



Comments for the Record

# Safeguarding and Securing the Open Internet Comments

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## COMMENTS OF JEFFREY WESTLING

### I. Introduction and Summary

The Federal Communications Commission’s Notice of Proposed Rulemaking<sup>[1]</sup> classifying broadband as a Title II telecommunications service exceeds congressionally granted authority and will not serve the goals the Commission outlines. First, the Commission claims that reclassification is necessary to ensure Internet openness, but the Internet ecosystem is open and vibrant under the light-touch framework historically used to regulate broadband. Second, the Commission claims that reclassification is necessary to safeguard public safety and national security, but Title II reclassification will lead to less investment, harming both national security and public safety. This lower investment will also limit access to quality, high-speed broadband networks, another goal of the Commission.

The question of broadband classification is fundamentally one of legal interpretation. Congress never explicitly granted the FCC the authority to regulate broadband as a utility, as the definition for telecommunications service was written in 1934 and designed for services such as voice telephony that utilize the publicly switched network system. The FCC cannot regulate broadband as a utility until Congress grants it the authority to do so.

### II. Title II Classification Isn’t Necessary to Protect an Open Internet

The Commission cites Internet openness as a primary justification for broadband reclassification and the adoption of specific rules under that authority regulating how broadband providers can manage traffic.<sup>[2]</sup> This logic fails on two accounts. First, the Internet has remained open under the Commission’s light-touch framework adopted in 2017. Second, allowing providers control over traffic incentivizes innovations in market practices that improve the quality and variety of services available to consumers.

#### A. THE INTERNET REMAINS FREE AND OPEN BECAUSE BROADBAND PROVIDERS LACK AN INCENTIVE TO DEGRADE CUSTOMER SERVICE

The Commission primarily argues that the need for Title II-based open Internet rules is to promote innovation and free expression, but the Internet has remained free and open, with no consumer-harms stemming from the FCC’s RIF order occurring in the last six years.

Broadband providers lack a financial incentive to degrade their customers’ service. Broadband is more competitive than ever, especially when considering the convergence of technologies to provide all-in-one services to consumers. Cable, fiber-to-the-home, fixed wireless, and even LEO satellite constellations (that are quickly densifying their networks and making equipment more accessible to consumers)[3] compete for fixed service, while mobile providers must compete with traditionally fixed providers offering mobile services to their consumers using a mix of commercial wireless networks, licensed local networks, and unlicensed hotspots.[4] If a consumer doesn’t like the service a company provides, more than ever the consumer can seek alternatives.

With this increased competition and lack of incentives to engage in anticompetitive practices, the hyperbolic claims from 2017 never came to pass. Americans do not get tweets “one word at a time.”[5] The “Internet as we know it” never collapsed and still operates as it did before the RIF order went into effect.[6] And yet, the NPRM asserts that without Title II, the open Internet would be in jeopardy, while providing no evidence.

In favor of Title II, proponents often cite the example of the Santa Clara firefighters. In 2018, firefighters from the Santa Clara Fire Department were responding to the Mendocino wildfire when the increase in data traffic caused the firefighters to hit their data cap, resulting in the throttling of their service.[7] While Verizon did have a policy to lift data caps in such situations, the policy wasn’t properly applied. The situation had nothing to do with network neutrality, however, and no actions by Verizon would have violated the 2015 order.[8] In short, the Santa Clara Fire Department had purchased a data plan that didn’t suit their needs as it did not provide enough data.[9] Proponents claim that this type of incident shows the need for Title II authority to better regulate these situations to address public safety, an issue addressed infra, but clearly Internet openness had nothing to do with the issue.

Finally, some proponents of Title II point to state laws to argue that industry would engage in anticompetitive behavior if not for the restrictions imposed by the states. First, broadband providers didn’t engage in such behavior before the state laws went into effect, so it is unclear why these laws now restrain behavior that would otherwise occur. Second, if the laws do in fact protect Internet openness, then a federal regulation is unnecessary as states have already resolved the concerns.

## **B. TRAFFIC DIFFERENTIATION BENEFITS CONSUMERS**

As explained above, broadband providers do not have an incentive to block or throttle traffic to consumers that would degrade their experience. Hence, there have been no cases where Title II classification would prevent harm to consumers. But Title II classification could actually cause harm to consumers by limiting how broadband providers prioritize traffic flows and implement data usage policies.

Applications have different needs. A video-on-demand service, for example, needs enough bandwidth to buffer the video, but doesn't need the low latency or high stability connection that a live-video service would need due to the ability to buffer the video. If a person is watching a YouTube video and the download speed drops temporarily, the consumer may not see a disruption of the service. A live Twitch stream, however, may not need significant bandwidth but poor latency or speed can cause stuttering and frame drops. Title II classification would allow the FCC to essentially prohibit the provider from adequately managing its network in a way that ensures consumers get the services they need.

For example, many Title II proponents criticize zero-rating, the practice by which a broadband provider enters a deal with an application to allow users to access the application without the data transmitted counting towards existing data caps. This practice, however, benefits consumers and promotes an open Internet. First, applications can use zero-rating to help bring in new customers, enhancing the value of the product and providing revenues to defray the investment for additional innovation.<sup>[10]</sup> Second, zero-rating can lower the cost to subscribe to broadband and actually use services to communicate, especially globally where some 2.5 billion people have access to broadband but choose not to subscribe.<sup>[11]</sup> Finally, zero rating can lead to more efficient use of networks, especially if the zero-rated services use fewer bits than a non-zero rated version.<sup>[12]</sup> With zero-rated services, consumers gain more options, at lower costs, than they would otherwise.

Essentially, the FCC argues that efficiencies created by practices like zero-rating and network slicing<sup>[13]</sup> to enhance consumer experience don't actually protect free speech online, and only government control can protect consumers. But this is the exact opposite of the truth; the free market protects Internet openness because that is what consumers want. Broadband providers serve their customers needs, and applications can work with providers to enhance the experience. A command-and-control approach, meanwhile, would lessen the incentive to make these types of changes, ultimately leaving consumers with fewer options, and a worse quality of service overall.

## III. Title II Isn't Necessary to Protect National Security or Public Safety

The current regulatory framework has protected an open Internet, and no evidence has arisen suggesting reclassification would prevent anticompetitive behavior. Therefore, the FCC also asserts public safety and national security as justifications for reclassification, moving away from the original point of net neutrality that primarily justified reclassification in 2015.<sup>[14]</sup> While the Commission should ensure that broadband networks support public safety and national security, the NPRM largely ignores the benefits of investment to both issues.

### A. TITLE II CLASSIFICATION HARMS BROADBAND INVESTMENT

Going back as far as 1998, the FCC has conceded that a heavy-handed approach would harm infrastructure investment: "As an empirical matter, the level of competition, innovation, investment, and growth in the enhanced services industry over the past two decades provides a strong endorsement for such an approach [Title I regulation]."<sup>[15]</sup> And indeed, the evidence backs this up.

According to new research from the Phoenix Center, the FCC's Title II regulatory approach reduced invest by around 10% below expected over the last decade, led to a reduction of total employment by 195,600 jobs, and

reduced GDP by \$1.45 trillion over ten years.[16] This new research builds on previous studies that shows a reduction in infrastructure investment in comparison to the expected investment, and that the spending reduction began in 2015 before the order could be fully implemented.[17] In 2017 alone, for example, the capital investment was \$10.7 billion below the forecast for what investment would have been absent Title II reclassification, though only \$3.1 billion below the linear trend.[18] The Phoenix Center also accounted for more broad infrastructure investment in the economy in another analysis, finding a “negative and statistically significant effect on investment resulting from the implementation of Title II regulation in the *2015 Open Internet Order*.”[19]

Unlike other studies that simply show the change in investment, the Phoenix Center shows that investment was below an expected level, but even to the extent the Commission looks at raw numbers, broadband investment drastically increased after the FCC went back to a Title I approach in 2021, with \$86 billion invested in 2021 and an average of \$81.55 billion since 2018 (compared to the \$76.4 billion from 2015–2017).[20]

## B. INCREASED INVESTMENT UNDER TITLE I PROMOTES PUBLIC SAFETY

Connectivity promotes public safety.[21] If a network lacks the capacity to transmit traffic during times of increased demand, lives can be lost.[22] To the extent that the Commission seeks to promote public safety, it should consider how the decrease in investment will negatively affect safety.

First, and most important, enterprise services relied on by many public safety entities are not telecommunications services because they are not mass marketed, meaning reclassification would not impact the plans subscribed to by those entities.[23] For example, if the Commission establishes an open Internet rule that prohibits the throttling of traffic, the rule would not affect the ability of a provider of the enterprise service from throttling or blocking service to an enterprise customer like a local fire department. While this may sound concerning, allowing the provider to tailor the network to ensure reliability for the enterprise customers allows for increased flexibility and security in times of crisis. Regardless, reclassification wouldn’t impact these plans, so the majority of public safety uses would not benefit from reclassification, even if reclassification did provide some net benefit to public safety generally.

Second, the FCC’s proposed rules banning blocking, throttling, and paid prioritization will not promote public safety more generally. The NPRM cites the Mozilla decision to explain that “any blocking or throttling of [safety officials’] Internet communications during a public safety crisis could have dire, irreversible results.”[24] Taking a moment to ignore the fact that no broadband provider would knowingly block or throttle the traffic of public safety officials during a crisis, the description from the Mozilla court hits on an important broader point: If a broadband network fails during times of crisis, lives can be lost.

This argument supports the current framework, however, not a Title II-based regime where the FCC oversees broadband networks. As explained above, under a Title I regime, broadband investment increases because providers can see a larger return on investment. This increased investment leads to improvements along three facets: coverage range, capacity, and reliability.

Increased coverage range means more consumers and responders can access critical, potentially life-saving information. For example, in 2015 wildfires spread across rural Washington, and many residents and responders lacked broadband connectivity to receive up-to-date news.[25] In 2021, however, Comcast announced a \$7.5

million investment to expand broadband service to an additional 1,600 homes in the affected area.[26] As these kinds of investments continue, more areas of the country will be connected, meaning more Americans can get up-to-date information in the event of an emergency.

Likewise, bandwidth is critical during times of crisis as networks see a spike in traffic. More than ever, firms are investing in high-bandwidth applications that require high-bandwidth networks. During times of crisis, increased traffic using these high-bandwidth services can cause congestion and service disruptions. Increased investment in broadband networks leads to higher capacity networks, as broadband bandwidth has drastically increased on average in recent years.[27] And during the pandemic, United States networks operated with little interruption for users, differing from Europe which required some throttling of services such as Netflix to address congestion.[28] Embracing a Title II approach and lowering investment will likely limit the increase in bandwidth, harming public safety.

Finally, networks need to remain operational, even in times of disaster, and thus broadband providers have invested in the reliability of their networks.[29] A Title II approach would give the FCC more authority to regulate the safety features of networks, but broadband providers would have less incentive to make reliability investments if the potential return on that investment is limited and if they cannot use that reliability as a means for differentiating their product from their rivals.

Taken together, increased investment leads to more coverage in unserved areas, increased bandwidth during times of increased network use, and increased reliability when potentially dangerous events do occur. The Commission and the courts are right to identify public safety as a key consideration when evaluating how to regulate broadband, but the Commission shouldn't lose sight of the benefits that the increased investment stemming from Title I classification provides.

## C. INCREASED INVESTMENT UNDER TITLE I PROMOTES NATIONAL SECURITY

The Commission also cites heavily to national security as a justification for Title II regulations.[30] Again, however, the NPRM ignores important national security implications of reducing investment in broadband networks. In addition, the FCC has addressed broadband security issues under existing authority, and where more authority is needed Congress should fill the gap.

### i. Increased Investment Helps the United States Outcompete International Rivals

The Commission cites to Section 214 to argue that Title II is necessary to ensure American networks remain uncompromised.[31] Yet the NPRM largely ignores the larger geopolitical implications of a Title II-based approach and the growing race with foreign adversaries such as China to lead the world in broadband infrastructure and investment.

The hands-off approach to broadband regulation allowed U.S. firms at the application layer to far exceed rivals. The Internet economy now constitutes over 10 percent of the nation's gross domestic product, and has created 8 million jobs.[32] In terms of market capitalization, 60 of the largest 100 technology firms are U.S. firms.[33]

This gives the United States an advantage over international rivals, but reclassifying broadband under Title II could jeopardize this growth.<sup>[34]</sup> China has made state investments in broadband networks and can subsidize the manufacturing and distribution of its equipment.<sup>[35]</sup> If the United States falls behind, the next generation of applications will develop overseas, meaning geopolitical rivals will obtain the benefits of moving first.<sup>[36]</sup> The Commission can take numerous steps to incentivizing further expansion and growth of America's broadband industry, but the most obvious is to continue the Title I approach that has led to the significant investment in American networks.

Further, to the extent that the Commission is worried about compromised equipment in U.S. networks, a deregulatory environment could make it more profitable to choose higher quality infrastructure. Broadband providers will choose to install equipment that will maximize profit, and often times that will include potentially compromised equipment from firms with ties to foreign governments.<sup>[37]</sup> But firms likewise balance the risk against potential returns, and in an already risk-heavy environment, the firm may have no choice but to take the riskier option because it is the only path to profitability. If, instead, the firm has a larger potential return, they can more freely limit that risk by choosing higher-quality, more secure equipment. Though not always the case, making an investment more appealing to providers could decrease the risk that providers will use cheaper, compromised equipment.

## ii. Congress Should Fill Security Gaps

In cases where broadband providers either pose a security risk or use equipment that poses such risk, the FCC has already taken steps to limit harms under the Title I approach. In cases where more authority is needed, Congress can fill the gaps as necessary.

In 2019, the FCC adopted the Protecting Against National Security Threats Order, which barred the use of universal service support to purchase, obtain, maintain, improve, modify, or otherwise support any equipment or services produced or provided by a company posing a national security threat to the integrity of communications networks or the communications supply chain.<sup>[38]</sup> As a part of this order, the Commission designated Huawei and ZTE as national security threats for the purposes of the rule, effectively prohibiting firms trying to connect the most difficult to reach places from using the cheaper Huawei and ZTE equipment. While not an outright ban, the FCC had existing tools under the Title I approach to address potential security risks and used these tools effectively to target specific harms.

Congress went further in passing the Secure and Trusted Communications Networks Act of 2019.<sup>[39]</sup> The law allows the Commission to identify firms that posed a threat to national security and ban the use of their equipment in American networks. This is how the process should work: The Commission can use existing authority to address potential harms, and Congress can grant the Commission more authority as necessary. If future cases require additional Commission authority, Congress can again step in to fill any regulatory gaps.

# IV. Congress Is the Appropriate Body to Impose Open Internet Rules

Finally, unlike previous iterations of this debate, the Commission must seriously consider its authority in the context of the major questions doctrine<sup>[40]</sup> as emphasized in *West Virginia v. Environmental Protection Agency*.<sup>[41]</sup>



By shifting away from a market-based regulatory regime endorsed by Congress to a utility-style regime designed for utility telephone networks, the FCC would raise the exact political and economic issues that the Court worries about. The Commission should not reclassify broadband without clear authority from Congress.

## A. ECONOMIC OR POLITICAL SIGNIFICANCE

The major questions doctrine begins with a basic threshold question: Does the regulation deal with an issue of major economic or political significance? The proposed rules in the NPRM clearly do both.

Regarding economic significance, in *West Virginia*, the Court explained that the EPA's rule would "substantially restructure the American energy market," a major economic impact, by limiting the number of coal plants that could operate. This would fundamentally restructure the United States' energy market.<sup>[42]</sup> As the Court explains, "We also find it 'highly unlikely that Congress would leave' to 'agency discretion' the decision of how much coal-based generation there should be over the coming decades" when Congress simply gave the EPA the authority to mandate emission reduction technologies that wouldn't fundamentally change the nature of energy production.<sup>[43]</sup> While the decision focused primarily on the radical departure from existing policy, the majority clearly saw the shifting of energy production sources through an economic lens.

The FCC's rules would have just this impact. As explained above, reclassification decreases broadband investment by up to \$40 billion annually. But even beyond the investment effects, reclassification would allow the FCC to impose a variety of utility-style regulations, such as price controls<sup>[44]</sup> and privacy standards.<sup>[45]</sup> These regulations would lower potential revenue, and as potential revenue decreases, broadband providers would likewise have less incentive to invest in expanding and improving coverage for their users. The economic impact doesn't stop at broadband alone, and services such as video conferencing, online gaming, and even basic online shopping could be affected if broadband networks do not receive the investment necessary.

Network neutrality rules and broadband classification also have major political significance, the second consideration of the doctrine. The Commission has noted the significant public attention paid to this issue in past years, as pundits, celebrities, and everyday Americans raised their concerns about their access to the Internet. In fact, Republican FCC commissioners received death threats when reclassifying broadband in 2017,<sup>[46]</sup> and the vote on the item was delayed due to a bomb threat at the FCC.<sup>[47]</sup>

## B. AGENCY EXPANSION OF AUTHORITY

The *West Virginia* case goes beyond these two basic concerns and looks at three main considerations when determining if a regulation raises a major question.

First, courts must look at transformative expansion of its regulatory authority in a long extant statute. The Court explained that Congress empowered the EPA to consider emission-reducing technologies, but it did not grant the EPA broad authority to determine which types of power sources generators could use. The statute had never been used in such a way and was a major departure from existing interpretations. Likewise, Title II of the Communications Act was designed to regulate public switched telephone networks (legacy telephone networks) in which individual companies had inherent monopolies on the local telephone service. While early Internet connections originally operated over telephone networks, broadband networks quickly moved beyond this model and providers developed their own rival networks. The treatment of broadband providers as common carriers would ignore this history by interpreting the definition of telecommunications services beyond what

Congress could have possibly intended when defining the term. Worse, as an amicus brief by TechFreedom has explained, reclassifying broadband as a Title II service “opens the door for the FCC to impose common carriage regulation on any services that connect to the Internet using public IP addresses” such as “VoIP services that do not interconnect with the telephone network” and “equivalent voice chat function built into other services, such as real-time, multiplayer gaming.”<sup>[48]</sup> Classification of broadband as a Title II service would not only fundamentally shift the regulation of broadband in the country, but also justify the regulation using authority in a classification designed for telephone networks.

Second, in *West Virginia*, the EPA found authority for its rulemaking in an ancillary provision that had rarely been used in the preceding decades.<sup>[49]</sup> While the Commission does have authority to reclassify services, Congress has often stepped in to update the law when new technologies arise.<sup>[50]</sup> While the FCC can and often does classify new services and technologies, it rarely classifies a new service as a Title II service without some connection to the telephone networks. Nevertheless, the FCC discovered that it could simply stretch the definition of telecommunications service to include broadband providers, despite never making such an expansive reading of the statute in the past.

Finally, just as in *West Virginia*, congressional inaction on broadband reclassification suggests that it never intended for the Commission to treat broadband as a common carrier service. In the EPA’s case, Congress consistently rejected proposals to amend the Clean Air Act to create such a program or similar measures such as a carbon tax.<sup>[51]</sup> Similarly, Congress has repeatedly rejected calls to reinstate the 2015 Open Internet Order or reclassify broadband as a Title II service. Further, specific legislation to impose network neutrality regulations, even outside of the Title II context, has repeatedly failed despite some bipartisan support for such an approach.<sup>[52]</sup> If Congress believes broadband should be regulated like utility telephony, it can choose to reclassify broadband as a matter of law. It hasn’t done that, and thus agency action to reclassify broadband would ignore congressional intent.

## C. CONGRESS DIDN’T CLEARLY AUTHORIZE THE FCC TO REGULATE BROADBAND AS A COMMON CARRIER

Even assuming a reviewing court determines broadband classification and/or net neutrality rules present a major question, the FCC could still receive deference if it can point to “clear congressional authorization” to regulate in that manner.<sup>[53]</sup> Unfortunately for the Commission, it lacks that authorization.

In *West Virginia*, the Court explicitly rejected a broad reading of “application of the best emission reduction...adequately demonstrated” in part because reading into the statute things that aren’t there could allow the agency to consider almost any rulemaking, no matter how tenuous its authority to do so. As the Court explains, “just because a cap-and-trade ‘system’ can be used to reduce emissions does not mean that it is the kind of system of emission reduction referred to....”<sup>[54]</sup> Similarly, the FCC points primarily to Section 706, a provision that simply directs the FCC encourage the deployment of broadband services by removing barriers to deployment.<sup>[55]</sup> The Commission also cites its general authority over telecommunications services to support its conclusion that it can regulate broadband as a common carrier, but this ignores that Congress designed Title II for telephony and services that use the telephone network to deliver voice communications and not broadband. Congress did not expect the FCC to start qualifying every new technology as a telecommunications service.

Further, when Congress makes clear its intent in other areas that contradict the reading, there is reason to



believe Congress didn't intend to give the agency authority to interpret the provisions in the way it has. *West Virginia* highlights that Congress went “out of its way” to amend the statute to allow states to meet standards through a cap-and-trade system but “not a peep was heard from Congress about the possibility a trading regime could be installed under §111.”<sup>[56]</sup> Likewise, Congress considered the FCC's role in promoting broadband deployment in Section 706(b), but the statute never mentioned regulating broadband as a utility, and instead limited the FCC's authority to incentivizing broadband deployment through removing barriers and promoting competition.

## V. Conclusion

The Commission should not adopt the proposed rules in the NPRM. The hands-off approach to broadband regulation has led to a robust internet ecosystem and high-speed, reliable networks. Reversing course now would jeopardize these developments and fail to achieve the goals of the Commission.

[1] *Safeguarding and Securing the Open Internet*, WC Docket No. 23-320, Notice of Proposed Rulemaking (Sept. 28, 2023) (“NPRM”), <https://docs.fcc.gov/public/attachments/DOC-397309A1.pdf>.

[2] “Given how essential BIAS is to consumers’ daily lives, we believe that our proposed reclassification of BIAS as a telecommunications service is necessary to unlock tools the Commission needs to fulfill its objectives and responsibilities to safeguard this vital service. Critical among these is enabling the Commission to ensure the Internet is open and fair, including by establishing a uniform, national regulatory approach that would provide consistent protections for consumers and certainty for ISPs.” NPRM at ¶ 21.

[3] “Competition in the Low Earth Orbit Satellite Industry,” *Bipartisan Policy Center* (last visited Dec. 14, 2023), <https://bipartisanpolicy.org/competition-low-orbit-satellite/>.

[4] Michelle Connolly, “Competition in Wireless Telecommunications: The Role of MVNOs and Cable’s Entry into Wireless,” *Duke University* (Sept. 11, 2018), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3249157](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3249157).

[5] Tweet of Senate Democrats (8:38 AM, Feb. 27, 2018), [https://web.archive.org/web/20201006034031/https://twitter.com/SenateDems/status/968525820410122240?ref\\_src=tw](https://web.archive.org/web/20201006034031/https://twitter.com/SenateDems/status/968525820410122240?ref_src=tw).

[6] Joe Kane, “Does the Internet Still Exist!?!?! Fact-checking net neutrality doomsday predictions,” *R Street Institute* (June 11, 2018), <https://www.rstreet.org/commentary/%F0%9F%9A%A8does-the-internet-still-exist%F0%9F%9A%A8-fact-checking-net-neutrality-doomsday-predictions/>.

[7] Jon Brodtkin, “Verizon throttled fire department’s “unlimited” data during Calif. Wildfire,” *ARSTECHNICA* (Oct. 21, 2018), <https://arstechnica.com/tech-policy/2018/08/verizon-throttled-fire-departments-unlimited-data-during-calif-wildfire/>.

[8] Comments of TechFreedom, WC Docket No. 17-108 p. 29 (April 20, 2020), <https://techfreedom.org/wp-content/uploads/2020/04/TechFreedom-Net-Neutrality-RIFO-Comments.pdf>.

[9] *Ibid.*

- [10] Doug Brake, “Mobile Zero Rating: The Economics and Innovation Behind Free Data,” *Information Technology & Innovation Foundation* (May 23, 2016), <https://itif.org/publications/2016/05/23/mobile-zero-rating-economics-and-innovation-behind-free-data/>.
- [11] *Id.*
- [12] *Id.*
- [13] “Network Slicing,” *Ericsson* (last visited Dec. 14, 2023), <https://www.ericsson.com/en/network-slicing#:~:text=What%20is%20network%20slicing%3F,top%20of%20a%20shared%20infrastructure>.
- [14] *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order (Mar. 12, 2015), <https://docs.fcc.gov/public/attachments/FCC-15-24A1.pdf>.
- [15] Federal-State Joint Board on Universal Service, *CC Docket No. 96-45, Report to Congress ¶95* (Apr. 10, 1998), [https://transition.fcc.gov/Bureaus/Common\\_Carrier/Reports/fcc98067.html](https://transition.fcc.gov/Bureaus/Common_Carrier/Reports/fcc98067.html).
- [16] Dr. George S. Ford, “Investment in the Virtuous Circle: Theory and Empirics,” *Phoenix Center for Advanced Legal and Economic Policy Studies Policy Paper Number 62* p. 26 (December 2023), <https://phoenix-center.org/pcpp/PCPP62Final.pdf>.
- [17] *Id.*
- [18] *Id.* at 3.
- [19] Dr. George S. Ford, “Does Title II Reduce Infrastructure Investment? Repairing Hooton’s Analysis,” *Phoenix Center for Advanced Legal & Economic Public Policy Studies* p. 1. (Oct. 15, 2019), <https://www.phoenix-center.org/perspectives/Perspective19-06Final.pdf>.
- [20] “2022 Broadband Capex Report” *USTelecom* (Sept. 8, 2022), available at <https://ustelecom.org/research/2022-broadband-capex/>.
- [21] “The Role of Telecommunications in Public Safety and Law Enforcement,” *UtilitiesOne* (Aug. 7, 2023), <https://utilitiesone.com/the-role-of-telecommunications-in-public-safety-and-law-enforcement>.
- [22] NPRM at ¶ 13.
- [23] Comments of TechFreedom, WC Docket No. 17-108 et al. p. 21 (Apr. 20, 2020), <https://www.fcc.gov/ecfs/document/10420177798132/1/>
- [24] NPRM at ¶ 119.
- [25] “After Wildfire, a push for better rural internet,” *Northwest Public Broadcasting* (May 21, 2021), <https://nwpb.org/2021/05/21/after-wildfire-a-push-for-better-rural-internet/>.
- [26] “Comcast Plans to Invest More Than \$7.5 Million to Expand Broadband Service to More than 1,600

Additional Homes,” *Yahoo!* (Feb. 25, 2021), <https://finance.yahoo.com/news/comcast-announces-rural-broadband-expansion-160100080.html>.

[27] See Twelfth Measuring Broadband America Fixed Broadband Report, Federal Communications Commission Office of Engineering and Technology (Jan. 6, 2023), <https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-twelfth-report>.

[28] Hadas Gold, “Netflix and Youtube are slowing down in Europe to keep the internet from breaking,” *CNN* (Mar. 20, 2020), <https://www.cnn.com/2020/03/19/tech/netflix-internet-overload-eu/index.html>.

[29] See, e.g., Derek DiGiacomo, “Reliability: A keystone in the post-pandemic world,” *LightReading* (Feb. 17, 2021), <https://www.lightreading.com/cable-technology/reliability-a-keystone-in-the-post-pandemic-world>.

[30] NPRM at ¶ 25.

[31] *Id.* at ¶ 27.

[32] Tina Highfill and Christopher Surfield, “New and Revised Statistics of the U.S. Digital Economy, 2005-2021,” *Bureau of Economic Analysis U.S. Department of Commerce* (2022), <https://www.bea.gov/system/files/2022-11/new-and-revised-statistics-of-the-us-digital-economy-2005-2021.pdf>.

[33] Data taken from “Largest Companies by Market Cap” (last visited Dec. 12, 2023), <https://companiesmarketcap.com/>.

[34] The virtuous cycle, as described by the Commission fails to account for the fact that broadband providers would not benefit from interfering with edge services because “[p]rofits are not increased by blocking, choking, requiring paid prioritization, or monopolizing edge services (even under favorable conditions).” Dr. George S. Ford, “Investment in the Virtuous Circle: Theory and Empirics,” *Phoenix Center for Advanced Legal and Economic Policy Studies Policy Paper Number 62* p. 11-12 (December 2023), <https://phoenix-center.org/pcpp/PCPP62Final.pdf>.

[35] Paul Zhou, “Shenzhen Subsidizes 5G Deployment: Why Are Governments around the World Subsidizing 5G?” *Telecoms.com* (Sept. 23, 2019), <https://www.telecoms.com/5g-6g/shenzhen-subsidizes-5g-deployment-why-are-governments-around-the-world-subsidizing-5g->.

[36] Peter Linder, “5G pushes importance of first-mover advantages to new levels,” *Ericsson* (May 18, 2020), <https://www.ericsson.com/en/blog/2020/5/5g-pushes-importance-of-first-mover-advantages-to-new-levels>.

[37] For example, the rip-and-replace program to remove Huawei and ZTE equipment places a disproportionate burden on smaller carriers, “which relied on the cheaper gear from the Chinese firms.” Cecilia Kang, “‘Rip and Replace’: The Tech Cold War Is Upending Wireless Carriers,” *The New York Times* (May 9, 2023), <https://www.nytimes.com/2023/05/09/technology/cellular-china-us-zte-huawei.html>.

[38] *Protecting Against National Security Threats to the Communications Supply Chain Through FCC Programs et al.*, WC Docket No. 18-89 et al., Report and Order, Further Notice of Proposed Rulemaking, and Order (Nov. 22, 2019), <https://docs.fcc.gov/public/attachments/FCC-19-121A1.pdf>.

[39] Secure and Trusted Communications Networks Act of 2019, Pub. L. 116-124 (Mar. 12, 2020), <https://www.congress.gov/116/plaws/publ124/PLAW-116publ124.pdf>.

[40] This section incorporates much of a more robust analysis in my previous work for the American Action Forum, which can be found here: Jeffrey Westling, “West Virginia v. EPA and the Future of Net Neutrality,” *American Action Forum* (Aug. 23, 2022), <https://www.americanactionforum.org/insight/west-virginia-v-epa-and-the-future-of-net-neutrality/>.

[41] *West Virginia et al. v. Environmental Protection Agency et al.*, No. 20-1530 (slip opinion) (2022), [https://www.supremecourt.gov/opinions/21pdf/20-1530\\_new\\_1537.pdf](https://www.supremecourt.gov/opinions/21pdf/20-1530_new_1537.pdf).

[42] *Id.* at p. 20.

[43] *Id.* at p. 25.

[44] 47 U.S.C. § 201.

[45] 47 U.S.C. § 222.

[46] Press Release, “Man Arrested for Threatening to Murder Family of FCC Chairman,” *United States Department of Justice* (June 29, 2018), <https://www.justice.gov/usao-edva/pr/man-arrested-threatening-murder-family-fcc-chairman>.

[47] Colin Lecher, “FCC evacuates net neutrality vote after bomb threats,” *The Verge* (Dec. 14, 2017), <https://www.theverge.com/us-world/2017/12/14/16777178/fcc-net-neutrality-vote-evacuation>.

[48] Brief for *Amicus Curiae* TechFreedom In Support of Respondents, *Mozilla Corporation, et al., v. Federal Communications Commission and United States of America*, Case No. 18-1051, United States Court of Appeals for the District of Columbia Circuit (Oct. 18, 2018), <https://techfreedom.org/wp-content/uploads/2018/10/TechFreedom-Amicus-Brief-Restoring-Internet-Freedom-Order.pdf>.

[49] *West Virginia* at pp. 6, 20.

[50] *See, e.g.*, 47 U.S.C. § 332 prohibiting state or local governments from regulating the rates charged by any commercial mobile radio services.

[51] *West Virginia* at p. 27.

[52] Press Release, “Sinema to Lead Bipartisan Net Neutrality Effort,” Senator Kyrsten Sinema (Mar. 13, 2019), <https://www.sinema.senate.gov/sinema-lead-bipartisan-net-neutrality-effort/>.

[53] *West Virginia* at p. 19.

[54] *Id.* at p. 28.

[55] NPRM at ¶ 194.

[56] *West Virginia* at p. 30.