



The FCC's Rejection of Starlink's Bid and its Impact on Connecting Unserved Americans

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Executive Summary

- The Federal Communications Commission (FCC) recently reversed a previous agency decision to award Starlink, SpaceX's low Earth orbit satellite broadband provider, \$885 million to provide high-speed internet to nearly 650,000 unserved rural homes and businesses across 35 states through the Universal Service Fund's Rural Digital Opportunity Fund (RDOF).
- The FCC's notice of reversal highlights concerns with Starlink's ability to meet established benchmarks for bandwidth and the long-term viability of its network, as well as the service's high price point compared to alternative technologies.
- Notably, FCC Commissioner Brendan Carr disagreed with these concerns, noting that the FCC does not have an alternative provider for these consumers and expressing confidence in its growing network capabilities.
- Regardless of the merits of the FCC's Starlink decision, the agency should ensure it prioritizes the RDOF's goal of bringing broadband deployment to unserved Americans and ensuring taxpayer money is spent efficiently to further that goal.

Introduction

Federal Communications Commission (FCC) leadership recently reversed a previous agency decision to award Starlink, SpaceX's low Earth orbit (LEO) satellite broadband provider, \$885 million from the 2020 Rural Digital Opportunity Fund (RDOF) auction to provide high-speed internet to 642,925 unserved rural homes and businesses across 35 states. FCC Chairwoman Jessica Rosenworcel's statement on reversing the auction award [characterized](#) Starlink's technology as "still developing" and stated, "we cannot afford to subsidize ventures that are not delivering the promised speeds or are not likely to meet program requirements." SpaceX has [filed](#) an application for review of the reversal, describing it as "flawed as a matter of both law and policy."

This dispute stems from questions about Starlink's ability to meet the bandwidth requirements established by the RDOF program, as well as the affordability of the service compared to alternative technologies. The FCC's notice of reversal states that Starlink [service](#) is "not reasonably capable of complying with the Commission's requirements."

FCC Commissioner Brendan Carr has [objected](#) to Chairwoman Rosenworcel's depiction of Starlink's services, writing "the reversal constitutes clear error and plainly exceeds agency authority." Carr contends that the reversal leaves nearly 650,000 homes and businesses unserved with no alternatives, that concerns about Starlink's bandwidth and technical capabilities "do not bear out," that raising issue with Starlink's cost are arbitrary and not grounds for revoking the award, and that any new commitment to provide service "will cost us orders of magnitude more money to do so." In SpaceX's [application](#) for review, the company calls the decision "flawed as a matter of both law and policy."

Beneath the surface of this debate is a broader tension between prioritizing the build-out of fiber-to-the-premises technology, often referred to as a “future-proof” network, and a “technology-neutral” approach that prioritizes expanding broadband access to as many users as possible, regardless of the medium. The FCC’s statement of rejection notes RDOF program funding has supported “primarily fiber gigabit broadband service,” and notes that “hundreds of carriers have already begun deploying these future-proof networks to connect unserved areas.”

Fiber-to-the-premises is the [best option](#) for many consumers because of its high bandwidth, low latency, and reliability. But it is [expensive](#) to build out and takes time to implement, particularly in rural areas, because of the high per-mile cost in less population-dense areas. In his statement, Commissioner Carr argued: “We should correct course, adopt a technology neutral approach, and in doing so ensure that we prioritize the needs of Americans that remain unserved today.” New technologies, such as Starlink, offer high-bandwidth, low latency connectivity without costly infrastructure buildout and time delays.

The goal of the RDOF program is connecting unserved Americans, and the FCC’s decision may worsen the digital divide for hundreds of thousands of rural homes and businesses. This insight considers key arguments from both sides of the current debate regarding the subsidization of LEO satellites as a solution to bridging the digital divide, as well as the broader issue of a “future-proof” approach versus a “technology-neutral” approach to broadband network deployment.

FCC Concerns with Starlink

The FCC cites three main issues with Starlink as a Universal Service Fund ([USF](#)) recipient: meeting the bandwidth requirements of the program, viability of technology, and the cost of connecting.

Bandwidth

In revoking the initial award to Starlink, the FCC highlighted concerns about the service’s recently declining speeds, specifically its upload speeds. To participate in the Phase I RDOF auction, a provider had to specify which service “[tier](#)” it would offer and demonstrate its ability to provide that service. The FCC established four tiers for bandwidth capacity and two tiers for latency. Concern over Starlink’s ability to meet the “above baseline tier” – 100 megabits per second (Mbps)/20 Mbps bandwidth and latency lower than 100 milliseconds – threshold is cited in the agency’s [public notice](#) rescinding Starlink’s bid. Based on third-party data, [Starlink’s](#) median download bandwidth increased by 38 percent between the first quarter of 2021 and the first quarter of 2022, but median upload bandwidth decreased at least 33 percent over the same period, and both were beneath the program’s required threshold. As Starlink has [expanded](#) service, there have been complaints from customers about sluggish service and trouble getting online. Crowd-sourced [data](#) uploaded by individual Starlink users in the United States for September puts average Starlink download and upload bandwidth below the required thresholds set by RDOF. The FCC’s concerns about bandwidth capacity are reasonable as it is crucial to the technology’s viability. Yet [questions](#) remain about what bandwidth capacity truly reflects user needs, especially when areas receiving RDOF support still lack 25/3 Mbps service.

SpaceX and Commissioner Carr, however, challenge these concerns. In its application for review, [SpaceX](#) notes the bandwidth requirements do not become applicable for three years, and that no other applicant is currently providing service in the areas in question. They also insinuate that Starlink is being held to a different standard than other providers. Commissioner Carr [echoed](#) this point, noting that “Starlink’s speeds have *increased*

year over year” and that benchmarks “do not kick in for another three years.” SpaceX also states that the data cited by the FCC are from country-wide tests rather than specific areas where Starlink will provide service. SpaceX further asserts that evidence in its long-form application shows it will “[easily](#)” meet performance requirements for these areas by 2025. Further, the company writes that the agency’s reversal does not follow its own standard of assessing whether an applicant is “[reasonably capable](#)” of meeting its obligations. Instead, SpaceX claims the FCC reversed its decision because “it was not 100% certain that SpaceX could meet its requirements.”

Viability of LEO Broadband

Underlying the issue of bandwidth is a larger question of the viability of the technology. The FCC highlighted the “nascent” nature of the Starlink LEO satellite constellation, with the chairwoman saying the technology is “still developing.” For example, some [reports](#) forecast capacity shortfalls in 2028, with potentially 56 percent of RDOF subscribers suffering from congested service in a “low demand scenario.” Another [report](#) analyzing Starlink capacity estimates that a 12,000-satellite constellation could serve between 300,000–800,000 subscribers. Both the number of subscribers and bandwidth capacity are projected to rise as the [constellation grows](#) and satellite [technology](#) improves. If the technology attracts a wider userbase, as Starlink predicts, homes connected through RDOF may face even more congestion.

Starlink is the unquestioned [leader](#) in low Earth orbit (LEO) satellite broadband service, boasting a [constellation](#) with more than 3,000 operational satellites, serving nearly half a million subscribers worldwide. [SpaceX](#) set a record this year with [40](#) launches so far and is on pace to reach its goal of [52](#) orbital launches by the end of 2022. [Ultimately](#) Starlink plans to have a constellation with as many as 42,000 satellites but has so far only received approval to launch 12,000. Elon Musk, founder, owner, and chief engineer at SpaceX, has [confirmed](#) SpaceX’s goal for 2023 is 100 launches, close to double the number of launches this year, which should continue improving capacity and reliability. In response to the FCC’s characterization of Starlink’s technology as “nascent” and “still developing,” Commissioner Carr [argued](#) “those arguments do not bear out,” citing increased speeds, the pace of new satellite launches, and agreements with “other components of the federal government” to provide coverage. In its [application](#) for review, SpaceX notes that it received a letter of credit from an “eligible bank” based on a review of the firm’s RDOF application and its ability to meet program requirements. This provides an independent assessment of Starlink’s capabilities now and in the future from a third party that would be financially responsible if Starlink were to fail to meet deployment obligations.

These deployments will likely increase with its new Starship. SpaceX recently received Federal Aviation Administration [guidance](#) on steps necessary to comply with an environmental review, a [critical step](#) toward receiving a launch license for the Starship vehicle. The Starship, which will [launch Starlink’s next generation satellites](#), can carry almost [five times](#) the payload of current Falcon 9 rockets into LEO and is seen as a critical part of the company’s plan to build out its LEO constellation. Even if Starship is delayed, SpaceX’s [application](#) for review claims its original long-form application demonstrated that it can meet applicable satellite launch milestones using the Falcon 9. Bolstering SpaceX’s case to trust its technology are recent high-profile contracts, such as an [Air Force](#) contract for Starlink to service military bases and an agreement with [Royal Caribbean](#) to provide broadband to cruise ships.

Consumer Costs

Finally, there is the issue of Starlink’s high upfront and monthly cost for service. The chairwoman’s remarks highlighted Starlink’s “\$600 dish” when speaking about subsidizing technology that is “still developing.” Starlink [raised](#) the price of its dish from \$499 to \$599 in March 2022, as well as the monthly price for connectivity from \$99 to \$110, citing recent inflation in the costs of raw materials and logistics. [Competing](#) satellite providers Viasat and HughesNet both charge over \$100 per month on average for service and

\$100 to \$449 for installation and offer plans with data caps. [Average](#) prices for fiber or cable broadband are between \$40–80 per month, but [range](#) based on the amount of data, speed of the plan, equipment rentals, and provider availability. While the FCC is wise in its efforts to control costs, it is unclear if other options would yield greater connectivity at a comparable or lower cost.

At the same time, Commissioner Carr and SpaceX claim the FCC is applying this concern arbitrarily and to the detriment of unserved populations. The upfront cost of Starlink’s equipment is high, but its monthly costs are similar to those offered by traditional [satellite](#) broadband providers. Moreover, while more [expensive](#) per month on [average](#) than fiber, fiber network [build-out](#) requires significant capital investment because of the cost to cover each additional house in [sparsely](#) populated areas. Commissioner Carr [estimates](#) it would cost around \$3 billion, triple the award Starlink received, to provide fiber coverage to the areas Starlink planned to serve. Further, in its application for review, SpaceX states it never claimed an intention to use current Starlink prices for future RDOF customers; moreover, the law would prevent it from doing so. The [application](#) also argues that compared to other RDOF bidders, Starlink services are less expensive because it discloses the “true cost to consumers,” with “no [hidden fees](#), no [installation costs](#), [and] no [perpetual equipment rentals](#).” The agency will review progress on deployment obligations in 2025 and do a reassessment in 2028. Not only does this provide time for more launches and service improvements, but it allows for further [innovation](#), increased [manufacturing capabilities](#), and [competition](#) to [bring down](#) costs for consumers.

What Does This Mean for the FCC and Efforts to Close the Digital Divide?

It remains to be seen whether Starlink’s network can meet the demands of the program, but without an alternative plan, the reversal of funding leaves nearly 650,000 Americans without access to the Internet. The homes that Starlink would serve currently lack basic Internet access (25/3 Mbps), so Starlink’s *current* service would be a vast improvement, allowing people to work from home, do homework, and stream. Fiber-to-the-premises for all is a worthy goal, but if suppliers are already feeling [pressure](#) to keep pace with current projects, there should be real concerns about timelines, especially in rural areas. Compared to the long [waits](#) for fiber network construction and service, projects which can take [months](#) or [longer](#) to complete, Starlink users can get online in as few as [12 hours](#). With the FCC’s decision, consumers stranded on the wrong side of the digital divide will need to wait longer still to receive basic connectivity.

Subsidy dollars should go toward building the highest value network for consumers, and attempting to “[future-proof](#)” broadband infrastructure has been frequently [tried](#) and has often [failed](#). Even if the FCC seeks to switch all future deployments to fiber, the costs of expanding such coverage to the areas covered by Starlink’s bid would be close to [\\$3 billion](#) before accounting for inflation, more than triple the amount awarded to Starlink. With limited funding for these deployments, the agency should maximize the value of each subsidy dollar and ensure that unserved Americans get connected. Starlink’s commitment to improve its technology and grow its satellite constellation indicates that more progress is coming. Regulators should consider the benefits consumers stand to enjoy as new iterations of the technology become available, especially with competitors such as [Amazon’s Project Kuiper](#) and [OneWeb](#), entering the LEO broadband market.

Conclusion

The primary objective of RDOF is to get Americans without Internet service connected. While there is an appeal to preferencing fiber networks, this approach fails to account for future technological innovation, such as satellite-based broadband, and the potential benefits such technologies could provide to consumers in rural and remote areas. Allowing new technologies and companies to compete encourages novel solutions to close the digital divide. Congress should ensure that taxpayer dollars are spent efficiently to connect people by conducting more oversight of the FCC’s progress where necessary to make certain agency decisions advance RDOF’s primary goal of connecting unserved Americans. Resources are available to close the digital divide, but the realities of deploying service introduce difficult choices. The FCC’s reversal may narrow those choices and

slow progress on getting Americans connected to broadband.