

Federal Communications Commission



**Connecting Opportunity Communities to Broadband During the COVID-19 Pandemic:
Lessons Learned and Recommendations**

**Submitted to the Federal Communications Commission by the
Digital Empowerment and Inclusion Working Group of the
Communications Equity and Diversity Council**

Adopted: June 15, 2023

**Federal Communications Commission
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**Digital Empowerment and Inclusion Working Group
Workstreams #2 & #3**

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EXECUTIVE SUMMARY

The COVID-19 pandemic and resulting lockdowns that began in March 2020 forced the country into the uncharted territory of increased demand for home connectivity and internet-enabled devices. It also exposed a persistent digital divide faced by many across the country. At the same time, the country saw the rise of public and private partnerships and investment in broadband infrastructure and tackling affordability barriers to broadband adoption. Through several bipartisan bills, agencies such as the Federal Communications Commission (FCC) were tasked with rapidly deploying programs that were designed to bring much-needed relief to households that were experiencing unprecedented challenges related to the pandemic.

In this context, the Federal Communications Commission Chairwoman Jessica Rosenworcel rechartered the Community Equity and Diversity Council (CEDC) in 2021 to make recommendations to the Commission on advancing equity in the provision of and access to digital communication services and products for all people of the United States, without discrimination on the basis of race, color, religion, national origin, sex, or disability. In February 2022, the CEDC's Digital Empowerment and Inclusion Working Group announced that one of its goals was to assess the impact of the programs that were implemented in response to the pandemic via two workstreams; Digital Empowerment and Inclusion Working Group Workstream 2 (DEI Workstream 2) and the Digital Empowerment and Inclusion Working Group Workstream 3 (DEI Workstream 3)¹.

The recommendations included in this report focus on the CEDC's mission of "advancing equity in the provision of access to digital communication services and products for all people of the United States, without discrimination on the basis of race, color, religion, national origin, location, sex or disability.

Recommendations from Public Convening

- 1. The federal government should continue the Affordable Connectivity Program (ACP).**
- 2. There should be greater outreach efforts to educate families about the benefits of the ACP. Those outreach efforts should include many more languages than English.**
- 3. Make it easier for families to enroll in the ACP.**
- 4. Broadband service providers can implement their own low-cost broadband service programs with quality service and comparable speeds as high-income households and provide broadband connectivity centers within communities.**

¹ Communications Equity and Diversity Council Meeting - February 2022. February 23, 2022. <https://www.fcc.gov/news-events/events/2022/02/communications-equity-and-diversity-council-meeting-february-2022> (accessed May 18, 2023).

- 5. Non-profit organizations, and community anchor institutions (such as libraries) can develop Wi-Fi centers within local communities funded by the federal, state, local government and/or in partnership with industry.**
- 6. To identify and overcome the challenges to broadband adoption, affordability, and greater participation in digital literacy skills training programs, broadband service providers and federal and state governments must collaborate and leverage the trusted relationships that anchor institutions have with their local communities.**
- 7. To develop broadband adoption and digital literacy skills training on a national scale, the non-profit and private sectors need to develop best practices for more broader collaboration.**
- 8. The federal government must ensure states receive funds to develop their digital equity plans.**

Introduction

The COVID-19 pandemic affected every aspect of American life, leading to financial hardship, housing insecurity, and social upheaval for millions of people. The virus spread quickly, and federal and state authorities implemented stay-at-home mandates and social distancing measures to slow its spread. As a result, businesses and schools closed, and travel and events were restricted. People quickly turned to virtual platforms for learning, telemedicine, telework, entertainment, and social interactions. It soon became clear that more than a decade past the launch of the National Broadband Plan², a significant number of households were still experiencing digital inequity both in terms of availability and adoption. This divide disproportionately affects communities of color, low-income households, tribal communities, rural communities, seniors, and other opportunity communities.

The pandemic exposed and exacerbated the digital divide. For many, the cost of equipment and services, lack of broadband infrastructure, financial resources, digital skills, privacy concerns, and inadequate social support have created significant barriers to internet adoption. The consequences of this divide have significant implications for civic engagement, social inclusion, and economic mobility, marginalizing those who cannot access and benefit from digital technologies.

The surge in internet usage following the pandemic placed unprecedented demands on the nation's broadband infrastructure.³ Broadband providers stepped up to expand and upgrade their networks to keep up with the increased demand and to reach more households in unserved areas. The FCC worked tirelessly to support the connectivity needs of households across the country during the pandemic, including through the agency's universal service programs and newly appropriated funding. However, some areas still experienced slow or unreliable internet speeds, and access disparities persisted.

Disparities in broadband access were exposed during the pandemic. At the end of 2019, at least 14.5 million individuals in the US still lacked access to fixed broadband internet service of at least 25/3 Mbps.⁴ The lack of broadband access has a significant impact on educational attainment, healthcare outcomes, social connection, and economic mobility for those from historically marginalized communities.⁵ For instance, with schools closed or operating on a limited basis, millions of students in low-income households and rural communities did not have internet service. This prevented them from participating in virtual classes, completing assignments, and keeping up with their classmates.

² FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: Mar.17, 2010).

³ <https://reconanalytics.com/2021/11/us-broadband-network-performance-during-covid-19-and-beyond/>

⁴ See Broadbandnow.com.

⁵ *In the Matter of Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, FOURTEENTH BROADBAND DEPLOYMENT REPORT, FCC GN Docket No. 20-269 (rel. Jan.19, 2021, available at <https://docs.fcc.gov/public/attachments/FCC-21-18A1.pdf>).

In sum, the pandemic highlighted the need for continued investment in broadband infrastructure and adoption efforts to ensure that all Americans benefit from this critical tool. Further, it demonstrated the need for policies to promote digital equity, investment in digital skills programs, and initiatives to make broadband internet and devices affordable, particularly for unserved and underserved communities. It did not so much reveal as underscore the fact that a significant number of individuals lacked the resources or the ability to transition to an online ecosystem and that a significant number of social service agencies lacked the capacity to meet the moment. As a result, the CEDC's Digital Empowerment and Inclusion Working Group made a commitment to assess the impact of the programs that were implemented in response to the pandemic.

METHOD FOR LISTENING SESSIONS

DEI Workstream 2: This workstream was responsible for gathering information from key stakeholders, including internet service providers (ISPs), federal agencies with emergency broadband funding, state agencies, and community and civic organizations and faith-based institutions, to understand and identify lessons learned from programs that provided broadband connectivity to opportunity communities during the pandemic.⁶

Beginning in December 2022 and ending in March 2023, the DEI Workstream 2 conducted one-on-one in-depth interviews. We found it crucial to understand the experiences both of administrators (such as ISPs and community anchor institutions) in the creation and deployment of emergency broadband programs and of beneficiaries of those programs. We began our research with online searches and inquiries of emergency broadband programs initiated during the COVID-19 pandemic, along with taking stock of relevant regulatory documents (especially those concerning the creation of the Emergency Broadband Benefit (EBB) and Affordable Connectivity Program (ACP). We also analyzed documents that were submitted to the workstream by our interviewees regarding their broadband connectivity accomplishments and programs.

The workstream conducted fifteen (15) one-on-one interviews with representative of ISPs, federal agencies, state agencies, and community organizations (including, for example, civic, educational, social justice, and faith-based groups) that developed emergency broadband programs during the pandemic. The interviews sought to understand the successes and failures of emergency broadband programs, and lessons these representatives learned from their experiences.

Interviews were conducted with the following individuals:

- Ovidiu Viorica, Program Manager, Broadband & Technology, New Mexico Public School Facilities Authority
- Angela Bennett, Digital Equity Director, National Telecommunications and Information Administration
- Ji Soo Song, Digital Equity Advisor, US Department of Education
- Jessica Ch'ng, Fellow, Office of Educational Technology, US Department of Education
- Shirley Bloomfield, CEO, NTCA- The Rural Broadband Association
- Loren King, Vice President of Business Development, Wisper ISP
- Mona Thompson, General Manager Cheyenne River Sioux Tribe Telephone Authority
- Seamus Dowdall, Associate Legislative Director, National Association of Counties (NACo)

⁶ The DEI Working Group encourages advocates, researchers, industry partners, and government agencies to use the term “opportunity communities” rather than disadvantaged or low-income. The term should encompass communities that are traditionally underserved or face socio-economic barriers to mobility and equity. *See, The Role of Public Libraries and Community Partnerships in Promoting Digital Adoption*, Digital Empowerment and Inclusion Working Group, Digital Inclusion Subgroup Report, Advisory Committee on Diversity and Digital Empowerment (adopted June 24, 2021).

- Rick Chessen, Senior Vice President, Legal and Regulatory Affairs and Chief Legal Counsel, NCTA – The Internet & Television Association
- Keith Gabbard, CEO/GM, Peoples Rural Telephone Cooperative
- Olivia Wein, Staff Attorney, National Consumer Law Center
- Anna Sanchez, Director, Department of Senior Affairs, City of Albuquerque
- Dr. Traci Morris, Executive Director, American Indian Policy Institute
- Amy Bender, VP, Regulatory Affairs, CTIA
- Nirali Patel, Senior Vice President of Policy and Advocacy, USTelecom
- Rev. William Lamar IV, Pastor, Metropolitan AME Church

While each interview consisted of questions unique to that individual, the workstream developed the following series of questions as the basis for those that were tailored for and posed to each respondent:

- What, if any, programs, did you [or your members] implement during the pandemic regarding broadband availability, affordability, adoption, and accessibility?
- What were your goals for your program?
- Who was your targeted population? Who participated?
- How was your program funded?
- Did you partner with any other organizations?
- In your opinion, did this/these program[s] meet with your expectations? How did you measure your impact/expectations on a quantitative or qualitative basis?
- What, if anything, would you have done different to achieve your goals?
- How do/did you conduct outreach to opportunity communities and what did you find worked well in these efforts?
- What roles do you envision other organizations in the community having in achieving broadband availability, affordability, adoption and accessibility goals?
- How can partnerships benefit future programs?
- Do you/your organization plan to continue your emergency broadband program{s} and how will you fund it/them?
- Can you offer any recommendations to the FCC for how to improve any aspects of their emergency broadband programming?
- Future programs, enrollment/application, outreach

- Is there anything else you'd like to tell us that we haven't covered?
- Can you share with us anything you'd like us to read and consult or follow up on?
- Is there anyone else you think we should speak with?

DEI Workstream 3: This workstream organized and facilitated an FCC roundtable held on March 23, 2023, that consisted of two (2) moderated discussions with a diverse range of stakeholders focusing on broadband deployment and adoption for serving opportunity communities.⁷ During the roundtable, stakeholders shared perspectives on lessons learned from the pandemic on broadband access, affordability, and deployment, identified innovative solutions and provided recommendations for how to accelerate the equitable deployment of broadband access in all communities, including those communities that comprise of people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who have been historically underserved, marginalized, or adversely affected by persistent poverty and inequality in access to technology, communications services and next generation networks, which have resulted in negative impacts in education and employment. A full list of roundtable participants is included in Appendix B.

⁷ Materials regarding the CEDC's March 23, 2023, roundtable, including the roundtable video, agenda, participants' bios and event transcript, are available at <https://www.fcc.gov/news-events/events/2023/03/lessons-learned-pandemic-roundtable-broadband-access-affordability-and>.

DEI Workstream 2 Interview Summaries and Findings

The goal of DEI Workstream 2 was to solicit information from key stakeholders across ISPs, federal agencies with emergency broadband funding, state agencies, and community organizations to understand and identify lessons learned from programs that provided broadband connectivity to opportunity communities during the pandemic.

DEI Workstream 2 members conducted fifteen interviews over the course of three months. Interviewees are identified below and at Appendix A. The interviewees represented a diverse group of stakeholders. They included representatives of ISPs, large and small, from individual companies and co-ops, trade associations, government officials and representatives at the federal, state, county, and municipal level, and non-profit organizations and advocates, some specializing in broadband policy and some in the provision of related direct services. These individuals possessed deep expertise spanning topics such as public education, seniors and aging, and tribal issues. The interviewees also included academics, consumer advocates, industry executives and lawyers, and religious congregation leaders. In addition to a wealth of unique viewpoints that came to light from their experiences during the pandemic, several common themes emerged from these conversations, highlighting many measures that worked well and some that could have been improved.

Response to the Pandemic

Digital Inclusion Interviews: This crisis galvanized a broad coalition of stakeholders across the public and private sectors. The digital inclusion advocates interviewed by DEI Workstream 2 played a key role in raising awareness and addressing the root causes of these connectivity disparities. Digital inclusion advocates included those from tribal communities, faith-based organizations, public schools, and law centers. They pushed for immediate solutions to address the challenges that low-income, rural, aging populations and other marginalized communities were facing to stay connected and advocated for long-term solutions to bridge the digital divide. Digital inclusion advocates also supported and implemented local efforts to keep communities online and worked with community-based organizations, schools, libraries, and other anchor institutions to provide internet access and devices to those in need. They also deployed digital navigators to train individuals on how to use the internet and digital devices, which was especially important as services moved online. They called for policies and programs that would ensure affordable and reliable internet access for all, including low-income and marginalized communities. They also urged the private sector to further invest in deploying broadband infrastructure in underserved areas.

ISP Interviews: There was also direct engagement by ISPs of all sizes to help bridge the financial barriers for consumers – including expansion of their existing financial assistance programs for low-income households. Many of the major ISPs we spoke with also launched new initiatives to provide the internet for free or at low cost to eligible households and entered public-private partnerships to help school districts and localities to provide free internet to their

constituencies. More than 800 ISPs signed onto the Keep Americans Connected Pledge⁸ under which they committed not to terminate service to any residential or small business customers who were unable to pay their bills due to pandemic-related economic disruptions. They also agreed to waive any late fees that these customers incurred due to pandemic-related economic circumstances and to make available Wi-Fi hotspots to any American in need.⁹

Stakeholders successfully collaborated to engage policymakers in addressing the needs of opportunity communities for broadband connectivity. As a result, the federal government passed several pieces of legislation between 2020 and 2021, providing \$146.8 billion in funding for broadband infrastructure deployment, digital equity initiatives, and remote learning and telework. The major federal funding legislation that passed to provide broadband funding during the pandemic included:

- American Rescue Plan Act of 2021 (ARPA), which created the Emergency Connectivity Fund (ECF), a \$7.171 billion program to help schools and libraries support remote learning.¹⁰
- Coronavirus Aid, Relief, and Economic Security (CARES) Act, which provided economic assistance for American workers, families, small businesses, and industries.¹¹
- Consolidated Appropriations Act of 2021, in which Congress appropriated \$3.2 billion for the Emergency Broadband Benefit (EBB) program.¹²
- Infrastructure Investment and Jobs Act (IIJA), in which Congress dedicated \$14.2 billion for the Affordable Connectivity Program (ACP) as a successor to EBB, as well as \$42.5 billion in deployment funding in the Broadband Equity, Access, and Deployment (BEAD) Program, plus \$2.75 in the Digital Equity Act.¹³

Along with billions invested at the state and local government level,¹⁴ these pieces of legislation provided significant funding for broadband infrastructure deployment, digital equity initiatives, and remote learning and telework during the COVID-19 pandemic.

⁸ Keep Americans Connected | Federal Communications Commission (fcc.gov).

⁹ *Id.*

¹⁰ H.R.1319 - American Rescue Plan Act of 2021. <https://www.congress.gov/bill/117th-congress/house-bill/1319/text>.

¹¹ H.R.748 - CARES Act. <https://www.congress.gov/bill/116th-congress/house-bill/748/text>.

¹² H.R.133 - Consolidated Appropriations Act, 2021. <https://www.congress.gov/bill/116th-congress/house-bill/133/text>.

¹³ S.2016 - Infrastructure Investment and Jobs Act. <https://www.congress.gov/bill/117th-congress/senate-bill/2016/text>.

¹⁴ FACT SHEET: Biden-Harris Administration Announces Over \$25 Billion in American Rescue Plan Funding to Help Ensure Every American Has Access to High Speed, Affordable Internet | The White House.

Lessons Learned

Below are some highlights from the interviews:

- **Interviewees uniformly praised the value of public-private partnerships between ISPs and local governments, libraries, housing authorities, healthcare providers, school districts, and universities.** They also cited partnerships between ISPs and other community pillars, such as non-profit foundations able to provide funding and grassroots organizations to adapt by providing trusted information to and about their local communities and constituencies.

Interviewees noted that internet service providers must build connections and trust over time with partnering organizations and in turn, with the populations they serve. Companies cannot expect to reach out only in times of crisis and have the same results they would achieve from longer-term relationships.

Listening to local leaders and impacted individuals is always key, especially in uniquely challenging environments for broadband deployment and affordability, such as people from tribal lands and other rural areas with similarly challenging topography presented by mountainous terrain or distance between people's homes and other serviceable locations. They also included impoverished and under-served areas, such as economically disadvantaged neighborhoods, communities of color, and populations in which English is not the predominant language. Of course, these are not mutually exclusive designations or challenges, as rural and urban areas alike intersect with and include opportunity communities that fit more than one of these categories.

Interviewees suggested that all parties in any broadband partnership must recognize the unique aspects of individual geographic areas and different demographic groups, as well as the different capabilities of various companies and government institutions. Fruitful partnerships are dynamic and organic; there is not a one-size-fits-all approach that allows for instant creation of productive working relationships:

1. Some large ISPs partnered with community groups, faith-based institutions, and school districts to conduct sign-up events for the EBB and ACP initiatives created by Congress and implemented by the FCC within the first two years of the COVID era.
2. Others leveraged existing lower-priced and affordable offering programs in place before the start of the pandemic, as well as digital inclusion and skills training efforts likewise in place prior to COVID, with partnerships forged between national wireless carriers and nationwide non-profit organizations such as UnidosUS, Boys and Girls Clubs, Girls Who Code, and college associations such as Historically Black Colleges and Universities (HBCU)s.
3. Smaller ISPs serving more unique or remote service territories, as well as local schools, non-profits, tribal representatives, and churches, also engaged in extended outreach and education efforts. They conducted sign-up events and listening sessions. But they did so over smaller geographic areas and with more

targeted populations than the large national carriers did, often “filling small pockets” in urban and rural settings alike “where no one else could go.”

In sum, there was a great breadth and rich diversity of experiences, rather than a uniform formula for success with public and private partners at the neighborhood, municipal, regional, and federal levels alike. Yet, even with the need to quite often “fly the plane while we were still building it” in the response to this historic crisis, interviewees consistently recognized the crucial role that longstanding and newly created partnerships played in outreach, education, and enrollment of beneficiaries in pandemic response connectivity programs.

- **Multiple interviewees discussed the need for broadband adoption programs, subsidies, training, and outreach to “meet people where they are.”** During the interviews, various individuals emphasized the importance of local coordination and engagement by trusted local stakeholders for successfully reaching community members. In reviewing programs launched in the pandemic, interviewees explained that not every outreach or enrollment effort was successful. Areas for improvement suggested by less successful approaches are detailed in the section that follows this one. Those efforts that did work well did so because they “met people where they are.” They implemented programs with a deep understanding of their target population, both in terms of their physical location and their personal circumstances, including language barriers, experiences, and beliefs. More importantly, they were trusted by the target population. Successful efforts were thus attuned to and tailored for the target populations’ needs. This was often thanks to successful partnerships with local institutions and with community anchors that could quickly understand existing supports as well as newly minted federal programs, then serve as trusted navigators for these programs even in the challenging and extraordinary circumstances that the COVID crisis imposed – thanks in part to the FCC’s understanding of the need for such trusted navigators and community liaisons, coupled with the fact that the IJA included funding for ACP outreach grants.

“Meeting people where they are” was also a literal mandate for many interviewees. They noted that even in urban areas, many potential beneficiaries would be unable to attend trainings at inconvenient hours or locations, due to inability to take off from work or take on additional commuting expenses. In rural and tribal areas, travel was expensive, and there was a need to have an established local presence and individualized outreach to known potential beneficiaries – as opposed to simply parachuting into the location the day of an enrollment event, with agents and intermediaries unfamiliar with the territory and the people who live there.

- **Interviewees suggested that all the measurements they were able to gather during the implementation of pandemic response connectivity programs showed that these new federal funding programs had a positive impact.** Building on smaller-scale or pre-existing low-income affordability subsidies and industry-led initiatives, new programs like EBB, ACP, and the school-focused Emergency Connectivity Fund (ECF) all worked to increase adoption levels nationwide, and in particular for the student

populations and other target communities served by local institutions and advocacy organizations.

The organizations, institutions, and companies represented by interviewees were often “so busy just doing what needed to be done” that measurement and assessment came second. As one trade association representative indicated, companies were willing participants in the drive to get and keep people connected, but they were also steered into doing it by local and federal authorities, and sometimes faced conflicting demands to launch quickly but also to gather more input.

Trade association representatives typically expressed confidence in the federal programs’ success but indicated that individual companies would have more precise data on their subscribership growth and retention rates during the studied periods of time. Some did refer DEI Workstream 3 to results in specific cities and service territories, such as Chicago and Philadelphia.

Representatives of the smaller individual companies and co-ops to whom we spoke reported growth in subscriber numbers during the period after federal subsidy programs commenced, building on other efforts preceding the creation of EBB and ACP including voluntary company initiatives. But none could pinpoint data to answer questions about numbers of individuals signing up for the first time or able to stay online solely because of new subsidies.

Government representatives cited work done by counties like Fulton, Georgia, and Palm Beach, Florida, to track their progress towards specific targets, such as connecting 20,000 additional students in Fulton County, or providing connectivity and device supports across their entire geographic area or school districts. Academics studying specific demographic groups and populations suggested that anecdotal data was positive, but that they knew of no comprehensive quantitative measurement of impacts for these groups from all COVID broadband efforts.

As a result of these difficulties with capturing data in depth and breadth, interviewees from advocacy organizations, academia, and industry associations tended to agree with the need for more studies conducted by the FCC, NTIA, and other fund administrators, or by entities like the U.S. Government Accountability Office (“GAO”) using its expertise to measure program efficacy and outcomes.

All interviewees agreed that these programs had been vital during a time of even greater and even more readily apparent need for connectivity, owing to the need for so many services and societal interactions to move online during a time of quarantine and social distancing. The economic downturn also made it even harder for many people to get and stay connected at just the moment when broadband became even more vital to their day-to-day lives. When people are choosing between putting food on the table or paying rent, on the one hand, and having the broadband necessary for remote work, school, and healthcare on the other, any income support they receive is helpful regardless of whether

they could have somehow met all of those expenses in the absence of the broadband subsidy.

- **The EBB program and the successor ACP initiative increased affordability at a time of great job loss and economic upheaval.** Interviewees praised these programs and provided recommendations for improvement. One industry representative interviewee recognized the positive impact of expanding EBB and ACP eligibility beyond Lifeline’s previously established criteria. That expansion came both in terms of letting individuals qualify at a higher income threshold relative to Federal Poverty Guidelines, and in the number and breadth of other qualifying benefits programs that EBB and ACP applicants could use to demonstrate eligibility automatically.

Representatives of large and small ISPs also detailed the extensive list of carriers with affordability programs offering reduced-price services, and with digital inclusion, literacy, and skills trainings initiatives prior to the pandemic. Some interviewees from faith-based institutions and consumer advocacy organizations felt that while corporate efforts were extensive and necessary, companies that earned profits from serving opportunity communities both before and during the pandemic could have done even more to advance connectivity goals in an expansive, just, and equitable way. Interviewees argue that with more funding and resources from ISPs, more people could have been connected during the crisis and over the long-term, in order to make even greater strides towards closing the digital divide.

Interviewees noted the importance of the ECF program for schools, students, and districts. ECF was established contemporaneously with EBB in the American Rescue Plan Act of 2021 and provided more than \$7 billion for schools and libraries to provide connectivity. And even before that, the CARES Act adopted early in the pandemic in 2020 allowed school districts receiving funding to use that money for broadband connectivity among other permissible uses. ISPs worked with school districts to facilitate connectivity in dozens of states before the end of 2020.

Lastly, interviewees noted the importance of the Broadband Equity, Access, and Deployment (BEAD) program, which is primarily focused on deployment but that also provides opportunities for broadband adoption and workforce development efforts administered by NTIA. The Infrastructure Investment and Jobs Act included the BEAD program as well as the \$2.75 billion Digital Equity Act, also administered by NTIA, to fund digital inclusion, literacy, and training initiatives.

- **Community organizations and local agencies also played a vital role, in partnership with ISPs, to support funding of broadband connectivity and advertise the availability of newly created federal subsidy programs.** Interviewees cited regionally focused non-profits’ willingness to fund broadband service for student populations across entire school districts; universities’ efforts to ensure that their students could learn virtually as well during times of mandatory shutdowns and social distancing; and school-district statewide educational agency efforts to provide the necessary infrastructure,

devices, and affordability supports when students were required to stay at home and attend school only online.

While distance learning and school efforts garnered tremendous attention, other community anchor institutions like churches, libraries, and American Legion posts participated in awareness programs, outreach campaigns, and actual enrollment drives to inform potential recipients of their eligibility and then help them navigate the sign-up process.

Areas for Improvement

Interviewees unanimously agreed on the value of EBB and ACP, as well as the wide range of other federal, local, non-profit, and corporate initiatives. Yet, they did have observations on design and implementation features that could have been done differently and better during the pandemic:

- 1. There were not enough resources to get to 100 percent connectivity in specific opportunity communities or nationwide.** While the \$14.2 billion investment in ACP is a landmark figure it is not nearly enough to keep millions of households connected for the long term. With ACP projected to run out of funding during 2024 absent congressional renewal and re-investment. Interviewees from ISPs consistently said they would like to continue their lower-priced offerings and keep subsidized subscribers online, but they expressed some doubt about their ability to do that without a consistent funding stream.

Even with unprecedented and historical mobilization efforts challenges existed to connect disconnected individuals in cities and in geographically distant populations to these resources. In rural and tribal areas, the challenges of reaching all communities are especially acute because of several geographic and economic challenges.

- 2. There were challenges in increasing awareness about newly created federal programs, especially during times of health crises and economic upheaval.** Interviewees discussed an incredibly wide range of outreach techniques and initiatives, but with results that were either hard to measure or results that were worse than expected. Sign-up events at local stores and community centers could be incredibly effective if done right, but not if community members are given short notice via mass media, fliers, or other advertising methods.

Trusted and known community partners, businesses, and leaders were far better messengers, but sometimes non-local companies would send representatives and other middlemen to communities where they had no track record or local presence, and they would simply hand out devices or applications for EBB and ACP without backing them up with local support and continued investment.

Using text messaging and other methods of outreach that required potential recipients to already have some level of connectivity was tricky and often ineffective. That

connectivity gap was especially problematic when beneficiaries who were not online were told they had to sign-up or demonstrate eligibility for EBB or ACP online, or when Lifeline program participants didn't have sufficient voice minutes or data allotments to complete application processes – let alone sufficient connectivity to plug into mandatory telehealth, telework, or distance learning.

Mass media advertising campaigns potentially reach broad audiences locally and even nationally, depending on the size and scope of the ad buy, but it is difficult to measure conversion rates and return on investment for people who see broadcast, print, or outdoor ads. Targeted advertising online may be easier to track, but once again is difficult or even impossible for households that start out as disconnected and not online.

- a. Outreach materials were translated into as many languages as possible, and the FCC, under both Chairman Ajit Pai and Chairwoman Jessica Rosenworcel, made efforts to reach non-English speaking individuals and communities. But advocates and others conducting community outreach still often needed to rely on community members or other non-governmental parties and outside resources for accurate translation.
- b. Sending program materials home with students whose families might be or definitely were eligible for EBB and ACP seemed like an easy outreach route, but ISPs found that older students and especially high-schoolers were less likely to hand those materials along to their parents or other adults who could complete the application process.
- c. One interviewee praised the intelligence of building \$100 million for outreach into the ACP statute itself. But they and others noted that even with those resources, there were still challenges in informing potentially eligible individuals and entire communities alike about new and existing federal subsidy programs and about individual carriers' efforts. Outreach was sometimes confusing for potential beneficiaries because it is not easy to explain that participants in Lifeline automatically qualify for ACP, but that a household could not have two ACP benefits for different members of the same household, nor to obtain separate wireline and wireless services from multiple providers at once.

3. Interviewees routinely noted that the EBB and ACP sign-up and verification processes were cumbersome for companies and digital navigators to complete despite their expertise, and that these processes could be even more bewildering for newly eligible beneficiaries. The application process was difficult and daunting to complete for individuals told to go online who had no broadband. Sign-up drives and community institutions helped to fill this gap, but did not resolve every challenge, such as applicants' difficulties in finding and knowing their latitude and longitude coordinates to establish their address locations on tribal lands.

Community leaders and ISPs serving impoverished areas noted that recipients could feel stigmatized and deterred from applying if they were embarrassed by answering questions posed by customer service representatives unknown to them about the potential recipient's income or their enrollment in other benefits programs.

All interviewees who expressed views on these topics indicated appreciation for (i) the speed with which programs had to be designed and rolled out, and (ii) safeguards and eligibility verification measures to ensure that such large funds were spent as intended and only on eligible recipients.

4. ISPs, government actors, and community institutions participating in EBB and ACP outreach and implementation had difficulties measuring sign-up and subscriber gains in real time. While new subscriber numbers and churn rates are not the only measurement needed to assess impact, policymakers would benefit from developing assessments and conducting a study of outreach effectiveness, and other more holistic quantitative and qualitative determinations of different communities' responses to the availability of these support programs. While individual ISPs may have relatively granular data on their own subscriber base and its growth, they do not always share it publicly at the same level of granularity and they do not always share it in the same formats year over year, between different and sometimes changing service tiers, or in ways readily comparable to other carriers' accounting metrics.

While the FCC's and the Universal Service Administrative Company's (USAC) various dashboards and data sets are valuable measures of these programs' overall enrollment and expenditure totals, they do not shed much light on the successes or improvements needed to reach specific geographic areas and target demographic groups.

DEI Workstream 3 Public Convening Summary and Recommendations

The goal of DEI Workstream 3 was to carry out a public convening of key stakeholders across ISPs, federal agencies with emergency broadband funding, state agencies, and community organizations concerning programs that provided broadband connectivity to opportunity communities during the pandemic to exchange information on lessons learned from efforts to provide internet access to opportunity communities during the pandemic.

Summary of the March 23 Convening Event¹⁵

Thu Nguyen, Executive Director of Organization of Chinese Americans (OCA), Asian Pacific American Advocates

Nguyen recommends continuing the ACP and for organizations working with the private sector to make information about the ACP and other broadband adoption subsidy programs be made available in more languages. She worked with “tech partners like Comcast, Verizon, Charter, T-Mobile, and AT&T, to make sure that their in-language materials [included] how to get low-cost internet options as well as...discounts on devices.”

Her organization developed a “workshop module” that it presented through their OCA Chapters for small business owners on “what are the mobile apps out there, what are the online business options for you to, you know, get your [services] on a delivery app, right, or get your services online so that people can order from you.” Her organization also partnered with the Walmart Foundation to get a few hundred laptops out to Asian American, Native Hawaiian and Pacific Islanders (AANHPI) students in Hawaii, California, Massachusetts, and Washington State.” She recommends that the federal government continue the ACP. Outreach to educate communities about that subsidy program can be combined with their outreach programs such as “Get Out the Vote.”

Joshua Breitbart, Senior Vice President for ConnectALL at Empire State Development and Director of the Division of Broadband Access for the State of New York

Breitbart explained how “in the span of about five to six weeks, his agency identified a particular vulnerable population at the time, which were isolated seniors living in public housing during the lockdown.” Many of those people did not have internet connectivity. His agency worked with T-Mobile and Older Adults Technology Services to develop a partnership that distributed internet connected tablets, personalized tech support, each one – and remote training to more than 10,000 of those seniors in public housing. He recommends that the federal government continue the ACP.

¹⁵ Quoted statements from participants at the March 23, 2023, roundtable are from the event transcript which is available at <https://www.fcc.gov/news-events/events/2023/03/lessons-learned-pandemic-roundtable-broadband-access-affordability-and>.

Annette Taylor, Director of the Office of Digital Equity and Literacy within the North Carolina Department of Information Technology

Taylor recommends greater outreach efforts to inform and enroll families in EBB and ACP. Her office worked with the North Carolina Department of Transportation to inform families about these programs through mailers. She stated that the federal government should continue the ACP but that there needs to be better outreach. North Carolina has created its own statewide digital navigator program. They are also going to work with a hotline service so that people can get the type of support they need. When this pandemic happened, the North Carolina Business Committee for Education “jumped into place and leveraged their partnerships with the corporate sector.” She recommends that all relevant public and private sectors share information to spur greater deployment and adoption of broadband services.

Ovidiu Viorica, Broadband and Technology Program Manager with the Public School Facilities Authority and recently New Mexico Office of Broadband and Access and Expansion

Viorica stated that New Mexico is a difficult state in which to deploy broadband networks because it is very rural, tribal, and sparsely populated. Viorica recommends that the federal government continue the ACP and that “the federal government should continue to engage with states directly and emphasize local engagement and partnerships because they know what their community needs best, and they all bring value and important perspectives and resources.”

Broderick Johnson, Executive President for Digital Equity at Comcast Corporation

Johnson recommends that the federal government continue the ACP. He also recommends investing in digital navigators and “[g]rass roots community-based solutions to close the digital divide.” Johnson believes Comcast’s Internet Essentials program helped connect Americans during the pandemic. Johnson also said Comcast’s Internet Essentials call center has access to translation services for 240 plus languages. Comcast also established Lift Zones across the nation. There are “more than 1,200 Lift Zones across the country.” “These are community- based centers where Wi-Fi is accessible.” The federal government needs to do better outreach about the ACP. For example, in Maryland only 27 percent of eligible households have signed up to ACP. Johnson contends that there's a lot of work to do there regarding ACP enrollment.

Greta Byrum is Principal at HR&A Advisors in the Broadband practice there and also serves on the Regents Advisory Council on Libraries for the State of New York.

Byrum’s organization collectively built out 15 community hubs and Wi-Fi hubs in the Bronx. Her organization also trained local people as digital stewards to install and maintain that equipment. Her organization “set up solar charging stations and access points in church parking lots as well as in places where people were seeking other social services,” and “developed intranets so that there was some material that people could access so that they didn't have to get all the way onto the big internet.” The Queens Public Library has over 25 Wi-Fi hubs across their service area, and they served over 500,000 unique users in the year of 2020.

Byrum recommends that broadband service providers, federal, state, and local governments collaborate with trusted institutions within the local communities to increase awareness of

broadband subsidy programs such as the ACP and other programs that can promote digital literacy skills.

Anisa Green, Director, Federal Regulatory, AT&T

Green recommends that other broadband service providers follow AT&T's example of establishing connected learning center hubs. This is a collaboration between AT&T and local communities that provide families with "free access to highspeed fiber internet, Wi-Fi, technology resources and digital literacy content." AT&T currently has four hubs in Raleigh, NC, Los Angeles, CA, Chicago, IL, and Houston, TX. AT&T has committed to opening 50 more such hubs nationwide. AT&T has also partnered with the Public Library Association to offer literacy skills and courses and workshops. AT&T believes the ACP "is extremely important and would love to see the program continue beyond the forecasted end of program." AT&T also believes that the non-profit sector and private sector should work on developing best practices to promote collaborations between the two sectors.

Thomas Kamber, Founder and Executive Director of Older Adults Technology Services (OATS) in New York

Kamber stated that OATS established a structured corporate affiliate relationship with AARP. This gave OATS access to all 50 AARP state offices as potential channels. OATS used these AARP offices to distribute its training programs nationwide through licensing agreements. In order to reach communities who speak languages other than English, Mr. Kamber discussed how more than 35% of OATS digital skills training is available in languages other than English. Mr. Kamber also stated that developing digital skills training for rural communities requires a different set of approaches in the content and the institutional support groups are different. In rural areas, a lot more younger people are offline. Many rural households do not have high-speed internet right to their home yet, or it's prohibitively expensive to make that connection or support the network over time.

Kamber also explained how his organization was able to overcome the challenge of building digital skills training programs that can scale. OATS did not have much experience with going from training 1,000 people to training 10,000 or 100,000. So, OATS created a program called Senior Planet Licensing, which was originally supposed to be in rural areas. OATS created a model where organizations could apply to OATS to become a licensing partner, go through a course where OATS would train them on how to deliver its curriculum, and gather data on outcomes from the training. When that program launched, OATS thought it might get to 50 programs around the country within a year or two. OATS now has over 200 and expects to reach 300 in 2023.

Ji Soo Song, Digital Equity Advisor at the Office of Educational Technology at the U.S. Department of Education (DOE)

Soo Song discussed how the DOE launched a digital equity initiative known as the Digital Equity Education Roundtables (DEER) Initiative. Specifically, DOE held a series of national conversations, listening sessions with communities and organizations, learners, and families that

are championing education and digital access. DOE used the data it gathered to develop guidance for leaders as they begin developing state digital equity plans.¹⁶ DOE found that it's not enough to make technology available and affordable. We also need to take a human approach to the issue and meet communities where they are and help them use technology in ways that supports their individual goals and needs. Soo Song also said it is very important to leverage the trusted organizations in a community to distribute information more broadly about subsidy programs such as the ACP. DOE leverages those trusted educational organizations within a community such as Learning Heroes, and parent-teacher associations. DOE has met with National Association of Elementary School Principals and the National Association of Secondary School Principals to spread this message of using local educational organizations to inform families about the importance of broadband adoption and digital literacy.

Norma Fernandez, CEO of EveryoneOn

Fernandez recommends working closely with local community organizations to address the diversity of communities. For example, non-profits, public housing agencies, and community health clinics, really organized themselves to meet the needs of their communities beyond what their regular services offered. Those organizations held food drives and donated devices. They did several things that were critical to the communities that they serve, which were also the same communities that were disproportionately affected by the pandemic and the digital divide. Fernandez's group also worked with Microsoft to conduct a national research study. That study showed that more than 65 percent of people trusted a combination of libraries, schools and non-profit groups to learn about resources such as the EBB program. She emphasized the importance of strategic partnerships. "Really looking at how various communities are coming together to maximize the funding." She thinks "it's imperative to have government at the table, philanthropy at the table, private sector, including ISPs at the table, as well as community-based organizations."

Hal Woods, Chief of Policy at Kids First Chicago

Woods reiterated how important community events such as food drives were to marketing broadband adoption and digital literacy programs to families that were struggling during the pandemic. Woods also discussed a cohort program in which Chicago Connected provided digital literacy training to families. It is a rigorous 10-week course, and they graduate with certificates. Those families, in turn, provide digital skills training to other families in their communities. Woods also stated that in order to design a comprehensive digital skills training program that helped as many people as possible within communities it was very important to survey families to determine their digital training needs. Connected Chicago knows a lot about Chicago Public School students, but they did not know much about their families' needs. He also indicated that to take as much advantage of the ACP as possible, it was important that the federal government streamline the enrollment process by just using names and addresses as Chicago Connected used. He believes that the federal government providing states with funding to develop digital equity

¹⁶ That guidance can be found at tech.ed.gov/deer.

plans would greatly help states develop improved broadband adoption and digital skills training programs.

Stephan Adams of the U.S. Virgin Islands Next Generation Network

Adams spoke about the importance of the Virgin Islands Governor speaking on radio stations to rally communities in those islands to share resources with each other because they could not count on help from the mainland. Adams said that the ACP is one of the best programs to help communities in the U.S. Virgin Islands, however, some challenges exist. One problem with the program is that “the enrollment process itself is very difficult.” Some “people don't want to participate in the ACP program because they don't want to give up the personal data that's required for it. They feel like the government is being intrusive just to be able to get this voucher.” The second problem is that the application process is too burdensome for broadband service providers. The “ISPs don't like it because we're only 87,000 people. So, there's not that much to defray the costs for the ISPs to offer the program.”

Additional Recommendations from Panelists (post-roundtable event)

Ovidiu Viorica, New Mexico Public School Facilities Authority

The FCC should work within their approved jurisdiction (and Congress should act where needed) to strengthen funding resources (such as USF) to continue to make available long-term/predictable investments (subsidies) through successful programs such as ACP and ECF. These investments should be distributed in collaboration with local anchor institutions (schools, libraries and community centers), non-profits, faith and other local trusted organizations, leveraging industry presence, services and know-how – to ensure training to develop digital skills as well as cost effective, affordable and secure access to scalable high-speed connectivity for all (especially focused on low income, rural, tribal, minorities, veterans, disabled, and seniors).

Annette Taylor, North Carolina Department of Information Technology

As states focus on all of the priority populations, here are a few examples of where the FCC can invest resources to support consumers' increased awareness and access to information, while addressing barriers that may hamper digital literacy & inclusion: 1) the ‘deaf and hard of hearing’ population, given the plans to abolish landline phones (include our aging population) – there's truly a sense of urgency to prepare these consumers; 2) support for ‘hospitals and healthcare systems’ to make access to telehealth a reality, especially for new Americans, and returning citizens; and 3) states' public safety agencies for infrastructure and platforms to support connectivity needs that help address safe communities, mental and behavioral health.

As a workstream, we defer to the wisdom of our roundtable participants to propose recommendations. As a result, we echo and support the following recommendations made by our roundtable participants.

Recommendations from Public Convening

- 1. The federal government should continue the Affordable Connectivity Program (ACP).**
- 2. There should be greater outreach efforts to educate families about the benefits of the ACP. Those outreach efforts should include many more languages than English.**
- 3. Make it easier for families to enroll in the ACP.**
- 4. Broadband service providers can implement their own low-cost broadband service programs with quality service and comparable speeds as high-income households and provide broadband connectivity centers within communities.**
- 5. Non-profit organizations, and community anchor institutions (such as libraries) can develop Wi-Fi centers within local communities funded by the federal, state, local government and/or in partnership with industry.**
- 6. To identify and overcome the challenges to broadband adoption, affordability, and greater participation in digital literacy skills training programs, broadband service providers and federal and state governments must collaborate and leverage the trusted relationships that anchor institutions have with their local communities.**
- 7. To develop broadband adoption and digital literacy skills training on a national scale, the non-profit and private sectors need to develop best practices for more broader collaboration.**
- 8. The federal government must ensure states receive funds to develop their digital equity plans.**

Conclusion

During the pandemic, keeping all Americans connected to the internet presented unique challenges. However, the collaborative efforts of digital inclusion advocates, ISPs, and the government achieved significant success in bridging the digital divide. Over 9 million households enrolled in the Emergency Broadband Benefit, and over 18.5 million households are currently enrolled in the Affordable Connectivity Program. Between 2019 and 2021, 1.4 million homes gained broadband availability, including 727,000 rural homes.¹⁷ These efforts made great strides in ensuring affordable and reliable internet access for all. As we look to the promise of the future, it is important that all stakeholders work together in providing access to affordable, high-speed, quality Internet to every community.

¹⁷ See <https://www.ncta.com/broadband-facts>.

APPENDIX A

Interviews Conducted

- Ovidiu Viorica, New Mexico Public School Facilities Authority
- Angela Bennett, NTIA
- Ji Soo Song and Jessica Ch'ng, Department of Education
- Shirley Bloomfield, NTCA
- Loren King, Wisper ISP
- Mona Thompson, Cheyenne River Sioux Tribe Telephone Authority
- Seamus Dowdall, National Association of Counties (NACo)
- Rick Chessen, Senior Vice President, Legal and Regulatory Affairs and Chief Legal Counsel, NCTA – The Internet & Television Association
- Keith Gabbard, CEO/GM - Peoples Rural Telephone Cooperative
- Olivia Wein, National Consumer Law Center
- Anna Sanchez, Director, Department of Senior Affairs, City of Albuquerque
- Dr. Traci Morris, American Indian Policy Institute
- Amy Bender, VP, Regulatory Affairs, CTIA
- Nirali Patel, USTelecom
- Rev. William Lamar IV, Metropolitan AME Church

APPENDIX B

March 23, 2023 Public Convening Panelists

- Clayton Banks, CEO, Silicon Harlem (Moderator), CEDC Member
- Joshua Breitbart, Senior Vice President, ConnectAll NY
- Greta Byrum, Principal for Broadband and Digital Equity, HR&A Advisors
- Broderick Johnson, Executive Vice President, Public Policy Executive Vice President, Digital Equity Comcast
- Thu Nguyen, Executive Director OCA – Asian Pacific American Advocates
- Annette Taylor, Director, Office of Digital Equity and Literacy, North Carolina Department of Information Technology
- Ovidiu Viorica, Broadband & Technology Program Manager, New Mexico Public School Facilities Authority
- Sarah Kate Ellis, President and CEO, GLAAD (Moderator), CEDC Member
- Stephan Adams, President and CEO, Virgin Islands Next Generation Network (viNGN)
- Norma Fernandez, CEO, EveryoneOn
- Anisa Green, Director, Federal Regulatory Chief of Staff – EVP, Federal Regulatory Relations & Chief Regulatory Officer, Corporate External & Legislative Affairs, AT&T Services, Inc., CEDC Member
- Thomas Kamber, Founder and Executive Director, Older Adults Technology Services (OATS)
- Ji Soo Song, Digital Equity Advisor, U.S. Department of Education, Office of Educational Technology
- Hal Woods, Chief of Policy, Kids First Chicago