A STATE-CENTERED APPROACH TO DIGITAL EQUITY

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I. INTRODUCTION

September 14, 2021, was the fourth day of school for the Owyhee Combined School on the Duck Valley Indian Reservation in Nevada.[1] Internet connectivity problems, however, made it almost impossible for administrators to take attendance, ensure students were in the correct classes, or retrieve student data to contact families of students with COVID-19 symptoms.[2] At the same time, across the country in Taliaferro County, Georgia—a county where nearly a quarter of the population lives under the federal poverty line—students struggled to complete their assigned classwork because they could not access the internet.[3] Remote education during the COVID-19 pandemic, one of the many challenges at this time, highlighted the need for reliable broadband infrastructure and affordable access in the United States.

The Federal Communication Commission (FCC) defines broadband as a variety of technologies that provide

> high-speed Internet access [that] allows users to access the Internet and Internet-related services at significantly higher speeds than those available through "dial-up" services. . . . Transmission is digital, meaning that text, images, and sound are all transmitted as "bits" of data. The transmission technologies that make broadband possible move these bits

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[1] All Things Considered, *Lack of Broadband Creates Daily Struggle on Reservation in Northern Nevada*, NPR, at 0:14 (Sept. 14, 2021), https://www.npr.org/2021/09/14/1036584618/infrastructure-series-broadband.

[2] *Id.* at 0:30.

[3] Nick Fouriezos, *Despite Pandemic Promises, Many Rural Students Still Lack Fast Internet*, WASH. POST (June 17, 2022, 7:00 AM), https://www.washingtonpost.com/education/2022/06/17/student-internet-access-rural.

> much more quickly than traditional telephone or wireless connections.[4]

In addition to education, the COVID-19 pandemic demonstrated the importance of broadband as it relates to health.[5] In fact, broadband is a social determinant of health.[6] During the COVID-19 pandemic, populations with broadband access had lower mortality rates than populations without "even when controlling for other socioeconomic factors such as income and education"[7] because those individuals were less likely to have access to public health guidance and recommendations on the internet.[8] The lack of broadband access also made scheduling vaccine appointments more difficult, further adversely affecting health outcomes.[9]

As of 2023, 7 percent of US households and businesses did not have broadband access.[10] In rural areas, as of 2021, nearly 17 percent of the population could not access broadband.[11] On tribal lands, almost 21 percent of the population did not have access.[12] Poverty exacerbated this problem, especially for senior citizens in poverty who were less likely to have broadband access than younger groups.[13]

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[4] *Getting Broadband Q&A*, FED. COMMC'NS COMM'N, https://www.fcc.gov/general/types-broadband-connections (Jan. 25, 2024).

[5] *See* COLLEEN MCCLAIN ET AL., PEW RSCH. CTR., THE INTERNET AND THE PANDEMIC 11, 14, 21 (2021) (noting that during the COVID-19 pandemic, US adults used the internet to attend telehealth visits, review public-health figures, and schedule vaccines).

[6] *See* Amy Yee, *Broadband Access a 'Matter of Life and Death' During Pandemic*, BLOOMBERG (June 28, 2022, 12:35 PM), https://www.bloomberg.com/news/articles/2022-06-28/broadband-internet-access-a-matter-of-life-and-death-during-pandemic.

[7] *Id.*

[8] *The Impact of Internet Access on Covid-19 Mortality in the United States*, DIGIT. PLANET (June 23, 2022), https://digitalplanet.tufts.edu/the-impact-of-internet-access-on-covid-19-deaths-in-the-us.

[9] Tamra Burns Loeb et al., *No Internet, No Vaccine: How Lack of Internet Access Has Limited Vaccine Availability for Racial and Ethnic Minorities*, THE CONVERSATION (Feb. 8, 2021, 8:42 AM), https://theconversation.com/no-internet-no-vaccine-how-lack-of-internet-access-has-limited-vaccine-availability-for-racial-and-ethnic-minorities-154063.

[10] Brian Fung, *Here's How Much Each State Will Get in the $42.5 Billion Broadband Infrastructure Plan*, CNN (June 26, 2023, 12:53 PM), https://www.cnn.com/2023/06/26/tech/broadband-infrastructure-biden/index.html.

[11] Fourteenth Broadband Deployment Report, 36 FCC Rcd. 836, 891 (2021).

[12] *Id.*

[13] KENDALL SWENSON & ROBIN GHERTNER, PEOPLE IN LOW-INCOME HOUSEHOLDS HAVE LESS ACCESS TO INTERNET SERVICES: 2019 UPDATE 2 (2021) ("Among adults age

Additionally, Black and Latinx adults were less likely to have broadband at home than White adults.[14]

Broadband access issues have given rise to the concept of "digital equity," defined as "a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy."[15] Digital equity encompasses both physical and affordable access to the internet.[16]

This Comment examines federal and state legislative and regulatory approaches to digital equity, including physical broadband infrastructure and broadband affordability. Part II of this Comment explores the federal government's legislative approaches to broadband, including the Telecommunications Act of 1996 (the "Telecommunications Act"), the American Recovery and Reinvestment Act of 2009 (the "Recovery Act"), the COVID-19 response legislation, and the Infrastructure Investment and Jobs Act of 2021 (IIJA). Part III of this Comment then discusses state approaches to expanding broadband. Part IV details why states are best equipped to increase broadband access and argues for a state-based approach to broadband expansion, mirroring and expanding upon the method authorized under the IIJA. Part V concludes by advocating for additional federal funding to increase access and affordability, as the funding provided, thus far, is unlikely to achieve universal broadband connectivity and digital equity.

II. BRIEF HISTORY OF FEDERAL BROADBAND LEGISLATION

Traditionally, the federal government—including the FCC and Department of Agriculture—assumed the primary role in broadband policy and expansion by appropriating and administering funds directly to internet providers for broadband build-out.[17] In recent

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[sixty-five] and older . . . 60 percent of those in poverty had access to the internet . . . . This gap was larger than the gap across poverty status for younger age groups.").

[14] Sara Atske & Andrew Perrin, *Home Broadband Adoption, Computer Ownership Vary by Race, Ethnicity in the U.S.*, PEW RSCH. CTR. (July 16, 2021), pewresearch.org/fact-tank/2021/07/16/home-broadband-adoption-computer-ownership-vary-by-race-ethnicity-in-the-u-s.

[15] *Definitions*, NAT'L DIGIT. INCLUSION ALL., https://www.digitalinclusion.org/definitions (last visited Apr. 13, 2024).

[16] *See id.*

[17] Brian Whitacre & Christina Biedny, *Is Your State Ready to Handle the Influx of Federal Funds for Expanding Broadband?*, THE CONVERSATION (Dec. 2, 2021, 2:51 PM),

years, however, federal legislation has distributed these funds to states, who in turn can decide how to use the funding.[18] Nonetheless, federal legislation serves as a useful guidepost to contextualize the contemporary state of broadband in the United States. This Part first examines the origins of universal service in the Telecommunications Act. Next, this Part discusses the Recovery Act, specifically the provisions relating to broadband. Third, this Part considers funding for broadband in federal COVID-19 response legislation. Finally, this Part reviews the IIJA and its provisions relating to broadband.

A. *The Telecommunications Act of 1996*

President Clinton signed the Telecommunications Act into law on February 8, 1996.[19] The Telecommunications Act attempted to modernize and expand the telecommunications industry by increasing market competition.[20] While the Telecommunications Act represented one of the first pieces of legislation aimed at increasing access to internet services in the United States,[21] it proved only mildly successful.[22]

1. Provisions in the Telecommunications Act of 1996 Relating to Internet Services

The Telecommunications Act requires the FCC to regularly report on "whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion," including internet services.[23] If the FCC's report is negative, the FCC must "take immediate action to accelerate deployment of such

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https://theconversation.com/is-your-state-ready-to-handle-the-influx-of-federal-funds-for-expanding-broadband-172131.

[18] *See id.*

[19] *See* Press Release, Nat'l Telecomms. & Info. Admin., Statement of Assistant Secretary of Commerce Lawrence E. Strickling on Twentieth Anniversary of the Telecommunications Act of 1996 (Feb. 8, 2016), https://www.ntia.gov/press-release/2016/statement-assistant-secretary-commerce-lawrence-e-strickling-twentieth; *see generally* Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.).

[20] *See* Press Release, Nat'l Telecomms. & Info. Admin., *supra* note 19.

[21] *See Universal Service*, FED. COMMC'NS COMM'N, https://www.fcc.gov/general/universal-service (Apr. 10, 2024).

[22] *See* Stuart N. Brotman, *Was the 1996 Telecommunications Act Successful in Promoting Competition?*, BROOKINGS (Feb. 8, 2016), brookings.edu/blog/techtank/2016/02/08/was-the-1996-telecommunications-act-successful-in-promoting-competition.

[23] 47 U.S.C. § 1302(b).

capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market."[24]

In addition to requiring the FCC to provide regular reports on internet services, the Telecommunications Act introduced the concept of "universal service" as it relates to the internet.[25] The principles of universal service adopted in the Telecommunications Act include: (1) providing quality services "at just, reasonable, and affordable rates"; (2) providing "[a]ccess to advanced telecommunications and information services" throughout the United States; (3) providing access to low-income consumers and "those in rural, insular, and high cost areas"; (4) ensuring "equitable and nondiscriminatory" access to services; (5) ensuring "specific, predictable[,] and sufficient [f]ederal and [s]tate mechanisms to preserve and advance universal service"; and (6) ensuring schools, healthcare providers, and libraries have access to internet services.[26] To meet these goals, the Telecommunications Act attempted to encourage competition among telecommunications companies by allowing cable television and telephone companies to offer additional services, such as internet services.[27] Congress hoped that permitting these industries to expand their services would accelerate broadband deployment.[28]

2. Successes and Failures of the Telecommunications Act of 1996

The early years of the Telecommunications Act's enactment proved minimally successful in expanding internet access.[29] In the first five years after Congress passed it, competition in the marketplace decreased, with no expansion of internet services—a far cry from Congress' intent.[30] Similarly, the Telecommunications Act failed to bring down prices for those already with internet access, leaving the service unaffordable for many.[31] While it proved unsuccessful initially, it had some limited success in the long term.

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[24] *Id.*

[25] *Universal Service*, *supra* note 21.

[26] § 254(b)(1)–(7).

[27] Brotman, *supra* note 22.

[28] *Id.*

[29] *See id.*

[30] *Id.*

[31] *See* Gene Kimmelman et al., *The Failure of Competition Under the 1996 Telecommunications Act*, 58 FED. COMMC'NS L.J. 511, 516 n.29 (2006).

Between 1996 and 2022, internet providers in the United States contributed $2 trillion in capital investments toward broadband, one of the aims of the Telecommunications Act.[32] Providers primarily invested in increasing both internet accessibility and internet speeds.[33] Overall, some interest groups contend the law failed to achieve its overarching goal, leading to less competition, less diversity, and higher prices in the marketplace.[34] There have been efforts on Capitol Hill to update and modernize the Telecommunications Act to respond to technology and marketplace changes.[35] For example, in 2014, members of the US House of Representatives released white papers that explored criticisms of the law and suggested ways to upgrade the Telecommunications Act but took no further action.[36] Although it had limited success in expanding broadband, the Telecommunications Act is one of the initial pieces of federal legislation that emphasized the need for accessible internet services and identified universal service as a goal of the United States' broadband policy.[37] These principles continue to guide broadband policy, both federally and in the states.

B. *The American Recovery and Reinvestment Act of 2009*

President Obama signed the Recovery Act into law on February 17, 2009,[38] in response to the 2008 recession.[39] In addition to providing stimulus funding for the economy,[40] the Recovery Act supported programs that addressed broadband.[41] Overall, it is important because

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[32] THE BROADBAND ASS'N, USTELECOM, 2021 BROADBAND CAPEX REPORT 1 (2022).

[33] *Id.*

[34] *See* David McCabe, *Bill Clinton's Telecom Law: Twenty Years Later*, THE HILL (Feb. 7, 2016, 9:00 AM), https://thehill.com/policy/technology/268459-bill-clintons-telecom-law-twenty-years-later.

[35] *Id.*

[36] Helen Domenici, *Updating the 1996 Communications Act*, CTR. FOR STRATEGIC & INT'L STUD. (Feb. 5, 2014), https://www.csis.org/analysis/updating-1996-communications-act.

[37] *See* Brotman, *supra* note 22.

[38] *Recovery Act Broadband Initiatives*, FED. COMMC'NS COMM'N, https://www.fcc.gov/recovery-act-broadband-initiatives (last visited Apr. 13, 2024); *see generally* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (codified as amended in scattered sections of the U.S. Code).

[39] *See* Michael Levy, *American Recovery and Reinvestment Act*, BRITANNICA, https://www.britannica.com/topic/American-Recovery-and-Reinvestment-Act (last visited Apr. 13, 2024).

[40] *Id.*

[41] *Recovery Act Broadband Initiatives*, *supra* note 38.

it created the National Broadband Plan (the "Plan")—a plan for expanding broadband services throughout the United States.[42]

1. Broadband Provisions in the American Recovery and Reinvestment Act

The Recovery Act provided $7.2 billion in funding[43] for broadband-related programs to "accelerate broadband deployment in unserved, underserved, and rural areas and to strategic institutions that are likely to create jobs or provide significant public benefits."[44] Specifically, the Recovery Act created the Broadband Technology Opportunities Program (BTOP) and the Rural Development Broadband Program.[45] The National Telecommunications and Information Administration and the Rural Utility Service administered the funds.[46]

The BTOP funded projects to deploy broadband infrastructure, enhance and expand computer centers, and encourage the adoption of sustainable broadband service.[47] For example, the National Telecommunications and Information Administration awarded $1,899,929, through the BTOP, in Delaware to establish computer labs in public libraries for economically vulnerable communities.[48] The labs assisted the unemployed and underemployed with finding jobs.[49]

The Rural Development Broadband Program (now named the ReConnect Loan and Grant Program) finances infrastructure projects to increase broadband access for rural Americans.[50] The United States

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[42] 47 U.S.C. § 1305(k)(1)–(3).

[43] U.S. GOV'T ACCOUNTABILITY OFF., GAO-10-823, RECOVERY ACT: FURTHER OPPORTUNITIES EXIST TO STRENGTHEN OVERSIGHT OF BROADBAND STIMULUS PROGRAMS 2 (2010).

[44] *Recovery Act Broadband Initiatives*, *supra* note 38.

[45] *Id.*

[46] *Id.*

[47] *Broadband Technology Opportunities Program*, NAT'L TELECOMMS. & INFO. ADMIN., https://www.ntia.doc.gov/category/broadband-technology-opportunities-program (last visited Apr. 13, 2024).

[48] NAT'L TELECOMMS. & INFO. ADMIN., CASE STUDY REPORT ROUND 2: DELAWARE DEPARTMENT OF STATE (DELAWARE DIVISION OF PUBLIC LIBRARIES) PUBLIC COMPUTER CENTER 1 (2013), https://www2.ntia.doc.gov/files/delaware_case_study_report_round_2.pdf.

[49] *Id.*

[50] *ReConnect Loan and Grant Program*, U.S. DEP'T OF AGRIC., https://www.usda.gov/reconnect (last visited Apr. 13, 2024).

Department of Agriculture administers the program.[51] The program continues to finance projects, and in 2022, allocated $759 million, with some of these funds used for projects in North Carolina, Minnesota, and Colorado to connect households, businesses, farms, and educational facilities to high-speed internet.[52]

In addition to funding grant programs for broadband expansion, the Recovery Act required the FCC to develop the Plan and to report on:

> (A) an analysis of the most effective and efficient mechanisms for ensuring broadband access by all people of the United States; (B) a detailed strategy for achieving affordability of such service and maximum utilization of broadband infrastructure and service by the public; (C) an evaluation of the status of deployment of broadband service, including progress of projects supported by the grants made pursuant to this section; and (D) a plan for use of broadband infrastructure and services in advancing consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.[53]

2. Successes and Failures of the American Recovery and Reinvestment Act

Between 2010 and 2021, broadband access increased across the United States, with 61 percent of families reporting broadband access in 2010 and 77 percent of families reporting broadband access in 2021.[54] Additionally, communities receiving grants through the BTOP "experienced an estimated 2 percent greater growth in broadband availability than non-grant communities."[55] Moreover, BTOP funding decreased broadband prices for schools and libraries by approximately

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[51] *See id.*

[52] Press Release, U.S. Dep't of Agric., Biden-Harris Administration Provides $759 Million to Bring High-Speed Internet Access to Communities Across Rural America (Oct. 27, 2022), https://www.usda.gov/media/press-releases/2022/10/27/biden-harris-administration-provides-759-million-bring-high-speed.

[53] 47 U.S.C. § 1305(k)(1)–(3).

[54] *See Internet, Broadband Fact Sheet*, PEW RSCH. CTR. (Jan. 31, 2024), https://www.pewresearch.org/internet/fact-sheet/internet-broadband.

[55] *BTOP/SBI Archived Grant Program*, NAT'L TELECOMMS. & INFO. ADMIN, https://www2.ntia.doc.gov/Broadband-Resources (last visited Apr. 13, 2024).

95 percent.[56] Although access modestly increased, the limited funding meant the gains fell short of the Recovery Act's goal of "ensur[ing] that all people of the United States have access to broadband capability."[57]

The Plan represented the Recovery Act's most significant success with regard to broadband. The FCC completed the Plan on March 17, 2010.[58] The Plan included strategies and mechanisms to ensure that all people in the United States have broadband access.[59] Critics, however, feared that the new regulations would impede expansion and attacked the Plan's lack of specificity, doubting that it would lead to affordable broadband services.[60] Others were concerned that the Plan was not ambitious enough because it failed to include proposals to increase marketplace competition.[61] Despite criticisms, the Plan is notable because it reflected a comprehensive scheme to achieve universal broadband access throughout the United States.

C. *The CARES Act and ARPA*

During the COVID-19 pandemic, Congress passed two significant pieces of legislation to stimulate the economy: the Coronavirus, Aid, Relief, and Economic Security Act (CARES Act)[62] and the American Rescue Plan Act (ARPA).[63] On March 27, 2020, President Trump

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[56] *Id.*

[57] § 1305(k)(1)–(3).

[58] *National Broadband Plan*, FED. COMMC'NS COMM'N, https://www.fcc.gov/general/national-broadband-plan (last visited Apr. 13, 2024).

[59] *See generally* FED. COMMC'NS COMM'N, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN (2010), https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.

[60] *See* Brian Stelter & Jenna Wortham, *Effort to Widen U.S. Internet Access Sets Up Battle*, N.Y. TIMES (Mar. 12, 2010), https://www.nytimes.com/2010/03/13/business/media/13fcc.html; Matt Richtel & Brian Stelter, *F.C.C. Questioned on Its Far-Reaching Plan to Expand Broadband Access*, N.Y. TIMES (Mar. 16, 2010), https://www.nytimes.com/2010/03/17/technology/17broadband.html.

[61] Joelle Tessler, *Critics: Broadband Plan Doesn't Go Far Enough*, NBC NEWS (Mar. 22, 2010, 6:51 PM), https://www.nbcnews.com/id/wbna35992627.

[62] Leon LaBrecque, *The CARES Act Has Passed: Here Are the Highlights*, FORBES (Mar. 29, 2020, 7:00 AM), https://www.forbes.com/sites/leonlabrecque/2020/03/29/the-cares-act-has-passed-here-are-the-highlights; *see generally* Coronavirus, Aid, Relief, and Economic Security Act, Pub. L. No. 116-136, 134 Stat. 281 (codified as amended in scattered sections of the U.S. Code).

[63] Barbara Sprunt, *Here's What's in the American Rescue Plan*, NPR (Mar. 11, 2021, 2:39 PM), https://www.npr.org/sections/coronavirus-live-updates/2021/03/09/974841565/heres-whats-in-the-american-rescue-plan-as-it-

signed the CARES Act, which provided $2 trillion in economic relief, including direct payments to taxpayers, expanded unemployment benefits, and small business loans.[64] ARPA, which President Biden signed on March 11, 2021, provided $1.9 trillion in economic relief, expanding upon many of the programs established under the CARES Act.[65] Both acts allocated much of the funding directly to states, to whom Congress gave significant discretion in deploying funds.[66] To support broadband access, states applied these funds to internet service providers, educational institutions, and health care institutions, as outlined in this Part.[67]

1. The CARES Act and Broadband

Of the $2 trillion in spending in the CARES Act, the federal government allocated $150 billion directly to state, municipal, and tribal governments to aid them in responding to the COVID-19 pandemic.[68] The federal government gave states broad discretion in using these funds to cover pandemic-related costs, including those related to broadband, incurred from March 2020 through December 2020.[69] States primarily used this funding towards expanding digital learning, telehealth services, public Wi-Fi, and residential broadband infrastructure.[70] For example, with regard to education, Ohio allocated $50 million and Missouri allocated $10 million of their CARES funding to increase internet access for students and upgrade educational broadband infrastructure.[71] Vermont set aside $9 million in CARES funding to support health management programs and

heads-toward-final-passage; *see generally* American Rescue Plan Act of 2021, Pub. L. No. 117-2, 135 Stat. 4 (codified as amended in scattered sections of the U.S. Code).

64 LaBrecque, *supra* note 62.

65 Sprunt, *supra* note 63.

66 *See States Tap Federal CARES Act to Expand Broadband*, PEW CHARITABLE TRS. (Nov. 16, 2020), https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2020/11/states-tap-federal-cares-act-to-expand-broadband; Anna Read & Kelly Wert, *How States Are Using Pandemic Relief Funds to Boost Broadband Access*, PEW CHARITABLE TRS. (Dec. 6, 2021), https://www.pewtrusts.org/en/research-and-analysis/articles/2021/12/06/how-states-are-using-pandemic-relief-funds-to-boost-broadband-access.

67 *States Tap Federal CARES Act*, *supra* note 66; Read & Wert, *supra* note 66.

68 *States Tap Federal CARES Act*, *supra* note 66.

69 *Id.*

70 *Id.*

71 *Id.*

telehealth access.[72] Idaho used $2 million to broaden public Wi-Fi access.[73] And many states utilized CARES funding to expand residential broadband infrastructure, including Mississippi, which dedicated $75 million in emergency broadband grants to improve residential access.[74]

The long-term effects of this funding on broadband access are yet to be seen, but states welcomed the funds. For example, the governor of Alabama stated the funding would "bridge the gap until all students can get back into the classroom,"[75] and the Maryland superintendent of schools explained the funds would give local school systems "support and flexibility to help ensure that students most impacted during the crisis receive intense focus" during remote learning.[76]

2. ARPA and Broadband

ARPA specifically itemized funding for broadband expansion, including $7.171 billion for the Emergency Connectivity Fund and $10 billion for the Coronavirus Capital Projects Fund.[77] The Emergency Connectivity Fund "reimburse[s] schools and libraries for providing free broadband service (and connected devices) to students and patrons at their homes."[78] Notably, as of 2022, the Emergency Connectivity Fund has supported over ten million broadband connections.[79] The Coronavirus Capital Projects Fund finances broadband infrastructure projects, including fiber-optic infrastructure to unconnected households and businesses.[80]

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[72] *Id.*

[73] *Id.*

[74] *States Tap Federal CARES Act*, *supra* note 66.

[75] Press Release, Off. of Ala. Governor, Governor Ivey Allocates $100 Million for Alabama Broadband Connectivity for Students (July 31, 2020), https://governor.alabama.gov/newsroom/2020/07/governor-ivey-allocates-100-million-for-alabama-broadband-connectivity-for-students.

[76] Ellie Heffernan, *Md. to Tap $210M from CARES Act to Improve Remote Learning*, THE DAILY REC. (June 29, 2020), https://thedailyrecord.com/2020/06/29/md-to-spend-210m-to-improve-remote-learning-for-schools.

[77] Kevin Taglang, *What the American Rescue Plan Is Doing for Broadband*, BENTON INST. FOR BROADBAND & SOC'Y (Mar. 15, 2022), https://www.benton.org/blog/what-american-rescue-plan-doing-broadband.

[78] *Id.*

[79] *Id.*

[80] U.S. DEP'T OF THE TREASURY, GUIDANCE FOR THE CORONAVIRUS CAPITAL PROJECTS FUND FOR STATES, TERRITORIES, AND FREELY ASSOCIATED STATES 3–4 (2021),

Like the CARES Act, ARPA also designated $219.8 billion in funding to state, local, and tribal governments to respond to the lingering economic effects of the COVID-19 pandemic and gave these governments discretion in using their funds.[81] Again, some states dedicated ARPA funding to broadband expansion, focusing on supporting access to broadband for education and public health.[82] For example, Colorado allocated $40 million of their ARPA funding to expand broadband infrastructure.[83] Other states like Virginia utilized ARPA funding to assist low-income households with accessing broadband and to improve broadband infrastructure for health departments.[84] Some states have used the funding uniquely. For example, Arizona allocated $100 million of ARPA funding to expand broadband infrastructure along interstates to reach rural customers.[85] Unlike prior pieces of federal legislation, such as the Telecommunications Act and the Recovery Act, in which the federal government distributed funds directly to recipients,[86] both the CARES Act and ARPA gave the states significant authority in allocating federal funds for broadband.

D. *The Infrastructure Investment and Jobs Act and Broadband*

President Biden signed the IIJA into law on November 15, 2021.[87] The IIJA funds numerous upgrades to infrastructure across the United States, including $65 billion for broadband infrastructure.[88] It also includes $42.45 billion for the Broadband Equity, Access, and Deployment (BEAD) Program.[89] The IIJA allocates $14.2 billion for the Affordable Connectivity Program, which supplies low-income households with discounts on their monthly internet bills and money

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https://home.treasury.gov/system/files/136/Capital-Projects-Fund-Guidance-States-Territories-and-Freely-Associated-States.pdf.

81 Taglang, *supra* note 77.

82 Read & Wert, *supra* note 66.

83 *Id.*

84 *Id.*

85 *Id.*

86 *See* discussion *supra* Part II.A–B.

87 Emily Cochrane et al., *Here's What's in the Infrastructure Bill that Biden Signed Today*, N.Y. TIMES (Nov. 15, 2021), https://www.nytimes.com/2021/11/15/us/politics/whats-in-the-infrastructure-bill.html.

88 *Id.*

89 47 U.S.C. § 1702(b)(2).

to purchase computers.[90] Additionally, the IIJA allots $2.75 billion to states for digital equity to ensure that all people in the community have digital literacy skills and capacity.[91] It also provides $3 billion for the Tribal Broadband Connectivity Program to support expanding broadband on Tribal lands.[92] The IIJA devotes $2 billion for the ReConnect Program, which finances infrastructure projects for rural communities.[93] Finally, it gives $1 billion for middle mile deployment to connect local and national networks and to increase access speeds.[94] The IIJA's goal is to connect everyone in the United States to high-speed internet by 2030.[95] Notably, the federal government developed a single, centralized website, Internet for All, for funding opportunities and progress updates.[96]

The IIJA provides most of the broadband funding to the BEAD Program.[97] Under the BEAD Program, each state receives a minimum of $107 million in funding as a baseline, to provide broadband access to unserved locations, with additional funding allocated based on each state's proportion of unserved locations.[98] Nineteen states will receive

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[90] *Fact Sheet: Biden-Harris Administration Announces over $40 Billion to Connect Everyone in America to Affordable, Reliable, High-Speed Internet*, THE WHITE HOUSE (June 26, 2023) [hereinafter *Fact Sheet*], https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/26/fact-sheet-biden-harris-administration-announces-over-40-billion-to-connect-everyone-in-america-to-affordable-reliable-high-speed-internet.

[91] *Digital Equity Act Programs*, BROADBANDUSA, https://broadbandusa.ntia.doc.gov/resources/grant-programs/digital-equity-programs (last visited Apr. 13, 2024).

[92] *Tribal Broadband Connectivity Program*, NAT'L TELECOMMS. & INFO. ADMIN., https://www.ntia.gov/category/tribal-broadband-connectivity-program (last visited Apr. 13, 2023).

[93] *Fact Sheet*, *supra* note 90; *ReConnect Loan and Grant Program*, *supra* note 50.

[94] § 1741(h); *Enabling Middle Mile Broadband Infrastructure Program*, BROADBANDUSA, https://broadbandusa.ntia.doc.gov/funding-programs/enabling-middle-mile-broadband-infrastructure-program (last visited Mar. 30, 2024); *see also* Jason Hotujec, *Middle Mile Network: What Is It and Why Does It Matter?*, WIN (Jan. 18, 2023), https://www.wintechnology.com/blog/middle-mile-network-what-is-it-and-why-does-it-matter ("Middle [m]ile [n]etwork is an industry term that describes the network infrastructure that connects 'last mile' (i.e., local) networks to other network service providers, major telecommunications carriers, and the greater internet. It does not typically connect the majority of end-users. . . . Developing middle mile infrastructure can provide a solution to expensive network connections by expanding internet networks closer to unserved and underserved communities.").

[95] *See Fact Sheet*, *supra* note 90.

[96] *See* INTERNET FOR ALL, https://www.internetforall.gov (last visited Apr. 13, 2024).

[97] *See* § 1702(b)(2).

[98] *See Fact Sheet*, *supra* note 90.

funding over $1 billion.[99] Territories will receive at least $25 million.[100] States and territories can use the funds for planning, broadband infrastructure deployment, and broadband adoption programs.[101] The IIJA requires states to create five-year action plans that detail their broadband goals and assess their broadband needs.[102] As of publication, all eligible entities for BEAD funding have submitted their proposals for approval.[103]

III. HISTORY OF STATE APPROACHES

Although the federal government has predominantly been at the center of broadband expansion policy, more recent legislation—including the COVID-19 relief funding and the IIJA—has given states significant authority to determine where to direct funding. This Part first details an early state approach to broadband expansion—the California Emerging Technology Fund. Next, this Part examines the more recent transition to formal state offices administering broadband policies and funding. Finally, this Part discusses the use of task forces to study broadband expansion.

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[99] *Id.* For a full list of BEAD awards, see News Release, BroadbandUSA, Biden-Harris Administration Announces State Allocations for $42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda, https://broadbandusa.ntia.doc.gov/news/latest-news/biden-harris-administration-announces-state-allocations-4245-billion-high-speed (last visited Apr. 13, 2024).

[100] Fung, *supra* note 10.

[101] *Broadband Equity, Access, and Deployment (BEAD) Program*, BROADBANDUSA, https://broadbandusa.ntia.doc.gov/funding-programs/broadband-equity-access-and-deployment-bead-program (last visited Apr. 13, 2024).

[102] U.S. DEP'T OF COM., NAT'L TELECOMMS. & INFO. ADMIN., FIVE-YEAR ACTION PLAN GUIDANCE 3, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-09/BEAD_Five-Year_Action_Plan_Guidance.pdf.

[103] *BEAD Initial Proposal Progress Dashboard*, INTERNET FOR ALL, https://www.internetforall.gov/bead-initial-proposal-progress-dashboard (Apr. 30, 2024).

A. *Early Approach: The California Emerging Technology Fund*

The California Public Utilities Commission created the California Emerging Technology Fund (CETF) in 2005.[104] The CETF aimed to "forge [public-private] partnerships and foster public policy to close the Digital Divide" across California.[105] The CETF is a unique entity, in that it acts as an independent 501(c)(3) nonprofit, rather than a traditional public state agency.[106] Funding for the CETF comes from state and federal funding and private donations.[107]

Beginning in 2007, the CETF set forth goals of ensuring 98 percent of households had physical access to broadband and that 80 percent of households actually adopted broadband.[108] To achieve this goal, the CETF deployed five strategies, including: (1) civic leader engagement; (2) venture philanthropy grantmaking; (3) public policy initiatives; (4) public awareness and education; and (5) strategic partnerships.[109] Civic leader engagement refers to achieving a "'critical mass' of regional and local leaders" to focus on broadband deployment.[110] Through venture philanthropy grantmaking, the CETF reaches "priority consumer groups in target communities" for funding and grant opportunities.[111] The CETF also attempts to "[p]rovide a positive public policy environment to optimize the impact of grants and to accelerate broadband adoption" through public policy

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104 CAL. EMERGING TECH. FUND, CATALYST FOR ACTION: 10 YEARS OF ACHIEVEMENT IN CLOSING THE DIGITAL DIVIDE 2007–2017, at 8 (2017) [hereinafter CETF REPORT], https://www.cetfund.org/wp-content/uploads/2019/08/006_CETF_2017decadeAR_LP10_forweb.pdf.

105 *Id.* at 4.

106 *Mission and History*, CAL. EMERGING TECH. FUND, https://www.cetfund.org/about-us/mission-and-history (last visited Apr. 13, 2024); *Articles of Incorporation*, CAL. EMERGING TECH. FUND, https://www.cetfund.org/about-us/mission-and-history/articles-of-incorporation (last visited Apr. 13, 2024).

107 CAL. EMERGING TECH. FUND, CALIFORNIA EMERGING TECHNOLOGY FUND (A CALIFORNIA NOT-FOR-PROFIT PUBLIC BENEFIT CORPORATION) FINANCIAL STATEMENTS JUNE 30, 2021 AND JUNE 30, 2020, at 5–6 (2021), https://www.cetfund.org/wp-content/uploads/2022/04/CETF_Final_Audit_2020-2021.pdf; *see also Mission and History*, *supra* note 106 (noting that AT&T and Verizon were "required to contribute to CETF a total of $60 million over [five] years 'for the purpose of achieving ubiquitous access to broadband and advanced services in California, particularly in underserved communities, through the use of emerging technologies by 2010.'").

108 CETF REPORT, *supra* note 104, at 8.

109 *Id.* at 20.

110 *Id.* at 21.

111 *Id.*

campaigns supportive of broadband programs.[112] With regard to public awareness and education, the CETF seeks to educate the public on the benefits of broadband adoption.[113] Finally, the CETF employs strategic partnerships with governments, foundations, and employers to collaborate on joint ventures to expand broadband access.[114]

The CETF has flourished in the decade since its creation.[115] It successfully connected nearly 87 percent of households in California to broadband, an increase of nearly 32 percent of households in a decade.[116] As one of the first state initiatives at broadband, the CETF proved the benefits of a dedicated state approach.

B. *Formal Broadband Offices*

While all fifty states now operate some sort of broadband program, some have adopted a centralized approach through dedicated state agencies focused on expanding broadband access. North Carolina and Washington provide two state models of centralized broadband offices.

North Carolina created the Division of Broadband and Digital Equity (the "Division") in 2021 within the existing Department of Information Technology framework.[117] The Division addresses the lack of access to broadband by focusing on broadband infrastructure, digital literacy, and affordability.[118] Specifically, the Division's mission includes "[b]uilding a sustainable team to deliver digital equity to North Carolina; [e]nabling more North Carolinians to afford high-speed internet; [i]ncreasing digital literacy among all North Carolinians; [e]xpanding broadband access across the state; [and] [l]everaging data to identify and understand community needs."[119]

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[112] *Id.*

[113] *Id.*

[114] CETF REPORT, *supra* note 104, at 21.

[115] *See id.* at 10–11.

[116] *Id.* at 10.

[117] *About Us*, N.C. DEP'T OF INFO. TECH.: DIV. OF BROADBAND & DIGIT. EQUITY [hereinafter *About the N.C. Division of Broadband*], https://www.ncbroadband.gov/about-us (last visited Apr. 13, 2024).

[118] *Digital Divide*, N.C. DEP'T OF INFO. TECH.: DIV. OF BROADBAND & DIGIT. EQUITY [hereinafter *N.C. Digital Divide*], https://www.ncbroadband.gov/digital-divide (last visited Apr. 13, 2024).

[119] *About the N.C. Division of Broadband*, *supra* note 117.

The Division also manages local grant programs.[120] To address infrastructure needs, the Division plans to invest $971 million in funding focused on providing last mile services, replacing broadband poles, mapping broadband, creating a competitive infrastructure bidding process, and providing services for underserved households with children and senior citizens.[121] The Division aims to provide internet speeds of one hundred megabits per second download and twenty megabits per second upload "with the ability to handle future speeds of [one hundred megabits per second download and one hundred megabits per second upload]."[122] Finally, to expand digital literacy, the Division administers grants focusing on community-based efforts to expand broadband awareness.[123] The digital literacy grants total $50 million to help residents understand the benefits of high-speed internet and access the digital economy, including education, job seeking, and health care.[124] While still a relatively new program, the Division hopes to ensure 80 percent of North Carolina households have high-speed internet by 2025.[125]

In 2019, Washington established the Washington State Broadband Office within the Washington Department of Commerce.[126] The Washington office's enabling legislation set goals for expanding broadband infrastructure and increasing access speeds.[127] In 2021, the Washington State Broadband Office created an Office of Digital Equity to expand broadband adoption among first-time broadband users.[128]

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120 *N.C. Digital Divide*, *supra* note 118.

121 *Id.*

122 *Id.*

123 *Id.*

124 *Id.*

125 *Id.*

126 *See Broadband in Washington 2019*, WASH. STATE OPEN DATA PORTAL, https://data.wa.gov/stories/s/Broadband-in-Washington/irv9-b275 (last visited May 6, 2024); WASH. REV. CODE § 43.330.532 (2021).

127 *Washington State Broadband Office*, WASH. STATE DEP'T OF COM., https://www.commerce.wa.gov/building-infrastructure/washington-statewide-broadband-act (last visited Apr. 13, 2024).

128 *Digital Equity Moonshot: State Launches New Office of Digital Equity to Help All Washington Residents Thrive in a Connected World*, WASH. STATE DEP'T OF COM. (Oct. 20, 2021), https://www.commerce.wa.gov/news/digital-equity-moonshot-state-launches-new-office-of-digital-equity-to-help-all-washington-residents-thrive-in-a-connected-world.

The Washington State Broadband Office administers Broadband Infrastructure Grants and Infrastructure Acceleration Grants to address its infrastructure goals.[129] These grants are available to "local governments, tribes, public and private entities, nonprofit organizations, and consumer-owned and investor-owned utilities" to build broadband infrastructure in unserved and underserved areas.[130] Additionally, to address connectivity and accessibility issues, the Washington State Broadband Office created "Broadband Action Teams" for counties.[131] The teams are "community-driven collaborations that identify the connectivity and accessibility needs for their communities."[132] Overall, the Washington State Broadband Office seeks to provide internet speeds of at least 150 megabits per second download and 150 megabits per second upload for all residents and businesses by 2028.[133] Notably, both North Carolina's[134] and Washington's[135] internet speed goals are higher than the minimum speed for average users of twenty-five megabits per second download and three megabits per second upload.[136]

C. *Task Forces and Commissions*

Several states have established task forces to study broadband expansion.[137] Task forces are formal teams, usually including executive agencies and the public, that study broadband issues.[138] For example, in 2021, New Jersey passed Assembly Bill 850, establishing the Community Broadband Access Study Commission (the "Commission") to study broadband throughout the state.[139] The Commission studies

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129 *Washington State Broadband Office*, *supra* note 127.

130 WASH. STATE DEP'T OF COM., WASHINGTON STATE BROADBAND OFFICE INFRASTRUCTURE ACCELERATION GRANTS HANDBOOK 21-23, at 7 (2022).

131 *See Washington State Broadband Office*, *supra* note 127.

132 *Id.*

133 *Id.*

134 *See N.C. Digital Divide*, *supra* note 118.

135 *See Washington State Broadband Office*, *supra* note 127.

136 Camryn Smith, *What Is a Good Internet Speed?*, ALLCONNECT (Sept. 22, 2023), https://www.allconnect.com/blog/internet-speed-classifications-what-is-fast-internet.

137 Anna Read & Lily Gong, *Which States Have Dedicated Broadband Offices, Task Forces, Agencies, or Funds?*, PEW CHARITABLE TRS. (Sept. 14, 2022), https://www.pewtrusts.org/en/research-and-analysis/articles/2021/06/28/which-states-have-dedicated-broadband-offices-task-forces-agencies-or-funds.

138 *Id.*

139 2021 N.J. Laws C.161.

the feasibility of community broadband networks to connect remote areas of the state and areas where people cannot afford the internet.[140] The Commission consists of nineteen members including: the president of the Board of Public Utilities; the chief technology officer of the Office of Information Technology; the director of the Division of Rate Counsel; the secretary of the Department of Agriculture; the chief executive officer of the New Jersey Economic Development Authority; the commissioner of the Department of Education; the commissioner of the Department of Community Affairs; members of the public; and members of the New Jersey Legislature.[141] Rather than regulating broadband or administering broadband expansion grants, the Commission evaluates impediments to broadband expansion and reports its findings to the governor and the legislature.[142] These task forces study issues and make policy recommendations rather than directly promulgate policy.

IV. THE NEED TO CONTINUE AND EXPAND UPON A STATE-CENTERED APPROACH

As outlined below, states are best equipped to expand broadband infrastructure, access, and affordability. The recent shift in federal legislation—putting states at the center of funding—is essential to the continued expansion and to ensure broadband access for all throughout the United States. First, this Part argues states are more flexible than the federal government and can create unique responses to the challenges of broadband expansion. Second, this Part contends that states are better equipped to enter public-private partnerships, which are essential for broadband expansion. Next, this Part suggests states can distribute funding efficiently. Finally, this Part argues that state authority presents no constitutional concerns via the dormant commerce clause[143] or preemption.[144]

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140 *Id.*

141 *Id.*

142 *Id.*

143 The Dormant Commerce Clause is the negative implication in the Commerce Clause that prohibits states from passing laws that "discriminate[] against interstate commerce." Dep't of Revenue v. Davis, 553 U.S. 328, 338 (2008). "A discriminatory law is 'virtually *per se* invalid.'" *Id.* (quoting Or. Waste Sys., Inc. v. Dep't of Env't Quality, 511 U.S. 93, 99 (1994)); U.S. CONST. art. I., § 8, cl. 3.

144 Under the Supremacy Clause, "Congress has the power to preempt state law." Arizona v. United States, 567 U.S. 387, 399 (2012). States cannot "regulate[] conduct in a field that Congress, acting within its proper authority, has determined must be

A. *States Are Flexible*

States are in the best position to ensure digital equity because they can be more flexible in their approaches than the federal government. States can develop innovative strategies suitable for local needs, whereas traditionally, federal funding has been rigid and difficult to administer.

1. Innovative State Approaches

Because states are at different points in their broadband deployment regarding both access and infrastructure, a "one-size-fits-all" approach is unsuitable. For example, as of 2024, nearly 98 percent of Maryland residents have access to wired or fixed broadband with an internet speed of twenty-five megabits per second download and three megabits per second upload, and 66 percent of the state has access to fiber-optic services.[145] Because broadband infrastructure is rather robust in Maryland, the Office of Statewide Broadband has pursued other focuses.[146] For instance, a key initiative is the Maryland Emergency Broadband Benefit Program, which increases access opportunities for low-income residents by subsidizing broadband services.[147] Additionally, Maryland's Office of Statewide Broadband provides grants to educational institutions to "close the gap for students who lack necessary internet access."[148] The office also provides funding to community-based organizations to address internet affordability in local communities.[149] In fiscal year 2022, the office awarded over $125 million in grants to organizations throughout Maryland—including internet providers, educational institutions, nonprofits, and local governments—to assist with affordability and infrastructure.[150] Although Maryland's Office of Statewide Broadband

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regulated by its exclusive governance." *Id.* Further, "state laws are preempted when they conflict with federal law." *Id.*; U.S. CONST. art. VI., § 2.

145 *Maryland Internet Coverage & Availability in 2024*, BROADBANDNOW, https://broadbandnow.com/Maryland (last visited Apr. 13, 2024).

146 *See Individual & Family Resources*, MD. DEP'T OF HOUS. & CMTY. DEV., https://dhcd.maryland.gov/Broadband/Pages/Individual-Resources.aspx (last visited Mar. 1, 2024).

147 *Id.*

148 *Community & Provider Resources*, MD. DEP'T OF HOUS. & CMTY. DEV., https://dhcd.maryland.gov/Broadband/Pages/Provider-Resources.aspx (last visited Apr. 13, 2024).

149 *Id.*

150 *See generally* CONNECT MD., FY22 CONNECT MD: NETWORK INFRASTRUCTURE GRANT PROGRAM AWARDS (2022).

focuses much more on access and affordability, it continues to connect the remaining 3 percent of state residents by allocating funding to local jurisdictions and internet providers to construct infrastructure.[151]

As of 2024 in Montana, by contrast, only around 84 percent of the state had access to wired or fixed wireless broadband with speeds of twenty-five megabits per second download and three megabits per second upload.[152] Approximately 23 percent of Montana had access to fiber-optic services.[153] Therefore, Montana's ConnectMT Program—Montana's broadband funding authority—has focused more on broadband infrastructure deployment than a program like Maryland's.[154] Montana's ConnectMT Program provides funding to internet providers and focuses on increasing broadband access and quality for those with limited or no services.[155] Maryland and Montana demonstrate the flexibility inherent in a state-centered approach, in that it allows states to dedicate resources to different goals: affordability in Maryland and infrastructure build-out in Montana.

2. Rigidity and Inefficiencies of Federally Administered Funding

Whereas states have focused on their individualized needs—whether it be affordability, access, or infrastructure—federally administered broadband programs have been criticized for their rigidity.[156] For example, federal funding through the ReConnect Program, which provides loans and grants to construct and improve broadband infrastructure, is limited to certain types of internet technologies, namely fixed and satellite broadband services.[157] Mobile wireless networks are ineligible for funding, even though these networks are an essential interim access point to internet while

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[151] *Community & Provider Resources*, *supra* note 148.

[152] *Montana Internet Coverage & Availability in 2024*, BROADBANDNOW, https://broadbandnow.com/Montana (last visited Apr. 13, 2024).

[153] *Id.*

[154] *Connect MT Broadband Program: General Information*, MONTANA.GOV, https://connectmt.mt.gov/General-Information (last visited Apr. 13, 2024).

[155] *Connect MT Broadband Program: History*, MONTANA.GOV, https://connectmt.mt.gov/General-Information/History (last visited Apr. 13, 2024).

[156] *See* Daniel Lyons, *Government Accountability Office Report Criticizes Broadband Deployment Efforts*, AEI (June 15, 2022), https://www.aei.org/technology-and-innovation/gao-report-criticizes-broadband-deployment-efforts.

[157] *ReConnect Loan and Grant Program*, *supra* note 50; U.S. GOV'T ACCOUNTABILITY OFF., GAO-20-535, BROADBAND: OBSERVATIONS ON PAST AND ONGOING EFFORTS TO EXPAND ACCESS AND IMPROVE MAPPING DATA 24 (2020).

deploying broadband infrastructure.[158] Moreover, the ReConnect Program only provides funding to eligible telecommunication carriers, which generally must be designated by a state entity, making funding unavailable for many organizations.[159] Tribal authorities have also had trouble applying for funding because of the need to be designated an eligible telecommunication carrier.[160]

Additionally, federal capital investments in broadband infrastructure have been inefficient. From 2009 through 2017, the federal government made $795 billion in capital investments for broadband infrastructure.[161] Some of the federal capital funding for broadband, however, requires a lien on the funded assets—a form of security for payments—to ensure accountability.[162] Broadband providers have argued that using liens discourages applying for funds because, many times, the liens violate stockholder agreements and other aspects of providers' businesses.[163]

Other critics of federal broadband efforts have noted the fragmented approach of past federal efforts.[164] Fifteen federal agencies are responsible for administering one hundred broadband programs.[165] Diffused oversight has led to situations where different agencies have administered funding to two different providers for building infrastructure in the same service area.[166] Critics have tied these issues to the lack of a clear national broadband strategy.[167] In contrast, states can identify their broadband needs more efficiently and develop clear policy initiatives on a local level. Overall, federally administered funding has not succeeded as hoped, with a large disparity remaining between rural and urban internet access.[168]

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158 GOV'T ACCOUNTABILITY OFF., *supra* note 157, at 24.

159 *Id.* at 24 n.53.

160 *Id.* at 24.

161 *Id.* at 12–13.

162 *Id.* at 26.

163 *Id.*

164 Lyons, *supra* note 156.

165 *Id.*

166 *Id.*

167 *Id.*

168 GOV'T ACCOUNTABILITY OFF., *supra* note 157, at 20.

B. *States Can Enter into Public-Private Partnerships*

Public-private partnerships are agreements between government entities and private businesses, groups, and individuals.[169] Scholars have defined three types of public-private partnerships.[170] The first type involves shared investments owned by both public and private entities.[171] The next type of public-private partnership includes investment by private entities, with the investment facilitated by a public entity.[172] The final type of public-private partnership concerns public investment, with a private entity facilitating execution of that investment.[173] The Virginia case study discussed below demonstrates that states can enter effective public-private partnerships and quickly solve broadband access issues.

1. The Importance of Public-Private Partnerships

Public-private partnerships can be highly effective in expanding broadband access. One benefit of these partnerships is that they allow local governments and businesses to "pool their resources and technical expertise to deliver cutting-edge services to citizens."[174] For example, local governments can lease their lands to private broadband providers to provide access in rural areas, where private companies have, thus far, struggled to provide broadband infrastructure.[175] Additionally, public-private partnerships allow local governments "to share the costs, responsibilities, and benefits of local network projects."[176] The risk of broadband projects becoming insolvent lessens when both public and private entities assume some responsibility for the project, encouraging investment.[177]

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[169] *Case Studies in Public-Private Partnership Driving Broadband Deployment*, BROADBANDUSA [hereinafter *Case Studies*], https://broadbandusa.ntia.gov/node/7375 (last visited Apr. 13, 2024).

[170] *See* PATRICK LUCEY & CHRISTOPHER MITCHELL, SUCCESSFUL STRATEGIES FOR BROADBAND PUBLIC-PRIVATE PARTNERSHIPS 6 (2016).

[171] *Id.* at 8.

[172] *Id.*

[173] *Id.* at 7.

[174] *Case Studies*, *supra* note 169.

[175] *Id.*

[176] LUCEY & MITCHELL, *supra* note 170, at 6.

[177] *Id.* at 8.

2. Effective Public-Private Partnerships: Virginia as a Case Study

States have developed effective public-private partnerships to increase broadband access. In Virginia, the Office of Telework Promotion and Broadband Assistance created a public-private partnership—the Commonwealth Connect Coalition (the "Coalition").[178] The Coalition convened to assist Virginia's plan to achieve universal broadband access.[179] The Coalition included over 120 organizations such as broadband providers, local governments, trade associations, nonprofits, and private companies.[180]

Virginia's Coalition had numerous successes. For example, through the Coalition, Virginia developed a toolkit for local governments to bring broadband to their communities.[181] This toolkit included "model solicitations, as well as step-by-step guidance for localities to lead them from whatever their current state of connectivity may be to universal coverage."[182] Additionally, the Coalition aided in developing the Commonwealth Connect Plan, which assessed the current broadband access landscape and made policy recommendations.[183] Furthermore, the Coalition served as a guide for local governments to create their own public-private partnerships.[184] Counties in Virginia followed the Coalition's lead and partnered with private companies to expand access to broadband in their local communities, supported by state funding.[185] Overall, these efforts appear to be working in Virginia, where the number of unconnected households was cut in half between the Commonwealth Connect Coalition's creation in 2017 and 2021.[186]

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178 *See* COMMONWEALTH CONNECT, REPORT ON COMMONWEALTH CONNECT: GOVERNOR NORTHAM'S 2021 PLAN TO CONNECT VIRGINIA 10 (2021) [hereinafter COMMONWEALTH CONNECT REPORT].

179 *Id.*

180 *Coalitions and Commissions*, VA. PTA, https://vapta.org/coalitions-and-commissions (last visited Mar. 27, 2024).

181 COMMONWEALTH CONNECT REPORT, *supra* note 178, at 10.

182 *Id.*

183 *See generally id.*

184 *See Case Studies*, *supra* note 169.

185 *Id.*

186 COMMONWEALTH CONNECT REPORT, *supra* note 178, at 4 (explaining that the number of unconnected households in Virginia lowered from approximately five hundred thousand to 233,500 between 2017 and 2021).

C. *States Can Most Effectively Spend and Distribute Funding*

States are best situated to coordinate funding efficiently and effectively to address broadband infrastructure and affordability issues. As illustrated below, states have already demonstrated they can distribute funds precisely with their advanced mapping technologies. States have also ensured accountability in their funding programs.

1. State Mapping Technologies Allow States to Effectively Spend and Distribute Funding

States have administered various grant programs addressing broadband infrastructure deficiencies and broadband affordability, whether utilizing their own funds or federal funds.[187] Regarding infrastructure, state programs generally focus on "last mile" broadband infrastructure, which is "the segment of the network that connects the local [internet service provider] to the customer."[188] Accurate broadband maps are necessary to determine which areas lack access.

Thus far, the federal government has been unable to effectively determine where broadband infrastructure is located.[189] The FCC has relied on providers to verify broadband coverage, who have overstated results.[190] The FCC also counts entire blocks of homes as served, so long as only one home on the block has broadband access.[191] Additionally, the FCC undercounts households living under a broadband monopoly—an issue that can make broadband unaffordable for many.[192] Furthermore, federal mapping has left insufficient time for the public to comment on proposed maps, resulting in inaccurate maps.[193] These mapping inefficiencies have

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187 *See generally How State Grants Support Broadband Deployment*, PEW CHARITABLE TRS., https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2021/12/how-state-grants-support-broadband-deployment (Dec. 23, 2021).

188 *Id.*

189 Karl Bode, *The FCC's New Broadband Mapping Effort Might Be One Big Waste of Money*, DAILY DOT, https://www.dailydot.com/debug/fcc-broadband-maps-telecom (July 25, 2022, 10:24 AM).

190 *Id.*

191 *Id.*

192 *Id.*

193 *See* Paul Flahive, *States, Communities Struggle to Meet Deadline in Broadband Funding Process*, MARKETPLACE (Jan. 13, 2023), https://www.marketplace.org/2023/01/13/states-communities-struggle-to-meet-deadline-in-broadband-funding-process.

come at a cost of $350 million and have caused the federal government to provide subsidies in areas where they were unneeded.[194]

States, however, are developing sophisticated mapping technologies through state agencies and private organizations that will allow them to distribute funds accurately and precisely to unserved and unaffordable areas.[195] For example, in 2022 the New York State Public Service Commission released an interactive broadband map, along with a report detailing broadband infrastructure in the State.[196] Other more rural states like Montana have also created sophisticated broadband maps, using geographic information systems to report on infrastructure issues.[197] The ability of states to develop accurate broadband maps will allow them to target communities in need effectively. In contrast, the federal government lacks accurate broadband data tracking techniques, while expected to distribute funds across the entire United States.[198] Even assuming the federal government accessed state maps, the inefficiencies in their administration of funds still exist.

2. States Have Ensured Accountability in Their Funding Programs

States have also ensured accountability in administering state and federal funds for broadband through reporting requirements, mandatory provider service rates, and speed testing requirements for new networks.[199] For example, the California Advance Service Fund Broadband Infrastructure Grant Program provides state funding for broadband infrastructure in California and requires robust reporting.[200] Grantees must provide semi-annual progress reports, due

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194 Bode, *supra* note 189; GOV'T ACCOUNTABILITY OFF., *supra* note 157, at 30.

195 *See, e.g.*, *New York State PSC Broadband Map*, N.Y. DEP'T OF PUB. SERV., https://mapmybroadband.dps.ny.gov (last visited Apr. 14, 2024); N.Y. STATE PUB. SERV. COMM'N, 2022 REPORT ON THE AVAILABILITY, RELIABILITY, AND COST OF HIGH-SPEED BROADBAND SERVICES IN NEW YORK STATE (2022) [hereinafter 2022 REPORT]; *see also* Eric Dietrich, *State Unveils Broadband Access Map, Solicits Grant Applications*, MONT. FREE PRESS (Feb. 7, 2022), https://montanafreepress.org/2022/02/07/montana-broadband-access-map-unveiled.

196 *New York State PSC Broadband Map*, *supra* note 195; *see generally* 2022 REPORT, *supra* note 195.

197 Dietrich, *supra* note 195.

198 GOV'T ACCOUNTABILITY OFF., *supra* note 157, at 30.

199 *How State Grants Support Broadband Deployment*, *supra* note 187.

200 *See* CAL. PUB. UTILS. COMM'N., APPENDIX A REVISED CASF PROGRAM GUIDELINES 31–33 (2021).

on March 1 and September 1 each year.[201] The progress reports require identification of milestones, costs, speed test data, and certifications that the reports are correct.[202] The state reporting requirements demonstrate that states are fiscally responsible when distributing broadband funding.

D. *State Broadband Infrastructure and Access Authority Presents No Constitutional Concerns*

Although state regulation of the content on the internet itself presents constitutional concerns—namely preemption and the dormant commerce clause—expanding access through infrastructure and affordability initiatives presents no such concerns.[203] For example, in 2017, the FCC rescinded network neutrality protections that required internet service providers to treat all internet communications equally.[204] In rescinding these protections, the FCC preempted state rules requiring network neutrality.[205] Regarding the dormant commerce clause, many scholars have suggested that states "have little power to regulate local broadband carriers because internet communications cross state lines."[206] Even these views of preemption and the dormant commerce clause, however, are not universally held, with Justice Thomas and the US Court of Appeals for the District of Columbia Circuit expressing doubts that state authority is preempted with regard to broadband.[207]

Policies and funding to expand broadband infrastructure and address affordability issues face no such constitutional concerns. Instead, Congress has expressly given states the authority to disburse funding for broadband in the IIJA, rather than restrict that

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[201] *Id.* at 31.

[202] *Id.* at 31–32.

[203] For a discussion of preemption and the dormant commerce clause, see *supra* notes 143–44 and accompanying text.

[204] Tejas N. Narechania & Erik Stallman, *Internet Federalism*, 34 HARV. J.L. & TECH. 547, 548 (2021).

[205] *Id.*

[206] *Id.* at 549.

[207] *Id.* ("Justice Thomas has suggested that the [FCC's] disavowal of regulatory power preserves rather than preempts state authority. And the [District of Columbia] Circuit vacated (over dissent) the agency's sweeping preemption order—though it conceded that some state rules may conflict with federal standards." (footnotes omitted)).

authority.[208] Moreover, states can work in conjunction with the federal government, even in areas where the federal government has retained power, like the Affordable Connectivity Program.[209] Many states, such as Maryland, have funding programs addressing digital equity and affordability that worked alongside the Affordable Connectivity Program.[210] Although the federal government may preempt the states with regard to internet regulation, no such concerns exist about broadband expansion.

V. CONCLUSION: THE NEED FOR CONTINUED FEDERAL FUNDING

A state-led effort to expand broadband will be effective in achieving digital equity, as states can best expand infrastructure, while ensuring broadband is accessible and affordable. Historically, the federal government has been unsuccessful in broadband expansion because of fragmented policymaking and the inefficient distribution of federal funds.[211] But recently federal legislation has given states the authority to disburse broadband funding by allocating funds directly to the states, who in turn can decide where and how to focus funds.[212] This model will be effective because states have proven track records and can create unique approaches to expanding digital equity by focusing on local challenges.

Moreover, states have created advanced mapping techniques.[213] States are also best situated to create public-private partnerships and coordinate funding, which makes infrastructure projects less likely to go insolvent and allows local stakeholders to provide input in crafting more efficient solutions to local broadband issues.[214] Although the IIJA provides a strong legislative framework for broadband funding, additional funding is necessary to ensure the United States reaches the goal of broadband-for-all and digital equity.

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[208] *See* Whitacre & Biedny, *supra* note 17 ("Historically, broadband funding has been distributed from federal entities like the [FCC] or [US] Department of Agriculture directly to internet providers. . . . This time, however, states are at the center of the funding that is coming down the pipeline.").

[209] *See, e.g.*, *Community & Provider Resources*, *supra* note 148.

[210] *Id.*

[211] *See* Lyons, *supra* note 156.

[212] Whitacre & Biedny, *supra* note 17.

[213] *See, e.g.*, *New York State PSC Broadband Map*, *supra* note 195; Dietrich, *supra* note 195.

[214] LUCEY & MITCHELL, *supra* note 170, at 6–8.

Many states face budgetary constraints and are likely to face budget deficits in the future.[215] As noted, the IIJA provides $65 billion in funding for broadband services.[216] Alone, the infrastructure to connect all Americans to minimum speeds of twenty-five megabits per second download and three megabits per second upload—a minimum goal for many states—could cost up to $37 billion.[217] These speeds only support light internet activity for two to three people in a household, "such as streaming, online gaming, web browsing[,] and downloading music" and can only support one person with heavier internet use, such as gaming or high-definition streaming.[218] Moreover, even the FCC has recommended one hundred megabits per second as the minimum download speed,[219] which could cost up to $67 billion.[220] Even higher speeds could cost up to $198 billion.[221] These numbers, however, represent only the cost of infrastructure and do not consider affordability issues for low-income populations.

In addition to infrastructure upgrades, ten years of subsidies for low-income individuals to access broadband, such as the Affordable Connectivity Program, will likely cost between $50 billion and $202 billion.[222] Additional subsidies that are necessary to connect

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[215] *See* Josh Goodman, *State Budget Problems Spread*, PEW CHARITABLE TRS. (Jan. 9, 2024), https://www.pewtrusts.org/en/research-and-analysis/articles/2024/01/09/state-budget-problems-spread ("Some of the most populous states—including California, New York, and Pennsylvania—face among the most serious problems, but these governments are not alone. Based on budget analyses states published in late 2023, roughly half of Americans live in states that report short-term budget gaps, potential long-term deficits, or both—and this inventory almost certainly understates the scope of the problem because many states do not publish sufficient forward-looking data to meaningfully assess their fiscal outlook.").

[216] Cochrane et al., *supra* note 87.

[217] ACA CONNECTS, ADDRESSING GAPS IN BROADBAND INFRASTRUCTURE AVAILABILITY AND SERVICE ADOPTION: A COST ESTIMATION & PRIORITIZATION FRAMEWORK 11 (2021), https://acaconnects.org/index.php?checkfileaccess=/wp-content/uploads/2021/06/Addressing-Gaps-in-Broadband-Infrastructure-Availability-and-Service-Adoption-ACA-Connects-and-Cartesian-June2021.pdf; Tom Wheeler, *5 Steps to Get the Internet to All Americans*, BROOKINGS (May 27, 2020), https://www.brookings.edu/research/5-steps-to-get-the-internet-to-all-americans ("While at the FCC, we estimated that it would cost about $80 billion for a one-time fix to deliver broadband to everyone.").

[218] Smith, *supra* note 136.

[219] *Id.*

[220] ACA CONNECTS, *supra* note 217, at 11.

[221] *Id.*

[222] *Id.* at 28.

educational institutions and healthcare facilities could cost even more. Therefore, the $65 billion in funding in the IIJA will not cover complete broadband infrastructure expansion, and those places gaining access will likely only receive minimum speeds.[223] Future legislation is needed to ensure access is affordable, especially for low-income households, as current funding is insufficient.[224]

This is not to say, however, that the approach adopted under the IIJA should be abandoned. The IIJA provides a sound foundation for a future goal of broadband-for-all insofar as it gives states significant control over how they will distribute their portion of federal funding. As the United States strives for digital equity, the federal government must consider similar approaches, and states should continue to expand their capacities to promote broadband access. These models will help ensure the United States achieves digital equity for future generations.

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[223] *See id.* at 13 (finding that, in total, providing gigabit internet speeds to every household and subsidies to low-income households would cost between $167 billion and $399 billion).

[224] Funding for the Affordable Connectivity Program expired in April of 2024. *See Affordable Connectivity Program*, FED. COMMC'NS COMM'N, https://www.fcc.gov/acp (Apr. 2, 2024) ("The Affordable Connectivity Program stopped accepting new applications and enrollments on February 7, 2024. The last fully funded month of the program [was] April 2024.").