Resources for Broadband Advocates: Making Digital Equity A Reality in Pennsylvania

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I. INTRODUCTION

The most powerful broadband advocacy starts in communities where residents inform the connectivity solutions they need. In fact, there is nothing more powerful than concerned residents equipped with information. That is why Next Century Cities focuses on equipping local leaders with ways to take ownership of digital divides and develop programs with the communities they serve.

The resources provided in this report are designed to give local officials, residents, advocates, and allies (a) a snapshot of broadband access and adoption in Pennsylvania, (b) background on the elected and appointed officials tasked with improving digital equity statewide, and (c) recommendations on partnerships that could accelerate progress on addressing broadband gaps.

Whether you are a seasoned broadband advocate, or this is the first time you have considered engaging in this work, you have an opportunity to do something and say something. Use this report to find a place to start or ways to ramp up your efforts. Lock arms with allies who also believe that your community deserves equal access to a digital society. You can count on Next Century Cities as a partner.

II. HOW DOES BROADBAND ACCESS IN PENNSYLVANIA COMPARE TO OTHER STATES & TERRITORIES?

BROADBAND ACCESS DATA. In 2023, Pennsylvania ranks 16th among the states in speed and availability. According to the Federal Communications Commission (FCC), over 96% of Americans nationwide have access to a wired or fixed wireless broadband plan at minimum broadband speeds, 25/3 Mbps. Over 95% have access to a connection that delivers 100/20 Mbps. Almost half have access to fiber broadband connections, which deliver faster speeds than coax cable or telephone wireline. It is important to note that FCC mapping is supplemented by data voluntarily offered by Internet service providers. As a result, the FCC’s conclusions likely overestimate broadband connectivity.

According to the Pennsylvania statewide broadband plan, at least 250,000 locations statewide do not have access to 25/3 Mbps. More than half do not have access to 100/20 Mbps speeds. The State found that 2.6 million residents in 1.3 million households (26% of total households) do not have access to or adopted high-speed broadband service. Pennsylvania households facing insurmountable connectivity barriers are 35% Black or African-American and 25% Latino or Hispanic-American.
SPEED TEST RESEARCH. The Center for Rural Pennsylvania conducted a speed test analysis of statewide broadband access in 2022. The report provided an estimate of connectivity in Pennsylvania’s rural and urban counties based on nearly three million upload and download tests that the Measurement Lab collected. The investigation did not identify a single Pennsylvania county with universal access at minimum benchmark speeds. The underserved counties were concentrated in a few geographic regions: the Central Susquehanna Valley region (Juniata, Perry, and Snyder counties), portions of the Pennsylvania Wilds (Cameron, Clarion, Elk, and Forest counties), and the northeast (Susquehanna and Wyoming counties), as well as Greene County in the southwest and Crawford County in the northwest.

DEMOGRAPHICS. The State broadband plan does not further differentiate the demographics of homes without Internet service. However, according to a 2020 Study from Penn State University Harrisburg, multiracial (those who reported two or more races) and Asian Pennsylvanians had the highest access to broadband at 93.9% and 92.9%, respectively. The remaining racial groups ranked from highest to lowest rates of broadband access were White (89.4%), Hispanic or Latino (87.6%), African American or Black (86.2%), and Other (82.4%).

III. HOW IS THE STATE WORKING TO IMPROVE BROADBAND ACCESS & ADOPTION?

Significant measures have been taken to increase broadband connectivity in Pennsylvania. For instance, the Broadband Incentive Program, administered by the Pennsylvania Department of Transportation, provided financial support to three service providers who also won awards from the FCC’s CAF-II auction.

In 2020, Pennsylvania’s General Assembly created the Unserved High-Speed Broadband Funding Program, which provided $10 million for high-speed broadband infrastructure deployment in unserved areas statewide. In conjunction with the grant
program, the General Assembly passed Act 98, legislation that removed the requirement for commonwealth rural electric cooperatives to enter into new easement agreements with each property owner to install high-speed broadband infrastructure. Now, companies are permitted to use existing infrastructure and utility easements to run fiber lines to deploy high-speed broadband.

The General Assembly also passed Act 50, otherwise known as the **Small Wireless Facilities Deployment Act**. The 2021 law prescribed uniform permitting instructions, established processes for deployment, and established cost-based fees for permitting and pole replacements. While passed to expedite 5G deployment, this law introduced regulatory hurdles for smaller communities without significant permitting resources or staff.

Also, in 2021, the PA General Assembly passed Act 96. This act created the Pennsylvania Broadband Development Authority and defined certain procedures, including those related to overbuild challenges. Specifically, Act 96 defined an overbuild as broadband development in an area that is not unserved or underserved. The State held that proposed projects in which less than 80% of the locations to be served are unserved, underserved, or are to be managed or operated by a Federal or State entity are ineligible for grants. Conversely, only projects in areas where 80% or more of the locations to be served are unserved are eligible for grants.

### IV. ACCELERATING DEPLOYMENT FREQUENTLY TAKES PRIORITY OVER IMPROVING ADOPTION.

The Pennsylvania state broadband plan only makes four references to broadband adoption. In each instance, its mention is related to actions the commonwealth must take to determine how broadband adoption across the state can be determined. Currently, no state-sponsored reports measure broadband adoption rates in Pennsylvania.

**A. Federal Reserve Study**

In September 2022, the Federal Reserve Banks of Philadelphia published a report titled: "[Beyond Broadband: Device Access and Digital Equity in Pennsylvania.](#)" The study found that from 2016 to 2020, about 90% of Pennsylvania residents had at-home access to a computing device. This is slightly lower than the national average of 92%. The study also found that Pennsylvania ranks 43rd in terms of device access in the United States.
Counties with lower rates of device access tended to be less populous and have lower median household incomes than counties with higher rates. They also tended to have higher percentages of White residents and residents over the age of 65. Strikingly, both urban and rural communities were in the highest quintile for device access through a smartphone alone. However, many counties in Pennsylvania with high rates of device access through a smartphone alone had lower rates of device access overall.

B. Department of Labor and Industry Report

In 2022, the Pennsylvania Department of Labor and Industry ("DLI") published “Bridging the Digital Divide: A Vision for Digital Literacy and Connectivity.” While the report does not cite any statistics about digital literacy in Pennsylvania, it lays out three goals that the DLI has for digital literacy statewide. First, the DLI is working to create new ways of thinking for its staff to better understand Pennsylvania job seekers’ circumstances and improve its own processes. Second, it is working to provide digital literacy and job placement resources. Finally, DLI plans to audit itself to ensure that existing resources are used well to serve job seekers and improve infrastructure to increase digital capacity. These three goals are a starting point; however, without identifiable action items for increasing digital literacy, it is difficult to understand if DLI’s new programs will be successful.

C. Center for Rural Pennsylvania Analysis

Similarly, the Center for Rural Pennsylvania conducted a study entitled “Distance Learning and Online Coordination of Service in Pennsylvania’s Rural Schools.” The Center found that of interviewed rural school superintendents, 58% reported that Internet access had the greatest impact on their ability to deliver distance education. More than 80% of districts had to provide hotspots to students, and nearly 76% had to provide teachers with hotspots or devices to teach online.

The Center also found that roughly 33% of rural school districts initiated or expanded 1:1 device initiatives for students due to the pandemic. Before the pandemic, 48% of schools had 1:1 initiative using devices such as Chromebooks or laptops. Of those schools, only 23 schools (20 percent of the total sample) implemented 1:1 initiatives in all grade levels. Thirty-four percent of schools surveyed either expanded or first implemented 1:1 initiatives due to the pandemic. Only one school in the survey did not report issuing devices to students during the pandemic.
Further, 90% of schools distributed physical packets of learning materials during the pandemic. Ninety-seven percent of schools provided online materials for students during the pandemic, and 84 percent provided an online parental access center; however, no data were collected on these materials' quality, relevancy, or use.

There were also wide discrepancies between rural school districts' production of digital literacy and connectivity information production. For example, only 23 of 235 surveyed school districts had readily identifiable links that directed parents and students to help obtain Internet access. While the Center only studied rural school districts, it is safe to assume that urban school districts faced similar challenges in providing connectivity and devices to their students.

D. Additional Research & Analysis

Pennsylvania Internet Coverage & Availability in 2023, BroadbandNow

Statewide Broadband Plan (November 2022), Commonwealth of Pennsylvania

Delivery of High-Speed Broadband Services in Unserved and Underserved Areas of the Commonwealth (June 2022), General Assembly of the Commonwealth of Pennsylvania

Pennsylvania Broadband Access: A Speed Test Analysis (Feb 2022), The Century for Rural Pennsylvania

Broadband Internet Access (Sept. 2020), The Pennsylvania State University

Broadband Availability and Access in Rural Pennsylvania (June 2019), The Center for Rural Pennsylvania

Broadband is key to Pennsylvania’s future (April 2023), Benton Institute for Broadband & Society
V. WHO WILL DECIDE HOW IIJA FUNDS ARE DISTRIBUTED IN PENNSYLVANIA?

Pennsylvania Broadband Development Authority (PBDA) will be the core entity to determine how Pennsylvania allocates IIJA Funds. It was created as an independent agency of the PA Department of Community and Economic Development (DCED) with a mission of closing Pennsylvania’s digital divide so all Pennsylvanians can get connected to affordable and reliable high-speed broadband internet at home, at work, or on the road. Review PBDA’s bylaws here.

The Authority is responsible for creating a statewide broadband plan and distributing federal and state monies for broadband expansion projects in unserved and underserved areas of Pennsylvania. The PBDA is comprised of the following members:

- **Brandon Carson** - Executive Director, Pennsylvania Broadband Development Authority
- **Honorable Robert Matzie** - Pennsylvania House of Representatives, District 16
- **Honorable Kristin Phillips-Hill** - Pennsylvania Senate, District 28
- **Honorable John Kane** - Pennsylvania Senate, District 9
- **Honorable Carl Metzgar** - Pennsylvania House of Representatives, District 69
- **Honorable Reggie McNeil** - Acting Secretary, Department of General Services
- **Honorable Dr. Khalid Mumin** - Acting Secretary, Department of Education
- **Honorable Gladys Brown-Dutrieuille** - Chairman, Pennsylvania Public Utility Commission
- **Honorable Uri Monson** - Secretary of the Budget
- **Dr. Kyle Kopko** - Executive Director, The Center for Rural Pennsylvania
- **Honorable Rick Siger** - Secretary, Department of Community and Economic Development
- **Honorable Russell Redding** - Secretary, Department of Agriculture

The PBDA has four sub-committees, which include industry professionals, subject matter experts, and industry associations. More information on sub-committees, including the individuals in each subcommittee and meeting minutes, can be found here. Each sub-committee has a specific focus:

1. Data & Mapping
2. Technical
3. Workforce & Supply Chain
4. Outreach & Education
Access the meeting minutes and information packets for upcoming meetings in the document library.

VI. IIJA REQUIRES EACH STATE TO PREPARE A FIVE-YEAR ACTION PLAN AND A DIGITAL EQUITY PLAN, INCLUDING ITS COMMUNITY OUTREACH STRATEGY.

A. Who Will Design Pennsylvania’s Five-Year Action Plan and Community Outreach Strategy?

Michael Baker International (MBI), a professional services firm that provides engineering, planning, and consulting services, was hired to develop Pennsylvania’s five-year action plan and a community outreach strategy. The company's technology division offers a range of services, including GIS mapping, drone technology, and smart city solutions. Michael Baker International supports all levels of government and community organizations through broadband project identification, access to funding, and initiatives designed to provide affordable and equitable access to broadband and related digital devices.

B. Does MBI Have Broadband Project Experience in Pennsylvania?

Fayette County, PA | The Fayette County commissioners partnered with Michael Baker International (MBI) to complete the study between November 2022 and January 2023. More than 1,500 residents participated, and MBI officials presented their findings to municipal leaders, internet service providers, and other local stakeholders during an event in late April 2023.

Beaver County, PA | In February 2022, Michael Baker International was selected by the Beaver County Office of Planning and Redevelopment to support the Connect Beaver County Broadband Program under a $2.735 million program management contract. The contract includes oversight for the planning and deploying broadband implementation projects, public engagement, a “digital navigator” program, data collection, GIS digital mapping, and telecom management services. The program will span three years and connect more than 2,300 unserved residents and businesses utilizing American Rescue Plan Act (ARPA) funding.

Westmoreland County, PA | In May 2022, Westmoreland County hired Michael Baker International to design and deploy an equitable broadband internet plan using
$660,000 of funding supplied by the federal American Rescue Plan Act (ARPA). Work outlined in that contract includes:

- Create an equitable broadband expansion plan for the county.
- Identify areas needing investment in broadband infrastructure, including two early action projects.
- Aid the county to partner with a private internet provider to expand its services to those target areas.

C. Where Can You Learn More About the Listening Sessions?

MEETING SCHEDULE. In February 2023, the PBDA released a guiding document that outlined stakeholder engagement plans and requested comments, which many digital equity organizations across Pennsylvania provided feedback on. In the release, the PBDA emphasized dedication to fostering an open and comprehensive stakeholder engagement process while creating the BEAD Five-Year Action Plan and the State Digital Equity Plan.

OBJECTIVES & PUBLIC NOTICE. After receiving feedback from residents and digital equity groups, PBDA staff have refined the scope of work for their community outreach and stakeholder engagement plans. PBDA staff have recently secured a consultant to assist with developing a State 5-Year Action Plan and a Digital Equity Plan. Planning is underway to finalize listening sessions and community outreach, including specific objectives and plans for public notice.

D. When Will IIJA Funds Be Disbursed?

The State of Pennsylvania and PBDA will be required to follow guidance from the National Telecommunications and Information Administration (NTIA) related to the two programs that will be used to fund their Digital Inclusion Efforts: The Broadband Equity, Access, and Deployment Program and the Digital Equity Act Programs. The PBDA timelines will be aligned with these high-level federal timelines:
Timelines for planned statewide listening sessions and further planning efforts are being finalized between the PBDA and Michael Baker International, with updates expected by June 1. Regularly scheduled PBDA Board and Outreach & Education Sub-committee Meetings will continue, with upcoming opportunities for participation:

- **PBDA Outreach & Education Sub-Committee Meeting – 06-14-2023**
- **PBDA Outreach & Education Sub-Committee Meeting – 07-13-2023**
- **PBDA Outreach & Education Sub-Committee Meeting – 08-09-2023**
- **Pennsylvania Broadband Development Authority Board Meeting – 08-17-2023**

**VII. WHO INFLUENCES STATE BROADBAND POLICY?**

**A. Residents Have Power.**

There is nothing more powerful than groups of informed residents who understand the power of their own agency. No one knows a community better than the people who call it home, and there is no one more qualified to quantify the impact or articulate needs. It is imperative for residents to participate in public hearings, even if only to ask questions. When state officials solicit public input, a short letter or email can be incorporated into the public record and used to influence how funds are distributed.

**B. Community Leaders and Advocates Are Essential Movement-Builders.**

The history of advocacy in Pennsylvania predates the U.S. having 50 states. Whether advocating for voting rights, the rights of people living with disabilities, or bail reform, Pennsylvania advocates have developed movements that call for systemic change.
Today, advocating for digital rights requires similar organizing strategies. While there are too many digital equity advocates to capture on one list, here are several organizations working to expand which Pennsylvania residents will benefit from advances in technology.

- **PA Digital Literacy Alliance** | Contact Kate Rivera at kate.rivera@tlcphilly.org
- **Greater Pittsburgh Digital Inclusion Alliance** | Contact Next Century Cities for Jenn Blatz’s email
- **Computer Reach** | Contact Dave Sevick at dsevick@ComputerReach.Org
- **Online Together** | Chris Field: chris@onlinetogether.org
- **ExCITe Center, Drexel University**, Contact Andrew Stutzman at astutzman@drexel.edu
- **Chester County Digital Alliance** | Contact Next Century Cities for Jim Mercante’s email
- Organizations recognized in local media:
  - **Philly Community Wireless**
    - Allan Gomez, Project Manager
    - Administrative Lead Alex Wermer-Colan
  - **Temple University**
    - Heather Lewis-Weber, Senior Coordinator of Community Engagement City of Philadelphia:
  - **City of Philadelphia**
    - Juliet Fink Yates, Digital Inclusion Manager, Office of Innovation & Technology
    - Ana Ramos-Hernandez, Deputy Chief Performance Management and Technology of the Office of Children and Families

**C. Consider Joining the State Digital Equity Coalition Meetings.**

A group of local leaders across the state meets virtually biweekly on Tuesday afternoons from 3:00 p.m. to 4:00 p.m. ET to discuss state broadband updates. State leaders from the Broadband Development Office and NTIA Pennsylvania representatives regularly join the meetings.

The coalition brings together local, state, and federal officials across the state along with Pennsylvania community organizations to discuss upcoming opportunities, local broadband deployment and digital inclusion needs, and ongoing policy challenges. If you are interested in joining, Next Century Cities will connect you with Jennifer Blatz.
D. Stay in Touch with the Pennsylvania Broadband Development Authority (PBDA).

The PBDA leads state broadband funding programs and community engagement. The most recent PBDA meeting was on May 18, 2023. Reach out Kalie Snyder, Outreach & Engagement Manager, kalsnyder@pa.gov, to join the listserv of PBDA announcements. Julia Brinjac, the Digital Equity Program Manager, can be reached at jubrinjac@pa.gov.

E. Connect with NTIA Staff Members Based in Pennsylvania.

NTIA awarded the State $6.6 million in broadband planning grants in December 2022. BEAD funding allocations are expected on June 30, 2023. NTIA staff can help explain Pennsylvania’s requirements for community engagement.

- Knowledge Build Hudson, Digital Equity Officer for the Office of Internet Connectivity and Growth, kbhudson@ntia.gov.
- Nicole Ugarte, Pennsylvania Federal Program Officer, nugarte@ntia.gov. Provides updates on NTIA programs that impact Pennsylvania, including BEAD and DE.

F. Keep Asking State Legislators to Make Broadband a Priority.

Tell state legislators how they can be champions for your community. Here are a few examples of how state-level officials shape broadband conversations in Pennsylvania. For instance, State House Appropriations Committee Chair Jordan Harris (D., Philadelphia) discussed the need for infrastructure investments, including setting aside state funding to match federal Infrastructure funding. Other infrastructure investments can be tied with broadband deployment through dig-once and DOT coordination policies.

Appointed in January 2023, State Senate Communications & Technology Committee Chair Tracy Pennycuick and Minority Chair Jimmy Dillon have both publicly discussed the importance of broadband. According to Pennycuick, “This forward-looking committee is designed to keep Pennsylvania at the forefront of communications and related technologies through the review and consideration of legislation to improve access to high-speed internet services across the entire Commonwealth.”

Dillon stated that: “I’m excited to begin my work serving on these committees and tackling issues that are important to my constituents and people across Pennsylvania. Northeast Philly is going to have a voice in conversations on improving access to high-
speed internet, promoting business growth, protecting consumers, reforming unemployment, and supporting our police."

**G. County and Municipal Leaders Are Making an Impact on Access and Adoption Rates.**

Local officials frequently reach out to one another to brainstorm ways to implement broadband programs or to build on efficiencies in neighboring municipalities. Here are a few examples of local leaders who treat closing the digital divide as a short-list priority.

- Juliet Fink-Yates, *City and County of Philadelphia Innovation Management Team*, juliet.fink-yates@phila.gov, leads Philadelphia’s broadband and digital inclusion work and has experience developing and implementing the City and County’s local digital inclusion plan.
- Whitney Hoffman, Former Kennett Township Supervisor, gave a digital equity presentation to the current township supervisors in April 2023.
- York County Fiber Broadband Task Force launched its middle-mile pilot project in July 2022.
- Lancaster is partnering with a provider on its municipal broadband network.

**H. Academic Partners Can Help Accelerate Progress on Persistent Digital Divides.**

Academic partners are indispensable partners in long-term movements to address digital divides. Notably, academic institutions outlast political administrations. They are also invested in improving the quality of life for the communities they serve. Finally, they are uniquely positioned to quantify and qualify how inequities impact communities. Here are several academic allies with broadband advocacy experience.

- Kate Ulreich, University of Pittsburgh, Next Century Cities can make an introduction.
- Karen Lightman, Executive Director, *Metro21: Smart Cities Institute Carnegie Mellon University*
- Sascha Meinrath, Palmer Chair in Telecommunications Penn State, Founder and Director of X-Lab, which has a Pennsylvania Internet mapping tool available here.
- Christopher Ali, Pioneers Chair, Professor of Telecommunications at Penn State University, cba5434@psu.edu. Authored the book *Farm Fresh*
**Broadband**, which discusses various community-centered connectivity approaches.

- Professors from the University of Pennsylvania, the University of New Hampshire, and Northeastern University published a report on data privacy. *Americans Can’t Consent to Companies’ Use of Their Data* discusses privacy implications of public WiFi, in-home IOT devices, and harms caused by data breaches.
- Three PA Universities received funding from the *Connecting Minority Communities* program. Lincoln University in Southern Chester County, Community College of Philadelphia, and Eastern University in St Davids.

**VIII. Remember to Include the Governor in Your Outreach Plans.**

Governor Josh Shapiro hails from *Montgomery County* where nearly 5% of residents do not have a home computer, and nearly 8% do not have a home Internet subscription through a fixed or mobile Internet service provider. There may be several ways to partner with the Shapiro administration on your broadband advocacy. For instance, consumer protection is a priority area that overlaps with broadband. As Attorney General, Shapiro joined a letter urging the FCC to “reject a cable and telecommunications industry petition intended to stop states from enforcing state false advertising laws related to Internet speeds.”

Additionally, *black maternal healthcare* is a priority for his COVID recovery plan. Broadband connectivity can improve maternal health outcomes, as Brittany-Rae Gregory’s report *Changing our (Virtual) Reality: Telehealth and the United States Maternal Health Crisis* highlights. A two-page summary is available here. Governor Shapiro is also passionate about supporting seniors and people with disabilities. Broadband enables people to age in place and live independently with disabilities. *Page 3 of NCC’s March Newsletter* discusses broadband’s impact on people with disabilities.

**IX. Ask Members of Congress to Amplify Local Needs.**

Remember that members of Congress who have yet to lead on broadband legislation can still be an advocate for your community.
1. **Know their names.** Visit the [Members of the U.S. Congress](https://www.congress.gov/) website to find your member of House Representative or Senator. Search by the elected’s name or your address.

2. **Ask them to share their microphone and platforms.** Give your representatives information that enables them to amplify your success stories or specific issues that need attention. Events, press releases, and media interviews are great opportunities for elected officials to share community impact stories. Email highlights, statistics, and timelines that help elected officials and their staff members understand how connectivity challenges impact your community and ways that they can help.

3. **Hold your representatives accountable.** Pressuring elected officials to take ownership of digital equity issues is more effective when advocates acknowledge where progress is being made and are specific about deficiencies. It is helpful to stay in contact with your elected officials via staff. Celebrate their wins and give public high fives when earned. Sincere acknowledgments of steps forward invite collaboration when advocates need an elected official to use their social capital for systemic change.

X. **Social Media Is Critical for Building Public Awareness and Galvanizing Support.**

Here are a few suggestions for hashtags to launch a digital equity campaign across Pennsylvania.

- #CloseTheDigitalDividePA
- #BroadbandAccessANDEquityPA
- #DigitalEquityPA

Give coalition allies the language and visuals that you need them to amplify. Create social media tiles for allies to share or make the following samples your own.
digital divide
noun
separates communities into two or more parts of people who do and do not have reliable access to information, resources, and opportunities.

#CloseTheDigitalDividePA

IT'S A NEW DAY

#CloseTheDigitalDividePA
One in four Pennsylvania households do not have or cannot use high-speed Internet in their homes. 35% of those households are Black or African American. 25% are Hispanic or Latin American.

@Benton_Inst
#CloseTheDividePA

Broadband access does not equate to subscriership.

@Benton_Inst

#DigitalDividePA