State Recovery Now

Policy Playbook

Enhancing Access to the Digital Economy: Connecting Low-Income Americans to Broadband

A guide to helping communities make broadband accessible to low-income residents

Executive Summary

Today, approximately 29 million of the 123 million households in the United States do not have high-speed broadband. Despite the availability of affordable broadband plans for the last ten years, 20 million of these households, representing over 55 million people, are offline because they cannot afford an available Internet connection. Many of those unconnected are eligible for federal subsidy programs that are already in place, but either do not know about them or do not know how to sign up. Furthermore, in America's most unconnected communities, where 38% of households do not have home broadband, 20-25% of these residents without broadband live in low-income apartment buildings. By installing infrastructure for free Wi-Fi into these buildings, we can make a significant impact on closing the digital divide.

A one-time investment of American Rescue Plan (ARP) funds presents a compelling opportunity to connect low-income Americans to broadband, implemented through two policies that go hand in hand:

1. **The Free Apartment Wi-Fi program:** Addressing challenges in broadband access by installing Wi-Fi infrastructure in low-income apartment buildings and providing residents with access to that connection.
2. **An outreach campaign to sign up for federal broadband subsidy programs:** Helping low-income families sign up for existing federal broadband subsidy programs and for broadband service; supporting families through the sign-up process.

ARP funds are well-suited for this use because (1) providing Wi-Fi infrastructure in hallways and common areas of apartment buildings has a considerably high one-time cost, (2) monthly connection costs by building are not considerably high and could be partly offset by the city or state, (3) getting people to sign up for federal broadband subsidy programs has a fixed cost to run an outreach campaign, and (4) the outreach program could remain in service as a hotline for those seeking help in the future, with very low operating costs.

These policy models are proven to be cost-effective: the Wi-Fi infrastructure installation costs typically $300 per apartment to wire hallways and common areas (versus $1,500 per apartment to install wires into each unit) and the direct outreach and signup support is estimated to cost US$85 per household in a typical city, although this estimate does not include general awareness building.

Access to broadband has proven benefits for both individuals and communities. From increasing labor participation and reducing unemployment, to boosting income and economic growth, as

well as improving social outcomes.

Crucially, this policy would be targeted to individuals from traditionally marginalized communities. America's most unconnected communities, have a larger proportion of Black (67% more) and Latinx (60% more) households and twice as many people living in poverty.

Background

Today, approximately 29 million of the 123 million households in the United States do not have high-speed broadband. Despite the availability of affordable broadband plans for the last ten years, 20 million of these households, representing over 55 million people, are offline because they cannot afford an available Internet connection.

Access to broadband has proven benefits for both individuals and communities. From increasing labor participation and reducing unemployment, to increasing income and economic growth, as well as improving social outcomes.

Many among the 29 million households unconnected from broadband in the United States are eligible for federal subsidy programs that are already in place, but either do not know about them or do not know how to sign up. Furthermore, in America's most unconnected communities, where 38% of households do not have home broadband, 20-25% of these residents that lack a connection live in low-income apartment buildings. Installing infrastructure for affordable Wi-Fi into these buildings can make a significant impact on closing the digital divide.

Policy Overview

To overcome challenges associated with connecting low-income Americans to broadband, state and local governments should consider allocating a portion of American Rescue Plan Act (ARP) funds to create broadband adoption maps, which they can use to (1) target low-income multi-apartment buildings to install Wi-Fi infrastructure and provide free access to residents, and (2) implement an outreach campaign for households not living in low-income buildings to learn about their eligibility for the federal broadband subsidy program and walk them through the signup process. The two policies are intended to work hand-in-hand.

1. **The Free Apartment Wi-Fi program:** Address challenges in broadband access by installing Wi-Fi infrastructure in low-income apartment buildings. This involves wiring hallways and common areas with Wi-Fi access points, activating an Internet connection in the building for those access points, and providing residents with the Service Set Identifier (SSID) and password to access that connection.

2. **An outreach campaign to sign up for federal broadband subsidy programs:** This campaign educates and helps low-income families sign up for existing federal broadband subsidy programs and for broadband service, supporting them through the process of signing up. The necessary implementation steps are:
    a. Conduct a marketing campaign to spread awareness of the program;
    b. Collect data on which households are and are not connected to the internet;
    c. Coordinate outreach, primarily run at the local level; and
    d. Provide ongoing technical support to walk families through the process of signing up for both the subsidy program and the actual broadband service.

This intervention builds on evidence from pilot programs, including one currently running in Oakland, CA that has installed free Wi-Fi in five low-income apartment buildings. It also builds on evidence from both the Chicago Connected pilot program and the Clark County, NV school district, which has proven the effectiveness of an outreach campaign in helping residents learn about subsidy programs, sign up for them, and sign up for home Wi-Fi.

Outcomes

In America's most unconnected communities, where 38% of households do not have home broadband, 20-25% of the digital divide is concentrated in low-income apartment buildings. These communities have 67% more Black households, 60% more Latinx households and twice as many people living in poverty than the national average.

Connecting low-income Americans to broadband would help close the affordability gap, as it would focus on communities where there is access to broadband infrastructure. It is estimated that up to 20 million of the overall 29 million unconnected American households. cannot afford a broadband connection under the current market.

As a best practice for the Free Apartment Wi-Fi initiative, it should be required that landlords of low-income buildings provide free access to all tenants residing in a building that adopts the program. Furthermore, while the city can concentrate on reaching particular landlords of particularly marginalized areas, the programs should allow any low-income building landlord to opt-in.

Associated Costs

For the Free Apartment Wi-Fi program, Wi-Fi infrastructure installation in a building typically costs $300 per apartment to wire hallways and common areas (compared to $1,500 per apartment to pull wires into each unit). Other costs on the Free Apartment Wi-Fi initiative are monthly internet access and maintenance. In Oakland, these costs have ranged from $200-500 a month per building. Cities and states could partner with ISP to reduce these costs by providing direct connection to the city network (paid by the city) or by negotiating multiple contracts with ISP at once.

The direct outreach and signup support campaign is estimated to cost US$85 per household in a typical city, although this estimate does not include general awareness building.

Assessing the Return on Investment

There are known benefits from increasing access to broadband for both individuals and communities. Broadband makes it easier for people to search and apply for jobs and increases productivity at the firm level, and can in turn translate into higher wages. Research shows that higher broadband adoption at a macro level increases incomes, boosts economic growth, and lowers unemployment. Furthermore, there is evidence that reducing the digital education gap for low-income households increases schooling and learning, which translates into additional lifelong income. Lastly, there are possible direct and indirect effects of broadband on improving social support and health outcomes.

Evidence of Action

EducationSuperHighway has published papers and case studies on similar programs that are currently being run in different cities in the United States. In a white paper, "Closing the Digital Divide with Free Apartment Wi-Fi: An Infrastructure Solution for Connecting Low-Income Americans", the team explains the success

as well as the challenges faced by a pilot program currently been implemented in Oakland, CA which has been successful in the adoption of the Free Apartment Wi-Fi program in five low-income apartment buildings.

A case study on Chicago Connected presents compelling evidence that outreach campaigns can be successfully implemented through local authorities to increase sign up on the federal subsidy program. Further evidence can be found in a case study of a program recently run in Clark County, NV.

How is this a compelling use of one-time funding that can drive long term-impact and avoid unsustainable funding?

One-time ARP funds are well-suited for connecting low-income Americans to broadband because:

1. Providing Wi-Fi infrastructure in hallways and common areas of apartment buildings has a meaningful one-time cost (over $300 per apartment).
2. Total monthly costs by building thereafter are low ($200-$500 according to a pilot run in Oakland) on a per building basis and could be partly offset by the city, if it is willing to provide internet connections to buildings by partnering up with Internet Service Providers. Cities can further reduce these costs by providing direct connection to the city network (paid by the city) or by negotiating multiple contracts with ISPs at once.
3. Getting people to sign up for federal broadband subsidy programs has a considerable short-term component, with a fixed cost to run an outreach campaign and help residents go through the signup process.
4. The outreach program could remain in service as a hotline for those seeking help in the future with very low running costs.

Authority for ARP Spending: States and Local Governments may implement this policy using funds under Services to Disproportionately Impacted Communities (EC3) and under Water, Sewer, and Broadband Infrastructure (EC5).

Implementation

To ensure effective implementation, state and local governments should assess readiness and engage relevant partners early on.

Assessing Readiness

States and cities will need to map adoption gaps to implement the outreach campaign and to target landlords in low-income buildings to implement the Free Apartment Wi-Fi program. While states have an advantage over cities regarding planning and tracking, cities and local authorities are better equipped and have gained higher trust for the implementation of the outreach campaign, as well as working with landlords from low-income buildings.

States and cities will also need to coordinate with Internet Service Providers on the best way to expand broadband to buildings currently unconnected.

Essential partners for successful implementation

- Landlords, who are typically supportive because it makes their buildings more attractive to tenants. In Oakland, landlords have typically covered the up-front costs.
- Internet Service Providers and utility companies, as most will already have fiber in their networks.
- School districts, federally qualified health centers and free clinics, which can provide contact information for unconnected families.
- Local housing authorities, which could be in control of buildings the free apartment Wi-Fi program targets and can have the connection with landlords who may want to opt in.

Engaging Stakeholders and Beneficiaries

Engaging early with stakeholders and beneficiaries can make the program implementation run smoother, as there are many gears moving at the same time. Three key stakeholders that should be engaged early on are:

- Internet Service Providers, which the state/city could partner with to provide internet connections for apartment buildings at a reduced cost.
- A center of operations at the state level, which should do the planning, program management, and tracking, and should provide technology and funds for local partners to use in their outreach campaigns.
- Local community authorities and partners (county, cities, and school districts), as they should be the ones doing the outreach, calling families to educate them and provide help throughout the signup process. Local authorities are better suited for this step due to higher levels of trust.

Risk Mitigation

What could go wrong?

- "Tragedy of the commons": As there is no fee related to the amount of bandwidth used, some people might use a significant amount of the network's bandwidth capabilities, making it hard to use for the rest of the tenants.
- Low competition: Some buildings may only have access to one Internet Service Provider, which could increase costs or limit the quality of the connection.
- Privacy and security: As a single internet connection will be open to many apartments, privacy and security of information could be at risk.

How can we mitigate the biggest risks?

The following actions can help mitigate these risks:

- The program can put limits in place for individual devices and households on bandwidth use.
- Alternative internet backhaul options can be explored, such as connecting to existing municipal fiber networks or using wireless mesh technology to deliver connectivity to buildings.
- By following network security best practices for protecting user privacy and enabling built in features of modern Wi-Fi equipment, privacy and security issues can be minimized.

Data and Learning Strategy

Baseline Systems: Necessary inputs to implement the policy effectively

For planning and tracking these initiatives, an ideal approach is a center of operations at the state level that is in charge of mapping the accessibility gap, which can then be used for both initiatives to target their implementation. This center of operations could be part of a current office in the state which deals with digital inclusion, broadband, or connectivity in general.

For the outreach campaign, there should be a local office in charge of contacting and following up with residents, while either the local office or the centralized state center of operations can be tasked with providing signup support. The local office can be used in the longer term as a hotline for people looking for signup help.

Measuring Progress: How can progress toward the desired outcomes be measured — both to assess progress and inform improvement along the way?

The goal of this policy is to reduce the broadband affordability gap and increase access for all people in places where broadband infrastructure is already in place to connect them. This proposal allows states and cities to set credible estimates of the total number of households in their jurisdiction for which broadband affordability is the main obstacle to connecting, empowering them to target these households with either a common connection in their apartment building or signing them up in the federal broadband subsidy program. Progress can be measured using the following metrics annually:

- Number of households/residents with access to broadband from their homes, which is key for both programs to track outcomes.
- Cost of providing access to Wi-Fi connection per apartment: For the Free Wi-Fi apartment initiative, a key performance indicator is the fixed cost of providing access and how it can be reduced by adopting best practices.
- Cost of continued access to Wi-Fi maintenance per apartment: For the Free Wi-Fi apartment initiative, another key performance indicator is regarding how to make it less costly for landlords to maintain and guarantee continued service monthly.

Additional Resources

Closing the Digital Divide with Free Apartment Wi-Fi: An Infrastructure Solution for Connecting Low-Income Americans - A white paper prepared by Education SuperHighway that outlines the benefits of the Free Apartment Wi-Fi program, as well as the steps policymakers can take to implement this initiative.

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