

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Rural Digital Opportunity Fund	)	WC Docket No. 19-126
(Auction 904)	)	AU Docket No. 20-34
	)	

**Comments of TechFreedom of Starlink’s  
Application for Review**

Pursuant to Section 1.115(d) of the Commission’s rules, 47 C.F.R. § 1.115(d), TechFreedom submits the following comments in support of Starlink Services, LLC’s Application for Review of the Wireline Competition Bureau’s decision to revoke Rural Digital Opportunity Fund (RDOF) support won by Starlink in Auction 904.<sup>1</sup> The revocation of support was signaled by a statement from Chair Rosenworcel,<sup>2</sup> and a Public Notice, both issued on August 10, 2022.<sup>3</sup> It appears that there is further correspondence between the

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<sup>1</sup> Starlink filed its Application for Review on September 9, 2022. Pursuant to Section 1.115(d), “oppositions” (and therefore comments in support), are due within 15 days. These comments are timely filed.

<sup>2</sup> See Press Release, FCC Rejects Applications of LTD Broadband and Starlink for Rural Digital Opportunity Fund Subsidies, DOC 386140 (Aug. 10, 2022), <https://docs.fcc.gov/public/attachments/DOC-386140A1.pdf>.

<sup>3</sup> See Public Notice, Rural Digital Opportunity Fund Support for 80 Winning Bids Ready to be Authorized; Bid Defaults Announced, DA 22-848 (Aug. 10, 2022) (“Starlink Public Notice”), <https://docs.fcc.gov/public/attachments/DA-22-848A1.pdf>. Both Commissioners Carr and Simington released statements on the Bureau’s action. See Press Release, Carr Responds to FCC Decision to Reject Starlink RDOF Bids, DOC-386146 (Aug. 10, 2022), <https://docs.fcc.gov/public/attachments/DOC-386146A1.pdf>; Press Release, Simington Welcomes SpaceX Application for Review, DOC 387120 (Sept. 12, 2022), <https://docs.fcc.gov/public/attachments/DOC-387120A1.pdf>.

Bureau and Starlink, including a more detailed denial letter, which is unavailable to the public.<sup>4</sup> We file these comments only in the RDOF rulemaking docket, and limit our comments to the legal sufficiency and policy implications of the Bureau's action, including inquiring as to what will happen to the 642,925 locations in 35 states for which Starlink won RDOF support.<sup>5</sup>

## **I. About TechFreedom**

TechFreedom is a nonprofit think tank dedicated to promoting the progress of technology that improves the human condition. To this end, we seek to advance public policy that makes experimentation, entrepreneurship, and investment possible, and thus unleashes the ultimate resource: human ingenuity.

## **II. Background**

Rarely do we file comments regarding licensing matters, or actions taken at the Bureau level.<sup>6</sup> We do so only when the licensing action has a significant policy impact. The

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<sup>4</sup> See Application for Review, *In re Long Form Application of Starlink Services, LLC*, File No. 0009395128; *Rural Digital Opportunity Fund (Auction 904)*, WC Docket No. 19-126, AU Docket No. 20-34; *Petition of Starlink Services, LLC for Designation as an Eligible Telecommunications Carrier*, WC Docket No. 09-197, n. 1.

<sup>5</sup> Because the Bureau's denial letter is unavailable, and because Starlink's Application for Review is so heavily redacted, we cannot fully comment on the specifics of the Bureau's findings concerning Starlink's long-form application. As these comments point out, however, specific findings as to the exact performance of the Starlink system, as of today, are irrelevant, in that Starlink's system is far from fully deployed, and in any event, Starlink is not required to demonstrate it can meet its bid-for deployment speeds of 100/20 for several more years.

<sup>6</sup> One recent example where we did file comments in a licensing matter was in regard to the petition filed by AST & Science to gain market access for its foreign-licensed satellites to provide service in the United States. The application raised significant issues related to international treaty obligations, given that the sponsoring state was Papua New Guinea, a country with zero track record related to regulating or controlling orbital debris. See Letter from James E. Dunstan to Marlene Dortch in the Matter of AST & Science, LLC, SAT-PDR-2020413-00034 (Nov. 2, 2020), <https://techfreedom.org/wp-content/uploads/2021/03/TechFreedom-Letter-to-FCC-11-2-20.pdf>.

RDOF auction (Auction 904) represented one of the last, best hopes for closing the digital divide for those located in the most remote areas of the country. In adopting the RDOF rules in 2020, the Commission stated:

The Rural Digital Opportunity Fund represents the Commission’s single biggest step to close the digital divide by providing up to \$20.4 billion to connect millions more rural homes and small businesses to high-speed broadband networks.<sup>7</sup>

While the RDOF auction rules preferenced higher speeds,<sup>8</sup> the Commission recognized that it’s just too expensive to string fiber or install multiple towers in areas where the population density is less than one person per square mile.<sup>9</sup> “Our goal with this auction is to target support and provide incentives to serve areas that are known to currently lack service at speeds of at least 25/3 Mbps.”<sup>10</sup> The RDOF Auction was to be “technology-

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<sup>7</sup> Report and Order, Rural Digital Opportunity Fund, FCC 20-5, 35 FCC Rcd 686, ¶ 2 (2020) (“RDOF R&O”). *See also id.* ¶ 136 (“As we transition to a new funding mechanism to further our goal of supporting the deployment of both voice and broadband-capable networks, the existing service areas and corresponding obligations will help preserve existing voice service for consumers until the Rural Digital Opportunity Fund is fully implemented, and ensure that even the most remote, extremely high-cost areas are served, consistent with our universal service goals and principles.”).

<sup>8</sup> *Id.* ¶ 38 (footnote omitted) (“As in the CAF Phase II auction, we adopt weights that reflect our preference for higher speeds, higher usage allowances, and low latency. We also anticipate that terrestrial fixed networks will likely result in significant fiber deployment that can serve as a backhaul for rural 5G networks. Accordingly, we choose performance tier and latency weights to encourage the deployment of higher speed, low-latency services.”).

<sup>9</sup> *See* Christopher Ingraham, *Look at the jaw-dropping emptiness of America*, WASHINGTON POST (Jan. 20, 2016), <https://www.washingtonpost.com/news/wonk/wp/2016/01/20/americas-emptiest-places-42-of-the-land-1-of-the-people/> (“The counties shaded blue are the 462 least densely populated counties of the nation. . . In 65 of these counties, the density is less than one person per square mile.”). Carriers serving Alaska were not eligible to participate in the Auction 904, because of the separate “Alaska Plan,” adopted in 2016. *See* RDOF R&O, n. 83 (“Carriers serving Alaska Native regions will not be eligible to obtain additional support under the measures adopted today, however, because the Commission has already established a separate plan tailored to meet the needs of carriers serving Alaska.”).

<sup>10</sup> RDOF R&O, ¶ 25.

neutral,”<sup>11</sup> and satellite providers were eligible to bid, so long as they could meet the speed, latency, and buildout requirements.<sup>12</sup>

Starlink bid to provide 100/20 Mbps low-latency service to 642,925 locations in 35 states.<sup>13</sup> Starlink was to receive a total of \$881.5 million in support over ten years, which it could use to more quickly build out its NGSO satellite broadband system.

### **III. The Bureau’s Decision to Revoke RDOF Funding for Starlink is Arbitrary and Capricious and Should Be Reversed**

Notwithstanding that Starlink followed the Commission’s rules in bidding for RDOF support, the Bureau has declared Starlink to be in “default” of its obligations.<sup>14</sup> The Starlink Public Notice describes Starlink as “relying upon a nascent LEO satellite technology and the ability to timely deploy future satellites to manage recognized capacity constraints while maintaining broadband speeds to both RDOF and non-RDOF customers.”<sup>15</sup> Nascent? How about revolutionary. The Starlink constellation currently consists of over 2,500 individual,

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<sup>11</sup> *Id.* ¶ 31 (“We adopt technology-neutral standards for voice and broadband services supported by the Rural Digital Opportunity Fund, based on our experience in the CAF Phase II auction and its success in awarding support to a variety of service providers to deploy broadband in unserved rural areas, and consistent with long-standing Commission policy.”).

<sup>12</sup> See *FCC Auction 904 Factsheet*, FCC, <https://www.fcc.gov/auction/904/factsheet> (buildout requirements for RDOF recipients require service to 40% of required locations by the end of the third year, 60% by the end of the fourth years, and 80% by the end of the fifth year) (last visited Sept. 26, 2022).

<sup>13</sup> Starlink Public Notice at 9. We note that, as issued, the Starlink Public Notice is mis-paginated, with all pages listed as “5.” The page reference in the cite above is to the 9<sup>th</sup> page of the PN.

<sup>14</sup> *Id.* We note, with some irony, that this finding of “default” could subject Starlink to forfeiture proceedings. See RDOF R&O, ¶ 114 (“We next adopt rules that establish the framework under which a Rural Digital Opportunity Fund winning bidder will be subject to a forfeiture under section 503 of the Act if it defaults on its winning bid(s) before it is authorized to begin receiving support.” (footnote omitted)).

<sup>15</sup> Starlink Public Notice at 6.

currently deployed satellites. To put that into perspective, all countries of the world launched just over 3,000 satellites in the first 30 years of the space age.<sup>16</sup> SpaceX, Starlink's parent company, has conducted 42 launches so far in 2022,<sup>17</sup> already surpassing its own world record of 32 launches in 2021.<sup>18</sup> Three more Starlink launches are expected for the remainder of 2022.<sup>19</sup> Each Starlink launch delivers approximately 50 additional satellites to the constellation; over 200 new satellites were delivered via July launches alone. Yes, the Starlink constellation is not fully deployed; about half of the first generation of satellites have been deployed, with an ultimate goal of as many as 42,000 satellites.<sup>20</sup> But to label it as "nascent" reflects a lack of understanding of the suite of technologies involved in deploying such an extraordinary system, in which mass-produced satellites, launched at a fraction of the traditional costs, use varying frequency bands to drive down costs and provide true broadband and low latency.

It adds no clarity when the Public Notice observes that "Ookla data reported as of July 31, 2022 indicate that Starlink's speeds have been declining from the last quarter of 2021 to the second quarter of 2022, including upload speeds that are falling well below 20 Mbps."<sup>21</sup>

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<sup>16</sup> See *Number of Satellites Launched from 1957 to 2019*, STATISTA (July 14, 2022), <https://www.statista.com/statistics/896699/number-of-satellites-launched-by-year/>.

<sup>17</sup> See *Launches*, SPACEX, <https://www.spacex.com/launches/> (last visited Sept. 23, 2022).

<sup>18</sup> Loren Grush, *SpaceX just broke its annual launch record—and it's only July*, THE VERGE (July 22, 2022), <https://www.theverge.com/2022/7/22/23273077/spacex-falcon-9-launch-record-2022-32-high-cadence>.

<sup>19</sup> See Daisy Dobrijevic, *Space Calendar 2022: Rocket Launches, Sky Events, Missions & More*, SPACE.COM, <https://www.space.com/32286-space-calendar.html> (last visited Sept. 26, 2022).

<sup>20</sup> Stephen Clark, *SpaceX passes 2,500 satellites launched for Starlink internet network*, SPACEFLIGHT NOW (May 13, 2022), <https://spaceflightnow.com/2022/05/13/spacex-passes-2500-satellites-launched-for-companys-starlink-network/>.

<sup>21</sup> Starlink Public Notice at 6.

How can the FCC pull all funding for Starlink based on current speed tests for a system that is not yet fully built, and for which deployment, speed, and latency milestones don't apply for several more years? Moreover, a recent Ookla report indicates that Starlink's download speeds have increased 38% in the past year, while acknowledging that upload speeds have dipped slightly.<sup>22</sup> As dozens more satellites are deployed, *on nearly a weekly basis*, both download and upload numbers will increase.

Rather, it appears that the Bureau has changed the rules of Auction 904, after all the bidders went through the expense and effort to prepare their bids and participate in the auction, and after the Commission awarded more than \$9 billion in support. The Bureau found that Starlink was qualified to bid by authorizing its short form application.<sup>23</sup> The short form application presented the same technology Starlink continues to use today. There has never been any mystery as to how the Starlink system works, and the laws of physics certainly haven't changed since October 29, 2020.

It is bedrock principle that the FCC must apply its rules in a consistent manner and provide adequate notice if its rules are to be changed.

A fundamental principle in our legal system is that laws which regulate persons or entities must give fair notice of conduct that is forbidden or required. See *Connally v. General Constr. Co.*, 269 U.S. 385, 391 (1926) (“[A] statute which either forbids or requires the doing of an act in terms so vague that men of common intelligence must necessarily guess at its meaning and differ as to its application, violates the first essential of due process of law”); *Papachristou v. Jacksonville*, 405 U.S. 156, 162 (1972) (“Living under a rule of law entails various suppositions, one of which is that ‘[all persons] are

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<sup>22</sup> Josh Fomon, *Here's How Fast Starlink Has Gotten Over the Past Year*, OOKLA (June 28, 2022), <https://www.ookla.com/articles/starlink-hughesnet-viasat-performance-q1-2022> (“Starlink speeds increased nearly 58% in Canada and 38% in the U.S. over the past year”).

<sup>23</sup> See Public Notice, FCC Rural Digital Opportunity Fund Phase I Auction Qualified Bidders, Attachment A at 17, DA 20-1187A2 (Oct. 13, 2020), <https://docs.fcc.gov/public/attachments/DA-20-1187A2.pdf>.

entitled to be informed as to what the State commands or forbids’ ” (quoting *Lanzetta v. New Jersey*, 306 U.S. 451, 453 (1939) (alteration in original))). This requirement of clarity in regulation is essential to the protections provided by the Due Process Clause of the Fifth Amendment. See *United States v. Williams*, 553 U.S. 285, 304 (2008). It requires the invalidation of laws that are impermissibly vague. A conviction or punishment fails to comply with due process if the statute or regulation under which it is obtained “fails to provide a person of ordinary intelligence fair notice of what is prohibited, or is so standardless that it authorizes or encourages seriously discriminatory enforcement.” *Ibid.*<sup>24</sup>

That is what has happened here. Despite the nearly unbelievable pace at which Starlink is deploying its NGSO constellation, the Bureau has suddenly developed cold feet when it comes to satellite broadband. Its decision is arbitrary and capricious. The Commission has a duty to reverse Bureau decisions that misapply its rules.<sup>25</sup>

#### **IV. The Bureau’s Decision Threatens to Permanently Place Some Remote Areas on the Other Side of the Digital Divide**

We’ve warned the Commission recently that new federal funding being allocated for broadband deployment will not fully close the digital divide.<sup>26</sup> Notwithstanding the

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<sup>24</sup> *FCC v. Fox Tele. Stations, Inc.*, 567 U.S. 239, 253 (2012).

<sup>25</sup> See Memorandum and Order, In the Matter of Complaints Against Various Broadcast Licensees Regarding Their Airing of the “Golden Globe Awards” Program, FCC 04-43, 19 FCC Rcd 4975 (2004) (Commission overturned Media Bureau decision that speech uttered at the Golden Globe awards violated the Commission’s indecency rules); Order on Review, In the Matter of BellSouth Telecomm’s v. Fla. Power & Light Co., FCC 22-45, No. 19-187 (2022) (Commission overturned Bureau’s interpretation of rebuttable presumption standard, specifically the pole attachment rate formula).

<sup>26</sup> See TechFreedom, Reply Comments on Facilitating Interagency Coordination of Broadband Deployment Funding, WC Docket No. 22-251 (Aug. 16, 2022), <https://techfreedom.org/wp-content/uploads/2022/08/TechFreedom-Reply-Comments-Interagency-Coordination-8-16-22.pdf>; TechFreedom, Comments on Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84 (June 27, 2022), <https://techfreedom.org/wp-content/uploads/2022/06/TechFreedom-Comments-Pole-Attachment-6-27-22.pdf>; TechFreedom, Reply Comments on Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84 (Aug. 26, 2022), <https://techfreedom.org/wp-content/uploads/2022/08/TechFreedom-Reply-Comments-Pole-Replacement-8-26-22.pdf>.

pronouncements by NTIA Administrator Alan Davidson that every American will have access to high-speed broadband when the current monies are spent,<sup>27</sup> that likely will not be the case. Deployment costs are skyrocketing,<sup>28</sup> and the new FCC maps will likely reveal far bigger holes in the “fabric” of broadband deployment. This is an impending disaster. Now, what will happen to the nearly 650,000 locations where Starlink was to provide first service? Is fiber magically going to be strung to those locations? Most likely, those locations will be left unserved.

There’s a reason why the Commission included satellite broadband in the mix for receiving RDOF funding. As former Chair Ajit Pai said at the close of Auction 904 in December 2020:

We structured this innovative and groundbreaking auction to be technologically neutral and to prioritize bids for high-speed, low-latency offerings. We aimed for maximum leverage of taxpayer dollars and for networks that would meet consumers’ increasing broadband needs, and the results show that our strategy worked. This auction was the single largest step

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<sup>27</sup> See Megan Boswell, *Infrastructure Investment and Jobs Act Will Close Digital Divide if States Are Prepared, Says Alan Davidson*, BROADBAND BREAKFAST (Apr. 14, 2022), <https://broadbandbreakfast.com/2022/04/infrastructure-investment-and-jobs-act-will-close-digital-divide-if-states-are-prepared-says-alan-davidson/>; Grace Dille, *NTIA has ‘Once in a Generation Opportunity’ to Close Digital Divide*, MERITALK (Mar. 1, 2022), <https://www.meritalk.com/articles/ntia-has-once-in-a-generation-opportunity-to-close-digital-divide/>; *Testimony of Assistant Secretary Davidson on Connecting America: Oversight of the NTIA*, NTIA (Feb. 16, 2022), <https://www.ntia.doc.gov/speechtestimony/2022/testimony-assistant-secretary-davidson-connecting-america-oversight-ntia> (“Thanks to the leadership and work of this Subcommittee, the Bipartisan Infrastructure Law provided \$65 billion to help deliver affordable, reliable, high-speed Internet to every American and help close the digital divide.”).

<sup>28</sup> See *supra*, n. 22. See also Press Release, New GAO Watchdog Report Underscores Carr’s Concerns About the Absence of a National Strategy Coordinating Billions in Broadband Infrastructure Spending, DOC 384164 (June 10, 2022), <https://www.fcc.gov/document/carr-calls-national-broadband-strategy> (“their costs to construct Internet infrastructure are up nearly 30% in light of inflation, rising fuel costs, supply chain challenges, and workforce shortages”).



ever taken to bridge the digital divide and is another key success for the Commission in its ongoing commitment to universal service.<sup>29</sup>

But that's all changed now. RDOF is no longer technologically neutral if the only satellite broadband bidder capable of 100/20 low-latency service has been ousted. Low-latency satellite is now completely out of the mix. When the dust settles on this round of broadband deployment in a few years, and the new maps still show many Americans with no access to high-speed broadband, there will be no one to blame but this Commission.

## **V. Conclusion**

The digital divide needs to be closed. To do so, the government must bring all assets to bear. Changing rules mid-stream to arbitrarily exclude one class of technology, possibly the only technology that can reach the most remote peoples of America, defeats this effort in the worst possible way. The Commission should reverse the Bureau's decision and reinstate RDOF support for Starlink.

Respectfully submitted,

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<sup>29</sup> See Press Release, Successful Rural Digital Opportunity Fund Auction to Expand Broadband to Over 10 Million Rural Americans, DOC 368588 (Dec. 7, 2020), <https://docs.fcc.gov/public/attachments/DOC-368588A1.pdf>.