

**STATEMENT OF
CHAIRMAN AJIT PAI
FEDERAL COMMUNICATIONS COMMISSION**

HEARING ON “OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION”

BEFORE THE

**UNITED STATES SENATE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION**

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Chairman Wicker, Ranking Member Cantwell, and Members of the Committee, thank you for holding this hearing. I appreciate this opportunity to update you on the work of the Federal Communications Commission to advance the public interest.

I'd like to lead off by saying how proud I am of the dedicated staff of the Commission. They come to work every day eager to carry out their mission to close the digital divide, promote innovation, protect consumers and public safety, and improve the FCC's processes and programs. It has been a privilege to work alongside them at the FCC's headquarters and in the field. They exemplify what it means to be public servants.

For almost two-and-a-half years, we have worked together to achieve the priorities I set at the beginning of my chairmanship—most notably, the top priority of closing the digital divide. The Commission has taken a variety of steps to better enable the private sector to deploy broadband infrastructure. For example, last year, we made it easier and cheaper for competitive providers to attach fiber to utility poles through a groundbreaking reform called “one-touch make ready.”

Of course, there are some areas where the business case for broadband deployment just won't exist—no matter how much red tape we cut. These are typically rural areas with sparser populations and lower incomes. The FCC manages programs to connect these rural communities through the Universal Service Fund. Here, we've been aggressively taking action to maximize the USF's impact—to stretch scarce dollars as far as we can.

Last year, we finished the Connect America Fund Phase II reverse auction. Through this novel approach, we're now awarding about \$1.5 billion to connect over 713,000 unserved homes and businesses nationwide.

Before the auction, we identified parts of our country that were unserved by broadband. This was so that we could target funding to leverage—not displace—private capital expenditures. We didn't want to fund overbuilding. We also made sure the auction was open to providers of all types, including rural telecom, cable, fixed wireless, and satellite companies, as well as electric utilities. This ensured that there would be plenty of competition.

The outcome of the auction was a tremendous success. We distributed funding much more efficiently thanks in part to intermodal, competitive bidding, saving \$3.5 billion from the \$5 billion price we initially thought would be required to connect these unserved areas. And consumers are getting high-quality broadband—99.7% of the winning bids are to provide consumers with service of at least 25/3 Mbps.

On Monday, we gave final approval to a second round of auction funding that will provide \$166.8 million over the next decade to expand broadband to 60,850 locations in 22 states (including Arizona, Kansas, Missouri, Nevada, New Mexico, and Tennessee). This money will begin flowing by the end of the month. In May, we gave final approval to the first batch of applications to expand service to 37,148

rural homes and businesses in 12 states, and these funds have already started reaching broadband providers. Among other construction, these applicants will be deploying gigabit fiber to thousands of locations in rural Missouri and Hawaii. To date, the Commission has authorized \$278.4 million over the next decade for buildout of high-speed Internet service to 97,998 unserved locations. I saw a glimpse of the exciting future ahead for consumers in these areas during a recent visit to East Central Electric Cooperative in Okmulgee, Oklahoma. Thanks in part to CAF funding from the FCC, this electric cooperative will build gigabit-speed connections to thousands of locations in rural Oklahoma, including many Tribal residents of Creek Nation.

Moreover, last December, we implemented reforms to the FCC's Alternative Connect America Cost Model (A-CAM). As a result, a total of 186 small, rural carriers participating in the A-CAM program have now accepted \$657 million in additional support over the next decade to provide 106,000 more rural homes and small businesses with 25/3 Mbps broadband service. This represents a 31.8% increase in the number of locations that will have high-quality service available through the FCC's A-CAM program. And the increase is much larger in many states, such as 123% in New Mexico, 114% in Arizona, and 105.4% in Montana.

In December, for the first time we also began requiring that small, rural carriers that continue to rely on the Commission's legacy, cost-based support mechanism provide 25/3 Mbps broadband service to specific numbers of rural homes and small businesses in their service areas. Under the prior Administration's rules, these carriers were only required to provide 10/1 Mbps service to 115,441 locations; under our new rules, these same carriers will have to provide 25/3 Mbps broadband to at least 600,535 locations. At the same time, we also initiated a second round of A-CAM offers of fixed, model-based support for a term of ten years to these carriers, in exchange for building out 25/3 Mbps broadband to all fully-funded locations in their service areas. If all legacy-reliant carriers accept the new A-CAM offers, they will be required to provide 25/3 Mbps service to at least 1,126,082 locations. This would include 58,000 locations in Texas and Iowa, 42,000 locations in Indiana, and 36,000 locations in Missouri.

Last year, we took other steps through the Fund to help close the digital divide. For example, we increased the annual cap on rural healthcare program spending by nearly 43% to \$571 million per year and implemented ongoing annual inflation adjustments—the first increase in the program's funding level since it was established in the 1990s. In addition, in June 2018, we established a process to carry-forward unused rural healthcare program funds from past funding years for use in future funding years. This sensible modification means an additional \$83 million can be used in funding year 2019 that will help to provide critical connectivity to rural healthcare institutions.

Going forward, we plan to continue our emphasis on closing the digital divide. Later this year, for instance, we will begin a rulemaking to establish a \$20.4 billion Rural Digital Opportunity Fund. Applying lessons learned from the Connect America Fund Phase II reverse auction, this program will spur the deployment of high-speed broadband networks across more of rural America over the next decade, bringing greater economic opportunities to America's heartland. Service providers that win funding in the reverse auction will deploy needed infrastructure to provide up to gigabit-speed broadband in the parts of the country most in need of connectivity. I'm excited about this program—it will be the FCC's single biggest step yet to close the digital divide and will connect up to 4,000,000 rural homes and small businesses to high-speed broadband networks.

Of course, it is vital that we spend USF funds wisely and eliminate waste, fraud, and abuse in these programs. That's why recently, we developed a reorganization plan to create a Fraud Division within the Enforcement Bureau. I am pleased that this proposal was unanimously endorsed by the Commission and cleared by the Office of Management and Budget. This reform will embed a permanent effort to combat USF fraud within the structure of the Enforcement Bureau.

Another critical Commission priority is to maintain and advance our nation's leadership in 5G, the next generation of wireless connectivity. 5G networks will be 100 times faster than today's networks, perhaps more. They will have lag times that are one-tenth of what they are today. And they'll have much more capacity, being able to connect as many as one million devices per square kilometer.

Our work on 5G will open the door to new services and applications that will grow our economy and improve our standard of living. Smart transportation networks will link connected cars—reducing traffic, preventing accidents, and limiting pollution. Ubiquitous wireless sensors will enable healthcare professionals to remotely monitor your health and transmit data to your doctor before problems become emergencies. Connected devices will empower farms to apply precision agriculture. And there will be more innovations that we can't even conceive of today.

These breakthroughs will boost our economy. One study pegs 5G's potential at three million new jobs, \$275 billion in private investment, and \$500 billion in new economic growth. And that should not be news to the members of this Committee, which has taken the lead in ensuring America's leadership in 5G by passing laws like the MOBILE NOW Act.

To realize this potential, we've developed and are executing the 5G FAST plan—a comprehensive strategy that will “Facilitate America's Superiority in 5G Technology.” It has three key components: (1) pushing more spectrum into the marketplace; (2) promoting the deployment of wireless infrastructure; and (3) modernizing outdated regulations. In my testimony today, I'd like to concentrate on the first prong, spectrum.

The applications and services of tomorrow will require much more bandwidth. They cannot be developed and deployed without spectrum. This critical resource represents the lifeblood of the communications industry—and with it, the future of our economy. That's why the FCC must continue its work to aggressively make more spectrum available for commercial use.

Last year, I stated that the FCC would hold two high-band spectrum auctions during this fiscal year: one for the 28 GHz band and another for the 24 GHz band. And I noted that conducting these auctions successfully and promptly would be important to U.S. leadership in 5G.

I am pleased to report that we have done what I said we would do. Our 28 GHz auction began last November and concluded this January. All in all, bidders won 2,965 licenses, and the auction raised \$700,309,809 in net bids for the U.S. Treasury. Our 24 GHz auction began in March and concluded in May. In this auction, bidders won 2,904 licenses, and the auction raised \$2,022,676,752 in net bids.

These auctions are significant accomplishments, but the FCC cannot and will not rest on our laurels. Instead, we will continue to free up spectrum for commercial use. Starting on December 10, we will hold an auction of the upper 37 GHz, 39 GHz, and 47 GHz bands. This auction will be the largest in American history, releasing 3,400 megahertz of spectrum into the commercial marketplace. All in all, these auctions will free up for the commercial marketplace over 5 gigahertz of spectrum for flexible use. For context, that's more spectrum than is currently used for mobile broadband by all mobile broadband providers in the United States *combined*.

We are also taking aggressive action on mid-band spectrum, important spectrum given the desirable combination of coverage and capacity that these bands offer for wireless services. Next year, we intend to auction mid-band spectrum in the 3.5 GHz band. However, we expect to authorize initial commercial deployments in this band later this summer—well ahead of the auction—after we complete our review of the laboratory test results from the first group of spectrum access systems. And we intend to take action to make available more spectrum in the 2.5 GHz and 3.7-4.2 GHz bands in the coming months. Notably, the MOBILE NOW Act also required the Department of Commerce to evaluate the sharing of the 3.1-3.55 GHz band with commercial operators. Although the Department has only announced that it has started looking at a small portion of that band—the upper 100 megahertz—we look

forward to working with our federal partners on how to effectuate the widespread sharing of the full 450 megahertz of this prime mid-band spectrum.

As part of our balanced spectrum strategy, we have also been working to make more spectrum available for unlicensed use. Earlier this year, for example, we allocated over 21 gigahertz of spectrum in the *Spectrum Horizons* bands for unlicensed operations. And we are continuing our effort to open up a large amount of unlicensed spectrum in the 6 GHz band (while safeguarding incumbents with innovative technologies and sharing techniques). This will make sure we get the most use of this limited, essential resource and deliver consumer value.

The next priority I'll discuss is our important mission to protect public safety. Here, the Commission has been extremely active, both proactively and in response to emergencies that have arisen, such as Hurricanes Harvey, Irma, Maria, and Michael.

Last year, for example, we took important steps to improve Wireless Emergency Alerts, which play a critical role in notifying Americans when emergencies strike. We adopted an order that requires the delivery of more precise, geographically targeted alerts so that the alerts reach only those communities impacted by an emergency. The order also adopted rules to enable the public to better review emergency information by requiring that alert messages remain available on wireless devices for at least 24 hours after receipt, or until consumers choose to delete it.

Last year, we also took important steps to improve the reliability and effectiveness of the Emergency Alert System, or EAS. For example, we adopted an order that authorizes "live code" testing of EAS—that is, the testing of the same alert codes and processes that would be used in actual emergencies—but also requires clear messaging and outreach to make sure the public knows they are receiving a test message, not an actual emergency alert. And to reduce the risk and impact of false alerts, the order requires new safeguards in the configuration of EAS equipment and also requires broadcasters, cable systems, and other EAS participants to notify the Commission's 24/7 operations center when they discover they have transmitted a false alert.

We have also taken steps to ensure that Americans in need can reach someone who can help and that emergency responders can more quickly locate Americans in need. For instance, we have proposed rules to implement Kari's Law—and I would like to thank the members of this Committee again for making this vital 911 improvement law a reality. Kari's Law requires multi-line telephone systems—which commonly serve hotels, office buildings, and campuses—to enable users to dial 911 directly. And it also contains a notification requirement so that when a 911 call is made in these settings, a front desk or security office will be alerted to facilitate building entry by first responders. In March, we also proposed rules to help first responders more precisely locate wireless 911 callers in multi-story buildings. Specifically, we proposed a vertical, or "z-axis" metric to our location accuracy rules that would enable 911 call centers and emergency responders to figure out on what floor wireless 911 callers are located. In the coming year, the Commission intends to take final action to improve our location accuracy rules and implement Kari's Law.

Our work in this area also extends to national security. When it comes to the security of our communications networks, we cannot afford to make risky choices and just hope for the best. We must have a clear view of the threats we face and take action to respond to those threats. That ethos extends to our review of foreign companies that seek to do business in the United States. At our May open meeting, for example, the Commission advanced our national security by denying the application of China Mobile USA, a wireless carrier ultimately owned by the Chinese government, to provide international telecommunications services in the United States.

The process that yielded decision reflects the well-considered, fully-integrated approach of the FCC and Administration to the national security implications of communications networks. The FCC solicited the views of the relevant federal agencies on whether China Mobile's application raised national

security, law enforcement, or related concerns. After a lengthy review of the application and in consultation with the U.S. intelligence community, in 2018, the Executive Branch agencies recommended that the FCC deny China Mobile USA's application due to substantial national security and law enforcement concerns. Notably, this was the first time the Executive Branch had ever recommended that the FCC deny an application due to national security concerns. Based on this recommendation and the full public record in this proceeding, I determined that approving this application would not serve the public interest and the Commission voted to deny China Mobile USA's application. I'm pleased my colleagues agreed with me.

Our cross-agency efforts extend to the international stage. Last month, I was honored to be part of the United States delegation that traveled to Prague for an important conference on how best to secure our 5G networks. I'm grateful to the leaders of the Czech Republic's government for convening this meeting, which featured government officials from more than 30 countries, as well as industry leaders. I'm even more gratified that this gathering was able to develop a set of consensus best practices for 5G security. Dubbed the Prague Proposals, these guiding principles fall into four categories: policy, technology, economy, and security.¹ And the fact that proposals gained such wide support was due in part to the close collaboration among U.S. government agencies, including the FCC, and direct engagement on the international stage.

Going forward, we will continue to prioritize the security of our communications networks. We are working with our federal partners to implement Executive Order 13,873, the President's May 15 Order on Securing the Information and Communications Technology and Services Supply Chain, and section 889 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019. We are in turn examining the impact of these developments on the FCC's 2018 proposal to ban the use of money from the Universal Service Fund to procure equipment or services from companies that pose a national security threat to our communications networks or the communications supply chain. And we have followed with interest the bipartisan introduction of the United States 5G Leadership Act of 2019, which would create a Supply Chain Security Trust Fund to aid small carriers in replacing such equipment.

The last priority I'll mention—but certainly not the least important—involves attacking unwanted and illegal robocalls. During my tenure as FCC Chairman, I've had the opportunity to set the agenda for 28 monthly meetings. At almost half of those meetings, we've voted on measures to fight unlawful robocalls and caller ID spoofing. We've taken action to cut off robocalls and spoofing at the source, including authorizing carriers to stop certain spoofed robocalls. We've authorized the creation of a reassigned numbers database. We've taken aggressive enforcement action against those who unleash robocalls on consumers. We've proposed to use the authority Congress gave us in last year's RAY BAUM'S Act to expand the reach of our anti-spoofing rules. Most recently, last week we made clear that voice service providers may block unwanted robocalls by default and sought comment on creating a safe harbor for providers who block such calls that fail Caller ID authentication. I'm optimistic that these steps will make a significant dent in this problem, which generates the most consumer complaints to the Commission.

An important coda on Caller ID authentication framework, which can help combat illegal caller ID spoofing: Call authentication is the best way to ensure that consumers can answer their phones with confidence. It will help consumers know when a phone call is fraudulent before they pick up, thus eroding the ability of scam artists to use false caller ID information to trick vulnerable Americans into answering their phones when they shouldn't. With a robust framework in place, consumers and law

¹ The Prague Proposals issued following the Prague 5G Security Conference are available at <https://www.vlada.cz/en/media-centrum/aktualne/prague-5g-security-conference-announced-series-ofrecommendations-the-prague-proposals-173422/>.

enforcement alike will be able to more readily identify the source of illegally spoofed robocalls and reduce their impact.

I have repeatedly demanded that major carriers implement the SHAKEN/STIR Caller ID authentication framework by the end of 2019. If they do not, the Commission has taken the necessary steps to be move directly to final regulations early next year to require that they do so. Our work here is fully in line with, and a complement to, the important work this Committee has done in crafting the Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, or TRACED Act—important legislation that I hope soon becomes the law of the land.

In addition, the Commission continues to aggressively enforce the Telephone Consumer Protection Act as well as the Truth in Caller ID Act. We have sent a clear message that those who engage in illegal robocall schemes will pay a price. The FCC coordinates with the Federal Trade Commission on investigations into violations of our Do Not Call rules, and we work together on consumer education programs. The Commission also works with federal and state agencies to share information and resources that can be used to investigate unwanted calls, such as the Department of the Treasury, Department of Justice, and Department of Homeland Security. Finally, we alert consumers about robocall scams, such as a recent “one-ring” advisory issued this month warning consumers about scam calls using three-digit country codes for Mauritania or Sierra Leone and hanging up after a single ring.²

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I would like to conclude by once again thanking our dedicated staff. Day in and day out, they work hard to advance the public interest. Whether they are working to combat robocalls, expand broadband deployment, promote wireless innovation, protect public safety, or address consumer complaints, they serve the American people with skill and dedication, and I am honored to have them as colleagues.

Thank you for this opportunity to testify. I will be pleased to answer any questions that you may have.

² The “‘One-Ring’ Phone Scam” advisory is available at <https://www.fcc.gov/consumers/guides/one-ring-phone-scam>.