

## Fiber Is the Way

Fiber solutions for multifamily are the way of the future but may be too expensive in some brownfield properties. There are viable alternatives.

By Kevin Donnelly / *National Multifamily Housing Council* and Valerie M. Sargent / *Broadband Communities*

**F**iber is the gold standard. Yes. Fiber for multifamily is the way of the future. Sometimes. Maybe. It depends. Confusing? Yes. Is that typical in multifamily? Yes.

Fiber is certainly the logical choice for new multifamily communities installing broadband infrastructure. Apartment firms focused on development rightly see fiber as the gold standard for meeting the needs of today while planning for expanded capacity down the line. Fiber's capacity to ensure residents have seamless, high-speed connectivity to meet teleworking, remote learning, entertainment and even telemedicine needs are key factors in why it is seen as essential for meeting resident expectation and demands.

But behind the walls and less thought about, yet just as important, is fiber's ability to support expanding demand for bandwidth to run property management systems and smart-home and smart-building technologies that improve efficiency and increase net operating income and property valuations.

Whether bringing a fiber solution into a multiple-dwelling-unit (MDU) environment makes sense really depends on the apartment community's unique situation and the economics of making fiber work while not affecting the overall affordability of the property.

In new construction, laying fiber is very simple and cost-effective. The cost is built into the front end and distributed evenly, with the investment recouped over time. The challenge comes when the cost of a fiber overbuild in an existing property may be too high for smaller communities, the affordable market or even niche properties.

We have talked before about senior or student housing, and how those segments of the industry operate on a very tight margin. Aesthetics have been upgraded in some older buildings, but the communications backbone is a more significant cost, and many are unable to make those broadband upgrades for any number of reasons. They often simply don't have the ability to transfer that cost back into monthly rents.

So, even though fiber is "the way" and the best route, no single silver bullet infrastructure solution can meet the needs of such a diverse multifamily housing stock.

### FIBER ALTERNATIVES

If installing fiber isn't a viable option for a particular community, other solutions may work better to deliver the

connectivity residents need. Some are available now, and some will emerge soon.

Managed Wi-Fi solutions are increasingly popular for a wide variety of properties with varying infrastructure backbones, given the ability to provide a seamless solution that can be cost-effective. Coax cabling is another key solution, but it often gets a bad rap for not being sufficient to handle bandwidth and provide symmetric upload and download speeds. DOCSIS 4.0, new coax technology that cable broadband providers are testing, could help coax match the benefits of fiber in the near future.

With owners needing to balance the demands of today with cost-effective solutions, both fiber and DOCSIS 4.0 may still be too far out of reach. Some providers are turning to new technology that uses existing coax or, in some cases, copper wire to deliver gigabit speeds without major infrastructure overhauls.

Another emerging technology – home-based 5G wireless broadband products – have caught the attention of property owners and residents given the potential for affordable, accessible service when traditional wiring or infrastructure can be a challenge.

Owners, developers and managers simply need to look for the solution that best works for their properties or communities, then find a provider partner or a technology solution that can protect a property's economic viability while ensuring that the technology supports the needs of residents today and tomorrow.

### FEDERAL PREFERENCE FOR FIBER?

The bipartisan infrastructure package's inclusion of \$42.5 billion for broadband deployment is an historic game-changer in the nation's collective efforts to eradicate the digital divide and improve digital equity. The funding comes through the Broadband Equity, Access, and Deployment (BEAD) Program, and will be disbursed to states and localities by the National Telecommunications and Information Administration (NTIA).

The multifamily industry was successful in securing congressional language that specifically grants low-income multifamily properties eligibility for funding to deploy or upgrade broadband infrastructure or provide reduced or free broadband service to residents.

In May, NTIA took the first step in establishing guidelines and rules for the program in issuing its Notice of Funding Opportunity (NOFO), which helps clarify the process and timeline for funding to become a reality. Though it is clear this will be a long process and expectations are that deployment dollars won't actually be disbursed until 2023 or later, states now have a roadmap to design programs and applications that build off federal requirements.

One key provision that both owners and providers should pay attention to is the federal expectations or implied preferences for certain technologies under NTIA's new definition of "Reliable Broadband Service."

Though the NOFO doesn't explicitly endorse fiber, it does seemingly indicate a strong preference for it because of its adaptability and future flexibility. That's not to say that wireless internet service providers (WISPs) or other providers should not pursue the funding, but

NTIA has clearly set a hurdle that needs to be cleared.

Again, these funds will be distributed by states that are allowed to add their own programmatic requirements and preferences, which could change the equation depending on locale. In many ways, this mirrors the federal Emergency Rental Assistance Program (ERAP) distributed through the states during the height of the pandemic. ERAP provided the same level of flexibility to jurisdictions, which led to a great deal of confusion and a patchwork of requirements for owners and renters to overcome.

We remain cautiously optimistic that NTIA is doing enough preparation and providing enough guidance and oversight to ensure that these dollars get out the door smoothly and result in enhanced, reliable broadband service for Americans, regardless of the technology used to deliver it. ❖



*Kevin Donnelly is vice president of government affairs, technology and strategic initiatives for the National Multifamily Housing Council and can be reached*

*at [kdonnelly@nmhc.org](mailto:kdonnelly@nmhc.org).*

*Valerie M. Sargent is a multifamily speaker, trainer, and executive consultant and is the multifamily news correspondent for BROADBAND COMMUNITIES.*

*Contact her at [valerie@bbcmag.com](mailto:valerie@bbcmag.com). For more information, visit [www.nmhc.org](http://www.nmhc.org), [www.bbcmag.com](http://www.bbcmag.com), or [www.valeriemsargent.com](http://www.valeriemsargent.com).*



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