.

In addition to managing a workforce, many businesses rely on internet services to connect with customers and suppliers to sell products and offer services. In a survey of more than 4,800 global small and medium-size businesses, McKinsey found that companies with a strong digital presence grew more than twice as fast as those with a minimal web presence.[13]

[12] Collins, Terry. "Work Remote after COVID? Nearly 50% of US Workers Would Take a Pay Cut for It, Survey Says." USA Today, Gannett Satellite Information Network, 11 Nov. 2021, https://www.usatoday.com/story/money/2021/11/11/workplace-survey-remote-pay-cut-covid/6367601001/?utm_source=pocket_mylist.

[13] Manyika, James and Roxburg, Charles. "The Great Transformer: Impact of Internet on Economic Growth and Prosperity." McKinsey Global Institute. October 2011.

And for the unemployed, the internet is a necessity too. During the height of the pandemic, millions relied on online portals to apply for essential unemployment benefits from their state. A lack of high speed connection can make such conveniences out of reach for many Ohioans.

For students, remote learning became a new reality in the early days of the COVID-19 pandemic. But when schools went remote, many students were unable to learn and complete their schoolwork online. A 2020 Pew Research survey, taken at the height of pandemic-related shutdowns, found that 22% of parents worried that their kids wouldn't be able to do schoolwork due to a lack of high speed internet.[14] Even with students largely back in the classroom, they are still expected to complete online assignments at home, which requires active internet service.

Since the onset of Covid-19, many routine healthcare services are now provided online thanks to telemedicine. Seniors, who were one of the most vulnerable populations during the height of Covid-19 utilized telehealth services in exchange for routine visits in order to limit their exposure to the virus. Recently, McKinsey found that telemedicine and telehealth has increased 38X since pre-COVID-19.[15]

[14] Vogels, Emily, et al. "53% of Americans Say the Internet Has Been Essential During the COVID-19 Outbreak." 30 April 2020. https://www.pewresearch.org/internet/2020/04/30/53-of-americans-say-the-internet-has-been-essential-during-the-covid-19-outbreak/

[15] McKinsey, "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?" 9 July 2022. https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/telehealth-a-quarter-trillion-dollar-post-covid-19-reality

Internet access continues to be linked to important quality of life measures. It is clear that healthcare, jobs, and education are linked to internet access. And several studies have found a direct causal connection between high levels of broadband adoption in a community and higher incomes of its residents.[16, 17]

BARRIERS TO ADOPTION

Costs can be a major barrier to entry for families thinking about subscribing to high speed internet. According to data from BroadbandNow, only 30% of Ohio households can currently purchase a broadband plan for less than $60 a month. The most expensive location to subscribe to broadband is in Wyandot County in northwest Ohio, where the average price of a broadband connection is nearly $114 per month. The most affordable connections in the state can be found in Hamilton County, where the price of a broadband subscription averages just $49 per month.[18]

Whether it's $49 or $114, broadband can be cost-prohibitive, particularly to households with limited income. A 2020 study by Pew found that over half (52%) of low-income households were worried about being able to pay for broadband in the future, twice the rate of middle-income families.[19]

16 Whitacre, Brian, et al. "Broadband's Contribution to Economic Growth in Rural Areas: Moving towards a Causal Relationship." Telecommunications Policy, Pergamon, 11 July 2014, https://www.sciencedirect.com/science/article/abs/pii/S0308596114000949.

17 Manyika, James and Roxburg, Charles. "The Great Transformer: Impact of Internet on Economic Growth and Prosperity." McKinsley Global Institute. October 2011. https://www.mckinsey.com/~/media/mckinsey/industries/technology%20media%20and%20telecommunications/high%20tech/our%20insights/the%20great%20transformer/mgi_impact_of_internet_on_economic_growth.pdf

18 Cooper, Tyler, and Jason Shevik. "Emergency Broadband Benefit Recap." BroadbandNow, 29 June 2022, https://broadbandnow.com/internet/emergency-broadband-benefit-report.

19 Vogels, Emily, et al. "53% of Americans Say the Internet Has Been Essential During the COVID-19 Outbreak." 30 April 2020. https://www.pewresearch.org/internet/2020/04/30/53-of-americans-say-the-internet-has-been-essential-during-the-covid-19-outbreak/

The ACP's $30 monthly discount has the potential to overcome budgetary constraints that may hold many families back from purchasing high-speed internet service.

ADVANTAGES OVER GOVERNMENT-OWNED NETWORKS

Local governments may find it tempting to use federal infrastructure funds to build out government-owned broadband networks to solve the low-cost internet puzzle, but such efforts have had mixed results. These projects can suffer from unanticipated costs and delays, resulting in additional debt to the taxpayer, sometimes at the expense of municipal credit ratings, as was the case in Burlington, Vermont.[20] Similarly, the Groton, Connecticut municipality found that it was unable to take on the additional debt required to make its private internet a service break even for taxpayers. This resulted in Groton ultimately selling its government-owned system at a loss.[21] And even after successful networks are built, they can eventually become obsolete as municipal budgets fail to keep up with necessary technology upgrades. For example, a fiber buildout project in Provo, Utah was offloaded to the private sector after its technology became out of date.[22]

Moreover, government ownership does not necessarily ensure that prices for the consumer will be lower than existing private-sector offerings. Therefore, instead of municipalities building their own networks, communities should consider building awareness in the local community about the free and low-cost options available through the ACP. This will avoid duplication and provide fast resources to those who need it most.

[20] Linskey, Annie, "Burlington's Quest for Fast Internet Slows Credit Rating" 16 June 2013. https://www.bloomberg.com/news/articles/2013-06-17/burlington-s-quest-for-fast-internet-slows-credit-rating#xj4y7vzkg

[21] Elizabeth, Anna. "Groton City Mayor Keith Hedrick Makes his Case for a 3rd Term." 6 March 2021. https://ctexaminer.com/2021/03/06/groton-city-mayor-keith-hedrick-makes-his-case-for-a-3rd-term/

[22] Curtis, John. "Rep. John Curtis: Biden's broadband plan – government-run networks don't work. Here's what we learned in Utah". 13 June 2021. https://www.foxnews.com/opinion/biden-broadband-plan-government-plan-doesnt-work-utah-rep-john-curtis

RECOMMENDATIONS

The long-term impact of the ACP is great. It will eliminate barriers to entry for economically disadvantaged communities across the country. State and local communities, leaders, service providers, and nonprofits can also play a role to help close the connectivity gap. Below are just a few recommendations to help slow the digital divide:

- Build awareness about the ACP and local no-cost and low-cost internet options to residents. Advertise the program on websites, social media and broadcast platforms. Insert flyers in utility bills and promote the program at locations that help low-income residents apply for other types of government benefits.
- Reach out to local ISPs and ask them to participate if they are not already, ideally by agreeing to offer a discount $30/month package for qualifying subscribers.
- Hire staff to help residents navigate the plan options and enrollment process, as they would for any other type of low-income benefit.
- Work with nonprofits and community organizations to launch a program to train local students to refurbish computers donated by local businesses and distribute them to residents in need. [23]
- Bridge the broadband skills gap by working with nonprofits, libraries or community college to establish training programs

The FCC has even created an online toolkit, which includes outreach messages, tips and social media graphics for conducting a community outreach program to promote access through the Affordable Connectivity Program.[24]

[23] For examples of successful programs, look at Charlotte NC's Eliminate The Digital Divide (e-2-d.org) or Minneapolis's PCs for People (https://www.pcsforpeople.org/)

[24] USAC. "Community Resources." https://www.affordableconnectivity.gov/community-resources/