

CONNECTED CITIES AND INCLUSIVE GROWTH (CCIG)
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Broadband Affordability and the Emergency Broadband Benefit in California

On December 27, 2020, Congress passed the Consolidated Appropriations Act of 2021, leading to the establishment of the FCC's Emergency Broadband Benefit (EBB) program. The purpose of this \$3.2B program is to help low-income Americans connect to the Internet during the Covid-19 pandemic. The program launched in May 2021, and is set to expire when the funds are depleted or six months after the Department of Health and Human Services declares an end to the pandemic. At the time of writing (October 2021), EBB has more than 6 million recipients (about 700K in California), and Congress is discussing several proposals to transition the EBB into a permanent broadband subsidy program.

This policy brief examines broadband affordability in California and explores awareness and adoption of the EBB program among low-income California households.¹ The brief draws from survey data collected between July and August 2021 through the Understanding America Study (UAS) panel.² The full sample comprised 2,143 respondents, of which 515 live in low-income households and are therefore eligible to receive EBB benefits. Pre- and post-stratification weights are applied in the analysis to align the sample with the California adult population.³

For the majority of low-income households that subscribe to broadband, the cost of service exceeds the federal affordability threshold, and many report cutting on essential expenses to pay for high-speed Internet.

Nearly 78% of low-income households in California have residential broadband (which does not include broadband services provided by wireless carriers). This is significantly below the connectivity rate for non-low-income households, which stands at about 94%. Among connected low-income residents, the vast majority (about 95%) pay for broadband service, with less than 2% citing a free broadband connection received through a school, government agency or community organization.

The average monthly cost of broadband reported by low-income households (about \$67) is almost identical to the cost reported by non-low-income households (\$69). This finding suggests there is ample room for promoting affordability among the group targeted by programs such as EBB.⁴ Figure 1 illustrates this finding by plotting the distribution of residential broadband cost reported by respondents. As shown, differences between low-income and non-low-income households are negligible.

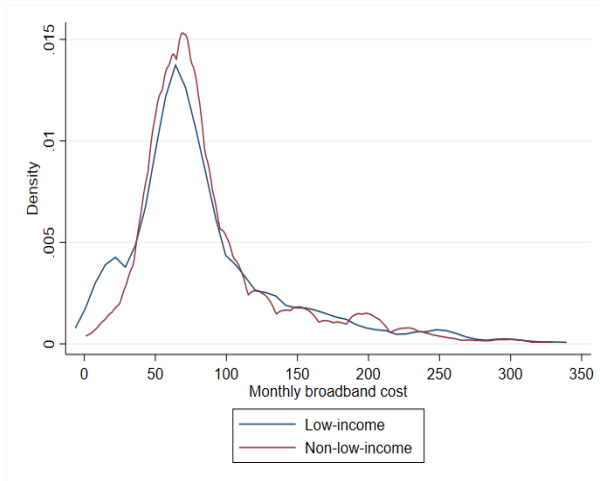
¹ Low-income households are those with annual incomes below 135% of the Federal Poverty Guidelines. This is one of the several eligibility factors to qualify for EBB.

² The survey was generously funded by the California Emerging Technology Fund (CETF).

³ For methodological details of the UAS see <https://uasdata.usc.edu/index.php>.

⁴ Reported costs refer to the monthly cost of stand-alone broadband service, and therefore excludes households that contract broadband bundled with other services such as cable TV and telephony.

Figure 1: Distribution of monthly residential broadband cost by HH income



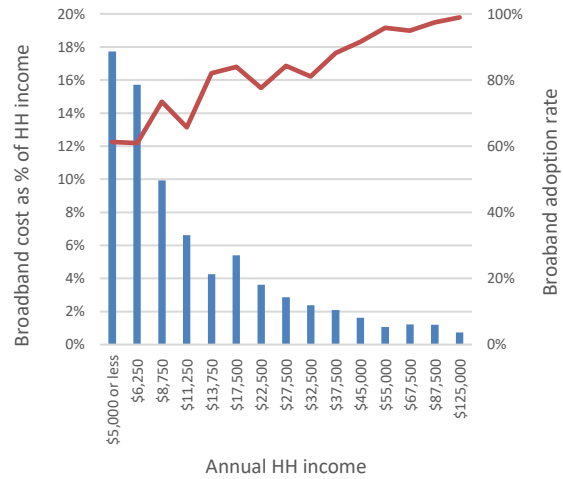
Source: UAS panel (August 2021)

In 2016, the FCC established a benchmark for measuring voice and broadband affordability as the extent to which expenditures for these services exceed 2% of low-income consumers' disposable household income.⁵ To estimate this benchmark based on the UAS data (which contains self-reported household income in increments of \$2,500 or \$5,000), household income values are recoded using the midpoint of the selected bracket.⁶

On average, the monthly cost of broadband as a percentage of income among low-income households is 5.2%, far exceeding the FCC's 2% affordability threshold. Using this metric, as Figure 2 shows, broadband service becomes affordable for a typical household only after annual household income exceeds \$40,000 (for reference, the figure also includes adoption rates for each income bracket). The results indicate that for the vast majority (nearly 70%) of low-income households that subscribe to residential broadband, the cost of service exceeds the federal affordability benchmark.

⁵ Lifeline and Link Up Reform and Modernization, et al., WC Docket No. 11-42 et al., Third Report and Order, 31 FCC Rcd 3962, 4112, para. 408 (2016).

Figure 2: Broadband cost as percentage of annual HH income and residential broadband adoption by income bracket



Source: UAS panel (August 2021)

The high cost of residential broadband as a percentage of household incomes is a key factor in explaining lower rates of adoption for low-income families. This finding is consistent with recent work indicating that, while there are other barriers to broadband adoption, the cost of services remains the primary barrier.⁷

Among those who subscribe to broadband, high cost means sacrificing on other essential expenditures. About a quarter (24%) of low-income households that subscribe to residential broadband report having to cut on other essential expenses (“such as health care, food or clothing”) to pay for broadband during the past year. Lack of affordability disproportionately affects minority households, with Black, Native Americans and those who identify as Hispanic twice as likely to report having to cut on essential expenses to pay for Internet access.

⁶ For example, households in the \$5,000-\$7,500 bracket are recoded to \$6,250, those selecting the 15,000-\$20,000 bracket are recoded to \$17,500, and so forth.

⁷ See USC-CETF Statewide Broadband Adoption Survey, March 2021.

Only a small share of potential EBB recipients is aware of the program, and findings suggest the need for increased outreach efforts among older adults and in immigrant communities.

Only about 20% of low-income respondents are aware of the EBB program, which helps explain the low program participation rate.⁸ However, when asked more generally about *any* affordable Internet program (including the Federal Lifeline program and those offered by ISPs pre-pandemic), awareness climbs significantly to about 45%.

There are noticeable variations in awareness for different groups of potential recipients. It is significantly lower among older adults (65+), with less than 8% reporting to know about the EBB program. Awareness drops further (to about 5%) among older adults who lack residential broadband, although about a third in this group are aware about the existence of affordable Internet programs in general.

Immigrant families are also considerably less likely to have heard about the EBB program (about 16% awareness) than those who are not immigrants (21% awareness). This finding suggests potential cultural and language barriers that depresses participation rates. Among those that identify as Hispanic, EBB awareness climbs slightly to 18%, indicating a need to increase outreach in other languages in addition to Spanish.

Contrary to expectations - given the efforts by schools and school districts to connect students throughout the pandemic - families with school-age children are no more aware of the EBB or other affordable Internet programs than other families. This finding suggests there is still room for strengthening outreach efforts by educational institutions to connect K-12 families.

Lack of information about eligibility requirements and the application process deter potential recipients from applying to EBB and other affordable Internet programs.

The findings point to other barriers for participation in EBB and other affordable Internet programs. Overall, 40% of respondents who are aware of *any* affordable broadband program report having filed an application. Calculated over the total number of low-income households in the sample (regardless of awareness), this yields an overall application rate of about 17%.

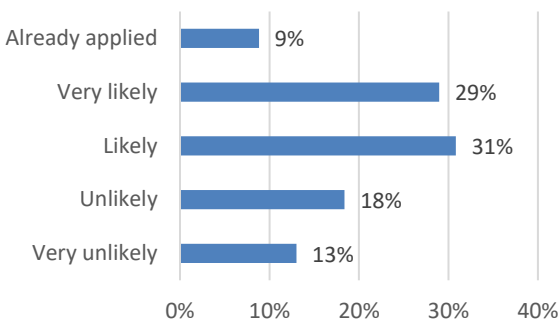
The results reveal a very significant difference in application rates for families with school-age children. Out of those aware of any affordable programs, 53% of families with children have filed an application at some point in time, compared to only 35% for families without children. This difference reflects the fact that many programs put into place during the pandemic explicitly targeted K-12 families.

When asked about the reasons for not applying, the most common response was a belief that the household would not be eligible (46%), followed by not knowing how to apply (25%) and not understanding the application process (7%). This again points to the need to renew information campaigns and onboarding efforts at the community level to facilitate application procedures for eligible households.

Finally, the survey asked low-income respondents how likely they are to apply to the EBB benefit (a general overview of the program was offered to all respondents). While a small share (9%) had already applied, nearly 60% said they were either likely or very likely to apply. This result suggests a large untapped demand for the EBB benefit, and the urgent need to provide better information and application support for potential beneficiaries.

⁸ According to the latest figures available, there are about 730K EBB recipients in California, out of an estimated 3.6M eligible recipients (based on Lifeline eligibility and ACS 2019 data).

Figure 3: “How likely are you/your household to apply to the EBB program?”



Source: UAS panel (August 2021)

Conclusion: Community-level strategies for enhancing the impact of affordable Internet programs.

Since May 2021, the EBB program has provided much-needed relief to over 700,000 low-income families in California, considerably lowering the affordability barrier for broadband. The program was put into place as the pandemic exposed how reliable, high-speed access to the Internet has become essential for employment, education, health, and many other activities.

At the same time, the findings of this report highlight numerous ways in which EBB and similar programs are falling short of their goals. One in four low-income households in California does not have residential broadband, and the cost for those who are connected far exceeds the affordability benchmark established by the FCC. This suggests a large yet untapped opportunity to expand the reach of EBB and similar programs that reduce the affordability barrier.

In addition, the findings indicate that lack of information about eligibility and the application procedures for these programs are deterring many potential beneficiaries. The findings also indicate the problem is particularly acute among those with lower levels of digital literacy (such as older adults) and for immigrant households.

In general terms, EBB seems to be helping many but failing to reach those who need it the most.

Enhancing the impact of the EBB program through better matching with target beneficiaries is an urgent task, one that will require cooperation between the various stakeholders involved. Increasing program awareness and providing support for onboarding is a critical task for which schools, churches, and other community organizations are ideally positioned.

There is also an urgent need to transition EBB into a more permanent program to mitigate concerns about price increases for households once the allocated funds are exhausted. A permanent subsidy program based on sustainable funding will also create a foundation for Internet Service Providers (ISPs) to realign their existing offerings and make long-term investments in connecting low-income households.

About the project

This document is part of the Connected Cities and Inclusive Growth (CCIG) project, a project of the USC Annenberg School for Communication. For more information visit arnicus.org/research/connected-cities.

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