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Fixed Wireless Access Is Boosting Rural Broadband and Consumer Choice

by

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It looks like 2022 will be a breakout year for fixed wireless access (FWA) services. On April 22, Verizon announced that it had gained another 194,000 FWA subscribers in the first quarter of this year, and analysts predict that there will be perhaps 2 million total new subscribers to FWA services in 2022. By harnessing 5G network speeds and capacity, fixed wireless is poised to connect several million Americans in rural and small markets within the next few years. And FWA has the potential to enhance competition in more populated markets that are served by fixed wireline and cable broadband providers.

The growth of fixed wireless access owes, in important part, to federal policy favoring private sector investment and market freedom to innovate. In order to help maximize the benefits of FWA, the FCC should maintain light-touch regulatory status for broadband Internet services as "information services" under Title I of the Communications Act. The Commission also ought to keep intact the infrastructure siting reforms that it instituted between 2018 and 2020 that preempt unreasonable local regulatory obstacles to deploying 5G infrastructure. And NTIA should ensure that FWA services are eligible for grant support for deployment of broadband to unserved Americans under the Infrastructure Investment and Jobs Act.

Fixed wireless access services, enabled by next-generation wireless networks, have the performance capabilities necessary to meet demands for residential broadband Internet access services. In some cases, FWA offerings that rely on 4G LTE networks can provide speeds that meet and exceed the FCC's 25Mbps/3Mbps benchmarks for broadband. For instance, Verizon's [LTE Home Internet](#) offers FWA with advertised download speeds of 25-50 Mbps and upload speeds of 4 Mbps. But 5G capabilities make FWA services an especially attractive option for consumers. According to a November 2021 [report by Accenture](#), "[a]s advanced 5G technology rolls out with high-band spectrum, FWA will have 10 to 100 times more capacity than 4G," and "future 5G-enabled FWA services will provide ultra-reliable service with under 10 millisecond latencies that are critical to many emerging 5G use cases." Also, by using advanced wireless 5G networks, "an FWA connection can potentially deliver sustained download speeds, through the air, of 1 Gbps up to four miles."

FWA services are now seeing explosive growth, as adoption has skyrocketed compared to just a couple years ago. For instance, in its [Fourteenth Broadband Deployment Report](#) (2021), the FCC observed: "[A]s of December 31, 2019, the adoption rate for fixed wireless services of at least 10/1 Mbps was 2%... This contrasts with the 60% adoption rate for cable and the 32% adoption rate for fiber-based services at the same speeds where these services are available." By 2021, however, the outlook for FWA was far different. According to [Bloomberg](#), of the 3.7 million new broadband subscribers gained by the five largest cable and phone companies last year, 22% signed up for wireless services. And MoffettNathanson [reportedly](#) estimated that about 38% of total U.S. broadband customer additions were for FWA services during the fourth quarter of 2021. It is [reported](#) that Verizon and T-Mobile together added 300,000 new subscribers during just the last quarter of 2021.

This positive trend for FWA has continued into this year. On April 22, [Verizon reported](#) 194,000 net fixed wireless additions during the first quarter of 2022. That is 2.5 times the number of Verizon's net additions during the fourth quarter of 2021. (T-Mobile will release its first quarter report on April 27.)

Moreover, analysts forecast strong FWA adoption numbers for this year and following. Morgan Stanley Research [reportedly](#) expects [Verizon 5G Home](#) and [T-Mobile 5G Home Internet](#) to gain a combined 400,000 new FWA subscribers during the first quarter of 2022. It is [reported](#) that LightShed Partners expects Verizon and T-Mobile to add 1.8 million wireless home broadband subscribers this year – doubling the total they added in 2021. Similarly, Cowen Inc. [reportedly](#) projects that Verizon, T-Mobile, Starry Internet, and other providers will add nearly 2.3 million new FWA subscribers in 2022. Also, Cowen predicts that by 2025, Verizon will have up to 5 million FWA subscribers and T-Mobile will have up to 8 million. Additionally, AT&T, which has nationwide mobile 5G network coverage, [plans](#) to launch 5G-enabled FWA services beginning in 2023. And DISH Network, which is developing its own nationwide 5G network, may be a future FWA entrant.

The business case is sometimes lacking for building out wireline infrastructure to Americans in low population density and lower income geographic areas, particularly when those areas have challenging physical terrains. Yet FWA services have tremendous potential to overcome those obstacles and deliver broadband Internet services to unserved and underserved Americans in

rural areas. Wireless networks can avoid delays and expenses that typically come with securing local permit approval, digging in the ground, and laying physical infrastructure for hard-to-reach areas.

FWA provides a strong competitive alternative to declining DSL services. Retirement of copper networks and replacement with fiber infrastructure has been long underway, but it will still take some years to complete such transitions across DSL provider footprints. Meanwhile, FWA offers a ready-to-market option, particularly for providers whose FWA offerings are an extension of their mobile wireless networks and supported by fiber backhaul. Indeed, MoffettNathanson (relying on Comlinkdata) [estimated](#) that ILEC-only markets, which represent just 5% of locations that can get T-Mobile FWA, account for 24% of T-Mobile FWA subscribers.

Prospects for [FWA competition with cable broadband](#) have been raised by wireless executives and by [market analysts](#) such as LightShed Partners and Sanford C. Bernstein & Co. However, MoffettNathanson [reportedly](#) has questioned whether FWA will have the network capacity to pose a competitive threat to cable. Indeed, cable broadband networks substantially outperform DSL, and cable providers are developing DOCSIS 4.0 specifications as part of their "[10G](#)" platform for delivering multi-gigabit speeds.

Yet even if FWA is not a significant threat to the existing subscriber base of cable broadband providers, fixed wireless may provide consumers in areas served by cable with an attractively-priced alternative and thereby help ensure the continued competitiveness of the broadband market. At least one strategy for dealing with FWA capacity constraints is by limiting the number of subscribers in a given area and focusing on providing service in rural areas that are less likely to use up network capacity. It has been [reported](#) that T-Mobile is taking this approach.

Going forward, usage-based or volume-based billing may be another method for optimizing use of FWA networks by larger subscriber bases, with heavy-volume users paying premiums for their data-intensive uses compared to moderate or low-volume users. It is important that federal policy continues to ensure that FWA providers have market freedom to innovate with different service and pricing plans in order to serve subscribers.

The existing market-friendly policy is reflected in the FCC's 2017 *Restoring Internet Freedom Order*'s reclassification of broadband Internet access services as "information services" under Title I of the Communications Act. A primary reason for the Commission's reclassification decision was its determination, based on economic theory and market experience, that public utility regulation under Title II, including rate controls, undermines the ability of broadband providers to seek returns on capital investment in infrastructure. To keep investment in broadband networks strong, there should be no going back to Title II.

It is also important that the Commission maintain policies that promote timely buildout of 5G infrastructure. The Pai FCC adopted several infrastructure siting policy reforms that preempted local regulatory barriers to building and upgrading towers, base stations, and small cells. Those reforms included the 2018 *Small Cell* and *Moratoria Orders*, as well as the 2020 *5G Upgrade Order*. Additionally, in February of this year, the U.S. Court of Appeals for the D.C. Circuit upheld the FCC's 2021 *OTARD Order*, which preempts local restrictions that unreasonably delay

or prevent installation and use of rooftop "hub and relay" antennas that may be used for 5G-enabled FWA services. These infrastructure siting reforms have been opposed by local governments and others. But the Commission should leave those reforms in place and thereby help facilitate the rapid deployment of FWA.

Importantly, NTIA should also ensure that FWA services are eligible to receive grants to deploy broadband networks to unserved Americans under the Infrastructure Investment and Jobs Act of 2021 (IIJA). The IIJA allocates \$65 billion for broadband-related programs, much of which will be administered by NTIA. One such program is the Broadband Equity, Access and Deployment (BEAD) program. Under the BEAD program, more than \$42 billion will be dedicated to broadband infrastructure construction grants that states will award, on a competitive basis, to broadband providers for purposes of connecting unserved and high-cost locations. There has been concern that only services offering fiber connections will be eligible for grants. But 5G-enabled FWA may be the best technology solution for connecting certain hard-to-reach geographic areas. NTIA – and participating states – should implement IIJA programs according to a principle of technological neutrality and give full and fair consideration to all competing platforms – including fiber, cable, and FWA.

Ultimately, American consumer demand will determine where 5G FWA services will fit into the competitive broadband Internet landscape of 2022 and beyond. But the maintenance of a market environment that is favorable to capital investment in FWA facilities and to innovation is key to ensuring that as many Americans as possible will get to benefit from the choice offered by this up-and-coming next-generation broadband service.

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Further Readings

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