MDU Community Connect Program

User Guide

What is the MDU Community Connect Program

The MDU Community Connect Program is a ready-made, customizable solution for accomplishing broadband adoption goals by sustainably lowering the cost of high-speed broadband through the deployment of infrastructure within an MDU. Its design is informed by and structured from past and present government-funded MDU infrastructure programs across the United States, incorporating learnings from their grant administrators, participating providers, and property owners.

As much as 25% of the digital divide is concentrated in public and affordable housing, where residents report a lack of affordable options as the reason they are not connected to high-speed broadband at home. This issue impacts both rural and urban communities, and the flexible design of this program allows it to effectively address the broadband challenges in both settings. Grant programs utilizing sourcing funds, such as BEAD, are a powerful tool for driving down subscription costs to MDU households for the following reasons:

1. Subsidizing some or all of a service provider's upfront expenses lowers the consumer's monthly bill because the provider does not need to include the recovery of their capital investment in the monthly fees.
2. When infrastructure is improved, existing and new providers can compete more evenly because existing infrastructure no longer discourages new companies from entering the market. When procured through an open process with guaranteed funding from a government, a more competitive marketplace is created, ultimately driving prices down.
3. Grant programs reduce a provider's cost of acquiring new customers by bringing together interested potential property owners. Providers can then transfer these savings to consumers and often offer portfolio discounts for acquiring groups of new customers.
4. Providing digital inclusion programming to improve adoption rates increases the expected number of new customers within an MDU. With higher projected new customers, expected revenue also rises, allowing providers to offer a discount on the monthly rates.
5. Similarly, offering a period of free service enhances adoption rates of the new network, resulting in increased expected revenue throughout the contract duration. This enables providers to offer discounted monthly rates.

These opportunities and advantages inform the design of components of the MDU Community Connect Program while incorporating strategies to minimize the burden of participation for all project partners.

How to Use the Program

The MDU Community Connect program is also a model framework—grantors will want to customize it to match their organization's goals and local conditions. This companion document was developed to help grantors understand why certain choices in the grant program design were made. It highlights

decision points within the program and the trade-offs to consider when customizing it for use. Each section of the program is broken down accordingly.

EducationSuperhighway offers pro bono support to grantors, assisting them in customizing and creating their versions of the program to accommodate their unique circumstances.

I. Overview and Objectives

This section provides an overview of the requirements and program process and is expanded in more detail in subsequent sections.

II. Definitions

The provided definitions are standard, except for "Project," which explicitly refers to implementing this grant program within a single community.

III. Eligible Applicants

To determine eligibility for the program, the grantor must clearly define applicant categories. Promoting partnerships and diversifying the types of applicants can attract new participants to the market. Consequently, the MDU Community Connect program welcomes a range of applicants beyond traditional service providers, including qualified government agencies, non-profits, and in-house IT teams. With the capacity and expertise to deliver broadband services, these entities can enhance program outcomes by integrating digital inclusion initiatives and deploying solutions tailored to community needs. However, managing a diverse applicant pool can be complex; thus, focusing on similar types, such as ISPs and MSPs, may streamline the assessment and administration process.

The program does not necessitate housing providers serving as lead or co-applicants, as they often lack the capacity to apply for technical grants or secure their broadband provider, which can significantly deter their participation.

IV. Participating Communities

For purposes of this program, in this and all related documents, MDU properties will be referred to as “communities.’ To be eligible, these communities must meet the definition of a “low-income community” as defined in the Definitions section. This eligibility can be easily adjusted by updating the definition of “low-income community” throughout the grant period. The current definition evaluates whether household rents are subsidized, ensuring a more straightforward assessment than a traditional income-qualifying criterion that requires detailed income data from residents, that may cause an undue administrative burden.

Additional eligibility criteria to consider beyond what is included in the program include the absence of certain high-speed broadband technologies (e.g., fiber to the unit), lack of affordable Internet service options, or a limited number of existing providers.

The program does not rely on broadband providers to find eligible communities and secure housing partner buy-in to serve as the lead or co-applicants. Although providers have sales teams that the program encourages them to use to expand the candidate pool of housing communities, these teams cannot operate at the scale required to meet the program's goals within the application timeline. Effectively identifying suitable communities, building trust with property owners, and coordinating joint grant applications require significant time and resources that sales teams may not possess.

For these reasons, the program is structured so the grantor can provide a pre-verified group of eligible housing partners interested in participating. The grantor gathers essential community data applicants need to create and share a network design. This reduces the workload for both housing partners and broadband providers, making it easier for them to participate. As a result, the grant process is streamlined, ensuring timely execution and encouraging more competition.

To effectively determine the scope and scale of a grant program, it's crucial to assess the number of affordable properties across the program's service area. Data can be gathered from Housing and Urban Development (HUD), private real-estate databases, and local government economic development departments. Additionally, analyzing state and federal broadband maps, the U.S. Census Bureau's American Community Survey (ACS), and information from local community organizations can help to identify regions with low broadband adoption rates, which may be attributed to insufficient affordable options or inadequate infrastructure.

V. Eligible Use of Funds

The program will cover all capital expenditures, including equipment purchases, construction, leasing, professional services, and warranties. Additionally, it will include costs related to internal wiring and connections to buildings and network operation centers. The program will also fund the broadband provider's operational expenses during the *first year*, extending free service to all residents. This approach enables housing operators more time to prepare to cover the cost in future years and/or allows the provider to demonstrate the quality of the service to residents who may choose to subscribe at a low rate after the initial free period.

Note that funding sources, including operating expenses, may restrict which costs are eligible in an MDU grant program. Generally, higher capital funding should result in more affordable subscription or bulk pricing, as capital costs do not need to be recouped through monthly service fees.

The leasing of facilities required to provide qualifying broadband service, commonly procured through indefeasible right-of-use (IRU) agreements, fiber, equipment space at internet interconnection points, and capital leases, can significantly increase operating costs. Consider adding

these as an eligible use of funds aligned to the performance period to drive down the monthly service fee further.

When reviewing project costs, Grantors may employ a variety of evaluation perspectives. They might assume a total project cost or cost per unit or establish an understanding of when extraordinary costs may be valid or when they might be flagged. Historical costs for projects of this type have been within the $1000-$2000 per unit range, varying depending on local conditions, portfolio size, and contract term lengths.

Grantors may wish to limit the degree of eligible use of funds offered based on local conditions. For example, as fiber installation costs vary widely across the U.S., grantors might limit funding for last-mile fiber costs necessary for an MDU project. The source of funds for the program may also dictate the degree of last-mile costs covered; for example, a Community Development Block Grant that funds a broadband project must ensure that the network only serves the intended population. A grantor may need to balance limiting funds to the intended population and allowing the fiber provider to use the asset for additional business opportunities to make the grant attractive to applicants.

Leveraging municipal network transport could substantially reduce ongoing costs, allowing for more affordable subscription pricing.

VI. Project Requirements

The program requires the applicant to demonstrate effective wireless broadband capabilities within the communities without dictating a standard solution. This allows for innovation and responsiveness to the challenges of providing Wi-Fi in varied building styles and construction types.

Network Design Requirements

A preference for wiring to the units and providing in-unit Wi-Fi equipment would be to encourage robust (fiber or ethernet) interior wiring to “future-proof” the property, increase the asset's value, and enable multiple providers to service the property. Alternatively, the 'hallway model' features shared access points (such as Internet equipment in hallways, common areas, and mechanical closets) that effectively cover all apartments. This approach offers several advantages, including lower costs, faster deployment, and eliminating the need to enter residents' apartments, which may encourage community owner participation in the program.

The program contains a two-step design process that enables applicants with promising desktop designs (network diagrams based on property owners' submitted information, i.e., building plans) to refine their designs and costs based on a site visit.

Customer Premises & Shared Equipment

Ownership of equipment and wiring is a crucial factor in project requirements. In a retail environment, broadband equipment is generally owned by the participating Internet Service ISP or MSP. However, this program specifies that the service provider is responsible for maintaining all equipment, wiring, and related warranties while the infrastructure remains the building owner's property.

To extend the lifespan of the equipment and delay the need for replacement, grantors should require customer equipment, i.e.,in-unit routers, to be compatible with the latest operating systems (WIFI 6/7, today). Additionally, property owners should maintain ownership of internal fiber or Ethernet wiring, as this ensures longevity and reduces maintenance requirements. Retaining ownership gives property owners the flexibility to choose or switch service providers without being constrained by restrictive contracts or needing to renegotiate access to equipment they do not own. This also protects them from incurring extra service fees or equipment leasing costs from ISPs or MSPs, resulting in significant long-term savings.

Municipalities may also consider owning or managing the internal wiring within buildings in instances where municipal services are delivered through the communication infrastructure or where a municipal fiber network facilitates internet access. This strategy could further enhance operational cost savings at the unit level.

Minimum Performance Requirements

The program proposes a minimum 100/100 Mbps service speed, despite the FCC's current definition of broadband as 100 Mbps downstream and 20 Mbps upstream (100/20), to account for increased video calling, streaming, and the proliferation of Internet of Things (IoT) devices in homes. For MDUs, a combination of fiber backhaul and internal fiber or ethernet cabling is the best means to achieve these speeds. Wireless backhaul (a building's connection to the internet) is also capable of meeting these symmetric speeds, and its lower cost and faster speed of deployment should be considered and weighed against wired's longer-term resiliency. A minimum latency and bandwidth at user devices are required to ensure reliable service, whether using wired or wireless backhaul technology. This ensures that the network can meet the needs of large families and support high-demand activities, regardless of the infrastructure used.

Note: Many MDUs will have coaxial cables running internally, a legacy of the cable industry, as providers of television and internet services. DOCSIS 4.0 or G.hn are technologies that can provide speeds capable of meeting the requirements of this grant program using these cables. While this solution is feasible and offers significant cost savings, grantors should exercise caution when applying it, as it is not as widely used as fiber or Ethernet. Additionally, its long-term scalability has yet to be proven.

Affordable Service Plans

The program requires broadband providers to discount their operating costs for a specified period in exchange for capital funds from the grantor to build networks to and within MDUs. Applicants must ensure pricing transparency to clearly demonstrate how these discounts are applied. Additionally, the grantor may hold applicants accountable by surveying advertised prices for comparable broadband services in the region to assess market rates.

For housing providers that choose not to participate in the bulk option, affordability goals can still be achieved by offering discounted rates to residents. Providers can establish contracts as retail or bulk hybrids, starting with a bulk model during the subsidized operational period and transitioning to the retail model after that. This hybrid approach maximizes the impact of the grant through bulk pricing while ensuring long-term sustainability by relieving housing partners of ongoing service costs and locking in affordable rates for residents throughout the contract period.

This program also suggests that companies offer both non-exclusive and exclusive marketing agreements. As the agreements become more exclusive, allowing additional marketing access to residents, applicants will be incentivized to provide larger subscription discount rates.

The FCC mandates disclosure of exclusive marketing agreements and requires that revenue payment to the owners be fixed; however, during this program's performance period, housing providers cannot receive any revenue from service providers. Once the grant contract term concludes, revenue sharing can be utilized to ensure network sustainability, allowing property owners to reinvest shared revenues to further subsidize or reduce broadband costs for residents.

Moreover, longer contract terms often lead to lower monthly rates for residents. Crucially, providers are more likely to offer competitive pricing when they secure a long-term commitment from property owners, which applies to bulk and retail marketing agreements.

Workforce Development [Optional]

Public and affordable housing programs often incorporate resident support initiatives such as job training, employment assistance, healthcare, and digital literacy. To strengthen these efforts, affordable housing broadband initiatives are essential. Furthermore, infrastructure projects create opportunities for community members to gain practical experience in network construction, marketing, and user adoption. These programs empower residents by providing access to high-quality, affordable broadband, enhancing their access to jobs, education, and civic engagement. Therefore, grantors should prioritize applicants who effectively integrate workforce development into their housing initiatives.

VII. Grantee Selection Process

State laws will dictate the evaluation criteria for applicants, and this program provides a customizable procurement evaluation process that is adaptable to local regulations. An initial pass/fail test filters out subpar technology solutions, streamlining the process and minimizing administrative overhead by eliminating detailed assessments for unqualified applications. A second scale rewards lower-cost service, and a third, more qualitative evaluation of the project is employed to ensure alignment with program objectives. This flexible approach enables the Grantor to compare varying proposals, considering differences in service quality, cost, and alternative offerings.

The primary aim of any procurement is to establish a clear and evidence-based objective evaluation method. The proposed scoring system seeks to achieve this while accommodating a range of connectivity solutions that ultimately enhance the end-user experience.

VIII. Information Required from Applicants

The information requested in this section focuses on network and program design requirements, scope of work, bill of materials, budget, and other narrative questions, allowing applicants to describe their proposed solution in detail. State laws will dictate the information applicants require to engage in public procurement, which may include additional information such as company history, senior staff, financial disclosures, and other attestations.

When requesting disclosure of financial and past experience qualifications, consider offering a Non-Disclosure Agreement (NDA) option. This will encourage smaller providers, who may not be publicly traded, to participate in the program since they can protect sensitive information. To reduce the administrative burden on the grantor, applicant information that is not unique to the project design requirements could be collected during an earlier pre-qualification round, during which applicants who have passed the pre-qualification round may bid on the properties as they become available.

IX. Project Status and Reporting

This section outlines the project reporting requirements, which are crucial for ensuring timely completion, reimbursement, and demonstrating network efficacy. Regular progress reports will track deployment, while annual reports on network usage will give the property owner valuable insights and inform future funding and procurement strategies.

X. Agreements & Payment Terms

This program proposes establishing a tri-party agreement that delineates the responsibilities of the Grantor, Housing Partner, and selected applicant. A contract will also be formulated between the Housing Partner and the chosen applicant to provide Internet service.

The grantor will be responsible for developing the agreement; however, post-award, they will release funds based on a mutually agreed milestone schedule. Funds will be allocated to the Housing Provider upon fulfilling milestones specified in the contract between the Housing Provider and the Service Provider, enabling the Housing Provider to make scheduled payments. Alternatively, payment may be made upon project completion to alleviate the administrative burden on the Grantor and the Housing Provider. By structuring the agreement this way, the Grantor avoids direct payments to the Service Provider, thereby establishing clear contractual terms that facilitate a smoother transition when financial responsibility shifts to the Housing Partner after the conclusion of the program funding.

It is important to note that payment schedules and methods may need to be adjusted per local laws or the internal processes of the Grantor's office.

XI. Execution and Performance

This section enforces performance accountability with required start-by and finish-by timelines. The performance period is five years, but a longer contract term will likely yield more affordable pricing and ensure a stable revenue stream over an extended period.

Sustainability

While we currently benefit from significant federal investments through the Infrastructure Investment and Jobs Act, via the BEAD program, interest in broadening and enhancing broadband networks may wane over time. Therefore, grantors must critically assess the sustainability of these new networks and actively explore strategies to support their longevity in the future.

Grant funding will ensure affordable pricing and rates vital for sustaining provider business models during the performance period. Following the grant period, funding-related restrictions may be lifted, providing partners with enhanced opportunities to maintain the network.

HUD will subsidize operating costs for Section 8 housing partners through Housing Assessment Payments when a new rent comparability study incorporates the latest internet service data[1]. Additionally, HUD is beginning to permit the use of Administrative Fee Reserves to subsidize broadband services.

Project partners should also consider sharing costs with residents. For instance, property owners might cover backhaul expenses while residents are responsible only for the service provider's operating costs. This collaborative approach reduces financial strain on both parties, making overall expenses more manageable.

1 https://www.hudexchange.info/resource/4851/section-8-renewal-policy-guidebook/

Refer to the Affordable Service Plans section for additional models focused on sustaining affordability.

Regarding the technology, Managed Wi-Fi is a sustainable, future-proof solution for residential buildings. It addresses connectivity challenges and ensures long-term flexibility and scalability. Unlike traditional service delivery, it streamlines access, providing seamless connectivity for residents without requiring individual service contracts or complex installations.

A key advantage of managed Wi-Fi is its scalability, with dedicated internet circuits expandable up to 100G symmetrical. Using CAT6 wiring to wireless access points enables delivery of up to 10G symmetrical service to end users, supporting even the most bandwidth-intensive applications.

The enterprise-grade infrastructure behind managed Wi-Fi typically lasts 7 to 10 years, extending replacement cycles to reduce e-waste and lower the total cost of ownership. Components needing replacement can be upgraded using existing cabling, ensuring continuous improvement without significant overhauls.

Moreover, property owners maintain long-term control over their network assets. Upon contract completion with a managed Wi-Fi provider, they retain ownership of the network infrastructure, allowing them to pursue competitive proposals from other service providers. This flexibility ensures access to optimal services and pricing, enhancing the network's sustainability and financial viability.