

## **Finding Marginal Improvements for the ‘Good Enough’ Affordable Connectivity Program**

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# Finding Marginal Improvements for the ‘Good Enough’ Affordable Connectivity Program

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## Introduction

The Affordable Connectivity Program (ACP) is a federal program that provides eligible low-income households with discounts of up to \$30 per-month for broadband-internet service and up to \$100 for a laptop, desktop computer, or tablet from a participating provider. It was created by Congress as part of the COVID-19 relief package and is administered by the Federal Communications Commission (FCC). The ACP is funded by a \$14 billion appropriation that is expected to be exhausted within the next year.<sup>1</sup>

In anticipation of legislation to continue ACP funding, some have called for the program to be expanded,<sup>2</sup> while other have urged that it be scaled back or otherwise expressed skepticism of how it is currently administered.<sup>3</sup> Despite its flaws, we argue in this issue brief that the ACP is a “good enough” solution that should be continued with some straightforward adjustments.

Currently, about 95% of households with access to the internet use it at home, and most obtain that access through a subscription with an internet service provider (ISP). Due to what appears to be inelastic demand, ACP has faced difficulties in stimulating sufficient interest among some segments of the 5% of unconnected households that could access the internet, but fail to take up service. These households may not be aware of the program or may lack digital literacy, may be able to access the internet without a subscription, or may have no interest in subscribing to an internet service at any price.

On the other hand, the ACP’s subsidies appear to have successfully enabled already-subscribed households to maintain at-home internet service through the COVID-19 pandemic, thereby proving effective at allowing economically vulnerable inframarginal consumers to remain connected. This becomes a critical fact in light of the interest expressed by some policymakers and advocates in solutions such as municipal broadband and rate regulation in order to guarantee low-income consumers’

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<sup>1</sup> *Affordable Connectivity Program*, FEDERAL COMMUNICATIONS COMMISSION, <https://www.fcc.gov/acp> (last accessed Sep. 14, 2023).

<sup>2</sup> Nicole Ferraro, *Rosenworcel Warns Congress That Not Funding ACP Will ‘Cut Families Off’*, LIGHT READING (Jun. 21, 2023), <https://www.lightreading.com/broadband/rosenworcel-warns-congress-that-not-funding-acp-will-cut-families-off/d/d-id/785380>.

<sup>3</sup> Press Release, *Thune, Cruz Statement on the FCC’s Mismanagement of a Taxpayer-Funded Broadband Subsidy Program*, SEN. JOHN THUNE (Jan. 25, 2023), <https://www.thune.senate.gov/public/index.cfm/2023/1/thune-cruz-statement-on-the-fcc-s-mismanagement-of-a-taxpayer-funded-broadband-subsidy-program>.

continued access to broadband. Moreover, the ability of programs like the ACP to stimulate demand could be deployed to stand up competitive markets in some areas that currently lack them.

This issue brief addresses some of the ACP’s early successes and remaining challenges, while sketching a roadmap for reform. Section I examines the digital divide and the factors that explain why it has proven so difficult to connect the remaining 5% of households that lack an at-home internet connection. Section II summarizes and evaluates the ACP and its predecessors. Section III examines how the ACP compares to an ideal subsidy program and the degree to which it has shown itself to be “good enough.” Section IV identifies some principles for broadband-adoption policy and a roadmap to reform the ACP. Section V offers concluding comments.

Despite the ACP’s shortcomings, the program is a much better policy than many alternatives, such as direct rate regulation or municipal broadband provision. While it is easy to qualify for the ACP, consumers nonetheless report difficulties with the enrollment process. We suggest focusing eligibility criteria on those low-income households that currently lack at-home internet service or that, due to being particularly economically vulnerable, are most likely to drop service. In tandem with tightened eligibility, however, the program’s enrollment process should be streamlined and the burden to enroll reduced. In addition, the program should expand its outreach to eligible households by leveraging data about enrollees in Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and the Section 8 Housing Choice Voucher Program. The FCC should also extend funding to local organizations—such as libraries, schools, community centers, and nonprofits—to inform eligible households about the ACP and to assist them with the application process.

These reforms would improve the ACP’s efficiency and efficacy. They would also likely reduce the program’s costs, thereby allowing a greater proportion of allocated funds to reach the households the program was intended to help.

## **I. Broadband Access, Adoption, and Use: Is There a Digital Divide?**

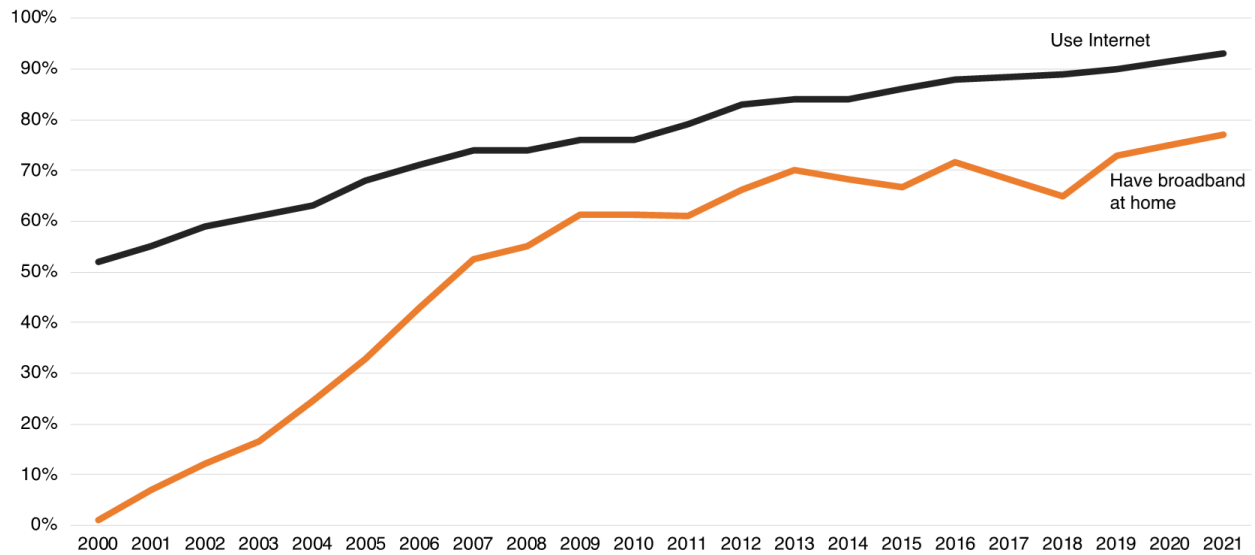
According to the Information Technology and Innovation Foundation (ITIF), 97.6% of the U.S. population has access to a fixed connection of at least 25/3 through ADSL, cable, fiber, or fixed wireless.<sup>4</sup> Pew Research reports that 93% of its survey respondents indicated they have a broadband connection at home.<sup>5</sup> Figure 1 summarizes Pew survey results since 2000, which shows at-home broadband use has increased from 1% in 2000 to 77% in 2021.

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<sup>4</sup> Jessica Dine & Joe Kane, *The State of US Broadband in 2022: Reassessing the Whole Picture*, INFORMATION TECHNOLOGY & INNOVATION FOUNDATION (Dec. 5, 2022), <https://itif.org/publications/2022/12/05/state-of-us-broadband-in-2022-reassessing-the-whole-picture>.

<sup>5</sup> *Internet/Broadband Fact Sheet*, PEW RESEARCH CENTER (Apr. 7, 2021), <https://www.pewresearch.org/internet/fact-sheet/internet-broadband>.

**FIGURE I: Internet Use and At-Home Broadband Adoption**



**SOURCE:** Pew Research

Pew’s results are in-line with U.S. Census estimates from the American Community Survey. Table 1 summarizes information from 2021.<sup>6</sup> The table shows that 90.3% of households have a broadband subscription and another 2.3% of households claim they have access to at-home internet “without paying a cell phone company or Internet service provider.” Assuming ITIF’s estimates of broadband availability are accurate, then among households without a broadband subscription, approximately two-thirds, or 6.4 million households, nonetheless have access to broadband.

**TABLE I: At-Home Internet Adoption, 2021**

	BROADBAND SUBSCRIPTION	CELLULAR-ONLY SUBSCRIPTION	NO SUBSCRIPTION	NO AT-HOME ADOPTION	TOTAL
Access	101,311,237	13,858,841	2,927,168	6,386,388	124,483,634
No Access	-	-	-	3,061,073	3,061,073
<b>Total</b>	<b>101,311,237</b>	<b>13,858,841</b>	<b>2,927,168</b>	<b>9,434,700</b>	<b>127,544,707</b>
% Access	79.4%	10.9%	2.3%	5.0%	97.6%
% No Access	-	-	-	2.4%	2.4%
<b>Total</b>	<b>79.4%</b>	<b>10.9%</b>	<b>2.3%</b>	<b>7.4%</b>	<b>100%</b>

**SOURCE:** American Community Survey; ITIF

<sup>6</sup> 2021 American Community Survey 1-Year Estimates, U.S. CENSUS BUREAU (2021), Table Id. S2801; ACS 1-Year Estimates Public Use Microdata Sample 2021, Access to the Internet (ACCESSINET), U.S. CENSUS BUREAU (2021).

Evidence about the impact of price on broadband uptake is mixed. In one study, George Zuo of the University of Maryland found that employment increased among low-income populations in areas where Comcast's subsidized low-cost "Internet Essentials" plans were offered:<sup>7</sup>

The results indicate that ... availability of Internet Essentials led to a 0.9 percentage point increase (1.6 percent) in the probability that an eligible low-income individual was employed. ... The findings also suggest that Internet Essentials was responsible for narrowing the income-broadband gap by as much as 40 percent. A back-of-the-envelope cost-benefit calculation suggests that the value to consumers (in terms of increased earnings) is four times that of the typical cost to provide the service.

Of course, this is not a direct measure of changes in willingness-to-pay. Employment changes, however, serve as an interesting proxy. Zuo's work exploits the difference between those eligible and ineligible for Internet Essentials, and found that, after becoming eligible for the plans, the employment gap between the two groups climbs from 3.1% to 5.6%.<sup>8</sup> One very strong possibility, therefore, is that the presence of a low-cost internet option spurred individuals to adopt and use that connection as part of a job search and employment.

Evidence from large surveys suggests that price is not a dominant factor driving adoption for the currently unconnected. For example, among the 7% of households who do not use the internet at home, more than half of Current Population Survey (CPS) respondents indicated that they "don't need it or [are] not interested."<sup>9</sup> About one-third of respondents indicated that price is a factor, with responses such as "can't afford it" or "not worth the cost."

Smaller surveys and focus groups that allow more opportunities for follow-up questions, however, suggest that price may be more important than suggested by Census Bureau surveys. For example, one study in Detroit, Michigan used surveys and focus groups to examine internet adoption and use in three low-income urban neighborhoods.<sup>10</sup> Participants who reported lacking at-home internet mentioned lack of interest and high costs at roughly equal rates.

Of course, cost and interest are not mutually exclusive factors.<sup>11</sup> A common response to CPS surveys among those who do not subscribe to internet service is that it's "not worth the cost." This is an unhelpful response to guide policymakers because it doesn't answer whether the cost is "too high," the value is "too low," or a combination of both. Another common response is "not interested." This, too, is unhelpful, as it does not identify the price at which a potential consumer might become

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<sup>7</sup> George W. Zuo, *Wired and Hired: Employment Effects of Subsidized Broadband Internet for Low-Income Americans*, 13 AM. ECON. J.: ECON. POL'Y 447 (2021).

<sup>8</sup> *Id.* at 463.

<sup>9</sup> George S. Ford, *Confusing Relevance and Price: Interpreting and Improving Surveys on Internet Non-adoption*, 45 TELECOMM. POL'Y 102084 (2021).

<sup>10</sup> Colin Rhinesmith, Bianca Reisdorf, & Madison Bishop, *The Ability to Pay For Broadband*, 5 COMM. RES. PRACT. 121 (2019).

<sup>11</sup> Ford, *supra* note 9.

interested, if such a price exists. For example, as discussed below, studies suggest that some non-adopters may become interested in subscribing to internet services or find it worth the cost at a price of zero.

### A. How Responsive Are Households to Broadband Pricing?

One way of evaluating the importance of cost is through empirical estimates of demand elasticity. The *price elasticity of demand* is the percent change in the quantity demanded for a good, divided by the percent change in price. A demand curve with an elasticity between 0 and -1 is said to be *inelastic*, meaning that the change in the quantity demanded is relatively less responsive to changes in price. An elasticity of less than -1 is said to be *elastic*, meaning the change in the quantity demanded is relatively more responsive to changes in price.

Michael Williams & Wei Zao's survey of the research on the price elasticity of demand for internet services concludes that "demand for Internet services was price-inelastic and has become increasingly so over time."<sup>12</sup> In 2015, Octavian Carare, *et al.* estimated an elasticity of -0.62.<sup>13</sup> George Ford's 2021 study estimates an elasticity ranging from -0.58 to -0.33.<sup>14</sup> Williams & Zao's 2020 report concluded with elasticity ranges from -0.08 to -0.05.<sup>15</sup> These results indicate a subsidy program that reduced the price of internet services by 10% would increase adoption by anywhere from 0.5% to 6.2%.

While these recent studies indicate an inelastic demand for internet services, the wide range of estimates makes it difficult to guide subsidy policies. If the elasticity is -0.62, then a subsidy program may be effective in meaningfully moving adoption closer to 100% of households with access. If the elasticity is closer to -0.05, however, then even a generous subsidy program would do very little to increase access.

The larger lesson is that policymakers need to be careful in determining how subsidies are used. As in Zuo's findings about improvements in employment outcomes, much could be gained from targeted subsidies in some contexts. In situations where demand is less elastic, however, subsidies will be less effective.

One reason that demand for internet services may be so inelastic is the nature of demand curves. Generally speaking, as quantity demanded increases (*i.e.*, moving downward along the demand

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<sup>12</sup> Michael A. Williams & Wei Zao, (*Expert Report of Michael A. Williams and Wei Zhao*, NTCA-THE RURAL BROADBAND ASSOCIATION (May 7, 2020), available at <https://www.ntca.org/sites/default/files/documents/2020-05/2020-05-07%20-%20Williams-Zhao%20report%20Final.pdf>).

<sup>13</sup> Octavian Carare, Chris McGovern, Raquel Noriega, & Jay Schwarz, *The Willingness to Pay For Broadband of Non-Adopters in the U.S.: Estimates From a Multi-State Survey*, 30 INF. ECON. POL'Y. 19 (2015).

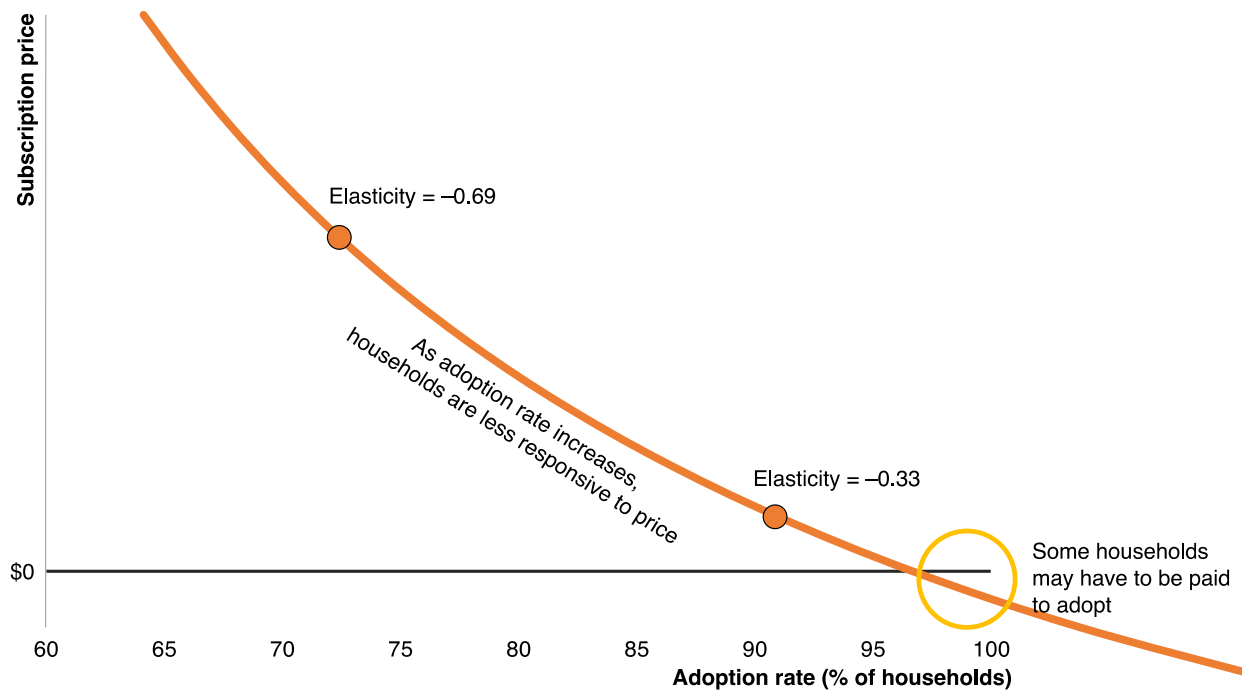
<sup>14</sup> George S. Ford, *Assessing Broadband Policy Options: Empirical Evidence on Two Relationships of Primary Interest*, PHOENIX CTR. FOR ADVANCED LEGAL & ECON. PUB. POL'Y STUD., PERSPECTIVES 21-04 (Jul. 28, 2021) available at <https://www.phoenix-center.org/perspectives/Perspective21-04Final.pdf>.

<sup>15</sup> Williams & Zao, *supra* note 12.

curve), the demand curve becomes less elastic, as shown in Figure 2.<sup>16</sup> With adoption currently at more than 90% of households, a significant portion of the remaining nonadopters are much less likely to adopt at any price.

This is demonstrated by a National Telecommunications and Information Administration (NTIA) survey of internet use that reported the average monthly price that offline households wanted to pay for internet access was approximately \$10 per month; roughly 75% of households gave \$0 or “none” as their answer.<sup>17</sup> In addition, as shown in Table 1, about a quarter of households without a broadband or smartphone subscription claim that they can access the internet at home without paying for a subscription. Thus, one potential reason for the substantial share of nonadopters who would not adopt internet service even if it were free may be because, in effect, some are already able to use it without paying for it. It is also likely, of course, that the status of those who are able to access broadband without paying for it could change quickly.

**FIGURE II: Hypothetical Household Demand for Internet Service by Adoption Rate**



<sup>16</sup> See also, N. GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* (4<sup>th</sup> ed, Thomson South-Western 2007) (“At points with a low price and high quantity, the [linear] demand curve is inelastic. At points with a high price and low quantity, the [linear] demand curve is elastic.”)

<sup>17</sup> Michelle Cao & Rafi Goldberg, *New Analysis Shows Offline Households Are Willing to Pay \$10-a-Month on Average for Home Internet Service, Though Three in Four Say Any Cost is Too Much*, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (Oct. 6, 2022), <https://ntia.gov/blog/2022/new-analysis-shows-offline-households-are-willing-pay-10-month-average-home-internet>.

## B. Does Digital Literacy Matter?

Despite near-ubiquitous internet access and use across society, there is a widespread belief that digital literacy presents a significant barrier to broadband adoption. Digital literacy can be divided into two broad categories: (1) familiarity with computers and the internet, and (2) an understanding of the potential value of a fixed broadband connection. J. A. Hauge & J. E. Prieger report that 22% of nonadopters cited digital illiteracy as a factor for nonadoption.<sup>18</sup> Ezezi Ogbo, *et al.* conclude from the literature that low-income households are unlikely to adopt broadband without understanding how being connected can save them time and money.<sup>19</sup> Jacob Manlove & Brian Whitacre note that one of the goals of the Connected Nation Broadband Adoption Program is to improve digital literacy and educate users about the relevance of broadband.<sup>20</sup>

Lack of access to—or a lack of understanding of how to use—a computer, tablet, or other internet-connected device certainly presents some barrier to broadband adoption. But as reported by Scott Wallsten, the evidence indicates little consumer interest in—if not outright antipathy toward—digital-literacy training classes:<sup>21</sup>

Finally, subscribers generally expressed a preference to avoid digital literacy training classes. In one project, many participants were willing to forego an additional \$10 per month savings or a free computer in order to avoid taking those classes.

Perhaps, rather than a lack of digital literacy, some nonadopters may have a surfeit of literacy, and conclude that smartphone internet service provides a superior “bang for the buck” relative to fixed broadband. Jamie Greig & Hannah Nelson note that low-income households are more likely to use smartphones than computers for internet access.<sup>22</sup> According to Pew Research, 19% of adults who do not lack at-home broadband report that their smartphone does everything they need to do online.<sup>23</sup> Colin Rhinesmith, *et al.* recount the response of a Detroit focus group participant:<sup>24</sup>

As one male, African-American job seeker in one of the focus groups mentioned, he was not interested in having home access, as he was able to do almost anything he wanted to

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<sup>18</sup> J. A. Hauge & J. E. Prieger, *Evaluating the Impact of the American Recovery and Reinvestment Act's BTOP on Broadband Adoption*, 47 APP. ECON. 6553 (2015).

<sup>19</sup> Ezezi Ruth Ogbo, Heonuk Ha, Hernan Galperin, & François Bar, *Measuring the Effectiveness of Digital Inclusion Approaches*, ICONFERENCE 2022 (Feb. 2, 2022) available at <https://www.ideals.illinois.edu/items/123109>.

<sup>20</sup> Jacob Manlove & Brian Whitacre, *An Evaluation of the Connected Nation Broadband Adoption Program*, 43 TELECOMM. POL'Y 101809 (2019).

<sup>21</sup> Scott Wallsten, *Learning from the FCC's Lifeline Broadband Pilot Projects*, TPRC 44: THE 44TH RESEARCH CONFERENCE ON COMMUNICATION, INFORMATION AND INTERNET POLICY 2016 (March 23, 2016), available at <http://dx.doi.org/10.2139/ssrn.2757149>.

<sup>22</sup> Jamie Greig & Hannah Nelson, *Federal Funding Challenges Inhibit a Twenty-First Century “New Deal” for Rural Broadband*, 37 CHOICES 1 (2022).

<sup>23</sup> Andrew Perrin, *Mobile Technology and Home Broadband 2021*, PEW RESEARCH CENTER (Jun. 3, 2021), <https://www.pewresearch.org/internet/2021/06/03/mobile-technology-and-home-broadband-2021>.

<sup>24</sup> Rhinesmith, *et al.*, *supra* note 10.



on his smartphone: “I have my four wheels, why would I pay for eight?” He explained—and this sentiment was echoed by many others across the three groups—that if he had to choose between home access and mobile access, the latter is more desirable as it allows him to be reachable and flexible for job interviews and the like. However, later in the conversation, he changed his mind when the possibility of cheap home access was mentioned by another participant, explaining he would sign up for home access, if he could afford to do so in addition to his data plan. This is another indication that low-income communities appreciate and understand the value of fixed access, but if financially forced to choose between home access and mobile access, it is not the first choice.

So, again, the findings on digital literacy are mixed. There is, however, another potential hurdle for adoption. As discussed in Section III, simple unawareness of programs such as the ACP could be the steepest hurdle. Increasing awareness of an existing program is a much lower-cost endeavor to implement than embarking on a nationwide digital-literacy effort.

## **II. The Affordable Connectivity Program and Its Predecessors: Successes and Failures**

Since the Great Financial Crisis of 2008 and the ensuing recession, Congress and federal agencies have enacted several programs to increase broadband adoption among low-income households. These include the Broadband Technology Opportunities Program, the FCC’s Lifeline Broadband Program, the COVID-19 pandemic-era Emergency Broadband Benefit Program, and the current Affordable Connectivity Program. While the first program had little demonstrated success, both Congress and the FCC appear to have built on the lessons of earlier programs to develop today’s relatively straightforward ACP.

### **A. Broadband Technology Opportunities Program**

The Broadband Technology Opportunities Program (BTOP) was a federal grant program that aimed to expand broadband access and adoption across the United States. It was funded by the American Recovery and Reinvestment Act of 2009, and administered by the NTIA. BTOP awarded about \$4 billion to 233 projects across the country, covering three categories: infrastructure, public computer centers, and adoption.<sup>25</sup> BTOP funded 44 grants totaling \$251 million on projects to sustain adoption of broadband service.<sup>26</sup> Unlike other program discussed in this section, however, BTOP did not include direct subsidies to consumers.<sup>27</sup> The program formally ended in 2015, but some projects continued to operate beyond that date.

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<sup>25</sup> *Broadband Technology Opportunities Program 46<sup>th</sup> Quarterly Report to Congress*, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (Nov. 2020), available at [https://ntia.gov/sites/default/files/publications/ntia\\_bttop\\_46th\\_quarterly\\_congressional\\_report\\_0.pdf](https://ntia.gov/sites/default/files/publications/ntia_bttop_46th_quarterly_congressional_report_0.pdf).

<sup>26</sup> Hauge & Prieger, *supra* note 18.

<sup>27</sup> T. Randolph Beard, George S. Ford, & Michael Stern, *Bridging the Digital Divide: An Empirical Analysis of Public Programs to Increase Broadband Adoption*, 67 *TELEMATICS & INFORMATICS* 10754 (2022).

NTIA reported that, based on the evaluation study sample of BTOP communities, more than 4.3 million people across the United States gained broadband availability from June 30, 2011 through June 30, 2013.<sup>28</sup> Jacob Manlove & Brian Whitacre note, however, that “the program's effect on increasing adoption were not rigorously studied” in the evaluation.<sup>29</sup> A later empirical study concluded that BTOP had no measurable effect on broadband adoption:<sup>30</sup>

We did not find clear evidence supporting the position that BTOP led to beneficial outcomes of increased adoption. In fact, with such a high degree of uncertainty in the results, no sweeping claims can be made for the success of BTOP as regards the goal of sustainable adoption. In fact, in at least some ranges of spending, additional BTOP spending is associated with lower levels of adoption.

More recent research concludes: “no effect of the BTOP programs on home broadband adoption, a result consistent with prior empirical analysis on BTOP programs.”<sup>31</sup>

## B. Lifeline Broadband

The FCC's 2012 Lifeline Order specified three goals for the Lifeline program: (1) ensure the availability of voice service for low-income Americans; (2) ensure the availability of broadband for low-income Americans; and (3) minimize the Universal Service Fund contribution burden on consumers and businesses.<sup>32</sup> The order established a broadband pilot program to gather data about how Lifeline could be used to support broadband adoption.<sup>33</sup> The pilot program aimed to test how the Lifeline program could be best structured to provide support for broadband services. In December 2012, the FCC announced the broadband pilot program and authorized approximately \$13.8 million for 14 projects, spanning 21 states and Puerto Rico.<sup>34</sup> The selected projects would study the effects of varying subsidy amounts, end-user charges, access to digital-literacy training, data-usage limits, choices for broadband speed, access to equipment, and other variables affecting broadband adoption. The pilot program ran from February 2013 to November 2014.

From the pilot program, FCC staff concluded that consumers were willing to pay for speeds in the mid-range of options and preferred “more modest and affordable” speeds and data allowances.<sup>35</sup>

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<sup>28</sup> NTIA, *BTOP/SBI Archived Grant Program* (n.d.), <https://www2.ntia.doc.gov/Broadband-Resources#evaluation>. See also, *Final Report: Social and Economic Impacts of the Broadband Technology Opportunities Program*, ASR ANALYTICS (Sep. 15, 2014), available at [https://www2.ntia.doc.gov/files/asr\\_final\\_report.pdf](https://www2.ntia.doc.gov/files/asr_final_report.pdf).

<sup>29</sup> Manlove & Whitacre, *supra* note 20.

<sup>30</sup> Hauge & Prieger, *supra* note 18.

<sup>31</sup> Beard, et al., *supra* note 27.

<sup>32</sup> FCC *Lifeline Reform Order*, 47 CFR 54 (2012), available at <https://docs.fcc.gov/public/attachments/FCC-12-11A1.pdf> (“2012 Lifeline Order”).

<sup>33</sup> FCC *Should Evaluate the Efficiency and Effectiveness of the Lifeline Program*, U.S. GOVERNMENT ACCOUNTABILITY OFFICE (Mar. 2015), available at <https://www.gao.gov/assets/gao-15-335.pdf>.

<sup>34</sup> *Id.*

<sup>35</sup> *Wireline Competition Bureau Low-Income Broadband Pilot Program Staff Report*, 30 FCC RCD 4960 (6) (May 22, 2015), available at <https://docs.fcc.gov/public/attachments/DA-15-624A1.pdf>.

Similarly, consumers had “little interest” in paying for the highest-speed tiers.<sup>36</sup> In addition, consumers had “little interest” in receiving digital-literacy training.<sup>37</sup> Based on these findings, the FCC’s 2016 Lifeline Order included broadband as a supported service in the Lifeline program, with the following provisions:

- Allow Lifeline subscribers to apply the \$9.25 monthly Lifeline discount to broadband and broadband voice-bundled service;
- Set minimum service standards for Lifeline-supported service;<sup>38</sup>
- Establish the National Verifier as a neutral third party to make program-eligibility decisions; and
- Phase out support for voice-only service over time.<sup>39</sup>

A 2017 Government Accountability Office report notes:<sup>40</sup>

[W]hile some academic studies have raised questions whether Lifeline is a costly and inefficient means of achieving universal service, FCC has not evaluated the program to determine whether it is efficiently and effectively meeting its goals ...

The 2016 Lifeline Order mandated that the Universal Service Administrative Company (USAC) obtain an independent program evaluation of the Lifeline program’s design, function, and administration. In response, USAC contracted Grant Thornton Public Sector LLC to conduct an independent program evaluation. Grant Thornton’s 2020 report concluded that “the Lifeline program has been successful in providing a free/low-cost option for voice and broadband service for consumers,” but that “[t]here is no evidence to support whether or not the Lifeline program has improved access to voice and broadband services for low-income consumers.”<sup>41</sup> In addition, the report notes “administrative costs relative to program enrollment and the number of eligible low-income households have been steadily increasing since 2011 and should be monitored.”<sup>42</sup>

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<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> Initially, the minimum service standards for fixed broadband were 10/1 Mbps speeds and 150 GB per-month of usage. Currently, the standards are 25/3 Mbps speeds and 1,280 GB of usage. *FCC Lifeline Reform Order*, 81 FR 7999 (2016), available at <https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf> (“2016 Lifeline Order”). See also, *Minimum Service Standards*, UNIVERSAL SERVICE ADMINISTRATIVE COMPANY (n.d.), <https://www.usac.org/lifeline/rules-and-requirements/minimum-service-standards>.

<sup>39</sup> Under the 2016 Lifeline Order, support for voice-only Lifeline services would decline to \$7.25 per-month beginning December 2019, and decline further to \$5.25 per-month by December 2020. Voice-only service for Lifeline would be eliminated by December 2021. However, voice-only service would continue to be supported so long as it was offered with a broadband service meeting the minimum service standards, or if the subscribers’ Lifeline service was only available from one Lifeline provider within a U.S. Census block. See also, *Additional Action Needed to Address Significant Risks in FCC’s Lifeline Program*, U.S. GOVERNMENT ACCOUNTABILITY OFFICE (May 2015), available at <https://www.gao.gov/assets/gao-17-538.pdf>.

<sup>40</sup> *Id.*

<sup>41</sup> *Universal Service Administrative Co. Lifeline Program 2020 Evaluation*, GRANT THORNTON PUBLIC SECTOR LLC (Feb. 5, 2021), available at <https://www.neca.org/docs/default-source/wwpdf/public/7121usac.pdf>.

<sup>42</sup> *Id.*

The Lifeline broadband program has faced allegations of waste, fraud, or abuse, such as the Assurance Wireless scandal.<sup>43</sup> Assurance was a Sprint brand that, as of 2019, had more than three million Lifeline customers in 41 states and the District of Columbia. That year, the FCC investigated allegations that the company may have enrolled ineligible or duplicate subscribers in three states. As part of the investigation, Sprint disclosed that more than one million Lifeline subscribers were not using their Lifeline services. In other words, approximately one-third of Sprint's Lifeline subscribers—and one in eight of all Lifeline subscribers—were not using the Lifeline services in which they were enrolled.

### **C. Emergency Broadband Benefit and the Affordable Connectivity Program**

Congress enacted the Consolidated Appropriations Act of 2021 in response to the COVID-19 pandemic. One provision of the act created a temporary \$3.2 billion Emergency Broadband Benefit (EBB) within the Lifeline program. The EBB program provides eligible households with a \$50 monthly discount on qualifying broadband service or bundled voice-broadband packages purchased from participating providers, as well as a one-time discount of up to \$100 for the purchase of a device (computer or tablet). The EBB program was originally set to expire when the funds were depleted or six months after the U.S. Department of Health and Human Services (HHS) declared an end to the pandemic.

With passage of the Infrastructure Investment and Jobs Act (IIJA) in November 2021, the EBB's temporary subsidy was extended indefinitely and renamed the Affordable Connectivity Program (ACP). The IIJA allocated an additional \$14 billion to provide subsidies of \$30 a month to eligible households. Without additional appropriations, the ACP is expected to run out of funding by early 2024.<sup>44</sup>

## **III. Lessons Learned From ACP and Its Predecessors**

The mixed results found in various studies of subsidized broadband access warrant caution and context. Caution is needed, insofar as, without some fiscal guardrails, merely throwing money at the problem—particularly at the tail of nonadopters—is unlikely to help very much. Context is needed because, in fact, subsidization can help along a number of dimensions, but the programs need to meet consumers where they are, rather than seeking to effect some ideal situation.

As noted above, some portion of current nonadopters have fairly inelastic demand and are unlikely to adopt at any price. That may not be the case, however, for many or most households that have not yet adopted broadband. Myopic focus on the hardest-to-connect group may distort the optimal design of a broader subsidy program. Apart from the significant portion of nonadopters who would

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<sup>43</sup> Daniel Lyons, *Assessing Broadband Affordability Initiatives*, BOSTON COLLEGE LAW SCH. LEGAL STUD. RES. PAPER NO. 593, (Jan. 16, 2023), available at <https://ssrn.com/abstract=4363595>.

<sup>44</sup> Jessica Dine, *Allowing the Affordable Connectivity Program to Lapse Helps Nobody*, INNOVATION FILES (Mar. 29, 2023), <https://itif.org/publications/2023/03/29/allowing-the-ACP-to-lapse-helps-nobody>.

adopt at the “right” price, there is some large share of users who have already adopted, but would unadopt if they faced economic hardship.

In the face of recession, job loss, or other economic volatility, many low-income households would likely unadopt from broadband access. When economic hardship strikes, families are often faced with tough choices about how to allocate their limited resources. Essential needs such as food, shelter, and utilities naturally take precedence over other expenses. Broadband access, despite its crucial role in modern society, would likely be one of the first things to be eliminated from the budget for many households.

The Broadband Equity, Access, and Deployment (BEAD) program, initiated by Congress this past year, underlines a recognition of this issue and reflects a commitment to ensuring and maintaining digital inclusivity. The BEAD program is structured to regard internet access as more than just as a luxury, but as a vital tool for education, employment, communication, and countless other facets of daily life. Thus, it is highly improbable that the FCC and Congress would merely look on as large numbers of people disconnect from the internet due to financial hardships. Instead, they will likely face recurring cycles of efforts to reconnect the disconnected, leading to substantial economic waste as programs are cyclically decommissioned and then reinstated.

This inefficiency can be likened to the function of a household thermostat. Keeping a home's temperature constant is more energy- and cost-efficient than constantly turning off and restarting the heating or cooling systems as external temperatures fluctuate. The same concept applies to broadband adoption. It is likely to be much more economically efficient, and less disruptive to households, to maintain a constant state of connection, rather than navigating the start-stop cycle of disconnection and reconnection.

In light of this reality, broadband-policy design needs to evolve to sustain continuous connectivity, even in the face of economic hardship. Thus, policymakers should look at subsidy design as getting a “good enough” result in the face of the various difficulties these programs face, and to forego aiming for the perfect.

More narrowly, even on its own terms, there is more to be done to make ACP a broader success. Approximately 40% of U.S. households are eligible for the ACP program.<sup>45</sup> At least two-thirds of eligible households, however, do not participate in the ACP. The GAO reports the program has an uptake rate of about one-third of eligible households,<sup>46</sup> while the Annenberg Research Network on

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<sup>45</sup> Hernan Galperin, *Estimating Participation in the Affordable Connectivity Program (ACP)*, ANNENBERG RES. NETWORK ON INT'L COMM. (Oct. 2022) available at <https://arnicusc.org/wp-content/uploads/2022/10/Policy-Brief-2-ACP-eligibility-final-1.pdf> (“Expressed in terms of percentage of eligible households, the income-only criteria estimates that about 28% of U.S. households are eligible for ACP, when the true number is closer to 40%.”).

<sup>46</sup> *FCC Could Improve Performance Goals and Measures, Consumer Outreach, and Fraud Risk Management*, U.S. GOVERNMENT ACCOUNTABILITY OFFICE (Jan. 2023), available at <https://www.gao.gov/assets/gao-23-105399.pdf>.

International Communication estimates a 28% uptake rate.<sup>47</sup> Moreover, despite repeated requests from the GAO to collect the data needed to evaluate the programs, the FCC has not undertaken any serious efforts to do so. Thus, more needs to be done to explore why eligible households are not taking advantage of ACP.

Unawareness of the ACP is a significant factor driving the low uptake rate. A survey of ACP-eligible households reports that 53% of respondents had either never heard of the program or had heard of it, but didn't know anything about it.<sup>48</sup> This suggests that increasing awareness of the program may be one of the most cost-effective ways to increase enrollment among unconnected households.

Even so, cost likely remains a key factor, too. The same survey reports that 42% of households pay \$50 or more a month *after* receiving the ACP discount.<sup>49</sup> In addition, 7% of nonadopters indicate the cost of a computer as a reason for not having broadband at home.<sup>50</sup> The ACP's equipment subsidy may be one way to address this factor.

On the flip side of the concern that Lifeline and ACP are ineffective at fostering broadband adoption is the concern that the programs provide subsidies to those who do not need them (at least, for adoption purposes). In congressional testimony, GAO Director Andrew Von Ah reported:<sup>51</sup>

One of the things we noted in a report we recently did on that [Affordable Connectivity] Program was that we're not sure—based the way that they measure their performance of that program—whether they're serving people who are new subscribers or they're serving people who already have a subscription but now they're getting a subsidy for that subscription.

George Ford estimates that less than 10% of EBB participants were not connected prior to enrolling in EBB.<sup>52</sup> This suggests that more than 90% of participants did not need a subsidy to subscribe to internet service. On the one hand, Daniel Lyons notes that Lifeline and ACP “risk squandering large amounts of subsidy dollars on households that would have bought internet access even without the subsidy.”<sup>53</sup> On the other hand, regarding the EBB, Hernan Galperin argues:

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<sup>47</sup> François Bar & Hernan Galperin, *A Look at the Affordable Connectivity Program's Inaugural Year through Interactive Dashboards*, USC ANNEBERG RESEARCH NETWORK ON INTERNATIONAL COMMUNICATION (Feb. 22, 2023), <https://arnicusc.org/a-look-at-the-affordable-connectivity-programs-inaugural-year-through-interactive-dashboards>.

<sup>48</sup> *Half of ACP-Eligible Households Still Unaware of the Program*, BENTON INSTITUTE FOR BROADBAND & SOCIETY (Mar. 17, 2023), <https://www.benton.org/blog/half-acp-eligible-households-still-unaware-program>.

<sup>49</sup> *Id.*

<sup>50</sup> Lyons, *supra* note 43.

<sup>51</sup> *Closing the Digital Divide: Overseeing Federal Funds for Broadband Deployment*, Before House Oversight and Investigations Subcommittee, 118<sup>th</sup> Cong. (May 10, 2023) (statement of Andrew Von Ah, Director, Physical Infrastructure, Government Accountability Office), <https://energycommerce.house.gov/events/oversight-and-investigations-subcommittee-hearing-closing-the-digital-divide-overseeing-federal-funds-for-broadband-deployment>.

<sup>52</sup> George S. Ford, *EBB, Lifeline, and ACP: Some Guidance*, PHOENIX CTR. FOR ADVANCED LEGAL & ECON. PUB. POL'Y STUD. (Jan. 13, 2022) available at <http://dx.doi.org/10.2139/ssrn.4159859>.

<sup>53</sup> Lyons, *supra* note 43.

[T]he primary impact of the EBB program was to alleviate the cost burden for households that were already connected pre-pandemic, with only modest impact in bringing new households online. Alleviating the cost burden of broadband for vulnerable households is an important policy goal, as evidence from other studies suggests that low-income households often cut on essentials expenses (such as food and clothing) to pay for Internet service.<sup>54</sup>

It is necessary here to walk the line walking carefully. We do not want *all* of the households that would otherwise connect to receive the benefit, but we want enough of the lower-income households to stay online until the point that competition is sufficiently healthy enough in their market to support organic low-cost options. Thus, creating a bright-line rule that cuts off ACP for anyone who was not connected prior to the program probably does not make sense.

In addition to concerns about subsidizing infra-marginal households, there are also concerns about potential waste, fraud, and abuse in the program as it is currently structured. Based on experiences with the Lifeline Broadband program, the GAO identified two overarching areas of potential concern with the ACP:<sup>55</sup>

- **Non-use of broadband service.** Instances in which providers receive ACP reimbursement for subscribers who do not use their broadband service; and
- **False reimbursement claims,** such as the submission of incorrect information regarding subscriber eligibility for ACP, failure to de-enroll ineligible subscribers or de-enroll them in a timely manner, or submission of incorrect reimbursement amounts.

For example, in September 2022, the FCC inspector general reported that potentially thousands of households were fraudulently enrolled in the ACP.<sup>56</sup> Typically, households are eligible for ACP support based on the subscriber's own participation in a qualifying federal program, like SNAP or Medicaid. Many other households, however, are eligible due to the presence of a "benefit-qualifying person" (BQP). A BQP is a household member—such as a child or dependent—who meets one of the ACP eligibility requirements. For example, if a child is enrolled in Medicaid or qualifies for free or reduced lunch at school, then the household would be eligible for ACP.<sup>57</sup> The inspector general found 12 BQPs who were used by service providers and their agents to enroll an average of 504 ACP households each. One BQP, a four-year old child who receives Medicaid benefits, was used to enroll 1,042 households.

One avenue for this sort of fraud is that the ACP subsidies go to ISPs, rather than directly to consumers. This creates an incentive for providers to enroll as many subscribers as possible in order to capture the revenues from the subsidies. The incentives appear to be sufficient to encourage some

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<sup>54</sup> Galperin, *supra* note 45.

<sup>55</sup> GAO, *supra* note 46.

<sup>56</sup> *Advisory Regarding Provider Enrollments of Multiple ACP Households Based on the Same Child/Dependent*, FEDERAL COMMUNICATIONS COMMISSION (Sep. 8, 2022), available at <https://docs.fcc.gov/public/attachments/DOC-387009A1.pdf>.

<sup>57</sup> GAO, *supra* note 46.

degree of chicanery (or at least negligence) to obtain the additional revenues. In January 2023, for example, the FCC proposed a \$62 million penalty for wireless provider Q Link Wireless, which was accused of seeking and receiving EBB reimbursements for internet-connected tablets in excess of the market value of the devices.<sup>58</sup>

#### **D. Defining ACP Success in a Competitive Market**

In a perfect world, direct subsidies would have a linear (or better) relationship with adoption and use of broadband. As noted above, this is an idealistic aim, but our goal for a subsidy program should be more rooted in the reality that individuals face. The goal of ACP (and any other similar program) should be focused on adoption where possible, and also on making sure that the economically vulnerable do not unadopt. This is, of course, a fine line to walk. We could over-index in the direction of preventing unadoption, and effectively subsidize the middle class, an endeavor that would be self-obviously economically inefficient.

In light of the interest shown by the FCC and Congress in keeping households online, subsidy programs like the ACP should be designed to minimize market disruption. That is, we know that Congress and the FCC are comfortable intervening in the market, and we want to make sure that intervention is done in the least-destructive manner possible that also yields the greatest possible benefits.

As we have previously noted, the existence of even potential competition across speed tiers has a substantial disciplining effect on broadband prices.<sup>59</sup> Thus, where a subsidy program is used to bring and keep people online, its success can be measured in terms of how many providers are now able to enter a new area. Once two or more providers have established themselves in an area, for example, households in that area can be weaned off of the subsidy program and market regulation can take over. As a competitive marketplace matures for hard-to-connect households, the need for the subsidy shrinks over time.

This is also where digital literacy and similar programs can have some positive effect. For those in the tail of the willingness-to-pay, learning how to use the internet for activities such as job searches, education, and health care will serve to stimulate some demand. Combined with the invigorated competition that flows from vulnerable inframarginal individuals becoming stable customers, such subsidies can provide the needed demand stimulus to grow a functional, self-supporting market.

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<sup>58</sup> Diana Goovaerts, *FCC Proposes to Fine Q Link Wireless \$62M Related to ACP*, FIERCE WIRELESS (Jan. 18, 2023), <https://www.fiercewireless.com/wireless/fcc-fines-q-link-wireless-62m-alleged-acp-fraud>.

<sup>59</sup> Geoffrey A. Manne, Kristian Stout, & Ben Sperry, *A Dynamic Analysis of Broadband Competition: What Concentration Numbers Fail to Capture*, INT'L CTR. FOR L. & ECON. (Jun. 3, 2021), <https://laweconcenter.org/resources/a-dynamic-analysis-of-broadband-competition-what-concentration-numbers-fail-to-capture>.



#### IV. A Roadmap for Reform

As Congress considers additional funding for ACP, lawmakers should consider the following reforms to make the program more effective in helping consumers and reducing the cost to taxpayers. The reforms should have three goals: (1) expand internet adoption among unconnected households and retain connections for vulnerable infra-marginal households; (2) reduce wasteful spending on erroneous or fraudulent enrollments, and (3) empower consumers to choose the devices and services that best fit their demands.

Some of these goals can operate at cross purposes. For example, efforts to increase enrollment in ACP increase the risk of false reimbursement claims. Similarly, efforts to reduce fraudulent claims will likely increase the burden on eligible consumers seeking to successfully enroll in the program, thereby stifling enrollment and adoption. With an eye toward reducing these cross purposes, we propose the following reforms to the ACP.

**Design eligibility criteria to target low-income nonadopters and vulnerable infra-marginal households.** The current eligibility criteria may be overly broad and include households that are neither unconnected nor economically vulnerable. For example, households that live in a school district that offers free and reduced-price school lunch through the U.S. Department of Agriculture's Community Eligibility Provision are eligible for ACP, regardless of their own income or broadband status. Some of this spending is likely wasteful and diminishes the program's effectiveness. Instead, the eligibility criteria should be based on income and broadband adoption, such as households that have no broadband service or only use mobile data plans, or are within a certain percentage of the federal poverty level.

**Provide targeted outreach to increase awareness among eligible households.** Many eligible households are unaware of the ACP or how to apply for it. According to a survey by Pew Research Center, only about half of low-income adults have heard of the ACP or a similar program. This limits the program's reach and effectiveness. The FCC should partner with local organizations—such as libraries, schools, community centers, and nonprofits—to inform and assist eligible households with applying for the ACP. The FCC should also leverage its existing Lifeline program—which provides discounts on phone service for low-income households—to promote the ACP and enroll eligible customers.

**Reduce enrollment complexities.** The ACP's current enrollment process is cumbersome and confusing for both consumers and providers. Consumers have to apply for the program through a website or a mail-in application, verify their eligibility through various documents or databases, and contact a participating provider to select a service plan. Some providers may have an alternative application that they will ask consumers to complete. Providers have to verify customers' eligibility through a national verifier system, report data on their enrollments and reimbursements, and comply with various rules and requirements. These complexities create barriers and inefficiencies for both parties.

The FCC should streamline the enrollment process by creating a user-friendly online portal that allows consumers to apply for and manage their ACP benefits, verify their eligibility through a single source of data, and compare and choose among different broadband options. The FCC should also simplify the reporting and reimbursement process for providers by creating a standardized system that minimizes paperwork and delays.

Indeed, there has long been criticism of the National Verifier program that the FCC uses to administer these programs.<sup>60</sup> The process is error prone and, according to Pew, more than two-thirds of Lifeline applicants using the process abandon their application.<sup>61</sup> In lieu of making their own process work better, the FCC should continue to allow private providers to engage in more efficient, alternative-verification processes.<sup>62</sup>

## V. Conclusion

The ACP is expected to run out of federal funding within the next year. In anticipation of legislation to continue funding, some have called for the program's expansion, while others urge that the ACP be scaled back. Despite its flaws, the ACP is a "good enough" solution and should be continued with some straightforward adjustments.

Approximately 95% of households with access to the internet use it at home, and most obtain that access through a subscription with an ISP. In addition to the 5% of fully unconnected homes, we need to be practically and politically concerned with some portion of the economically vulnerable at the tail of the 95% of current adopters.

Among nonadopting households, some are not aware of the program, some lack digital literacy, some currently access the internet without a subscription, and some have no interest in subscribing to an internet service at any price. On the other hand, the ACP and its predecessors appear to have been successful in subsidizing low-income households that already subscribe to an internet service, allowing these households to maintain at-home internet service through the COVID-19 pandemic and afterward.

The ACP has provisions to prevent and detect waste and fraud, and the FCC has implemented many of them. These provisions include requiring verification of eligibility, identity, and address, and auditing providers' compliance. Nevertheless, the program has experienced instances of fraud and abuse, such as providers enrolling ineligible customers or providers overcharging for equipment.

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<sup>60</sup> Anna Read & Kelly Wert, *Enrollment Hurdles Limit Uptake for FCC's Affordable Connectivity Program*, PEW CHARITABLE TRUSTS (Feb. 28, 2023), <https://www.pewtrusts.org/nb/research-and-analysis/articles/2023/02/28/enrollment-hurdles-limit-uptake-for-fccs-affordable-connectivity-program>.

<sup>61</sup> *Id.*

<sup>62</sup> Unfortunately, the FCC has signaled some reluctance to allow providers to do so. See Masha Abarinova, *FCC Urges Cox, Charter, Starry to Double Down on ACP Verification*, FIERCE TELECOM (May 18, 2023), <https://www.fiercetelecom.com/broadband/fcc-urges-charter-cox-starry-double-down-acp-verification>.

Even so, lawmakers and regulators must accept that any policies to make enrollment easier will necessarily increase the risk of erroneous or fraudulent subsidy payments. Similarly, any policies to reduce these risks will necessarily add additional burdens on providers and consumers and suppress enrollment.

Despite its shortcomings, the ACP is a much better policy than other alternatives, such as direct rate regulation or municipal broadband. Rate regulation would discourage investment and innovation in the broadband market.<sup>63</sup> Municipal broadband would create unfair competition and waste local taxpayer money.<sup>64</sup> Both of these are realistic policy alternatives that are frequently offered by advocates as ways to ease the burden of paying for broadband access by low-income households.

In contrast, the ACP likely fosters investment by encouraging household internet adoption and retention. Unlike municipal broadband, the ACP does not favor one provider over another and does not require any state or local funding.

The ACP is easy to qualify for, but difficult to enroll in. Eligibility criteria should be focused on low-income households that do not already use an internet service at home or are particularly economically vulnerable. Hand-in-hand with tightened eligibility, the ACP should streamline the process and reduce the burden to enroll. At the same time, the program should increase its outreach to eligible households through existing programs to support low-income households, such as SNAP, Medicaid, and Section 8. The FCC should provide funding to local organizations—such as libraries, schools, community centers, and nonprofits—to inform eligible households and assist them with applying for the ACP.

These reforms would make the ACP more efficient and effective. They would likely reduce the program's costs, thereby allowing more of the appropriated funds to be directed toward the households the program is intended to help.

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<sup>63</sup> Eric Fruits & Geoffrey Manne, *Quack Attack: De Facto Rate Regulation in Telecommunications*, INT'L CTR. FOR L. & ECON. (March 30, 2023), <https://ssrn.com/abstract=4412076> or <http://dx.doi.org/10.2139/ssrn.4412076>.

<sup>64</sup> Manne, *et al.*, *supra* note 59.