## TESTIMONY OF BRENDAN CARR COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

## BEFORE THE UNITED STATES SENATE COMMITTEE ON APPROPRIATIONS SUBCOMMITTEE ON FINANCIAL SERVICES AND GENERAL GOVERNMENT

## **MARCH 10, 2020**

Chairman Kennedy, Ranking Member Coons, and distinguished Members of the Subcommittee, thank you for the opportunity to testify. It is a privilege to appear before you.

I want to begin today with an update on the steps we are taking at the FCC to accelerate the buildout of 5G and other high-speed Internet infrastructure in communities across the country.

Just a few short years ago, in 2015 and 2016, we were at serious risk of ceding U.S. leadership in 5G to China. We were in jeopardy of losing the good-paying American jobs and the half trillion dollars that 5G can add to the U.S. economy to our overseas competitors. We have now flipped the script and secured the strongest 5G platform in the world here in the U.S.

We now need to sustain this momentum. Time is of the essence, because we know what is at stake with 5G. \$275 billion of private sector investment, with not a penny of new taxes. Three million jobs. \$500 billion in economic growth. What is more, the country that builds strong 5G first will reap the benefits of early adopter jobs and services. The trillion-dollar club—those companies with market caps above \$1 trillion—has just four members: Apple, Microsoft, Amazon, and Google. They're all American, and they all ride on our world-leading mobile networks. That's not a coincidence, and when the next Amazons and Apples are invented, we want them to be invented here on our 5G networks. We want the jobs, the services, and the opportunities they will create to be realized right here in the U.S.

Beyond global competitions and unfathomable dollar figures, we act with a sense of urgency on 5G because we know what a connection means to American families. Every day that a family lacks adequate Internet access may be a day a doctor's appointment is missed, a picture to loved ones goes unsent, or homework remains unfinished.

The FCC has acted to secure the benefits of 5G for all Americans. We have done so in two main areas: infrastructure and spectrum.

On infrastructure, we modernized the outdated rules that only slowed down Internet builds and drove up costs. By cutting red tape, we helped accelerate infrastructure builds, including in rural and remote parts of the country that had been left on the wrong side of the digital divide for too long.

On spectrum, we have pursued an all-of-the-above strategy. On high-band, we completed the first auction of millimeter wave spectrum in the world last year and have now held several more. On low-band, the U.S. started pushing this spectrum out into the commercial market more than a decade ago. On mid-band, though, the U.S. had fallen behind. In 2017, when leadership changed at the FCC, the agency had no mid-band spectrum in the pipeline. Although mid-band is a key input for securing U.S. leadership in 5G, the prior FCC left the mid-band cupboard empty.

We have worked diligently since then to correct this mistake. At 3.5 GHz, we ensured mid-band spectrum will work in the real world, and we will now auction it off this summer. With EBS, which had not been assigned in roughly half the country, we are pushing mid-band out into the commercial marketplace. At 2.5 GHz, our decision in Sprint/T-Mobile enables the combined company to build out this valuable mid-band nationwide. At 2 GHz AWS-4, we now have a binding commitment from DISH to build broadband using its mid-band licenses—an intensive use of the spectrum that DISH was not planning on absent the transaction and our demands. We are pressing ahead with 5.9 GHz and 6 GHz, as well.

The FCC's actions have delivered results. Internet speeds in the U.S. are now up 85 percent since year end 2016. Internet providers have been building out more miles of high-speed fiber than ever before—smashing prior records. Just last year, providers built out over 450,000 route miles of fiber, which is enough to wrap around the Earth 18 times. The digital divide—the percentage of rural and other Americans that lack access to high-speed Internet services—narrowed by about 30 percent over the first two years of this Administration alone. Competition has increased, too, with the percentage of Americans with more than two options for high-speed Internet services increasing by 52 percent between year end 2016 and year end 2018.

We must continue to build on the success we are seeing. We need to extend America's winning streak. That means continuing our work to free up more spectrum and streamline outdated infrastructure rules.

Our decision last month on C-band is a key part of that effort. Unlocking the C-band has been a tremendously complicated and important policy puzzle to solve. It involves nearly every industry that the Commission regulates, and the outcome was not obvious. The best minds at the FCC ground away at it for two years, relying on all of our capabilities: engineering, economics, and law. The Chairman and the FCC's dedicated staff deserve immense credit for their work.

All of that work will deliver tangible results to the American people. We will clear 300 MHz of C-band spectrum, which is more than incumbents ever thought they could give up and is enough to enable a number of providers to offer truly mobile 5G services. Americans will start benefiting from these services next year with a full clearing coming in 2023—ensuring that our communities need not wait any longer than necessary to access high-speed services and all of the opportunities it enables. And we will do all of this using the FCC's tried and true auction process, using rules that are fair and known, and which will result in tens of billions of dollars being returned to the American taxpayer.

Our approach strikes the right balance. It creates incentives that can bring C-band spectrum to the market quickly while protecting the hundreds of millions of Americans who currently rely on C-band services. Incumbent satellite providers are not going to see the level of accelerated relocation payments that they sought—not even close—but the figure we arrived at is based on the law, the facts, and the FCC's extensive rulemaking record. It is derived from economists' estimates of the value that early spectrum clearing creates. And it relies on an extensive technical assessment of our alternatives should the satellite companies not cooperate—namely to provide for the design and construction of satellites, fiber, or other technological means to ensure continuity of video delivery, especially to rural America.

Let's consider where we started and where we ended. Two years ago, the major satellite companies proposed selling 100 MHz of C-band to a wireless company or companies in a private sale.

That proposal would have made enough room in the C-band for perhaps only one wireless provider, it would not have assured a fair and transparent bidding process, and it would not have returned a single penny to the taxpayer. Satellite companies may have pocketed \$30 billion or more. We said "no." Over the course of the next year, the satellite companies increased their spectrum target to around 200 MHz, quickened their pace of clearing, and offered a 50-50 split to Treasury—a split that Senate Commerce Committee leadership tracked in their own legislation. Again, we said "no." Instead, we ruled that the amount of spectrum cleared will be 300 MHz, that we will conduct the auction using the ordinary public process, that the public will start to use the spectrum next year, and that the satellite companies could receive single-digit billions of dollars—if and only if they earn it. In response, at least one of the satellite companies subsequently has threatened lawsuits and bankruptcy, hoping the FCC would cave and offer them billions more in cash. We said "no." We stuck with a final decision that is supported by the facts and the law—not by the desire of any satellite company to improve its balance sheet.

I am proud of the entire Commission's multi-year work on the order because it will preserve vital broadcasting services, especially in rural America where technological alternatives to satellite are costly or infeasible. It will make a material impact on Americans' ability to access 5G services quickly. And it will return billions of dollars to the American taxpayer.

\* \* \*

I want to thank you again Chairman Kennedy, Ranking Member Coons, and distinguished Members of the Subcommittee for holding this hearing. I welcome the chance to answer your questions.