



Perspectives from FSF Scholars
May 11, 2020
Vol. 15, No. 23

FCC Report Shows Broadband Success Under Pro-Market Policies

by

Seth L. Cooper *

The April 24 release of the FCC's *2020 Broadband Deployment Report* reveals continued year-over-year increases in broadband service availability and speeds to Americans on different technology platforms. The 2020 Report's focus is on the progress of deployment of "advanced telecommunications capability" in 2018. Key data points contained in the report amply support the Commission's affirmative finding that broadband continues to be "deployed to all Americans in a reasonable and timely fashion."

Amidst the COVID-19 crisis, there are good reasons for optimism regarding the near-term future of broadband network deployments. Strong investment in 2017 and especially 2018 has enabled broadband networks to handle, without any material degradation, traffic increases occasioned by the COVID-19 pandemic. Service providers reported initial lockdown-related broadband traffic increases of 20-35% for fixed networks and increases of 10%-25% for wireless networks. Even as traffic increases may now be leveling off, service providers and analysts have emphasized that broadband networks are built to accommodate traffic spikes.

Data for 2019 and early 2020 indicates that broadband is still being timely deployed, with high-speed fiber, 5G, and Wi-Fi6E rolling out and poised to provide improved performance capability over earlier generations of technology. Despite widespread economic dislocations

due to the COVID-19 crisis, the evidence shows that the FCC's pro-investment and pro-infrastructure deployment policies continue to benefit Americans. The Commission should stick to those policies and build on them by promptly auctioning C-Band spectrum for commercial usage, reallocating the lower 45 MHz of the 5.9 GHz band for unlicensed Wi-Fi use, clarifying rules relating to infrastructure siting, removing outdated network unbundling rules that sap investment from next-generation network upgrades, and implementing its market-oriented universal service proposals.

Significant Broadband Deployment Progress in 2018

According to data cited in the *2020 Broadband Deployment Report*, here are the percentages of the U.S. population with access to broadband Internet access services at the end of 2018:

- 94.4% had access to fixed broadband services meeting download/upload benchmark speeds of 25Mbps/3Mbps – up from 93.5% in 2017, 91.9% in 2016, and 89.4% in 2014.
- "If we include satellite service in our estimate, the December 2018 data shows that fixed 25/3 Mbps service is deployed to nearly every American."
- 94.9% had access to mobile LTE broadband services with media speeds of at least 10Mbps/3Mbps – up from 89% in 2017, 87.3% in 2016 and 80.1% in 2014.
- 91.7% had access to fixed broadband services of 25Mbps/3Mbps and to mobile LTE broadband services with median speeds of at least 10Mbps/3Mbps – up from 85.8% in 2017, 83.3% in 2016, and 74.7% in 2014.

The 2020 Report observes that broadband access lags in rural and Tribal America compared to urban areas. However, notable deployment progress took place in these areas in 2018:

- "[T]he number of Americans living in rural areas with access to [access to fixed terrestrial broadband service at 25/3 Mbps] increased by 85%."
- "[M]obile LTE services coverage at median speeds of at least 10/3 Mbps in rural areas "increased from 69.3% to 83.3% between 2017 and 2018, after being relatively stagnant between 2014 and 2017."
- Although "22.3% of Americans in rural areas and 27.7% of Americans in Tribal lands lack coverage from fixed terrestrial 25/3 Mbps broadband," the year-end 2018 coverage gap is down from 26% in rural and 32% in Tribal areas at year-end 2017.

Importantly, the deployment progress achieved in 2018 depended on substantial infrastructure investment by service providers. According to the 2020 Report: "U.S. broadband providers invested approximately \$80 billion in network infrastructure in 2018, up more than \$3.1 billion from 2017." Thus, in 2018 service providers built on the pro-investment momentum that followed the 2017 *Restoring Internet Freedom Order's* repeal of public utility-like regulation under Title II of the Communications Act. *RIFO* reclassified broadband Internet access services as "information services" under Title I and established a market-oriented, light-touch policy approach with regard to those services. The investment gains of 2017 and especially 2018 stand in stark contrast to the annual declines in broadband infrastructure seen in 2015 and 2016 under the now-repealed Title II policy.

Positive Data Points Regarding Broadband Deployment in 2019 and Early 2020

Additionally, data cited in the *2020 Broadband Deployment* as well as other industry reports for 2019 and early 2020 provide evidence that broadband services meeting the Commission's advanced telecommunications services capability benchmarks continue to be reasonably and timely deployed to all Americans:

- At year-end 2019, 94.8% of the U.S. population had access to wired broadband services with download speeds of at least 25 Mbps, 91.4% had access to wired broadband services with speeds of at least 100 Mbps, and 84.9% had access to wired broadband speeds of at least 250 Mbps. (BroadbandNow)
- In March 2020, average U.S. fixed broadband upload/download speeds stood at 132.55/49.69 Mbps. (Ookla Speedtest)
- "[F]iber deployment in the United States [is] now passing 46.5 million unique homes, a 16% increase in homes passed by fiber since 2018. In 2019 alone, fiber broadband networks became available to roughly 6.5 million additional unique homes, the largest one-year increase ever, with smaller providers accounting for 25% of these new fiber connections... [T]he industry is currently on pace to deploy all-fiber networks to about 50% of U.S. households by 2025." (2020 Report)
- At year-end 2019, 4G network availability increased to 95.9% for Verizon, 95.4% for T-Mobile, 92.9% for AT&T, and 92.5% for Sprint. (Opensignal)
- In March 2020, average U.S. mobile broadband speeds reached 41.68/9.9 Mbps. (Ookla)
- At the end of 2019, 5G connections in North America grew to 587,000, including a 284% fourth quarter growth. (5G Americas)
- "AT&T, T-Mobile, Sprint, and Verizon are also rapidly expanding their 5G deployment, with 5G networks in aggregate now covering more than 200 million consumers across the country, especially in urban areas, with more live launches planned for 2020." (2020 Report)

An Optimistic Outlook on Progress of Broadband Deployment Amidst COVID-19

Amidst the COVID-19 crisis, there are good reasons for optimism regarding the near-term future of broadband network deployments. Strong network investment in 2017 and especially 2018 has enabled broadband networks to handle network traffic increases caused by COVID-19 and government lockdowns. In late April, a USTelecom report on network performance titled "Designed for Demand" stated that traffic increases on broadband networks in recent weeks "range from 13.6% – 36.75%, with a mean traffic increase of 21%." Meanwhile, NCTA reported on April 29 that national upstream peak growth was up 31% since March 1, and AT&T reported its core network traffic was 19% higher on April 28 than it was on February 28. However, service providers and other analysts have observed that such increases appear to be leveling off and reaching a "new normal" for network traffic.

At a U.S. Chamber of Commerce event held on May 5, FCC Chairman Ajit Pai stated: "Our broadband infrastructure has been able to withstand an estimated 20%-35% increase in usage on the fixed side and anywhere from 10%-25% increase on the wireless side." As service providers and analysts have emphasized, broadband networks are built to accommodate

spikes in traffic and to persevere through network failures. USTelecom observed in late April that "[e]ven during peak traffic periods over the past week, interconnections between networks have remain uncongested, as on average 49% to 67% of the total capacity on these peering links continues to be available as a buffer." Despite double-digit increased traffic demands, Ookla Speedtests reveal that fixed broadband speeds were 4% lower and mobile broadband speeds were 1% higher on March 6, 2020 compared to January 6, 2020.

Many service providers and analysts expect the COVID-19 crisis to negatively impact overall investment and deployment progress in 2020. However, rollouts of next-generation fixed and mobile networks in 2020 and beyond undoubtedly will reach previously unserved or underserved areas and reduce digital divides. As pointed out above, 5G network coverage will expand significantly in 2020, bringing increased capacity as well as average speeds up to 10 times faster than 4G networks and peak speeds up to 100 times faster. Significantly, the T-Mobile/Sprint merger will enable rapid deployment of a nationwide 5G network with up to 30 times more capacity than T-Mobile's pre-merger network by combining both providers' low-band and mid-band spectrum.

Additionally, the cable broadband industry's development of its DOCSIS® 4.0 technology and its 10G project to upgrade fixed broadband connections via cable networks could deliver gigabit and multi-gigabit speed services in 2021 and 2022. Consumers increasingly should enjoy improved capacity and reliability of unlicensed Wi-Fi6E as its rollout progresses and new spectrum resources, including 6 GHz band spectrum, are made available for Wi-Fi use. And future launches of next-generation satellites, including by HughesNet and ViaSat, are expected to enable high-speed satellite broadband service.

FCC Should Act to Ensure Continued Progress in Broadband Deployment

To build on recent pro-investment and pro-deployment actions and to counteract negative economic fallout from COVID-19, it is all the more important that the FCC steadfastly pursues market-oriented policy initiatives that will promote broadband infrastructure investment and deployment of next-generation networks. The Commission should start by following through on several pending proposals that would remove regulatory barriers to infrastructure deployment and incentivize service providers to continue making capital expenditures:

- Auction C-Band spectrum according to the agency's proposed schedule, with incentives for incumbent operators to expeditiously vacate for terrestrial mobile use.
- Adopt the agency's proposal to reallocate the lower 45 MHz of the 5.9 GHz band for unlicensed flexible use, including Wi-Fi6E, and combine it with spectrum in the adjacent 5 GHz band to create a contiguous 160 MHz channel.
- Issue a declaratory ruling to clarify provisions of Spectrum Act Section 6409(a) relating to non-substantial modifications to existing cell sites and thereby further reduce local government barriers to upgrading wireless infrastructure for next-gen services.

- Update the Over-the-Air Device (OTARD) rule to include hub and relay antennas for 5G fixed wireless and prohibit restrictions on their use within a property user's control.
- Curtail outdated "unbundling" regulatory burdens that inhibit investment and deployment of fiber and other next-generation network technologies.
- Implement its Rural Digital Opportunity Fund (RDOF) and proposed 5G Fund universal service initiatives while ensuring that funds target unserved areas and not overbuilding in areas already served by incumbent broadband service providers.

Conclusion

Data points charting broadband coverage and speed increases in 2018 – as well as indicators of further progress in 2019 and 2020 – show that the FCC's market-oriented light-touch regulatory policies for promoting infrastructure investment are continuing to bear fruit. The solid performance of U.S. broadband networks in accommodating COVID-19-related traffic increases as well as current and future rollouts of 5G, Wi-Fi6E, DOCSIS® 4.0, and other new technologies constitute solid reasons for optimism regarding the near-term future progress of broadband network deployments. Looking beyond 2020, the Commission can further advance the timely and reasonable deployment of broadband to all Americans by following through on its C-Band, 5.9 GHz, Section 6409(a), and other current initiatives to remove regulatory barriers to infrastructure investment and to reduce digital divides.

* Seth L. Cooper is Director of Policy Studies and a Senior Fellow of the Free State Foundation, an independent, nonpartisan free market-oriented think tank located in Rockville, Maryland.

Further Reading

[Comments of the Free State Foundation](#), the State of Competition in the Communications Marketplace, GN Docket 20-60 (April 27, 2020).

Randolph J. May and Andrew Long, "[The FCC's C-Band Plan Will Accelerate and Expand 5G Benefits](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 9 (Feb. 19, 2020).

Andrew Long, "[Wi-Fi 6E Can Modernize Unlicensed Wireless](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 7 (Feb. 7, 2020).

Seth L. Cooper, "[The Communications Market at 2020: The Competitiveness of Video, Mobile, and Fixed Broadband](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 6 (Jan. 30, 2020).

Randolph J. May, "[Relentless Competition Defines Wireless Space, So Regulate Very Lightly](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 1 (Jan. 9, 2020).

[Comments of the Free State Foundation](#), Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, GN Docket No. 19-285 (Nov. 22, 2019).

Seth L. Cooper, "[The FCC Should Clear Away Local Obstacles to Wireless Infrastructure Upgrades](#)," *Perspectives from FSF Scholars*, Vol. 14, No. 26 (Sept. 26, 2019).

Seth L. Cooper, "[Resurgence in Broadband Deployment Vindicates FCC's Pro-Investment Policies](#)," *Perspectives from FSF Scholars*, Vol. 14, No. 24 (Sept. 19, 2019).

Randolph J. May, "[A Summer Reading Recommendation for Commissioner Rosenworcel](#)," *FSF Blog* (Aug. 24, 2019).

Seth L. Cooper, "[FCC Report Indicates a Competitive Communications Marketplace: Future Reports Should Make Cross-Platform Substitution Findings](#)," *Perspectives from FSF Scholars*, Vol. 14, No. 6 (Feb. 26, 2019).

[Comments of the Free State Foundation](#) – Communications Marketplace Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*; GN Docket Nos. 18-231 and 18-238 (Sept. 21, 2018).

Seth L. Cooper, "[FCC Back on Track Promoting Broadband Deployment to All Americans](#)," *Perspectives from FSF Scholars*, Vol. 13, No. 9 (March 6, 2018).

[Comments of the Free State Foundation](#) – *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket 17-199 (Sept. 21, 2017).