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ACCOUNTABILITY AND OVERSIGHT OF
THE FEDERAL COMMUNICATIONS COMMISSION
THURSDAY, DECEMBER 5, 2019
House of Representatives,
Subcommittee on Communications
and Technology,
Committee on Energy and Commerce,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:02 a.m., in Room 2123, Rayburn House Office Building, Hon. Mike Doyle [chairman of the subcommittee] presiding.

Present: Representatives Doyle, McNerney, Clarke, Loeb sack, Veasey, Soto, O'Halleran, Eshoo, Butterfield, Matsui, Welch, Lujan, Schrader, Cardenas, Pallone (ex officio), Latta, Shimkus, Olson, Kinzinger, Bilirakis, Johnson, Long, Flores, Brooks, Walberg, Gianforte, and Walden (ex officio).

Also Present: Representative Blunt Rochester

Staff Present: AJ Brown, Counsel; Jeff Carroll, Staff Director; Parul Desai, FCC

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Detailer; Evan Gilbert, Deputy Press Secretary; Waverly Gordon, Deputy Chief Counsel; Tiffany Guarascio, Deputy Staff Director; Alex Hoehn-Saric, Chief Counsel, Communications and Consumer Protection; Jerry Leverich, Senior Counsel; Dan Miller, Senior Policy Analyst; Phil Murphy, Policy Coordinator; Joe Orlando, Executive Assistant; Kaitlyn Peel, Digital Director; Tim Robinson, Chief Counsel; Andrew Souvall, Director of Communications, Outreach and Member Services; Rebecca Tomilchik, Staff Assistant; Margaret Fogarty Tucker, Minority Legislative Clerk/Press Assistant; Peter Kielty, Minority General Counsel; Kate O'Connor, Minority Chief Counsel, C&T; Evan viau, Minority Professional Staff, C&T; and Nate Wilkins, Minority Fellow, C&T.

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Mr. Doyle. Well, good morning, everyone, and welcome to the Subcommittee on Communication and Technology's hearing on accountability and oversight of the Federal Communications Commission.

I am glad to welcome our witnesses back before the subcommittee. I know it has been 7 months since we had you before us, and I know that you have all missed the warm, welcoming atmosphere of our hearing room, but despite that passage of time, many issues that were of concern to us then still remain unresolved today. For example, I asked about the investigation into phone carriers selling the real-time location of nearly every American.

Mr. Chairman, you told me that even after more than a year had passed, we still couldn't tell whether this practice had stopped, couldn't say whether the impacted individuals had been notified, couldn't tell us if Members of Congress and law enforcement had their locations sold or tracked.

And in June of this year, you told Senator Blumenthal that you were wrapping up this investigation and would have recommendations shortly. That was 6 months ago, and we still don't have them. Chairman Pallone and I wrote to the chairman in November asking for an update and we got a response yesterday saying that he now expects an answer from the enforcement bureau by the end of January and the chairman says he will share those results with us as soon as practical. We will be interested to learn when that will be, Mr. Chairman.

Looking at your announcement yesterday about your new new plan with Mobility Fund Two, it seems that you have finally realized that the data you collected is garbage and that you need to go back and do this all over again. Everyone has been telling you

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that for years and instead of acting decisively, folks in rural America will have to wait even longer to get broadband as you finally collect the data that you need.

At our last hearing 7 months ago and the hearing 9 months before that, members brought up these same concerns and here we are with you just yesterday announcing that you were kicking off another lengthy rule-making process to try again to fix this process. And stamping your new plan 5G doesn't change the fact that communities where these funds are desperately needed had been waiting years and will have to wait even longer because of a bungled process.

And to add insult to injury, you aren't even taking action against the carriers that submitted the faulty or fraudulent data in the first place. What is the incentive in the future to provide accurate data if they know they are going to get a pass? Where is the justice for the people in the communities who have suffered because of this?

Mr. Chairman, I would remind you, you are charged with protecting and serving the American people, not the telecom industry. Shifting gears and on a more holiday spirited note, I am pleased about Chairman Pai's recent comments regarding the T-band. This spectrum is used by first responders around the country and as reports have shown, the value of selling this band will not even come close to covering their relocation costs.

In Allegheny County alone where I live. It would cost upwards of \$250 million for public safety to relocate to other spectrum. I think that once and for all we need to repeal this mandate, it makes no sense to me or many on this committee to go forward with it.

And finally, regarding C-band. I am pleased that you have finally come around to see the benefits of a public auction. For all the discussion about the need for speed in this debate, you unfortunately have been moving at a glacial pace. Questions of the

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commission's legal authority remain and threats of lawsuits on those grounds still hang heavily over the commission.

I along with subcommittee Vice Chair Matsui, Mr. Johnson, and Mr. Gianforte have introduced a C-BAND Act and similar legislation has been introduced in the Senate. I believe Congress must move to pass legislation authorizing an auction in this band and resolve the commission's authority to ensure a fair and transparent auction and capture auction revenue so that it may be used to pay for the deployment of rural broadband next generation 9-1-1 and closing the digital divide.

We all know if we want to address these challenges, the Federal Government needs to provide funding for it. The C-band auction represents our last best chance to do that in the foreseeable future and I stand ready to work with my colleagues on the committee and in the Senate to address this issue promptly and swiftly.

We need real solutions to address these problems, real protections for the American people, and accountability from our Federal regulators in industries that they oversee. I want to thank all the witnesses for being here today. I look forward to your testimony.

And with that, it is my pleasure to recognize my good friend, Mr. Latta, the ranking member on the subcommittee for communications in technology for 5 minutes for his opening statement.

[The prepared statement of Mr. Doyle follows:]

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Mr. Latta. Well, thank you, Mr. Chairman. And thank you to the commission for being with us today. It is great to see you all. I also appreciate that you are all so willing to be accessible and travel across the country to see how the FCC's regulation are affecting companies and consumers.

This past year, Commissioners O'Rielly and Carr both came to my district to speak on rural broadband and learn about telehealth and precision agriculture and see how a fixed wireless operator serves a local sheriff's office.

And a few years before Chairman Pai came to a town of less than 700 people to meet with a packed room of telephone providers to discuss rural call completion. Hearing and seeing first hand what is happening outside of D.C. helps to put our work in perspective. Again, I appreciate the work all of you do and thank you for being again with us today.

At the hearing in May, Chairman Doyle and I expressed the need for rural solutions to address illegal robo calls that are made to the American people. Yesterday we passed bipartisan/bicameral legislation out of this chamber that provides strong consumer protections to combat robo calls.

But this problem will only be solved with a multi-pronged approach, and I want to thank Chairman Pai and the rest of the commissioners for their work thus far in pushing the industry to curb fraudulent robo calls.

I also want to thank the commission for injecting some urgency into the 5.9 gigahertz band have long recognized the value of the spectrum for advancing vehicle safety and wireless innovation and the chairman's proposal starts the discussion to modernize the band. The ongoing uncertainty in the band has hindered investment and

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deployments of safety technologies and hampered the expansion of wi-fi services.

Our focus should be putting an end to that uncertainty, propel automobile safety, and unlock unlicensed use to help meet consumer demand for wi-fi services.

I look forward to hearing more about how we can ensure both interests are advanced while protecting incumbents. It is clear that wi-fi is important to our economy and our overall communications landscape which is why I am also interested to see that the FCC is looking at the 6-gigahertz band for additional unlicensed opportunities.

At the same time, we must be aware of the critical services already in the 6-gigahertz band. I fully expect and encourage the commission to continue its robust, technical analysis and testing as they do with every band to ensure incumbents are afforded their appropriate protection levels from harmful interference.

It is important that industry and the FCC work together to find a consensus position that allows the spectrum to be used as efficiently as possible. The commission has made many advances in reducing regulatory red tape from a fixed and wireless broadband infrastructure and more work remains. In July, a letter with nine of my colleagues on the subcommittee encouraging the FCC to clarify its rules regarding the statutory 5 percent cap on franchise fees, which some franchise authorities have stretched to include in kind contribution that may deter investment broadband infrastructure.

Part of the solution could be found by improving the underlying maps and I am pleased that this committee reported favorably H.R. 4229, the Broadband Data Act, to the House floor which I worked on with my friend, the gentleman from Iowa, Mr. Loeb sack, but the maps are only the beginning to closing the digital divide.

Last year, Mr. Loeb sack and I included our Precision Agriculture Connectivity Act in

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the farm bill. This provision will spur broadband deployment on rural, agricultural lands to help farmers better utilize connected equipment. I was pleased to see that the commission recently announced the creation of a task force as mandated by our legislation to offer advice and recommendations on how to best achieve this very important goal.

I look forward to continuing to work with the industry and the commission to further address the connectivity issues.

On the mobile broadband side, there is more work to be done as our Nation competes with China and others for 5G leadership. It is vital that we continue to look for opportunities in Mid-Band to extend the reach of 5G across the entire country, especially in rural communities. I hope to hear more about the commission's plan today for helping to speed build out and prioritize the development in rural America.

I also welcome any ideas the commission may have on how Congress can better promote broadband deployment in competition in unserved and underserved areas.

Again, I thank you all for being here to testify and before I yield back, Mr. Chairman, I would also ask unanimous consent to submit four letters for the record from carriers regarding ending their contracts to share location information.

Mr. Doyle. Without objection, so ordered.

[The information follows:]

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Mr. Latta. Thank you very much.

I yield back.

[The prepared statement of Mr. Latta follows:]

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Mr. Doyle. The gentleman yields back. The chair now recognizes Mr. Pallone, chairman of the full committee, for 5 minutes of his opening statement.

The Chairman. Thank you, Chairman Doyle. Congress mandated that the Federal Communications Commission do its work in the public interest. That means its actions, policies, and rules should put consumers first. Unfortunately, this FCC under Chairman Pai continues to turn its back to consumers in favor of big corporate interests.

Time and time again this commission has ignored the voice of the people and has taken a different path laid out by billion dollar companies. The prime example of this was the FCC's action turning control of the internet over to large corporations by eliminating strong net neutrality safeguards that protected a free and open internet. That was just the beginning.

As part of an effort to expedite the roll-out of 5G service, the FCC stripped away vital protections that helped safeguard important religious and cultural tribal sites. Luckily the court struck down that effort. And it didn't end there. The FCC similarly attempted to strip away protections that promote diversity in the ownership of media companies, but again the court struck down the FCC's actions. And just when you think this commission couldn't slip any further down, the FCC intentionally undermine the ruling of that court by approving more consolidation after the fact.

More and more challenges just like this are coming. In catering to corporate interests, the FCC has repeatedly stretched the law to the point of breaking and this has resulted in delays and unsuccessful initiatives that benefit no one. Beyond that, this commission is stalled when it comes to holding those mega corporations accountable for violating the slim safeguards that remain.

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We are, for example, still waiting for a conclusion of the FCC's investigation into the widespread disclosure of real-time location data by wireless carriers. That investigation started over a year ago and that is unacceptable. Effective deterrence requires swift and decisive action and the FCC has demonstrated neither.

In other instances, it is as if this commission has intentionally gone after vulnerable Americans. The commission is proposing to cut off support to connect schools and libraries, rural healthcare, broadband deployment, and support for low-income Americans by capping the universal service fund. This is shameful, and it preys on Americans that need our help.

And if these failures weren't bad enough, the FCC's actions or lack thereof have put the American people in danger. We are increasingly experience hurricanes and wildfires, but the commission is all talk and no action in the wake of these disasters. I have repeatedly asked this FCC to take steps to improve the wireless network resiliency cooperated framework, but nothing happens.

And finally, the ongoing Government Accountability Office investigation into the FCC's electronic common filing system is producing disturbing results.

I can't speak more specifically to its findings because the report is currently marked for limited or official use, but I ask Chairman Pai to dedicate the resources needed to quickly address the issues that GAO has found. And I just think it is time for the FCC to get back on track and put consumers first.

And with that, I would like to yield the balance of my time to Mr. Lujan.

[The prepared statement of The Chairman follows:]

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Mr. Lujan. Thank you very much, Mr. Chairman, and I want to thank the commissioners for making themselves available today for being in front of the committee and all the staff.

We all know that this country continues to face a deep and persistent digital divide. Unfortunately, I do not believe, Commissioner Pai, that this commission under your leadership has done enough to bridge that divide. And a concern that just occurred yesterday, despite bipartisan agreement that the United States of America must fix our Nation's broadband map, we know that the mapping system that the FCC has to accurately capture where there is connectivity where there is not, is broken.

It is not accurately collecting that information. And then to find out that wireless carriers submitted false information, false mapping information, inaccurate information, what that means is, wireless carriers submitted misleading coverage information to the FCC and I am concerned that it is being swept under the rug.

When consumers go buy their mobile phones, they have a beautiful brochure that is put in front of them and it shows coverage areas of where they live. Those coverage areas are supposed to show where there is connectivity.

Many people, especially in rural areas, buy their mobile phones based on those maps because they may need to make a phone call to save someone's life. They have elderly parents that need connectivity that there is no other family around. Why in the world would they not be held accountable, especially when there is bipartisan agreement from this Congress, Democrats and Republicans say we need to fix this problem?

I hope we hear more about that and how that can be connected, and then on top of that, Chairman Pai, it was announced that the FCC was going to rush repackaged USF

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funding based on this flawed data. These dollars are precious. We need to make sure that we put those dollars where they matter most and where we can get connectivity especially to rural America. Thank you for the time.

And I yield back.

[The prepared statement of Mr. Lujan follows:]

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The Chairman. And I yield back, Mr. Chairman.

Mr. Doyle. The gentleman yields back.

Chair now recognizes Mr. Walden, Ranking Member of the full committee for 5 minutes for his opening statement.

Mr. Walden. Thank you, Mr. Chairman. Good morning. Good morning to the chairman and to the commissioners. Thanks for your service to America. I know we have disagreements on some of these policy issues, but we do appreciate the meetings we have had, the discussions we have had, the service that you are providing.

You all heard me all along talk about the need for broadband in rural America. As Chairman Pai saw first hand, when he joined me in Eastern Oregon last year, far too many Oregonians still lack access so reliable broadband internet service. They are not alone.

Millions of Americans who live in rural America face the same sort of internet dead zones. The Universal Service Fund's an important component in building and maintaining rural broadband service, and as policymakers our primary goal is to ensure that Federal resources are allocated responsibly.

In that vein, we have to have accurate broadband maps to properly identify those places. We all express that in different terms with different emotion. I started way back when when the Obama stimulus was going through this committee and the money was going out the door before the maps determining where underserved and unserved areas.

I even had an amendment to fix that and it went down, unfortunately. So here we are, an administration or so later or two, and -- any way.

This committee recently passed two bipartisan mapping bills aimed at improving data collection and mapping efforts at the FCC, but there are some actions of the

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committee that do have some concern for us. We learned from the press release yesterday that the FCC's establishing a new \$9 billion fund with a billion specifically for precision agriculture.

Sounds good, but -- and I support build-out for 5G in rural areas, but I have no details on this plan. I do have a lot of questions. I am also unclear as to where the \$9 billion came from, and while still waiting for maps to accurately be updated. As you all know, we are the committee of oversight for the Federal Communications Committee. We take our job seriously, and I know you know that.

And you take yours seriously, but we expect to have a little more notice, little more communication on some of these big announcements. And so that would, I think, be helpful and probably alleviate some of the questions that will come today.

Since we obviously need to be crystal clear about our intentions for the FCC action from this committee, I would also like to note the importance of ensuring that Federal programs outside of the Energy and Commerce Committee's jurisdiction remain consistent with the committee's goal of promoting private investment in broadband infrastructure deployment.

Sometimes various programs trying to achieve the same goal are not always in sync, as you all know. Last Congress, we appropriated more than \$600 million toward broadband funding programs. As that money begins making its way out the door, I welcome an update from the commissioners here today as to how the FCC is consulting with other agencies as required by legislation last year.

Switching gears, I would like to turn to spectrum issues that have recently raised quite a bit of attention. The FCC announced that they would pursue a public auction of spectrum in the C-band. As the law stands now, any proceeds from an FCC auction would

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go to the Treasury for deficit reduction rather than going toward bipartisan priorities like facilitating the national transition to next generation 9-1-1. I think it is important to legislate and look to my colleagues on the other side to work with us on this issue in the coming weeks.

As we have these discussions, we must work with the current licensees, potential bidders, and others so this auction moves quickly and we preserve U.S. wireless leadership. I have sought for years to find consensus solutions to spectrum challenges as Chairman Pai well knows.

One of these issues I have been focused on is how to address certain challenges facing our public safety officials in telecommunications as we continue moving into a digital world, including finding a solution to the T-band auction. At the same time, it is also imperative that we put a stop to 9-1-1 fee diversion, so that States stop using fees paid by consumers to support 9-1-1 services as slush funds for unrelated programs.

At the last FCC oversight hearing and other times over the last several years, I have floated proposals as how to delay or repeal the T-band auction process and welcomed thoughts on how to reconcile these related issues. I have not been taken up on that offer, so I must say that I find it interesting that just last week, Chairman Pai called on Congress to repeal the T-band auction mandate, which was not coordinated nor discussed with me or my staff despite our efforts to find a solution.

So with the deadline fast approaching, I would like to take this opportunity to again repeat my call to affected parties to work with us and my colleagues to find a consensus solution on this issue. I realize it is a real one we need to address, but there are other issues.

I led the effort to implement the 9-1-1 commission findings that set up First Net

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and did the auction in 2012. And I know these issues pretty well and we got to take care of our first responders and we will, but there are other issues associated with this set of issues that we also need to address and we need to work together on these.

Mr. Chairman, with that I will yield you back 6 seconds, and thank you.

[The prepared statement of Mr. Walden follows:]

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Mr. Doyle. The chair thanks the gentleman. The chair would like to remind members that pursuant to committee rules, all members' written opening statements shall be made part of the record.

So it now gives me great pleasure to introduce our witnesses for today's hearing. The Honorable Ajit Pai, Chairman of the Federal Communications Commission. Welcome, Mr. Chairman. Honorable Michael O'Rielly. Welcome, sir. Honorable Brendan Carr. Welcome. Honorable Jessica Rosenworcel, welcome. And last but certainly not least, the Honorable Geoffrey Starks. Welcome to all of you. We thank you for joining us today. We look forward to your testimony.

I will be recognizing each witness for 5 minutes, but before we do that, we will explain the lighting system in front of you. There is a series of lights that will initially be green at the start of your opening statement. It will turn yellow when you have 1 minute left. Please begin to wrap up your testimony at that point. When the light turns red, your time has expired.

Chairman Pai, welcome. We now recognize you for 5 minutes.

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STATEMENTS OF THE HONORABLE AJIT PAI, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION; THE HONORABLE MICHAEL O'RIELLY, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; THE HONORABLE BRENDAN CARR, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; THE HONORABLE JESSICA ROSENWORCEL, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; AND THE HONORABLE GEOFFREY STARKS, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

STATEMENT OF THE HONORABLE AJIT PAI

Mr. Pai. Thank you. Chairman Doyle, Ranking Member Latta, members of the subcommittee, thank you for holding this hearing. I appreciate this opportunity to apprise you of the FCC's work to advance the public interest.

I would like to focus my statement this morning on two important issues that we will be taking up at our meeting next week. The first, unfortunately, hits home with millions of Americans. It involves my proposal to establish 9-8-8 as the three digit number dedicated to suicide prevention and mental health assistance.

Under my proposal, anyone who calls 9-8-8 would be routed to the established National Suicide Prevention Lifeline where they could be assisted by trained counselors. This proposal has a tragic backdrop. Suicide rates in the United States are at their highest levels since World War II. In 2017, more than 47,000 Americans died by suicide. That is a 33 percent increase since 1999. And more than 1.4 million adults attempted suicide. At-risk populations are disproportionately affected. For instance, every single day 20 veterans die by suicide and more than half a million LGBTQ youth will attempt suicide this year alone.

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I believe 9-8-8 could help. It has an echo of 9-1-1, a number we all know. An awareness of this resource should make a real difference when those in crisis need a lifeline, and I believe that we can get 9-8-8 up and running more quickly than other three digit numbers. Of course, more calls will mean more demand for crisis centers, which, in turn, will require more resources. And that is why it is so important that this effort has bipartisan congressional support.

In particular, I would like to thank Congressman Chris Stewart and Seth Moulton for leading on this issue in the House. My proposal also has diverse support outside Congress, including from the Departments of Veterans Affairs and Health and Human Services, the National Council for Behavioral Health, and the Trevor Project. They agree that a simple number, 9-8-8, could make the difference between life and death. Working together I am confident that we can and we will save lives.

The second issue I would like to discuss is my proposal to reform the 5.9 gigahertz band. Here is the background. In 1999, the FCC allocated 75 megahertz of spectrum in this band for a technology called Dedicated Short Range Communications, or DSRC.

DSRC was intended to enable ubiquitous automotive communications, but it hasn't born fruit. After two decades, DSRC has evolved slowly at best. It is not widely deployed and so this spectrum, this public resource, has remained largely unused. This is unacceptable and that is why I am proposing an alternative approach that would allow consumers to benefit from improved automotive safety technologies and more unlicensed innovation.

With respect to unlicensed innovation, I am proposing to permit unlicensed operations in the lower 45 megahertz portion of the 5.9 gigahertz band. This would be a big benefit for American consumers. The best evidence of that is WiFi's growing

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popularity. Since launching in 1999, the same year the FCC allocated this band for DSRC, wi-fi has become a staple of everyday life, but this has raised a challenge: We need more unlicensed spectrum.

Allowing unlicensed operations in the lower 45 megahertz portion of the 5.9 gigahertz band would help meet that challenge. With respect to automotive safety, the upper 20 megahertz of this band would be allocated for cellular, vehicle to everything, or C-V2X, a new cellular-based technology which would allow direct communications between vehicles and, well, everything from other vehicles to light poles to pedestrians. C-V2X is also expected to support new applications as we transition to 5G, and it is backed by automakers like Ford, Audi, BMW, Daimler, and Tesla. And we aren't closing the door on DSRC.

Japan has a single 10 megahertz channel for DSRC that is actively used for collision avoidance, and so I am proposing that we seek public input on whether to allocate the remaining 10 megahertz of spectrum in the upper part of the 5.9 gigahertz band for DSRC or C-V2X. Advocates of each technology could make their cases.

I appreciate the bipartisan support for reforms to the 5.9 gigahertz band, in particular, Ranking Member Latta, Committee Vice Chair Clarke, and Representatives Eshoo, Long, Matsui, and McNerney. And there is also diverse third-party support, including from Tech Freedom, Public Knowledge, Citizens Against Government Waste, the 5G Automotive Association, Ford, and the Wireless Internet Service Providers Association.

Now these two issues: Three digit number for suicide prevention and the 5.9 gigahertz band are just two examples of how the commission is advancing the public interest with strong bipartisan support. There are many others such as our actions last month to protect the security of our networks and improve the ability of first responders

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to quickly locate wireless 9-1-1 callers that I don't have time to discuss right now. I would be happy to answer any questions you might have about them or any other issues.

Mr. Chairman, Mr. Ranking member, members of the subcommittee, thank you again for holding this hearing. Look forward to answering your questions.

[The prepared statement of Mr. Pai follows:]

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Mr. Doyle. Thank you, chairman.

The chair now recognizes Commissioner O'Rielly for 5 minutes.

STATEMENT OF THE HONORABLE MICHAEL O'RIELLY

Mr. O'Rielly. Good morning, and thank you, Chairman Doyle, Ranking Member Latta, and members of the subcommittee. I appreciate the opportunity to join the subcommittee as it conducts further oversight of the commission.

With your indulgence, I would like to raise three topics for consideration. First, I will begin with the world radio communication conference 2019/WRC19 in Egypt, which I just attended, 2 weeks ago. Suffice it to say, despite meeting some of our Nation's spectrum policy goals, WRC19 raised fundamental concerns that call into question the value of this international spectrum conference. Several countries, in particular Russia, France, and China clearly sent delegations to Egypt with directives to thwart the United States and other forward leaning countries.

From my viewpoint, this was done in part for larger geopolitical purposes and to protect domestic industries from U.S.-based competition. Admittedly, international spectrum harmonization's incredibly valuable, especially in the 5G universe, but it must not come at the expense of U.S. interests and our like-minded allies. We are not without options if certain member nations continue to disrupt progress towards a next generation wireless world. For instance, the U.S. could explore the formation of a G7-like organization or loose coalition of leading wireless nations as an alternative to the ITU.

Second, when it comes to spectrum policy more generally, the WRC process

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reaffirms my belief that for the U.S. to lead in 5G wireless services, we must avoid any delay in finalizing needed spectrum allocations especially Mid-Bands.

In fact, I would argue that we must pursue speed ahead of other social objectives. To do otherwise is to give other countries a head start in the ability to dictate the progress of our wireless future. In terms of specific spectrum bands, I believe that the premier opportunities reside at 3.7 to 4.2 C-band and the 3.1 to 3.5 5-gigahertz band.

Given that the chairman has announced a C-band auction for 2020, we must do all that we can within legal constraints and respecting current licensees to complete this auction as soon as possible. For the 3.1 to 3.5 gigahertz band, the commission is initiating proceeding in December on a fairly narrow aspect of relocating commercial incumbents.

Remaining effort, which involves moving DOD radars and opening the rest of the band to sharing needs to be addressed in the very near future. This will require some heavy lifting and the subcommittee's assistance in this matter would be invaluable.

Finally, the subcommittee's help is also requested in addressing 9-1-1 fee diversion. I reported many times to this subcommittee on the progress the commission is making to reduce the number of fee diverting States and I can say to date we have successfully removed several from the last published list of diverters.

With remaining States, we have those gaming the process, changing the labels of various fees, or down right ignoring our calls to end their thievery. As Mr. Walden recently suggested, tying fee diversion to a T-band plan may be one strong option to consider and would add that establishing further statutory prohibitions on diverters is much needed as well.

Thank you for inviting me to testify, and I will welcome any questions you may have.

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[The prepared statement of Mr. O'Rielly follows:]

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Mr. Doyle. Thank you, Commissioner O'Rielly.

Mr. Carr, you are now recognized for 5 minutes.

STATEMENT OF THE HONORABLE BRENDAN CARR

Mr. Carr. Chairman Doyle, Ranking Member Latta, distinguished members of the subcommittee, it is a privilege to appear before you.

When I testified 7 months ago, I outlined the bold steps the FCC is taking to accelerate the build-out of 5G and other internet infrastructure. I am pleased to report that the commission's reforms are delivering results. Internet speeds are up 56 percent compared to just 2 years ago. The digital divide narrowed by about 20 percent last year alone. Providers built out more miles of high-speed fiber than ever before, and America now has the world's leading 5G platform.

The very first commercial 5G service launched here in the U.S. more than a year ago. The private sector brought 5G to 14 communities last year, quickly expanded that to over 30 in the first part of this year, and now one provider alone has committed to building 5G to 99 percent of the U.S. population.

Small sub-builts have jumped from 13,000 in 2017 to about 60,000 in 2018 to a total of 200,000 by the end of the year. These figures show the momentum America now has for 5G. Of course, numbers alone don't tell the full story. If 5G builds were limited to the wealthiest neighborhoods of America's biggest cities, we couldn't claim our policies are working.

We reached the finish line when every community has a fair shot at Next Gen

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Connectivity. And that is why I have spent a lot of my time on this job outside of D.C. in the communities we can't leave behind in the transition to 5G.

While there is much more to do, I am proud of the results that modernize infrastructure rules are already delivering. Take Houston's second ward, a neighborhood that hasn't always shared in the prosperity and investment of neighboring communities. I spent time there with Mayor Sylvester Turner. I talked to the broadband providers who are right then trenching fiber and powering up new small cells. Infrastructure builds that are boosting capacity in a community where for many their wireless connection is their only onramp to the internet.

Or take Sioux Falls, South Dakota, a community many people wouldn't associate with the leading edge of 5G. Yet a few months back, Mayor Paul TenHaken showed me the 5G cell sites that are already going up.

And this is great news because 5G opportunity can't be a unique privilege of living in a big city. That is why we focus on ensuring that rural America is not left behind. Not left out of the jobs, the healthcare, and the innovations that are going to ride on a 5G network.

To further extend U.S. leadership, we need to expand the skilled workforce that can build out this infrastructure. Industry could fill another 20,000 tower climbers to complete this 5G build and these are good-paying jobs, ones you can raise a family on, and they don't require an expensive 4-year degree.

So earlier this year I announced a jobs initiative that looks to community colleges as a pipeline for these 5G jobs and after I met with officials at a community college in South Dakota, they have recently announced that they are launching their own program just next month. The new jobs and the builds that this will enable create the platform for

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innovative new services.

Telehealth is a great example as I saw earlier this year with Ranking Member Latta at ProMedica Hospital in Toledo. That is where Dr. Jumaa showed us how a video app right on his smartphone now let's him to see and treat stroke patients from almost anywhere. It is shaving precious minutes and saving lives, and it is an example of a new trend in telehealth with apps that can be accessed right on a patient's own device. Quality care can now be delivered directly to patients. It is the healthcare equivalent of moving from Blockbuster to Netflix.

The FCC should support this new trend, particularly for low-income Americans and veterans, and that is why I have led the FCC's work to stand up a new \$100 million connected care program which can do just that. I would like to move to an order in that proceeding in 2020, and I look forward to working with all stakeholders in doing so.

In closing, I want to thank you again, Chairman Doyle, Ranking Member Latta, members of the subcommittee for the chance to testify. I look forward to your questions.

[The prepared statement of Mr. Carr follows:]

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Mr. Doyle. Thank you, commissioner.

Commissioner Rosenworcel, you are recognized for 5 minutes.

STATEMENT OF THE HONORABLE JESSICA ROSENWORCEL

Ms. Rosenworcel. Good morning, Chairman Doyle, Ranking Member Latta, and members of the subcommittee. Thank you for the opportunity to be here today.

A few weeks ago The Wall Street Journal published an article entitled, The People Left Behind in a Broadband World. It began by describing a parking lot in southeastern Ohio. It is right next to the county library and every evening long after the library has closed its doors, the lot is dotted with cars with passengers lit up by the light of their laptops and cell phones. You see, the library keeps the WiFi on even after it has shut its doors. It means students who need internet access to do their school work can get their assignments done while sitting in the cars of their family and friends because so many of them do not have access to broadband at home.

Today, 7 in 10 teachers assign homework that requires internet access, but FCC data repeatedly show that one in three households do not subscribe to broadband. Where those numbers overlap is what I call the homework gap, and according to the Senate Joint Economic Committee, the homework gap is real. It affects 12 million students in every State all across the country. You see it in communities everywhere. Kids lingering in those library parking lots during afterhours or sliding into booths at fast food restaurants to do their homework with a side of fries, or just urging their parents to shuffle them to the homes of friends and relatives just to cobble together the

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connectivity they need for nightly school work.

The homework gap is the cruelest part of the digital divide, but there are things we can do to solve it. The FCC could start a homework gap proceeding to identify solutions and new ways our universal service policies could help.

We could explore how these programs could equip school buses with WiFi and turn ride time, especially in rural areas, into connected time for homework just as legislation before this committee recommends.

And we could even go bigger and establish a national fund to solve the homework gap from a portion of the funds raised from the future auction of our air waves. This fund could be used to make sure there are wireless hot spots for loan in every school library across the country. It would give every student a fair shot to do their homework and keep up in class, and it could solve the homework gap virtually overnight. We can do this if we set up a fund from the revenues raised by new licenses in the C-band.

To this end, I am glad that the chairman has announce that we will have a public auction of these air waves and I think the next step should be exploring how we can solve the homework gap using some of the revenues from this auction.

If we did this, we could ensure no child is left offline, and I think we should because right now I think in too many FCC policies, we are leaving too many people behind. We just approved the largest wireless transaction in our Nation's history allowing two of the four national carriers to combine.

We all know what happens to consumers when market concentration increases following a merger. In the airline industry, this kind of consolidation brought us more baggage fees and smaller seats. Why do we think it is going to be different this time? On top of this, we are taking the wrong road in the race to 5G auctioning off high band air

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waves when the rest of the world has focused its efforts on Mid-Band spectrum.

We are serious risk of falling behind. Moreover, we have real work to do if we really want to secure our 5G networks and coordinate across the government because we do not have a national 5G security strategy and experts agree we need one. And when it comes to the resiliency of our existing networks, we need to recognize that wildfires and hurricanes are becoming more common and that communications outages that accompany them are becoming more severe, but we have not updated our FCC framework for disaster response and we need to.

Finally, the FCC is issuing all kinds of press releases about how we are going to update our universal service policies with new funds for rural broadband and wireless, but how are we going to do this when our maps are so inaccurate we can't say with certainty where service is and is not.

Commonsense says we need maps before money and data before deployment, but I fear that is not how we are going to proceed. These things need to be fixed, so I am glad you are holding this oversight hearing today. We have problems to solve, we have resources that are constrained, and communities that have real difficulty navigating the digital age.

I still believe communications technology can help. I believe with the right FCC policies in place, we can help solve the homework gap and so many other challenges that are before us.

Thank you, and I look forward to answering any questions you may have.

[The prepared statement of Ms. Rosenworcel follows:]

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Mr. Doyle. Thank you, commissioner.

Commissioner Starks, you are recognized for 5 minutes.

STATEMENT OF THE HONORABLE GEOFFREY STARKS

Mr. Starks. Thank you, Chairman Doyle, Ranking Member Latta, Chairman Pallone, and Ranking Member Walden, and members of the subcommittee, it is a privilege, of course, to appear before you here today.

Since I began and in the 7 months since I last appeared before you, I have repeatedly stressed the critical importance of reliable, affordable broadband service to communities throughout America and that is why I want to begin with outlining how the digital divide is hardening into the state of internet inequality and how the FCC needs to improve the universal service fund programs to address this issue. Millions of Americans in the hardest to serve areas are getting left behind.

I have proposed a four-point plan to address rural broadband. First, the FCC must fund rural broadband with fixed maps. We have heard this here today already. The FCC recently proposed a \$20.4 billion plan, the 10-year rural digital opportunity fund known as RDOF, critically 16 billion, nearly three-quarters of that fund will be spent over 10 years based on the Form 477 data and maps that nearly every stakeholder agrees is badly flawed. We should have proceeded with a smaller initial budget and shorter service terms while we fix that data and mapping and then proceeded with the bulk of the support over longer terms, unfortunately, the RDOF structure adopts a ready, fire, aim approach that favors speed over funding.

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Second, to address rural connectivity, we must incentivize providers to bring future proof broadband to our communities. A close review of the RDOF proposal finds that many communities that will be deemed eligible are currently unserved already receive FCC high cost funding.

How did this happen? That is why I have called for a data driven 10 year look back on how our high cost programming has performed in bringing broadband to our hardest to reach areas.

Sometimes you have to look back in order to move forward, and what we cannot have is a world in 10 years from now, we wake up with another \$20 billion spent and we still don't understand with precision which communities remain unserved and how we can accurately finish the job to connect them.

Third, we must hold our auction winners accountable. Sadly, more than a dozen winners from our last Universal Service Fund auction have already defaulted on their bids to provide that necessary service to rural areas. We need to be absolutely sure that the carriers who receive USF funding will deliver the connectivity to the communities that need it the most.

Finally, to address rural broadband. We must advance a more affordable way for our poorest rural Americans to connect to the internet. The FCC should require USF auction winners to offer an affordable broadband service option. We should examine the experience of a number of ISPs, including Comcast, Cox, AT&T, and Spectrum that do provide low-cost offerings for the internet around \$15 or less to families participating in low-income Federal programs.

Connecting all Americans isn't enough if those connections are not secure. And so back in May I raised the alarm that we need to focus on the problem of untrustworthy

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Chinese equipment that is in our networks. I say we need to find this insecure equipment, fix the problem, and fund it. Find it, fix it, fund it.

Last month my colleagues and I unanimously voted not only to prohibit USF funds from purchasing this untrustworthy Chinese equipment, but also critically to address what to do about the equipment that already stands in our networks.

There are additional security risks that must be addressed. One in particular that I focused on is election security. Reporting indicates that at least six States and Washington, D.C. still use voting machines that transmit results over cellular networks. Meaning that results can be blocked, altered by criminals, or our adversaries that can use fake cell towers and hack untrustworthy routers. Because of these risks, I have met with the major wireless carriers to discuss and have them tell me how they are protecting our network security. The important goal here that we must have is every vote to be counted accurately each and every time.

Finally, we must make sure that all Americans share in the benefits of 5G. That technology has the opportunity to drive solutions, real solutions on issues that matter most in our world, not just for today, but for our shared tomorrow. The future of work is one of these.

5G will allow massive IOT networks using automation and artificial intelligence to achieve unprecedented productivity and efficiency, but that transformation will also displace millions of workers and, in particular, research from McKenzie shows that this revolution will disproportionately impact communities of color and women.

That is due to their overrepresentation in roles as truck drivers, machinists, food service workers, and office clerks. Government needs to partner together with private sector to encourage and develop programs to use 5G better.

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Lastly, I will highlight the issue of climate change. It is an issue that we are seeing that our folks and companies are deploying in infrastructure deployments to account for climate change for their disasters and purposes of network resiliency, but 5G electric grid efficiency is going to play a critical role going forward.

Thank you for having me here today.

[The prepared statement of Mr. Starks follows:]

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Mr. Doyle. Thank you, commissioner.

We have concluded our openings. We are now going to move to member questions. Each member will have 5 minutes to ask questions of our witnesses and I will start by recognizing myself for 5 minutes.

So Chairman Pai, I am glad that you have come to see that a public auction is in the best interest of the country and is the best approach. I want to ask all of the commissioners to respond to my question by raising your hand if you agree. I will make a statement, if you agree with it, raise your hand.

Could the commission under its current authority use spectrum auction revenue from the C-band to pay for rural broadband development? Could you use it to pay for deployment of next generation 9-1-1? Could you use it to close the homework gap? Would Congress need to pass legislation to authorize revenue from an auction of the C-band in order to do any of those things?

Exactly. This is why we need to move quickly to pass legislation to address these issues and I stand ready to work with all members of this committee and the Senate who wish to do the same. This is an opportunity we dare not miss.

I also want to ask all the commissioners to respond to my question by raising their hand if they agree. This is sort of a little different approach to Mr. Dingell, but the FCC's broadband deployment data is significantly lacking and deeply flawed.

Do you agree with that statement? These flaws are so bad that some of it, as the chairman has said in the case of the Mobility Fund Two data, we will need to redo it. They need to be redone. When you have bad data as you did in Mobility Fund Two you can't make good decisions. You agree with that?

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Mr. Chairman, will you commit to collecting new accurate data as it seems you have realized you need to do in Mobility Fund Two for other proceedings?

Mr. Pai. Mr. Chairman, appreciate the question. We have done that with the digital opportunity data collection which we adopted on August 1 with respect to fixed broadband.

With respect to the 5G funds since that is a Greenfield bill we will be exploring with a notice to proposed rule making early next year, the way to move forward given the experience we have had with MF2 and that is why I agreed with the staff's recommendation we should close down the challenge process.

The maps we had were simply inaccurate and we cannot go forward as you pointed out aptly making a good decision on the basis of bad data.

Mr. Doyle. Let me ask Commissioner Rosenworcel and Commissioner Starks. Does it seem to you that the chairman's decisions about when he needs accurate data and when he doesn't is rather arbitrary because I can't find any rhyme or reason for why he accepts that he needs good data for these renewed Mobility Fund Two data, but in other proceedings such as this new forbearance proceeding regarding competitive services and the next round of connect America fund grants, the commission seems to be ignoring the lack of accurate data in its decision making. Would you like to both comment on that?

Ms. Rosenworcel. I agree with you, chairman. I think you are right and I think it is this simple: We need maps before money and data before deployment.

Mr. Starks. I could not agree more, Mr. Chairman, and it took us over a year to say that the Mobility Fund Two data was broken, which seems shocking to me. This is -- I am disappointed as well in an enforcement capacity that we are not going to hold folks

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accountable for those misrepresentations.

Mr. Doyle. Thank you. Mr. Chairman, you told Senator Blumenthal in June of this year that you were wrapping up your investigation into location sharing by mobile carriers and you would be responding to the incident in the near future.

Now its December and we still haven't seen anything and I know yesterday your office did email me a response to my request for an update saying you would try to share the results of your investigation as soon as practical. Could you tell us more specifically when we are going to get that information?

Mr. Pai. Mr. Chairman, as I pointed out in the letter after consulting with the career staff of the enforcement bureau, they have told me that they would be in a position to provide those recommendations to me -- to wrap up that part of the investigation by the end of January, which is why I said as soon as possible thereafter I would be happy to share with you, other interested members of the committee what those results would be.

Mr. Doyle. Commissioner Rosenworcel and Starks, do you have anything to add to that?

Ms. Rosenworcel. It has been well over a year since we learned that there is a black market out there for where we are with our wireless phones.

For a few hundred dollars, anyone could buy where we are within a few hundred meters. That is dangerous for our national and personal security, and it is crazy that wireless companies sold this data to skip tracing firms who then sold it to bail bondsman who then sold it to bounty hunters.

And here we are months and months later and I still don't know what happened and the chairman's office has refused to even provide us with any information about

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letters of inquiry or what we are investigating.

I think that this is something that you need to follow-up on because this goes to the security of every one of us who holds on to a mobile phone.

Mr. Doyle. Thank you. I see my time has expired. Do you agree with that statement, commissioner?

Mr. Starks. I do, Mr. Chairman.

Mr. Doyle. Thank you very much. I now yield 5 minutes to the ranking member.

Mr. Latta. Thanks, Mr. Chairman, and again, to the commission, thanks for being here today.

Chairman Pai, if I could start my questions with you. I applaud the work you and the commission are doing to make 6 gigahertz available for unlicensed use, but I am concerned about how it might impact the utilities in my district who rely on that band for fixed wireless services.

Does the commission have the technical knowledge to craft rules that ensure that incumbent users are being protected?

Mr. Pai. I appreciate the question, Ranking Member Latta, and the answer to that question is, yes, led in part by our sterling chief engineer and the other talented staff of our office of engineering and technology.

We are doing the necessary technical analysis to understand the extent to which the sharing of that 59-25 to 71-25 band with unlicensed operations would be consistent with the important functions that spectrum serves for the electric utilities and others that you identified.

Mr. Latta. Well, I appreciate that and will you commit to ensuring that the incumbent users are protected when you make 6 gigahertz available for unlicensed use?

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Mr. Pai. Absolutely, Congressman. I have said consistently that we will make sure that we balance both those interests. We want to preserve those important incumbent uses and we also want to look at unlicensed and other operations.

Mr. Latta. Thank you. Let me follow-up with another question. Recently you put forward a new proposal for the 5.9 gigahertz band which would make 45 megahertz of spectrum available for unlicensed use while the remaining 30 megahertz would be split between two different auto safety technologies, the DSRC and the C-V2X.

Would the proposal allow automakers to continue using the 5.9 gigahertz band to send safety messages and provide other critical life-saving services?

Mr. Pai. It would, Congressman. In fact, I would argue that my approach would deliver the most significant automotive safety benefits to the American public in decades and the reason is, it would allow cellular vehicle to everything, in particular, in that upper 20 megahertz part of the band to progress.

Under the current rules, C-V2X cannot go forward at all. We are stuck with the DSRC approach. My goal is to enable automotive safety technologies like that to thrive. And at the same time, we want to recognize, as I mentioned in my opening statement, the DSRC should have a fair shot in making its case and given the fact that the Japanese employ a 10 megahertz channel, that is why I included, as part of my proposal, seeking comment on whether DSRC or C-V2X should have an additional 10 megahertz.

So that is a 30 megahertz wide channel that would be allocated to automotive safety driving tremendous benefits for American consumers and this where, as I pointed out, a lot of automakers are focusing a lot of their energy as well.

Mr. Latta. Let me ask a quick follow-up on. Have you talked with the Department of Transportation on that?

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Mr. Pai. Extensively, congressman, for many, many months. I personally and my staff and this staff of the engineering and technology office, among others, have been consulting with them extensively.

We have revised our proposals substantially to accommodate the interest and, in fact, the approach that I published on the internet a couple of weeks ago reflects that compromise; that we aren't singling out -- we aren't -- we are essentially focusing on a balanced approach that would give automotive safety technology an exclusive home and unlicensed operations an exclusive home, and we feel like that is the best of both worlds.

Mr. Latta. Thank you. Because, again, as the FCC -- I think you talked a little bit about this, has the FCC performed or evaluated any engineering studies to determine the impact on the incumbent uses of this band once opened for the unlicensed use?

Mr. Pai. That is a good question. That is part of the reason why the approach I suggested is the best one. Under the previous administration, the contemplation was that we would share the entire band between DSRC and unlicensed operations. In order to test the feasibility of that, extensive testing was required.

And that testing has taken a long, long time. Under my approach with spectral separation by creating an exclusive home where automotive safety could thrive, they don't need to worry about unlicensed operations interfering with them. Similarly on the unlicensed side because they have that 45 megahertz exclusive home in the lower part of the 5.9 gigahertz band, there is no problem in terms of the interference with automotive safety.

And so essentially, it's saying, look, everybody gets a different bite of the apple, so to speak, and those bites don't have to conflict.

Mr. Latta. Thank you. Commissioner Carr, I know earlier this year that you were a

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key driver in the FCC's launch of \$100 million pilot program to support telemedicine. I have always been an advocate for telehealth. In fact, last month this committee passed my bill aimed to address maternal mortality disparities which include utilizing connected technologies. Would you please give me an update on how the pilot program is going?

Mr. Carr. Thank you, Congressman. We moved to the next phase earlier this summer, the common cycle on that has closed. My hope is that we would move forward quickly in 2020 with an order that would stand up formally that pilot program.

Mr. Latta. Thank you very much. Mr. Chairman, my time has expired.

And I yield back.

Mr. Doyle. The gentleman yields back.

The chair now recognizes Mr. McNerney for 5 minutes for questions.

Mr. McNerney. Thank you, chairman. And I thank the commission for your work in the initiatives you described this morning.

Mr. Chairman Pai, this summer I sent you a letter urging you to start a proceeding to take a first look at 5.9 and make it available for unlicensed use and I appreciate your proposal and I am pleased to see that. You have also put a proposal to make the 6 gigahertz band available for unlicensed use and I am hoping the commission can move forward very quickly on this as well and that has been echoed by members of the commission.

Chairman, please answer yes or no, will you commit to moving forward in a timely manner to make the 6 gigahertz band available for unlicensed use and protect the incumbents.

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RPTR MERTENS

EDTR ZAMORA

[10:57 a.m.]

Mr. Pai. Yes, Congressman, with the caveat that obviously we are going to be driven by the technical analysis, and I agree with the timely action on that basis.

Mr. McNerney. Thank you.

Commissioner Rosenworcel, if our Nation is to have a successful 5G strategy, how critical is it that we make use -- make more spectrum available for unlicensed use? And why is the 6-gigahertz band important for that purpose?

Ms. Rosenworcel. You are right, unlicensed is absolutely critical. When we talk about 5G, we can't just talk about licensed airwaves. We have got to talk about unlicensed too. We know that about 70 percent of 5G traffic is going to be offloaded onto WiFi at some point, so we have got to find places in our airwaves for that unlicensed activity to grow. The 6-gigahertz band is near existing unlicensed. We will have economies of scale, and it offers big, wide channels. We will have big capacity. This is where we get gigabit WiFi. It is where we need to go next.

Mr. McNerney. Thanks for that answer.

Chairman, during the recent California wildfires, hundreds of cell towers went down when the power was turned off in Contra Costa County, which is part of my district. We had 88 cell towers go down from power outages. This means that people couldn't call 911 or let loved ones know their status and so on.

Mr. Chairman, please answer yes or no again. Will you commit to conducting a formal investigation into why cell towers went down during the power outages, including examination of backup generators and what coordination existed between carriers and

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utilities?

Mr. Pai. Congressman, we are already doing that. Our Public Safety and Homeland Security Bureau has already reached out to the affected communications providers to understand what went wrong, looking at updating the wireless resiliency framework.

Mr. McNerney. Thank you. As a part of this investigation, then, will you commit to holding a hearing in northern California to hear from the stakeholders involved?

Mr. Pai. Congressman, I would happy to explore that with you and with other affected stake -- areas in California.

Mr. McNerney. So will you commit to doing this within 6 months?

Mr. Pai. Yes.

Mr. McNerney. Thank you.

Commissioner Rosenworcel, again, what should the FCC be doing going forward to make sure the cell towers don't go down during power outages?

Ms. Rosenworcel. Thanks. It is a terrific question, because we are having these once in a century weather events now every year. We have got to start planning and learning from them. We need a new playbook for disaster. Within 6 weeks after one of these outages, we should have an initial report every time. We should make sure we update our policies regarding cell towers and outages. We used to have backup policies at cell towers. We discussed them extensively after Hurricane Katrina, but the Office of Management and Budget took our rules and authority away. We have got to revisit that.

We have also got to update the wireless resiliency framework at the agency, which has been the subject of GAO criticism, and we have got to update our network outage reporting to make sure it reflects what is happening when people lose service.

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Mr. McNerney. Thank you.

Mr. Chairman, I would like to submit a record -- a letter from 24 public interest organizations.

Mr. Doyle. Without objection, so moved.

[The information follows:]

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Mr. McNerney. Mr. Starks, the Lifeline program is critical for so many of my constituents, especially during emergencies like the wildfires. I am troubled by the FCC's repeated efforts to undermine the program. It is concerning that we have seen a decrease in enrollment despite a large number of households that qualify. What should the FCC be doing to promote the program and increase participation?

Mr. Starks. Yes, Congressman, thank you so much for the question. Lifeline is the only program that we have right now that is designed for our most vulnerable low-income folks and for their communications, and times of emergency is exactly when they do need those connections. Issues with regard to the verifier and our ability to connect with some of the States electronically, as opposed to doing the manual review, has been part of the function of us having diminishing numbers, but I do have concerns that we need to do better by the most vulnerable.

Here in D.C., I visited most recently in Miriam's Kitchen, a homeless shelter, and spoke with a number of folks who have had trouble getting their Lifeline phones, and I know we need to do better.

Mr. McNerney. Mr. Chairman, I have about five more questions. Can I have about 5 more minutes?

Mr. Doyle. No, you can't. The gentleman yields back.

The chair now recognizes the ranking member of the full committee for 5 minutes for his questions.

Mr. Walden. Well, thank you for giving me his extra 5 minutes, Mr. Chairman. I like that.

Chairman Pai, as we learned late yesterday via the press release, the FCC plans on

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dealing with this whole issue with the faulty mobility fund II data, which was slated to provide \$4 and a half billion over the next decade to bring 4G LTE to rural America, by instead proposing a move forward to the new mobility fund II reinvented as 5G.

Two weeks ago, this committee unanimously reported out by partisan legislation which would direct the FCC to review its mobile coverage maps to fix the exact issue your investigation sought to review, inaccurate broadband maps built on faulty data. Now, it appears instead, the FCC has decided to move ahead, not only with the initially proposed \$4 and a half billion, but with an additional \$4 and a half billion in new funding.

And so I have got a couple of questions for you. How does the FCC plan to ensure these funds are distributed to appropriate places when you don't yet have accurate maps? I think we would all agree on that. And do you plan to distribute these funds once you have accurate data as legislated by Congress or move forward before knowing what locations actually need the funding?

And the third kind of unrelated to this is the new NPRM on forbearance. Is that going to rely on bad maps too, as you are dealing -- maybe you can't address that because it is an NPRM, but at least these other two we would like to know more about.

Mr. Pai. I appreciate the question, Congressman. So with respect to the question of proceeding on the basis of maps, that is part of the reason why I agreed with the career staff recommendation to suspend the MF-II challenge process and ultimately the proposal to terminate that proceeding altogether and to move to a 5G fund. The entire point of the 5G fund is that we are in the early stages. Deployment is relatively scant, especially in rural areas. It is virtually nonexistent. So the problem of inaccurate mapping with respect to 4G LTE does not map, pardon the pun, onto the 5G environment.

Secondly, with respect to the budget, that is one of the things we are looking at as

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well, and I will be rolling this out in the Notice of Proposed Rulemaking that I proposed to my fellow commissioners in early 2020, is understanding some of the puts and takes with respect to the budgets, the mapping, making sure we have the right eligible areas, et cetera. Those are the things we want to tee up early on in the Notice of Proposed Rulemaking to get public input.

The other thing I would note is that we are hopeful that past is prologue. So, for example, with the Connect America Fund Phase II, in part because of the reverse auction and intra-area and inter-area competition, we are able to substantially drive down the amount of funding that was required from \$5 billion to \$1.5 billion. Our hope is that we will be able to do the same here.

And with respect to forbearance, I couldn't agree more. When you and I were in eastern Oregon, we met with some of those affected providers. And that is why in the context of our pending UNII proposal, I took a very balanced approach, mindful of that. And some of the comments I have had heard from Chairman Doyle is not to throw the baby out with the bath water but to understand that in some of these rural areas, the incumbent infrastructure is being used by some of the competitors in a way that promotes the public interest, and that is why we took a very measured approach on that.

Mr. Walden. Yeah. I think we will see how all this plays out in the comments that come in, but I was given a map the other day that shows Burns, Oregon, as an urban area, and it is not. They would even admit it is not.

Mr. Pai. It is not Pendleton. It is not --

Mr. Walden. It is not. And so there are some things there I think we have to look at, and there are some dark fiber issues that I think deserve some review. So anyway, we can deal with that.

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At the last oversight hearing, Commissioner O'Rielly and I had an exchange about delaying the T band auction for States that stop diverting fees. And I appreciate your -- I had to go up to the other hearing on climate change. I asked every member of this panel if they disagreed with what we were trying to accomplish with that proposal, and nobody, nobody objected.

So, Commissioner Rosenworcel, you and Commissioner O'Rielly co-authored an op-ed on the issue. New York State allows these fees to be put in a slush fund, my term, and used for their pet projects, my term, unrelated to 911 services. That is a fact. What are your thoughts on New York's diverting of fees, specifically? What impact does New York fee diversion have on their public safety operation?

Ms. Rosenworcel. Thank you for the question. Look, fee diversion is terrible. It is bad. We should use every resource we have at the Commission and working with you on this committee to stop it. It is just an outright lie when your phone bill says those numbers are going to support 911. They don't go there.

Mr. Walden. I actually think it is Postal fraud, because if you did that or I did that in a business and ran it through the mail system and then used the fund for a different purpose, I think I would -- anyway.

Ms. Rosenworcel. And I would say it is especially cruel. We have about 6,000 911 call centers in this country, with about 100,000 people answering those phones from those days, the worst day of your life --

Mr. Walden. Right.

Ms. Rosenworcel. -- every day. They pick them up, and they need about \$12 billion to update to next generation 911, which will make them effective and all of us safer. We have got to start somewhere, and stopping fee diversion is the right place to

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start.

Mr. Walden. Thank you. Perfect timing. My time is up.

Thank you, Mr. Chairman. We will have some other questions for all of you.

Thanks for your service again to the country.

Mr. Doyle. The chair now recognizes Mr. Loeb sack for 5 minutes.

Mr. Loeb sack. Thank you, Chairman Doyle, and Ranking Member Latta for convening this oversight hearing today. And I want to thank all of our witnesses for being in attendance. It is always great to see you. I can't believe it has been 7 months.

Hopefully, we won't go 7 months again. It will be less than that before we see you again.

I do have a lot of material I want to try to get to today, so I am going to jump immediately to questions. First, for you, Commissioner Rosenworcel, I am sure you are aware of the work that this committee has been doing on broadband mapping, and I am proud that we recently passed the Broadband DATA Act through this committee unanimously on voice. And that will soon head to the House floor, hopefully, where I believe it will receive strong bipartisan support again.

And I know you have long been a proponent of using crowdsourcing, for example, to get better maps. I agree it is important to have multiple points of reference, multiple points of data too. And I am proud that we have a robust challenge process also in this bill to ensure that everyday consumers and State and local and Tribal governments are able to challenge a map that says they have service when they don't. I like it when you say it is common sense.

Additionally, I am glad that this bill includes quality of service metrics, the bill that Mr. Latta and I put forth, because it is important to know what sort of internet service is available, not just whether it is available but what kind of service as well. So with the FCC

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working on its own mapping proposal, I want to ask you about advantages or disadvantages you think this proposal, our proposal, has compared to the FCC proposal or other legislative proposals.

Ms. Rosenworcel. Thank you for the question, and thank you to this committee for its bipartisan work on maps. It is really important. We have got to fix the situation we have where our data is so inaccurate, we don't know if we are sending funds to the right place or not.

I think the best part of the legislation that this committee produced is it is all about public participation. We are going to take in crowdsource data. We are going to take in information from people and communities who know where there is service and there isn't, and we are going to test it against what people file with us in Washington. I think the best broadband map is not, in fact, going to be developed by us in Washington, but it is going to be a citizens' map we all develop, and your legislation speaks to just that.

Mr. Loebsack. I do appreciate that, and thank you for your response. This committee, as you know, has focused a lot of time on making sure that we get the accurate maps and that they are granular. And I just want to follow up, I guess, on what Ranking Member Walden asked about as well, give you a chance to respond.

Given the FCC's announcement of a high-dollar fund, I am concerned that the Commission hasn't yet taken the steps to ensure that the maps are accurate enough, that this sort of funding will, in fact, close the digital divide. So do you think programs like the newly announced fund will make a meaningful impact for rural lowans? What are your thoughts about that, just to follow up on the question that Mr. Walden asked?

Ms. Rosenworcel. Yeah. Sure. It could, but we have got a basic problem. We need maps before money and data before deployment.

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Mr. Loebsack. I like that phrase, by the way, ma'am.

Ms. Rosenworcel. We are just pumping out press releases about funds, but we are not explaining where we are going to send them and based on what information, and that is a problem.

Mr. Loebsack. And we all have stories we could tell. I don't have enough time to go through mine, obviously.

Commissioner Starks, I invite you to offer your insight on the mapping work of this committee or the recently announced 5G fund.

Mr. Starks. Yes. I too am, of course, as I think somebody from Kansas, I am eager to see that we get the latest technology and connectivity out to even our most rural citizens, but I have deep concerns and questions from what was announced yesterday. Where is the money coming from? Is this the same type of data that was relied upon on MF-II, which we all know had to be taken down? And very much related to the announcement from yesterday is a real issue of holding folks accountable where they have data that is incorrect.

One additional thing that I wanted to highlight is there was information yesterday that was redacted from the report that was issued by the chairman. I am working with the chairman and with the staff because I think there is critical consumer protection information in there that is not confidential, and so I am extremely hopeful that information will be lifted soon so that the American public can know what is going on.

Mr. Loebsack. I think we need to focus on the fact that we don't want to waste taxpayer dollars as well. We have got to have good data. Otherwise, this could be a waste of taxpayer dollars, the money that we do send out.

One last question, if I may, Ms. Rosenworcel, you know, about our precision ag bill

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that Mr. Latta and I worked together on and the commission was set up. What do you think needs to be the first focus of the task force, I should say, to ensure that we are tackling this problem in the right way?

Ms. Rosenworcel. Terrific. I think the chairman has set it up so the task force has its first meeting next week, which is exciting. I spent some time in Iowa, and I saw what it looks like when we connect cows at every corner of an agricultural field. So here is my concern. We are going to produce so much data from our farms, they are going to have to upload that to the cloud.

Traditionally, our broadband standards have been asymmetrical in that they are at much higher speeds that come down and much lower speeds sending it back up. I mean, that is based on the idea we watch video, and we just use broadband for consumption activity. But farms are going to start to get in the business of creation activity.

Mr. Loebsack. Right.

Ms. Rosenworcel. We have got to figure out how we have more symmetrical speeds to serve our agriculture future.

Mr. Loebsack. Thank you. And I know I have run over, Mr. Chairman, but as co-chair of the GPS Caucus, I ask unanimous consent to submit for the record a blog post from the GPS Innovation Alliance dated today, December 5, for the record, if I may.

Mr. Doyle. Without objection, so ordered.

[The information follows:]

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Mr. Loebsack. Thank you. Thanks, everyone.

Mr. Doyle. The gentleman yields back.

The chair now recognizes the gentleman from the great State of Texas, Mr. Olson, for 5 minutes.

Mr. Olson. I thank the chair for that very warm introduction of my own State of Texas.

Happy holidays to the entire FCC. I have to open with a confession to Chairman Pai. A few years ago, with an example from Chairman Carr, we both committed to climb a communications tower. In August of 2018, you did that in Colorado. I believe the tower was 131 feet tall. I haven't forgotten my commitment to you to climb a tower, but my problem is I am from Texas, and in Texas, bigger is always better. So I have been trying to climb a tower that is 20 times your tower, a 1,971-foot tower in Missouri City, Texas. If I can make this happen, you are welcome to join me, as you are too, Mr. Carr, and the commissioner, 2 miles up a tower.

Mr. Pai. Congressman, I certainly welcome the invitation, but at the risk of getting an okay, boomer response from Commissioner Carr, I will say that I would have to view it from the ground just to be safe.

Mr. Olson. Well, Commissioner Carr, thanks for mentioning the Third Ward in Houston, a great example of how big city America's third largest city has the same problems with 5G as rural America, so thanks for mentioning Houston, Texas, and Mayor Sylvester Turner.

My first question for you, Mr. Pai, I know that the Commission, under your strong leadership, has focused considerable resources on ensuring that the essential mid-band

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spectrum is made available to fuel 5G and keep us competitive internationally. Can you describe the steps you have taken as chairman during your administration to expedite the use of this critical spectrum resource?

Mr. Pai. Appreciate the question, Congressman. When I came into office, we were starting from scratch in terms of mid-band spectrum. And one of the things we have done as part of our 5G fast plan is to move aggressively on low, mid, and high-band spectrum. With respect to mid-band spectrum in particular, we have started the process of freeing up the 2.5 gigahertz band, the so-called the EBS band for wireless service, including a tribal window. The 3.5 gigahertz band will be auctioned on June 25 of 2020. Made an announcement recently about the public auction of the C band, critical mid-band spectrum.

In addition to that, as part of the T-Mobile-Sprint merger, they have committed to deploying their mid-band spectrum assets quickly for the benefit of American consumers. And although it doesn't necessarily rely on spectrum in particular, the small cell reforms we have done to encourage the deployment of these next generation networks, the architecture of those networks, has been vital as well.

And so it is curious when those who criticized us for not acting quickly on mid band are missing the fact that we are, in fact, moving quickly. But in many cases, in fact, on all of those, we faced opposition even from the Commission.

Mr. Olson. The next question is to Commissioner O'Rielly. You have been adamant about the need to make the C-band spectrum available as quickly as possible via that auction. Can you explain why speed is important, especially with your trip overseas, and how a delay can hurt our national security?

Mr. O'Rielly. So I believe that C band is the most ideal place for mid-band

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spectrum for 5G services. Internationally, they have already identified and are making that available in either auctions or licenses to their providers. So they are using the same identical bands that we would like to make available, and what I have argued is we cannot wait and delay for that process. The equipment manufacturers are making equipment for those purposes, and we will be delayed as a Nation, and our providers will harm from that if we do not move forward on C band as soon as possible.

Mr. Olson. And how does that hurt our national security?

Mr. O'Rielly. Well, in terms of the growth parts, economic security comes with economic growth, and also, national security, because the growth has been -- in international has been from one particular country, China. And China is spreading its equipment through multiple different means, and I don't want to -- in a public setting, I don't want to go there, but they are using all kinds of tools to expand their network throughout the globe as best they possible before we can get onto the playing field.

Mr. Olson. Thank you.

Final question for you, Commissioner Carr. You talked about finding qualified talent in areas of emerging technology for the FCC. Can you touch on what has been done within your commission to get the people you need with the qualification you need to move forward and how Congress can help you get those people? I know you talked about community colleges, local colleges, but what resources have you gotten, and how can we help get the resources you need to go forward?

Mr. Carr. Thank you, Congressman, for the question. Congressman Loeb sack has a bill that would go a long way in providing funding for more of these training programs. I have been working directly with community colleges. I started in Graniteville, South Carolina, at Aiken Tech and looking to expand their program as a model. As I mentioned,

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we have had some success already with at least one additional community college. I am now working directly with them, and the FCC as a committee is also looking at these workforce issues. I think that is going to be a fruitful avenue as well.

Mr. Doyle. The gentleman's time has expired.

Mr. Olson. Thank you. Go Navy. Beat Army.

Mr. Doyle. The chair now recognizes Mr. O'Halleran for 5 minutes.

Mr. O'Halleran. Thank you, Chairman Doyle.

I would like to acknowledge the Commission's recent action in spectrum policy, including maintaining FCC leadership for the public C band auction and proposing to expand wireless use into the 5.9 gigahertz band, so long as it can be done safely.

Making more mid-band spectrum available is important for 5G deployment, but also for eventually closing the digital divide in rural America. And, Commissioner Carr, I appreciate your statement earlier on the facts as far as that closure. I don't see that at all anywhere in rural America that I have been, and I am in rural America all the time. So our staff will get ahold of your office and try to come up with how those numbers were put together. The divide is only getting wider as we implement 5G into the entire process.

A lack of broadband access means life and death in rural America and, Chairman Pai, you had mentioned that. It also means it is not just rural Americans, it is all Americans that travel across our country. All 320-some million of us eventually travel across an area that has very little ability to have broadband. It impacts the opportunities for children in rural America compared to those in urban centers. It impacts business development. It has a profound impact on healthcare.

My district is home to 12 Tribal nations, which is the most of any congressional district. I will go back because Mr. Lujan would be upset with me, as the most population,

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not the most Tribes. Unfortunately, for Indian Country, the FCC's latest Tribal broadband report showed that 36 percent of Tribal households lacked access to any broadband, which is simply unacceptable in today's age. This is compared to 8 percent of non-Tribal households without any access. That is your report.

The RAY BAUM'S Act directed the FCC to complete a proceeding to address barriers to Tribal access found in the report within 30 months. Chairman Pai, we are now almost 2 years since this part of the Act was signed into law and over 6 months since the Tribal broadband report was released. With 9 months left to meet its statutory deadline, would you explain why the Commission has yet to begin a formal proceeding to specifically address these barriers from the report, and when do you think it will be done?

Mr. Pai. Appreciate the question, Congressman. The staff is, in fact, working on that report, but in the meantime, we are taking serious and meaningful steps to address particularly that issue, the lack of Tribal broadband, including a Tribal broadband factor, for example, in our universal service and program creating a rural Tribal window for a 2.5 gigahertz spectrum so Tribes exclusively can use that public resource to benefit their people --

Mr. O'Halleran. We will talk about that offline, but I just wanted to know that specific area.

Mr. Pai. Yes, sir.

Mr. O'Halleran. Commissioners Rosenworcel and Starks, has the chairman's office reached out to either of you about what the proceeding will look like before the upcoming statutory deadline?

Ms. Rosenworcel. The answer is no.

Mr. Starks. Not to me either, Congressman.

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Mr. O'Halleran. Let me go back to Chairman Pai, then. Why is that the case, Chairman Pai?

Mr. Pai. Well, Congressman, we are always happy to have conversations. This is an issue that the staff is working on, that particular report. I, myself, have not seen their recommendations thus far, but we would be happy to incorporate -- this is a bipartisan issue. I am the first chairman to get across the table a Tribal access proposal, 2.5 gigahertz. These are bipartisan issues that I think bind the Commission together.

Mr. O'Halleran. Whenever I have been in a leadership role, I have made sure that those that have to work with me are informed on a continual basis of any processes moving forward.

As you all know, I care deeply about the educational broadband service spectrum option and ensuring Tribal governments have ample opportunity to take advantage of the Tribal proprietary window. I appreciate the Commission's recent announcement that this priority window will now be extended for 180 days to ensure all Tribes have the consultation and resources to participate in the auction. This is extremely important that the Tribes have these resources. However, prior to this announcement, I have heard concerns from Tribes that the overall outreach affects efforts from the FCC's Office of Native American Policy were insufficient to fully educate them on the auction process and many other matters.

Chairman Pai, will you commit to holding more in-person and educational workshops for this proceeding beyond those announced in the next few weeks?

Mr. Pai. Congressman, I will, and we are.

Mr. O'Halleran. And I see my time is up. And thank you very much, everybody.

Mr. Doyle. The gentleman yields back.

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The chair now recognizes Mr. Kinzinger for 5 minutes.

Mr. Kinzinger. Thank you, Mr. Chairman. And again, thank you all for being here. I very much appreciate it.

I know we have talked about this, but I do have a few questions. You announced, Mr. Chairman, just before the Thanksgiving break, that you will proceed with a public auction to repurpose 280 megahertz in the C band. While there was a lot of debate about how the FCC was going to proceed on this band, there was one principle that seemed to be universal, that these proceedings need to occur quickly and efficiently. I was open to either mechanism, as long as we held to the principle of doing things quickly, plus one other principle that substantial revenues raised be raised for the Treasury and hopefully for things like rural broadband development and similar programs.

But given that most stakeholders estimate a public auction will take longer than a private sale, Mr. Chairman, what can Congress do to help speed this up? Do you need new authorities? Do you need temporary people, appropriations for auction software? What are the things we need to be aware of?

Mr. Pai. I certainly appreciate the question, Congressman, and with respect to some of the public interest benefits that have been identified by members of the committee, we would need legislation. Three years ago, for example, I was the first to propose a rural dividend, a portion of the proceeds being allocated for rural broadband. That would require legislation, so we certainly welcome the committee's input on that.

With respect to the structure and conduct of the auction, there are certainly resources that we have to muster. There are issues that we have to work out. I believe we do have authority currently to be able to do the necessary leg work in order to conduct the auction quickly, which is one of the things that we want to prioritize as well.

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But should that change, I will let you know in the immediate future.

Mr. Kinzinger. Yeah. Just -- if you could, with any of that, just keep us updated.

Mr. Pai. Absolutely.

Mr. Kinzinger. I think we would be eager to help.

On the supply chain security front, I want to again thank the Commission for its unanimous vote back in May to prohibit China Mobile from interconnecting with U.S. networks on national security grounds. And I also appreciate the Commission's ongoing proceedings to prohibit taxpayer dollars from being used to buy dangerous telecom equipment. You all may have seen that before Thanksgiving break, this committee favorably reported legislation that I and Chairman Doyle authored to facilitate information sharing from the Federal Government to the private sector. The goal is to better inform smaller and more rural carriers about the risks that certain foreign equipment can pose to our networks so that they don't purchase or install it.

Commissioner Carr, do you believe smaller and rural carriers have adequate access to classified information on network threats?

Mr. Carr. I hope they would. I spent some time outside of D.C., including in rural Montana, meeting directly with some of the small providers that are impacted and hearing directly from them, but I am happy to engage in more discussions with them as needed.

Mr. Kinzinger. And do you think we should be doing more and that this legislation would go in helping that information flow?

Mr. Carr. I am very supportive of the work that we need to do to make sure we have secure networks. And if there is additional information as to your bill, that would be very helpful to get us there.

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Mr. Kinzinger. Okay. Great. We will follow up, and you can follow up as well with any additional help you guys need.

And to continue with some of these security concerns, Chairman Pai, are there cybersecurity or physical security concerns if information and communications technology companies allow noncleared or unvetted personnel access to software development kits or application programming interfaces for 5G?

Mr. Pai. There are tremendous dangers, and not just to the economy of our country, but to our very national security. 5G networks, unlike their predecessor networks, will be software defined as opposed to hardware driven. And that is part of the reason why the attack surface is so much greater, and especially when you consider that 5G will involve Internet of Things deployments, billions more connected devices driving transportation, healthcare, education, agriculture, you name it. We have to be right across all of these different vectors, and that is part of the reason why we have taken 5G security so seriously, part of the reason why I personally have been speaking to our allies abroad. I have visited Bahrain, Germany, other countries to help them understand the risk profile and the need for us to collaborate on a risk-based framework.

To me, the challenge that China presents is one of the top national security issues for this country, and 5G is at the leading edge of that challenge.

Mr. Kinzinger. Thanks. And is there a common standard to use vetted personnel, you know, AI or machine learning to analyze source code that will be distributed or used in patches for software updates for 5G?

Mr. Pai. There is no standard, as I understand it, and part of the problem, in addition to that, is the fact that a lot of these software-driven networks are going to be managed over time. You are going to get software updates just as people get software

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updates on their phone. In real time, will governments have the ability to monitor every single line of source code that is being updated by an untrusted vendor? I think we know the answer to that question, which is part of the reason why we need to think of security as a forethought as opposed to an afterthought and have that risk-based framework that all allied countries agree on.

Mr. Kinzinger. Well, thank you. And again, to the Commission, you know, we like to sometimes find everything that divides us in this business. This is one area we are very united, so thank you all for your hard work.

And I yield 2 seconds back.

Mr. Doyle. The gentleman yields back.

The chair now recognizes the gentlelady from California, Ms. Eshoo, for 5 minutes.

Ms. Eshoo. Thank you, Chairman Doyle, and welcome to the full commission.

I guess there is an advantage to be one of the last members to question, and my observation is the following: We keep talking about the same things that have not been resolved, so I want to start with Chairman Pai. This whole issue of the letters of inquiry, you heard my displeasure in our exchange 7 months ago. Can you send the letters of inquiry to me?

Mr. Pai. Congresswoman, my understanding is that the Enforcement Bureau traditionally does not do that.

Ms. Eshoo. Well, I am not talking about tradition and understanding. So I am asking you a direct question. Will you send the letters of inquiry to me?

Mr. Pai. Congresswoman, I have to consult with the Enforcement Bureau career staff, but again, my understanding --

Ms. Eshoo. You keep talking about the career staff. Yes or no. Will you send the

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letters of inquiry to me?

Mr. Pai. I will see what we can do, Congresswoman.

Ms. Eshoo. That is a very -- that is not an answer. All right. I am going to move on because that is essentially a no.

California has obviously been in the news for something that is really sorrowful, these massive wildfires. And as California undergoes the pain of this, the aftermath, the loss of life, the loss of homes, the loss of property, there is also the loss of a telecommunications system. California is not the only State that has undergone or will undergo these weather catastrophes. We have tornadoes. We have hurricanes. We have flooding.

Now, it was raised that we have no backup plan. In California, 874 cell towers were out. Emergency services people cannot communicate with one another. I had a letter from seniors that are a couple, Mr. and Mrs., and said, what do we do? We have no way to contact 911 if there is a medical or fire emergency, and we can't contact the utility. How are we going to call the fire department or emergency services?

So what is your answer to them?

Mr. Pai. Congresswoman, I feel --

Ms. Eshoo. What is your answer?

Mr. Pai. I am sorry.

Ms. Eshoo. What is your answer? And by the way, have you been to California? Have you visited?

Mr. Pai. I have.

Ms. Eshoo. Have you met with emergency services people?

Mr. Pai. I have.

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Ms. Eshoo. And when was that?

Mr. Pai. I can't recall the specific date.

Ms. Eshoo. This year?

Mr. Pai. I can't remember if it was this year or not.

Ms. Eshoo. Well, let me know, all right?

Mr. Pai. Okay.

Ms. Eshoo. Yeah. What is your answer to these people, and what is the backup plan, A? And B, I would like to know why OMB shut that down. I don't understand what OMB has to do with this, but it would be interesting to know.

Mr. Pai. With respect to the second question, Congresswoman, the Office of Management and Budget --

Ms. Eshoo. Well, answer the first one. What is the plan?

Mr. Pai. So with respect to the first question, this is part of the reason why I have stressed, even before the wildfire situation you described, I have stressed the need for power companies to share information with telecommunications providers. In this case, they did not do that. That is one of the reasons why the Public Safety and Homeland Security --

Ms. Eshoo. Well, you know what, if you asked for that information, they did not give it to you. It is your responsibility just as it is mine to follow up with people. You have to be gum stuck to someone's shoe on behalf of the American people. We are not just States in America. We are the United States of America, so we need a policy that is going to serve everyone. There needs to be a plan on this. This is about life and death. We are not talking about, I don't know, some small potatoes somewhere.

And so it is disturbing to me that there isn't a plan, you can't articulate one, you

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don't remember when you have been in California, you don't remember the last time you spoke to anyone, and -- so let me move on.

On Lifeline, I have been a broken record. This is a program that President Reagan put into place. I have spoken to each one of you individually about it. I consider this a moral issue. A moral issue. And why? Because we are talking about veterans. We are talking about the elderly. We are talking about domestic violence victims. We are talking about people that have or are experiencing homelessness.

Now, I don't know what any of these people have done to any one of the commissioners, but to have a program that has an unfathomable 45 percent in the last 3 years, that is what it has fallen by. Are you gladdened by that? Is that something, Mr. Chairman, that you can take out there and brag about on the road? I don't think so. And somehow, I don't know how I can ever get to people to understand that people are being hurt by this. None of us went into public service, whether elected or appointed, to hurt people. But you know what? In this 45 percent in the last 3 years, people have been hurt. People have been hurt.

Mr. Doyle. The gentlelady's time has expired.

Ms. Eshoo. Thank you. I yield back.

Mr. Doyle. The chair now recognizes Mr. Bilirakis for 5 minutes.

Mr. Bilirakis. Thank you, Mr. Chair. I appreciate it. And thank you to all of you here this afternoon. Well, not afternoon quite yet. Pretty soon.

Chairman Pai, as you know, a portion of my district is part of a peninsula.

I don't know what is going on here.

Mr. Doyle. The gentleman will suspend.

Mr. Bilirakis, you are recognized.

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Mr. Bilirakis. Thank you. Thank you, Mr. Chairman.

Chairman Pai, as you know, my district in the Tampa Bay area of Florida is part of a peninsula. And during an emergency, this creates unique challenges as the bridges off the peninsula are closed in high winds and up to 1 million Pinellas County residents are sent north to a limited number of west-east evacuation routes. So Pinellas County is off the coast, the Gulf of Mexico. Luckily, we are close to approval of an additional evacuation route that will ease congestion, and it is called the Ridge Road, the Ridge Road Extension Project, which we feel we are going to get the permit this month to extend the road from west to east.

But separately, in 2016, the FCC modernized the wireless emergency alert system requiring providers to better geo target alert messages. This will also alleviate the road congestion from unnecessary evacuations. Have all providers complied with this requirement? And how will the full implementation of 5G enable even more specific geo targeting of emergency alerts?

Mr. Pai. With respect to the first part of your question, Congressman, I am pleased to say that the providers who participate in the wireless emergency alert system were ready to proceed with geo targeting along the lines you suggested. Unfortunately, because FEMA had not yet set up that system for testing, we extended that deadline for another couple of weeks. The providers needed 4 weeks of testing. So my understanding is that we -- that system will be up and running in the very near future.

Mr. Bilirakis. Good. I hope it happens, you know, in early spring.

Mr. Pai. Absolutely.

Mr. Bilirakis. You know why --

Mr. Pai. Yes.

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Mr. Bilirakis. -- with the hurricanes and all the natural disasters.

Commissioner Carr, last year, I had the pleasure of hosting the Pasco County emergency services center. One of the issues discussed at the time was the desperate need for system upgrades. And thank you very much for coming down to my district.

And obviously, Chairman Pai, we welcome you back as well. I am sure this is something that you hear about with the 911 centers all across the country, especially as many wish to move to NextGen services. What options is the Commission looking at to take advantage of technology improvements to help emergency service centers save lives? And what do you -- and how much money would it take to upgrade the country to NextGen 911 services? So in other words, if you can give me a round figure, it is so very important, obviously. So this is a public safety issue. If you could respond, please, I would appreciate it.

Mr. Carr. Thank you, Congressman. Thank you for your leadership on these important public safety issues. I enjoyed spending time with you at the Pasco County 911 center.

In terms of the general figure, the estimates I have seen range between \$9 to \$12 billion to upgrade the system to NextGen 911, and doing so is important for the reasons you pointed out. We need to have accurate, up to date, modern information at these call centers.

And one step we recently took at the FCC was something we call the Z access, vertical location information, so that for the very first time, those 911 call centers and then, in turn, public safety responders will know the vertical height of a 911 caller to accelerate response time. So that is part of a, I think, broadly speaking, upgrade to NextGen technology that we need to keep supporting. So thanks for your work on this.

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Mr. Bilirakis. Very good. Thank you.

Commissioner O'Reilly, you have long advocated for better use of spectrum in both the licensed and unlicensed spaces. The Commission is now working on repurposing -- and you alluded to this, I think other commissioners as well have alluded to this -- on repurposing the 5.9 band which was largely unused for nearly 20 years. Can you talk about the benefits of freeing up this spectrum that has gone unused for so long? And are the incumbents left with enough spectrum to engage in safety technologies? If you could elaborate on that, sir, I would appreciate it.

Mr. O'Reilly. Sure. Well, the answer to your second question is yes. I believe it does address their needs compared to the 75 megahertz that currently is allocated. I think we can do it. And then one of the reasons I like the chairman's proposal so much is because it looks very similar to the things I have been advocating for a little bit of time. So I think it falls in line with things that I have been, you know, pushing for, and I think that we are on the same page on that. And I think the Commission is on the same page.

Commissioner Rosenworcel and I have been working on this issue for quite a while. She articulated the reasons or the benefits that can come from having 5.9, and even when we do 6 gigahertz hopefully early next year, with the combination of those two bands and the existing 5 gigahertz band we have already operational, wide channels, 160 megahertz, the capacity -- I mean, I have seen upwards -- and I know Commissioner Rosenworcel also mentioned 70 percent. I have heard and seen upwards estimates of 80 percent of our commercial wireless traffic will be carried on unlicensed spectrum going forward, and that is what we are talking about.

It is the benefits to consumers and benefits to the underlying network itself, and that is unimaginable in terms of the -- you know, we talk about how much cost for this

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band or that band and what we can spend the money on. We are talking about trillions in benefits to the economy over a timeframe.

Mr. Doyle. The gentleman's time has expired.

Mr. Bilirakis. Thank you.

Mr. Doyle. The chair recognizes the gentleman from North Carolina, Mr. Butterfield, for 5 minutes.

Mr. Butterfield. Thank you, Mr. Chairman. Let me also thank the five of you for your testimony today. I say all the time that you must have a special calling to do public service, and thank you. I thank all of you for your service.

Chairman Pai, Congress has tasked the FCC to regulate our Nation's telecommunications policy in a fashion that promotes diverse forces. You know that. I know that. My research over the last few days shows that despite that mandate, minority broadcast ownership has never risen above 3.1 percent. Women's ownership has never exceeded 6 percent. And so my question to you is, and I want a yes or no answer, would you call that rate of ownership for minorities and women acceptable?

Mr. Pai. No.

Mr. Butterfield. Of course not. Thank you.

Last month, Mr. Chairman, the Third Circuit Court of Appeals ruled for the fourth time that the Commission has failed to adequately facilitate and promote women's and minority media ownership. In light of that ruling, sir, will you commit to addressing the critically low rates of media ownership by minorities and women? Can you make that commitment?

Mr. Pai. Congressman, two parts to the answer. Number one, we have been making that commitment. I personally as a person of color and a person who believes in

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broadcasting think this is a priority.

Mr. Butterfield. Will you double down on it? Will you double down on it?

Mr. Pai. Well, yeah, but the problem is, Congressman, one part of the decision that the Third Circuit struck down was our incubator program, the sole purpose of which was to get minorities, women, disadvantaged communities into the broadcast business. And that is part of the problem with the Third Circuit's decision is they have gutted our primary diversity initiative --

Mr. Butterfield. Let me take you in this direction, then. From 1978 -- and I have been doing a little research over the last few days. From 1978 to 1995, the FCC provided a tax incentive to those who sold their majority interests in a broadcast station to minorities. While in place, that program boosted the number of minority-owned stations from 40 to 323. And so, yes or no, would you call that program effective?

Mr. Pai. Congressman, I would have to look again at the report that the Congress did when it repealed that program in 19 -- the mid-1990s to understand whether it was effective or not. But what I can say is we are not waiting. I mean, I know that is a decision for Congress to make.

Mr. Butterfield. To go from 40 to 323, I mean, no one can dispute that that is an effective program.

Mr. Pai. It has declined.

Mr. Butterfield. All right. Let me go -- and my time -- this time goes very fast.

Commissioner Rosenworcel, earlier this year, I introduced a bill that would put the FCC's tax certificate back in place and expand it to include women. Could you speak to the impact that reviving the tax certificate program would have for women and minority broadcast ownership?

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Ms. Rosenworcel. It is a terrific idea, Congressman, because there is no other policy tool we have had in history that has been as effective at diversifying the ownership of these properties. It matters. What we see on the screen says so much about who we are as individuals, as a community, as a Nation. I think that restoring the tax certificate is a terrific idea.

Mr. Butterfield. Thank you. In rural areas, many expecting moms simply do not have access to the medical resources necessary to receive the treatment that they need. The results are deadly, and we are talking about it more and more now. The problem hits women of color especially hard. How can we use telemedicine to address the lack of maternal access to care? Yeah, maternal.

Ms. Rosenworcel. Well, I am the only woman here, so I am probably the only mom, and I am going to speak to that, which is we should take this \$100 million pilot project and address a national crisis. The United States is the only industrialized country with a rising rate of maternal mortality, and we now know that there are tools in telemedicine and connected care that can help. So when we do adopt that program that my colleague, Commissioner Carr, has worked on, I would like to see one maternal healthcare program in every State in this country, because we have got to figure out how we solve this problem. It is a crisis, and we need to fix it.

Mr. Butterfield. I share your views on that, Commissioner. Thank you for your response.

And let me conclude with Commissioner Starks. Commissioner, our 2016 election was targeted by Russian cyber hackers who sought to interfere with our election process. Is the Commission doing anything about it to secure our election infrastructure?

Mr. Starks. Thank you, Congressman, for the question, and thank you for your

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leadership on this issue. I continue to look forward to working with you.

We do know that intelligence confirms that foreign actors tried to impact our 2016 elections. In fact, we know that all 50 States and their voter registration rolls were attempted to be hacked, and we do know that at least seven States -- Illinois, Florida, Michigan, Maryland, Rhode Island, Wisconsin, and D.C. -- still use voting machines that connect to our regular cellular networks. That means that they are susceptible to being hacked by what we commonly call IMSI catchers. And so this is something that I am specifically focused on.

I think it is -- the FCC is tasked with focusing on our national security. I cannot think of any higher purpose than protecting our elections and protecting our democracy.

Mr. Butterfield. Our democracy is at stake. Thank you very much.

Mr. Doyle. The gentleman's time has expired.

The chair now recognizes Mr. Johnson for 5 minutes.

Mr. Johnson. Thank you, Mr. Chairman. And Chairman Pai and to the rest of the Commission, thanks for all that you are doing. I mean, these issues are complex, and the world is moving at light speed in our telecom arena, and so I appreciate what you are doing.

Chairman Pai, I would first like to thank you personally for your recent decision to hold a public auction on C band. I think it was the right decision to make. Following along with what Mr. Kinzinger said earlier, is there anything we can do to help you execute that auction?

Mr. Pai. Certainly, Congressman. My pitch would be to call of my -- a reprise of my 2016 proposal to allow the FCC to allocate a portion of that funding. My proposal was for rural broadband deployment, because as you know all too well in your district, there

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are many parts of the country that could benefit from that funding, but we can't allocate that funding --

Mr. Johnson. You don't have to hit me with that hammer too hard. So I appreciate it. We will certainly be looking at that issue as well.

What about regulations that might be roadblocks? Anything we need to help you break down?

Mr. Pai. As I was mentioning in my exchange with the Congressman, I believe we have current authority to take the necessary steps. But should that change, I am actively working with the staff now, and we will keep you apprised very quickly to enable you to meet the chairman's admonition that this committee and this Congress needs to move quickly to act one way or the other.

Mr. Johnson. All right. Well, let's move to the 6 gigahertz debate. You know, we have got to ensure that -- and there has been a lot of discussion already, but we have got to ensure that any decision does not create interference issues for critical infrastructure, communications, or the ability for our first responders to do their jobs. So how is the FCC ensuring that we can address unlicensed spectrum needs without creating interference for incumbents in the band?

Mr. Pai. That is the key question, Congressman, and that is why I have consistently said in this proceeding that we are going to be driven by one thing and one thing alone, which is the technical analysis that will enable us to figure out the appropriate balance between the incumbent uses and unlicensed operations. And so, for example, one can imagine one use case where it is a power plant in Pittsburgh, and it is an unlicensed user in 6gigahertz band in Los Angeles operating indoors at low power. I think we can agree there would not be interference there. If they are right next to each

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other and they are both blasting waves in the same spectrum, I think we can agree there might be a problem there. So where do we draw that line? That is one of the things our engineers are looking at.

Mr. Johnson. Can we get a commitment from you, Mr. Chairman, to engage in a continued dialogue with all the stakeholders as you move through this process, including the wireless providers, the utilities, and the first responders, to make sure we don't mess up?

Mr. Pai. Absolutely, Congressman. I would even go one step further. We are working with other Federal partners to make sure that we hear their input as well.

Mr. Johnson. Okay. Chairman Pai?

I am sorry. Mr. O'Rielly?

Mr. O'Rielly. I was just going to say, one thing you could be helpful on the 6 gigahertz item is that, you know, there are many people arguing -- you talked about, like, the utilities, if they could come way from some of the hyperbole. It has been incredibly difficult to get some of the technical analysis the chairman talks about. We want to get to the math. Instead, they are talking, you know, at a level trying to prevent any consideration.

Mr. Johnson. Well, as you guys have heard me say many times before, I am a big believer when you put the stakeholders around the table, and you all have a vested interest, you come away with the right decisions for the right reasons. So I would encourage you to continue that engagement.

Today, we have heard a lot of concerns about the FCC's flawed maps. For the past 2 years, Congress has appropriated funding to NTIA to create an accurate broadband map. You know my frustrations. I have shared that with you guys. To what extent has

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the FCC plugged into NTIA's broadband mapping efforts?

Mr. Pai. I appreciate the question, Congressman. Our staff has been working with them. In particular, our Rural Broadband Auctions Task Force, among others, I understand are liaising with their counterparts at the Department of Commerce.

Mr. Johnson. I still don't understand why this is so difficult. I am probably -- there is obviously some naivete on my part. I don't know what that is, because I have got 40 years in the IT spectrum, so I don't know why this is such a damn difficult problem, but it is continuing to be so.

Do you guys plan to -- does the FCC plan to utilize their mapping data, NTIA's, once it is made available, when you are making funding decisions on how to roll out rural broadband?

Mr. Pai. That is one of the things that we are looking at, Congressman, and we will be working with them and with you on that.

Mr. Johnson. Okay. Chairman O'Rielly -- I mean, Mr. O'Rielly, Commissioner O'Rielly, before we move on, I want to thank you personally for taking the time to come to my district. As you know, the Rural Digital Opportunity Fund holds immense opportunity for rural broadband, as do the proceeds from the C band auction. So we have got some real opportunities here to make some significant progress on rural broadband expansion, and I appreciate your help and diligence to do that.

I yield back.

Mr. Doyle. The gentleman yields back.

The chair now recognizes Ms. Matsui for 5 minutes.

Ms. Matsui. Thank you, Mr. Chairman. I also want to thank the commissioners for being here today. I know it is somewhat arduous, but we appreciate your being here and

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your public service.

I just want to say, first of all, given my track record on the calling for public auction of the C band, I was pleased to see the chairman's recent commitment to free up 280 megahertz of spectrum through the public auction. I do believe it is the best path forward to allocate valuable Federally owned assets and maximize returns to American taxpayers, including for rural broadband development. It is so important. Now that we have moved past competing proposals to reallocate the spectrum, I also urge you and all of you to expeditiously establish a successful auction.

I am probably going to sound like a broken record here, but being from California, I have to say this about the resiliency in wildfires. The FCC's Wireless Resiliency Cooperative Framework is a wireless industry commitment to improve emergency communications during disasters.

In April, the FCC solicited comments on improving the framework, specifically in response to reports from 2017 and 2018 hurricane seasons. This work would help protect property and save lives in States where hurricanes present a regular threat. However, in States like California, where wildfires are rapidly increasing in regularity and severity, there is an urgent need for targeted recommendations to promote network resilience.

Chairman Pai, yesterday, I sent you a letter with my colleagues, Representative Eshoo and Thompson, urging you to include wildfire-specific recommendations in the framework. Will you commit to me to include wildfire considerations in the framework moving forward?

Mr. Pai. Congresswoman, I haven't had a chance to review your letter, but what I can say is the framework includes all types of disasters within it. It is not particular -- or doesn't exclude wildfires in particular.

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Ms. Matsui. There hasn't been a particular emphasis on it, and this is an occurrence that is happening --

Mr. Pai. Right.

Ms. Matsui. -- too regularly now in California.

And I would like to have unanimous consent to put the letter into the record,
Mr. Chairman.

Mr. Doyle. Without objection, so ordered.

[The information follows:]

***** COMMITTEE INSERT *****

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Ms. Matsui. Okay. The FCC also solicited framework comments on January 3 of this year on coordinating with power companies. Poor coordination with power companies caused widespread confusion and severely jeopardized public safety in California.

Chairman Pai, has the FCC made improvements to the framework based upon this investigation? If not, when will it be completed?

Mr. Pai. Congresswoman, the Public Safety and Homeland Security Bureau staff is looking at that framework. In the meantime, they are also doing aggressive outreach to communications companies, and I personally have repeatedly, even before the wildfires, emphasized that power companies and telecom companies need to cooperate. One of the problems here, though, we don't have jurisdiction over energy companies. We cannot compel them to do something. And I would welcome the subcommittee's action on this because, at the end of the day, if you are a consumer and your district is affected by wildfire, you don't care whether it is the telecom company or the power company that has dropped the ball; all you know is you don't have 911 service.

Ms. Matsui. Exactly. But we also believe there is a loud voice that the FCC can provide here to this committee and the FCC putting special emphasis on this, because without meaningful action from the FCC, I am worried that we fail to learn the valuable lessons that could save lives in the future.

The wildfire season has gotten longer and longer. It starts earlier and ends later, and the devastation is unbelievable. After the wildfires come, if there is a lot of rain, floods. So it is a process that has become escalating. So I urge you to really put special emphasize on that.

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Mr. Pai. Okay. Thank you, Congresswoman.

Ms. Matsui. Thank you.

I introduced the Secure and Trusted Communication Networks Act, with Chairmen Pallone and Walden and Congressman Guthrie, to prohibit FCC funding from being used to purchase equipment from companies like Huawei and ZTE. The bill would also create a program to have communication providers remove vulnerable equipment from their networks and replace it with newer, secure equipment. Helping small and rural wireless providers replace vulnerable network equipment is a necessary step to boost national security, and I am continuing to push for floor consideration of this bill.

While the FCC recently voted to prohibit FCC funding from being used on Huawei or ZTE equipment, it did not commit to replacing existing equipment. Commissioner Starks, do you believe there is a need for Federal Government to support smaller carriers to identify and replace existing Huawei or ZTE equipment?

Mr. Starks. Yes. Thank you so much for the question, Congresswoman, and thank you for your leadership on this. I think it is imperative that we focus on those small rural carriers that do have this untrustworthy equipment.

Ms. Matsui. Okay. Fine. Thank you.

And I see I ran out of time already, so I yield back my 2 seconds. Thank you.

Mr. Doyle. The gentlelady yields back.

The chair now recognizes Mr. Long for 5 minutes.

Mr. Long. Thank you, Mr. Chairman. And thank you all for being here today. And, Chairman Pai, I appreciate your work. Your work ethic and commitment to freeing up additional spectrum, both licensed and unlicensed, for the commercial marketplace, and in particular, the mid-band spectrum.

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Many of us are excited about your agenda this month, such as moving forward with your plan to use the 5.9 spectrum for unlicensed use in WiFi. Moving forward, there is more need -- there is more that needs to be considered as the Commission strives to make the equal amount of spectrum available for both licensed and unlicensed use.

Before I get into some of that, the old country comedian, Jerry Clower, used to have a pretty good bit on coon hunting. And they were out coon hunting one night in Mississippi, and they had what they thought was a coon treed. So one of their buddies took off his shoes and climbed up the tree with a sharp stick to knock the coon out of the tree and

have the dogs get it down on the ground. He got up there, and it wasn't a coon, it was a lynx. So ensued this big fight. And they were screaming, and they were -- the lynx and the guy were at it in the tree. And so he noticed one of his buddies down on the ground had a pistol, and he hollers down, he said, shoot up here amongst us. And the guy hollered up, and he said, I can't shoot up there. I might hit you. He said shoot up here amongst us. One of us has to have some relief.

And there has been something going on with L band for 4 years now, and the folks on each side of the equation, I mean, they want some relief. They are ready for you to shoot up there amongst them and give them some relief. So can you tell me where we are on L band, when that decision after 4 long years is coming down?

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RPTR PANGBURN

EDTR ZAMORA

[11:59 a.m.]

Mr. Pai. Congressman, that was quite the windup, so I appreciate the question.

Mr. Long. That is how you wrote it.

Mr. Pai. One of the things that I have done is to instruct our staff to draft a proposed resolution of this issue. We have directed that proposed resolution into the Interdepartment Radio Advisory Committee, the IRAC, the interagency process to get the considered views of the executive branch. The executive branch requested extra time to provide that recommendation --

Mr. Long. When did they request extra time? How long ago was that?

Mr. Pai. The deadline is tomorrow. The new deadline is tomorrow.

Mr. Long. When did they request extra time?

Mr. Pai. I believe it was 4 weeks ago, 3 weeks ago, 4 weeks ago.

Mr. Long. So they are not going to meet the tomorrow deadline?

Mr. Pai. I am not sure. I believe -- I hope they will. I certainly hope they will, but I would be happy to get back to you on that. But one of the things that we are looking to do is to get their views so we can move forward.

Mr. Long. I hope you can go to them and, you know, tell them after 4 years that is enough time. We need to get this thing wrapped up. So anyway.

Okay. Given the recent decision on the C band, are you committed to conducting the public auction in 2020?

Mr. Pai. Yes, Congressman, we are aiming to commence the auction by the end of 2020.

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Mr. Long. Okay. And will you commit to ensuring that satellite incumbents adhere to previous estimates and commitments by requiring initial clearing within 18 months and total clearing within 36 months of an FCC order?

Mr. Pai. That is one of the things we are working on now, and I would anticipate that in the proposal that we will introduce to the Commission for its consideration early next year, that is one of the things that we are going to be focused on. As I have consistently said, it is important to get this spectrum allocated quickly and to get it into the hands of wireless operators --

Mr. Long. And as you know, a part of the controversy on which way to go with the auction, and being an auctioneer of 30 years experience, I believe in the auction method. I think that is the fairest and most transparent way to move forward and the way to get the most money into the Federal Government. And most of the auction you have done have brought way above what the first estimates were that they would bring. So I would hope that you can get this done in a timely fashion, because I think it is vital for getting 5G out there. And I still think if we change your name from Ajit Pai to a 5-jit Pai, we would --

Mr. Pai. I have been called worse.

Mr. Long. -- we would get things done, so -- but anyway, I appreciate your efforts in trying to get that, you know, moved along and auctioned and cleared and all that because I think that is a big, big hurdle. And the way things go in Washington, D.C., such as the L-band dragging on 4 years, you know, I hope -- very hopeful that you can speed the process along, because I think that, you know, it is incumbent on you all to try and get that done.

Mr. Pai. I couldn't agree more, Congressman. And just to be clear, this

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committee, this Congress would have to act in order for us to be able to designate you as the auctioneer of the C-band spectrum, so hopefully that can be incorporated into the package.

Mr. Long. All right.

[Speaks in auctioneer fashion.]

I yield back.

Mr. Doyle. Well, Billy, I wasn't sure where you were going with that story, but you tied it up there in the end, brother.

The chair now recognizes Mr. Welch for 5 minutes.

Mr. Welch. Thank you.

It is good to have everybody here, and everybody's reports were terrific. We are all getting along. We got a new chairman up here. I will ask my first question. Is he doing okay? You got a bill of health here. You are doing good.

It actually is really reassuring on the spectrum auction. We are all delighted that I think the Commission supports the chairman's decision here to have a public auction. You know, that is something where I give Mr. Doyle a lot of credit, and my Republican colleagues a lot of credit as well, because there is real opportunity here with the shared sense of purpose that both Republicans and Democrats have to try to get broadband out to rural America. So I just want to say that decision is important, but there is two things that have to be part of that in the implementation. One is, are we going to use the proceeds for a dedicated fund?

Because there is unity here about wanting to get broadband out to the Dakotas, to rural New York, and Vermont. And it is so hard, as you know, around here, on a very practical basis, to get money. And some of my Senate colleagues have introduced

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legislation to have the proceeds be in a dedicated fund. We don't know how that money would be spent exactly, but it would be dedicated to rural broadband.

I know, Commissioner Rosenworcel, this is something that is of interest to you. Maybe you could speak on it, then I would ask the chairman to address that as well.

Ms. Rosenworcel. Sure. A lot of members have asked a version of this question, what can you do to help us with the C band? I am going to say there are two things. The first, we are going to have to figure out how to properly incentivize those existing satellite licensees to return their spectrum. I think there are legitimate legal questions about what authority we have today under title 3 of the Act. We may need your help to make that authority more clear.

And the second thing we have to do goes straight to what you just said. You have billions of dollars that may come in as a result of this sale. Let's figure out how we can use those billions of dollars from the sale of public airwaves to solve a public problem.

We have a huge problem with rural broadband in this country, and I will point out we have a huge problem with the homework gap.

Mr. Welch. Right.

Ms. Rosenworcel. Kids everywhere who can't do their homework. We could solve it with this legislation from you, and I hope we do.

Mr. Welch. Thank you.

Chairman.

Mr. Pai. Congressman, I couldn't agree more on the need for Congress to take action here, and I would reiterate my call from 2016 for Congress to create what I have called the rural dividend. And just to give you context, when I made that proposal in 2016, at the time, the FCC had conducted something like \$100 billion worth of auctions.

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Think about if that extra \$10 billion back in 2016 had been allocated for rural broadband. That would be a massive game changer for folks in rural Vermont.

Mr. Welch. Well, I just want to say that, you know, we have got this -- Mr. Gianforte has been a leader on this as well.

Go ahead, Mr. O'Rielly.

Mr. O'Rielly. I was only going to add that if a fund is created, if money is allocated in terms of the bill that you talk about, that you consider using the FCC's distribution model, notwithstanding the mapping problem, because you have existing other Federal agencies who have been distributing dollars against in competition with us that has been problematic. So I hope the committee will consider that.

Mr. Welch. Well, that is a very practical suggestion.

The second part of this -- and we have got to get this right now. You know, if we create a fund in your -- I am hearing some support for a fund, because if we don't have a fund, it is going to be very difficult for us to actually deliver for rural America. That money will go somewhere else.

The second thing is, can we have standards that future-proof the speed and the quality of the broadband that goes out there? Right now, I think it could be 25/3. And, Chairman Pai, you don't think 25/3 is adequate for rural America, do you?

Mr. Pai. That is part of the reason why it is part of the Rural Digital Opportunity Fund. We have looked to increase the available -- all the way up to gigabyte speeds.

Mr. Welch. Here is a question. Why don't we just eliminate that, because we know that is dumbing down? Why don't we just get rid of 25/3 and not pretend that it is even close to being adequate?

Because here is the fear I have. There will be a lot of excitement in our rural

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communities if they are going to get broadband. I mean, we have got no G in parts of Vermont, okay. And if people are given that opportunity to get something that is really of inferior quality but it is better than zero, they will want it. Okay? We have got to establish a standard, and I just ask for some comments from you.

Mr. Carr, you were out there I think you said in Iowa, I know. And were you in South Dakota too?

Mr. Carr. Yeah.

Mr. Welch. Yeah. What are your thoughts about establishing a high standard as opposed to a low standard that is going to perpetually make rural America a second-class citizen?

Go ahead, Mr. O'Rielly.

Mr. O'Rielly. I appreciate and do want to get as much speed and capacity to everyone in America, but I will tell you that when we have raised the speeds in the past, the dollars tend to flow to the easiest places to serve, and the places that haven't been served will continue to be ignored.

Mr. Welch. If we get some standards. I mean, this is, I think, a request that you guys have to play a role in this to make certain that it is not -- it is done for the benefit of rural citizens, not for the entrepreneurs who want to make the easy quick money.

Ms. Rosenworcel. We need audacious goals --

Mr. Welch. My time is up.

Ms. Rosenworcel. -- right now for broadband. I completely agree with you, Congressman.

Mr. Welch. Thank you.

Mr. Doyle. The gentleman's time is expired.

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The chair now recognizes Mrs. Brooks for 5 minutes.

Mrs. Brooks. Thank you, Mr. Chair.

Chairman Pai, since the FCC began reviewing the potential for a greater use of 6 gigahertz in 2017, so much has changed in the communication space. And as we have already heard, we are expecting over 95G deployments by U.S. carriers by the end of this year, I believe. With these deployments comes a clear need for more of the mid-band spectrum we have been talking about.

Have you thought at all about licensing some of the 1,200 megahertz of spectrum in the 6 gigahertz band instead of opening it all up to unlicensed use?

Mr. Pai. Appreciate the question, Congresswoman, and I can tell you that our focus has been on unlicensed operations in the 6 gigahertz band. But I am continuing to take meetings among other stakeholders from folks who support that approach, and we will move ahead with an open mind.

Mrs. Brooks. And would some of those groups be emergency communications, utilities folks, and those groups?

Mr. Pai. Suffice it to say, there is a wide variety of stakeholders that encompasses some of those constituencies.

Mrs. Brooks. Okay. Well, I think there is a way we have to make sure that this prime mid-band spectrum can benefit all players in the space, and so let's make sure we get that right.

I come from Indiana, a huge automotive State, and I want to commend the Commission for proposing the Notice of Proposed Rulemaking on the 5.9 gigahertz band. It has been -- the spectrum has been underutilized for too long, and it is time to consider new uses. I also co-chair the 5G Caucus and recently visited with the 5G automotive

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association, and I have to tell you, one of the greatest concerns when we talk to constituents about autonomous vehicles is everyone remains concerned about safety. That is the number one issue.

But I am encouraged that the draft proposal would allow, and I have learned more and tried to learn more about the C-V2X, which I really didn't know much about, and I certainly think the American citizens know little to nothing about. To have access to the spectrum band, I think it does have tremendous potential, what I am hearing, to reduce highway fatalities. I understand there is a 5G version of this that needs to be considered for an additional portion of the spectrum band.

But regardless of how the Commission proceeds, I want to make sure that consumer safety is first and paramount. And so as commissioners, can you tell me how you are prioritizing road safety, because people still are very concerned about, as the automotive industry is moving forward and we need to and want to move forward, how are we prioritizing road safety and automobile safety? And how can we ensure that it will be protected regardless of how it is all allocated, Commissioner Pai, and other comments?

Mr. Pai. Critical question, Congresswoman, and that is part of the reason why it is so important to follow the balanced approach that I have outlined, allocating the upper 20 megahertz of the 5.9 gigahertz band for C-V2X, which will allow those safety applications; taking public comment on the next 10 megahertz for DSRC or C-V2X. But even beyond the 5.9 gigahertz band, this Commission, under my leadership, has demonstrated its commitment to vehicular safety.

In 2017, 2 years ago, I proposed that we allocate portions of the 76 to 81 gigahertz band, a massive 5 gigahertz of spectrum there for vehicular radar, and that is now being

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used for some of these safety type applications that you are talking about. And so it is not just the 5.9 gigahertz band. This Commission is committed to making sure that automotive safety in technologies move ahead.

Mrs. Brooks. And how are we working with the automotive industry, Commissioner Rosenworcel?

Ms. Rosenworcel. Yeah. I just want to say I think the chairman has done a good job of setting up the discussion for the 5.9 gigahertz band. He has acknowledged the needs of auto safety and the needs of unlicensed, and my hope is that going forward, we can find a way to accommodate both.

Mrs. Brooks. And how are we working with industry that is developing these technologies to make sure that we are -- you are being informed sufficiently, Commissioner O'Rielly?

Mr. O'Rielly. Well, I think we have been working on this issue for quite a while, and I have talked to and worked with a number of the auto industry. The auto industry itself has migrated their views over the timeframe and have moved away from DSRC. One thing that can be helpful that I have been unable to do in this process is actually commit with the words you used, that whatever portion of it remains be actually used for safety. When I pushed the auto companies to commit to using actual safety, they are, oh, hey, I don't know. I don't want to commit. That is a problem there. If they are going to have a band that is dedicated for safety, it ought to be used for safety, not advertising, not parking spots, and all these other ideas that are out there.

Mrs. Brooks. Okay. Thank you.

With that, I yield back.

Mr. Doyle. The gentlelady yields back.

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The chair now recognizes the chairman of the full committee, Mr. Pallone, for 5 minutes.

The Chairman. Thank you, Chairman Doyle.

Before I ask a question, I just want to express agreement with Ranking Member Walden. I too have serious concerns about the FCC providing little notice to the committee before taking significant actions, like the \$9 billion 5G fund that was announced yesterday. And that proposal raises many questions that need to be answered, including how the money will be spent without good maps of mobile deployment.

In addition, it is troubling that our members only seem to get answers to our letters to you hours before an oversight hearing. And so there is bipartisan agreement that you need to do better, and I expect so as we go forward.

But I wanted to ask some questions about resiliency, which is, you know, so important in my district, because we were probably most impacted by Superstorm Sandy, and we worry about all these hurricanes and storms that hit us repeatedly now with climate change getting worse. I have repeatedly urged the FCC to meaningfully improve the resiliency of communications and networks in the wake of disasters, but I fear my concerns, which are shared by millions of Americans, are falling on deaf ears. And because of that, I think it is time for Congress to step in to address this issue.

Since 2018, the FCC has issued two reports with recommendations on how to improve our network resiliency. And as part of an investigation, I requested the controller general issue a report in 2018 on network resiliency, with recommendations of which the FCC agrees. So we are talking about two FCC reports, one controller general report, three total. And I just wanted -- I am kind of assuming that all of you had an

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opportunity to review these reports, but just to be sure, if anyone hasn't reviewed these reports, all three, would you just raise your hand? I assume you have, so I don't expect anybody to raise their hand, but --

That means you all have. Okay.

Do any of you disagree with the recommendations in the reports, if implemented, you know, that the recommendations that they have, if implemented, could meaningfully improve our Nation's communications network? And you can just raise your hand if you disagree with the report's recommendations, essentially. I don't expect anybody to raise their hand.

All right. So I think that is good. And I appreciate that we are generally in agreement when it comes to using those reports as a baseline. But let me ask Commissioner Rosenworcel, I know you are all focused on this issue, so beyond the recommendations in these reports, what more do you think we should be considering?

Ms. Rosenworcel. Thank you. We need to update the wireless resiliency framework. Two years ago, the GAO told us that they don't know how to measure it, they don't know how to enforce it. We have got work to do. Since that time, we have issued four public notices asking for comment about it. I think we should stop asking for comment and we should start fixing it.

The Chairman. I certainly agree. As you know, the Trump administration is well known for undermining civil servants and ignoring experts if it benefits big corporate interests. And in October, the FCC approved the merger of T-Mobile and Sprint; however, serious questions have been raised about the transparency of the review process and whether expert analysis was ignored. And I have publicly said that I am quite concerned about these allegations.

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So again, Commissioner, you voted against this merger and raised concerns about the process. Would you want to explain your process concerns a little bit?

Ms. Rosenworcel. Sure. This is the largest merger of wireless companies in our Nation's history. We are all going to pay more for our wireless bills going forward as a result. And here is the problem: Before we even had any engineering, legal, or economic analysis before us, the majority of our Commission announced that they were going to support it. And then as the Department of Justice reorganized the entire transaction, they took a lot of meetings on it, but they denied the public an ability to actually come in and comment about it, and then rewrote the original draft from our expert staff from front to back on major competition issues.

On this committee, I think you should ask for a copy of that original draft, because there are such glaring differences between it and what we issued publicly. And I think that sunlight's the best disinfectant. Congress, the courts, and the public should know what was changed and why.

The Chairman. Oh, we will certainly follow up on that.

But let me ask Commissioner Starks, because I only have 30 seconds. I know you have some process concerns related to this merger. Can you elaborate as well?

Mr. Starks. Yes. Thank you, Mr. Chairman. In particular, when the chairman announced that there was going to be the largest investigation of Lifeline violations ever, I said that we should pause our review of the transaction, actually study what happened, let the investigation run its course. And, in particular, as a former enforcement official, I wanted to know more before we allowed the transaction to go forward.

As it turns out, there was a Wall Street Journal article just yesterday that was published that there are, in fact, potentially now more Lifeline investigations that we are

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down to Sprint. And so it certainly confirms that their needed to be more time, more investigation of what went forward.

One other thing that I would highlight for you is, when you are talking about an enforcement action like that, there are really two phases of it. The first is going to be a clawback, because the U.S. Government must be made whole. And so for whatever improper, ineligible Lifeline recipients Sprint received money for, all that money should come back. The second phase is going to be a penalty phase. Previously, we have issued penalties where there are improprieties with the Lifeline fund. I will expect significant action on both fronts.

The Chairman. Thank you. Thank you, Mr. Chairman.

Mr. Doyle. The gentleman's time is expired.

The chair now recognizes Mr. Gianforte for 5 minutes.

Mr. Gianforte. Thank you, Mr. Chairman. And thank you for commissioners and chairman for being here today.

I want to start by thanking you all for your work on helping us end illegal robocalls. We passed the House yesterday, and it is a significant milestone. I also want to thank you for next week's anticipated action around 9-8-8.

Mr. Chairman, you highlighted that in your opening comments, and I commend you for that, for a national suicide hotline. Unfortunately, Montana has the highest suicide rate in the country, with about 164,000 Montanans that have some form of mental health condition. Unfortunately, mental healthcare is not available to many Montanans. In fact, more than 600,000 Montanans out of a population of just over a million, 60 percent, live in an area where there is a shortage of mental health professionals.

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Ideally, everyone would have access to preventative mental healthcare, but Montanans know how difficult this is to achieve in our rural communities.

While we work to expand telehealth services so Montanans have access to critical care, this crisis of access to mental healthcare is why this 9-8-8 is so important. So thank you for your anticipated action there. We will continue to push.

Commissioner Carr, I want to thank you for coming to Montana and seeing firsthand the challenges we face. You mentioned while you were there that -- commending you, you have been to now well over 30 States around the country, but you said, our cell phone coverage is actually the worst you have experienced anywhere in the country. So I appreciate you coming and feeling some of the pain with us.

And I appreciate the Commission's emphasis on improving our maps, which is the path forward to fix this problem. In mapping legislation that is moving through Congress, a lot of emphasis has been put on a workable challenge process to correct some of these mistakes.

Commissioner Carr, could you just talk a little bit about how/why a challenge process is so important in developing sound maps and making good decisions?

Mr. Carr. Thank you, Congressman. Thank you for your leadership on rural broadband. As you mentioned, I did the drive from Missoula up to Great Falls, one of the most beautiful drives I have done, but basically zero bars the entire way up there. So I was stuck talking to one of my FCC colleagues the whole time. I don't want to repeat that.

But the mechanism has to be right because we have to make sure that no matter what community you are in, you are seeing the investments needed to give you connectivity, whether to your point, mental health services, or I know you are working on

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an initiative that let's people telework, to work from home. Be a great economic boost to rural communities where there is a lower cost of living, people want to live, so connectivity makes a big difference there as well.

Mr. Gianforte. So would a challenge or validation process improve the accuracy of the maps?

Mr. Carr. We absolutely have to have a mechanism in place to make sure we are not sending money to places where the private sector is already on its own building out and can sustain those builds without funding.

Mr. Gianforte. Okay. Thank you.

Chairman Pai, I would like to thank you for listening to my concerns around the best way to repurpose the C band, and applaud your announcement in moving forward with a public auction. As you continue to move forward on clearing other mid-band spectrum for 5G, I would like to raise my concerns -- and this has been raised by a number of other members; I just want to add my voice here -- to make sure incumbents are at the table, particularly electric utilities and railroads that are currently using some of the spectrum.

Can you commit that they will have a seat at the table as you have these discussions?

Mr. Pai. Absolutely, Congressman, they will.

Mr. Gianforte. Okay. Great.

Ranking Member Walden raised an issue earlier with the recent FCC NPRM that proposes a definition of urban, which is at a population of 2,500. The beauty of standards is we have so many of them. We operate in -- we are an agricultural State. The farm bill is a piece of legislation that affects all of our agricultural producers. In the farm bill, they

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have a definition of rural as 50,000 people.

Can you just -- is there a way we can sync these two so we don't have multiple standards? I am hearing concern from back home that with a really low bar of 2,500 population, that this would exclude many communities from the back hall and the resale that they need under this curricula. Can we just sync it up with the farm bill and make it 50,000?

Mr. Pai. Congressman, I am very sympathetic to that issue, coming from what I thought was a rural town of 11,000 in Kansas, but then going to places like Wisdom and St. Ignatius in your State, I understand how rural it is. And so I do think there is an important priority for the FCC but all Federal agencies to have a consistent definition to the maximum extent possible.

Mr. Gianforte. Okay. Thank you.

And with that, I yield back.

Mr. Doyle. The gentleman yields back.

The chair now recognizes Mr. Cardenas for 5 minutes.

Mr. Cardenas. Thank you very much, Mr. Chairman. And I appreciate very much all of your service, ladies and gentlemen, to the people of our great country, and you have tremendous responsibilities on your shoulders. And I am going to start off by applauding you a little bit, and then we are going to get into some different questions.

As Americans continue to depend on technology more and more every day, the decisions you make regarding our public airwaves have an incredible impact and shape our lives. Several of my colleagues and I sent a letter in October in support of a public auction of C-band spectrum to help America's development of 5G technologies. I was really glad to receive your response a couple of weeks ago announcing that the

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Commission will be proceeding with a public auction that will give the American people the transparency and accountability they deserve in such a crucial process that will help maintain America's standing as a global leader in innovation and technology.

I also applaud the Commission's continued efforts in the unlicensed spectrum arena to make more room for our increasing WiFi needs so we can continue to try to close the homework gap, run businesses, and stream our favorite entertainment. I would like to pivot to a different topic now.

Over a year ago, the FCC unanimously approved a hearing designation order in the Sinclair-Tribune merger. In that document, the Commission stated, quote: There are substantial and material questions of fact as to whether Sinclair affirmatively misrepresented or omitted material facts with the intent to consummate this transaction without fully complying with our broadcast ownership rules, end quote.

Earlier this year, the FCC's administrative law judge stated in her ruling that, quote: Honesty with the Commission is a foundational requirement for a commission license, end quote. And she referred to section 1.17 of the FCC rules when she wrote, quote: Mandates that FCC licensees deal truthfully with the agency, not only by refraining from misrepresenting information, but also by not omitting material information that is necessary to prevent any material factual statement that is made from being incorrect or misleading, end quote.

And then about 5 months ago, it was reported in the press that the Media Bureau had started an investigation into Sinclair. I know my colleagues and I would be happy to know more about this investigation, but I want to focus on what the administrative law judge said that, honesty before the agency is foundational to holding a broadcast license.

This is important as broadcast license renewals are set to start next year, and the

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American public should be aware and have all the information about broadcasters that we have given their public airwaves to.

So my first question is to you, Chairman Pai, if you could please give me a short yes-or-no answer. Do you believe that lying to the agency, the FCC, is a serious issue?

Mr. Pai. Yes.

Mr. Cardenas. Thank you. And yes or no, do you agree with the administrative law judge that honesty is foundational to hold a license?

Mr. Pai. Yes.

Mr. Cardenas. Thank you. Do you believe an entity that has lied to the agency should be held accountable if they have lied to the agency?

Mr. Pai. Yes, consistent with law and regulation and precedent, yes.

Mr. Cardenas. Yes. Thank you. Should an entity that has lied to the agency be eligible to hold a license?

Mr. Pai. Sorry. Could you repeat that?

Mr. Cardenas. Should an entity that has lied to the agency be eligible to hold a license if they have, in fact, lied in the past or recently, et cetera --

Mr. Pai. No.

Mr. Cardenas. -- material to your --

Mr. Pai. If it is material to the holding of a license, yes.

Mr. Cardenas. Okay, okay. Thank you.

Pretty straightforward questions, but you are not evading; I am just saying I just want to be clear --

Mr. Pai. That is why I asked for a clarification.

Mr. Cardenas. Thank you. Thank you very much.

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Commissioner Rosenworcel, do you agree with those questions and answers?

Ms. Rosenworcel. I am not entirely sure. Did the chairman say that if they are dishonest in front of the agency, they should or should not be able to hold a license?

Mr. Cardenas. Thank you for that clarification. So, for example, as many entities that hold licenses, they may have an application in 2018 or 2016 or 2017, if for some reason they have materially -- it was found that they materially lied to the FCC and they hold other licenses and, for example, they are up for re-license, et cetera, renewal, should that be a material fact in determining whether or not they have the integrity and should be given the responsibility to hold those licenses as well?

Mr. Pai. Congressman, it is obviously a fact-specific inquiry for any license renewal. I will simply reiterate what the administrative law judge said, in essence, which is, honesty good; dishonesty bad. It is a pretty simple --

Mr. Cardenas. And bad meaning that it is a trust that they have by holding a license, being granted a license and, therefore, if they have been bad actors to the degree that they actually lied to the organization that bestows that license upon them, then perhaps they should not be given that opportunity again. It is precious. It belongs to the people.

Mr. Pai. Congressman, I think I have made clearer than most of my predecessors that candor before the Commission is a serious value that we cherish, and I know this committee cares about as well.

Mr. Cardenas. Thank you, Mr. Chair. Thank you, members.

I yield back.

Ms. Clarke. [Presiding.] The chair now recognizes Mr. Flores for 5 minutes.

Mr. Flores. Thank you, Madam Chair.

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And I also want to thank the commissioners for your service, and thank you for being here today.

Chairman Pai, let me start with you. I think it is important, as you and I have discussed, that we preserve adequate spectrum for intelligent auto safety. I was glad to see in your recent NPRM with respect to 5.9 that you are saving part of that spectrum for a C-V2X potentially for DSRC. I do, however, share some concerns from the transportation industry about the uncertainty of DSRC's future and the significant investment research that has been put into this technology so far.

So two quick questions on this. The NPRM seeks a comment on designated 10 megahertz of the spectrum for DSRC. Do we have any analysis so far to show that this would be enough to continue adequate research for this standard?

Mr. Pai. Congressman, part of the evidence would be the fact that the Japanese, among others potentially, have allocated 10 megahertz channel for DSRC. Part of it also involves making sure that we have enough of an exclusive home for C-V2X, which is where most of the automakers have shifted their focus.

Mr. Flores. Right.

Mr. Pai. And so we -- that is part of the reason why I wanted to make sure we had an open conversation about that 10 megahertz portion to let everybody make the case based on the merits, not based on a particular political appeal.

Mr. Flores. Okay. Thanks. And I understand that both the FCC and NHTSA were in a three phase process to test interference between unlicensed devices and DSRC. How do you -- now that we have added C-V2X into the mix, how do you see that testing process evolving?

Mr. Pai. Congressman, this is part of the reason why I think, with my colleagues'

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assent, that this approach really is the right one for automotive safety. Under the previous administration's framework, DSRC would be sharing the spectrum, the 75 megahertz, with unlicensed, and extensive testing would be required over a whole bunch of different use cases. By spectrally separating the two, by creating an exclusive home for automotive safety, C-V2X, and potentially DSRC on one hand, unlicensed on the other in a completely separate part of that band, we can avoid the problems that all of this extensive testing would require. You don't need extensive testing to note you have an exclusive home in one part of the band.

And so our hope is that this finally removes the uncertainty, allows some of the great automotive safety technologies to be developed, and actually put into use for the benefit of American consumers. I think this part of what gets lost often, this is a public resource that was devoted for the purpose of automotive safety. And that is why I would argue, and I hope my colleagues would agree, that the step we are poised to take next week I believe truly would be the biggest benefit for automotive safety American consumers have seen in history.

Mr. Flores. Well, I appreciate your feedback, and I also appreciate how thoughtful you all have been in putting this out there for the public to look at. I look forward to seeing what the comments are in this regard.

Shifting gears a little bit, Commissioner O'Rielly, you have made supportive comments in the past on modernizing the merger reviews at the FCC to more efficiently consider applications. I plan on reintroducing legislation from the last Congress to codify the FCC's current practice of using an 180-day shot clock for the Commission to consider a merger application. This commonsense provision would give more certainty to the industry and our consumers.

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Can you speak to the importance of having a more efficient review process for applications at the FCC?

Mr. O'Rielly. Absolutely. I believe whatever decision we ultimately come to it should be done in a timely manner. The time that we spend in number of transactions go lengthy is money that is being spent on lawyers and bankers and not in terms of deployment and facilities and network and services, and that is a problem. We can speed up our process if there needs to be an escape valve, that is one thing, but to have open-ended timeframes, and this chairman has done a wonderful job in speeding it up compared to the past. There is still some room to improve, though, and anything that Congress can do to add to that would be very helpful.

Mr. Flores. That is helpful feedback.

Are there any other lessons that the FCC has learned that we should be aware of as we consider legislation like this to codify the 180-day shot clock?

Mr. O'Rielly. I think the shot clock is going to apply in many different situations, not just in merger transactions.

Mr. Flores. Okay.

Mr. O'Rielly. And I actually have a number of different ideas in improving the Commission, if you have some time.

Mr. Flores. I look forward to working with you on that. So, yeah, shoot those over to us and we will get it incorporated. Thank you.

I yield back the balance of my time.

Mr. Doyle. [Presiding.] The gentleman yields back.

The chair recognizes Ms. Clarke for 5 minutes.

Ms. Clarke. Thank you, Mr. Chairman. I thank our ranking member, and I thank all

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of our commissioners for their presentations before us today.

I would like to start with the idea that every citizen in our Nation, regardless of their income, their race, their national origin, their gender, have to be concerned about in the next couple of weeks, actually, and that is the 2020 Census. For the first time in the enumeration of our Nation, we are going to be doing this online.

And I want to start with you, Commissioner Rosenworcel. During your visit to my district, that is Brooklyn, and our discussion on your broadcast, we visited the topic of broadband deserts a few times. For the first time, broadband deserts have taken on another dynamic or dimension. One of our most basic rights true and fundamental to our democracy is the apportionment of our representation. That is because for the very first time, again, we will be conducting this primarily online. However, we know that millions of people are at risk of being undercounted because they lack access to the internet, and many communities across this Nation have been hard to count even without that dynamic.

So my question is, do you see risk in this approach, and what can we be doing to make sure that everyone is counted, Commissioner Rosenworcel?

Ms. Rosenworcel. Yes. Thank you for the question. There is enormous risk in this approach. We all know sitting at this table that we have a digital divide in this country. We have got broadband deserts in urban America and rural America. So now we have this constitutional duty to count every citizen, and the administration has decided it is digital first. They are going to tell everyone to respond online. We are hiring 125,000 fewer people to knock on doors.

I will tell you right now, I am worried we are not going to be able to count people who are on the wrong side of the digital divide, both in urban America and rural America,

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and it will have constitutional consequences. And I think that this Commission has to help the folks at the Census and the Department of Commerce to make sure we get it right, because we get one chance every 10 years and we have to get it right.

Ms. Clarke. I thank you for that. And I hope that, you know, we are focused on this because, indeed, we get one shot at this and it happens once every 10 years.

Commissioner Starks, I am concerned the FCC is not complying with existing law. Specifically, the FCC has not followed its statutory mandate to collect equal employment opportunity data for broadband licensees and cable operators. Although the FCC recently sought comment on the EEO enforcement, it has made no moves to implement the law.

Can you describe for us your views on this decision and what steps the FCC should take to remedy this long-standing failure to comply?

Mr. Starks. Yes. Thank you for the question, Vice Chair Clarke. From behind the camera to in front of the camera to who makes decisions of what local news and what our news really looks like, I believe diversity is imperative that we solve this issue. We have a statutory duty to collect this diversity information from our broadcasters, and we have fallen down on that duty. And I have requested that we specifically satisfy that. There are constitutional questions that have been raised. I was eager to take on those constitutional questions. I thought it should be part of the comment period. I am frustrated that folks have constitutional issues with asking a constitutional question. That really cannot be the case. And so I am eager, now that the comment period has ended, that we move forward quickly to make sure that we satisfy our statutory obligations here.

Ms. Clarke. Absolutely. As co-chair of the Smart Cities Caucus, I understand the importance of mid-band spectrum. It is being held as the Goldilocks of frequencies. In that vein, I have some quick questions for each commissioner and the answers, of course,

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are yes or no.

With regard to the relationship between 5G and C-band spectrum, do you agree that mid-band spectrum is critical for the U.S. leadership for 5G, Mr. Chairman?

Mr. Pai. Yes.

Mr. O'Rielly. Yes.

Mr. Carr. Yes, all three bands are going to be critical.

Ms. Rosenworcel. Yes.

Mr. Starks. Yes.

Ms. Clarke. If C-band spectrum is not made available as soon as possible, will the U.S. fall further behind China on 5G deployment?

Mr. Pai. Congresswoman, we are not behind China in terms of 5G deployment.

Ms. Clarke. I didn't ask that.

Mr. Pai. I believe it is critical.

Ms. Clarke. I said, if it is not made available soon, will we fall behind China?

Mr. Pai. We could, yes.

Mr. O'Rielly. Yes.

Mr. Carr. No, I don't think we will. We are in a leadership --

Ms. Clarke. No. I said, if it is not done soon, could we fall further behind China?

Mr. Carr. No. China is not going to beat us to 5G.

Ms. Clarke. That is aspirational. I love that about you.

Ms. Rosenworcel. I am going to disagree with my colleague over here. We are falling behind the rest of the world. We are resting on our 4G laurels. Mid-band spectrum is one of the ways to help fix it. We got to auction some of it in 2020.

Mr. Starks. Yes, and we need to move as quickly as practicable on getting the C

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band.

Ms. Clarke. I appreciate your answers.

And I yield back, Mr. Chairman. Thank you.

Mr. Doyle. Thank you. The gentlelady's time has expired.

The chair would request unanimous consent to waive Ms. Blunt Rochester onto the committee.

Without objection.

And now the chair recognizes Ms. Blunt Rochester for 5 minutes.

Ms. Blunt Rochester. Thank you so much, Mr. Chairman. And thank you also to the commissioners. I am sorry I wasn't able to be here at the beginning of this really important hearing. I was in another subcommittee, the one on environment and climate change, discussing building a 100 percent clean economy. And it is really pivotal and very much tied to what you are talking about here and the work that you do.

I also have gotten permission to start a future of work bipartisan caucus in the Congress, because it is one of these issues that we need to come together on, and so, again, your work is pivotal here. I want to thank you for that, for your service, and also just say how incredibly important it is to my colleagues and I to understand the decisions that you make and also the strategy, particularly as it involves Americans and our economy.

Like most of my colleagues probably today, many of them probably brought up the issue of broadband access, just like Ms. Clarke did, and I am concerned that some of the actions that you have taken -- I am encouraged that some are dealing with broadband access, but I also am concerned that we are not as far as we need to be. And I specifically want to just share an issue that is personal for me.

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In Delaware, the coverage maps, your current coverage maps suggests that the entire State of Delaware has at least one provider that provides at least 25 megabytes per second, yet from my own personal experience, just driving up and down my State, whether it is on my farms, whether it is in the city, we have patches where there is not access, and so this is a priority. And while I appreciate the willingness to adopt the shape file approach to resolve some of these issues, it seems not as precise, particularly when you are measuring through census tracks, and for a small State like Delaware that has great impact.

So I wanted to ask a question, you know, about the -- sort of the rejection of the proposal to utilize location fabric, the location fabric approach, which is more granular, I understand, and also had bipartisan support, was endorsed, I think, 2 weeks ago. And could you -- I will start with Commissioner Pai. Could you just share why the FCC rejected that proposal that would have been a little bit more -- provided more realistic coverage?

Mr. Pai. Appreciate the question, Congresswoman, as well as the concern that you have raised. I have seen that for myself during a recent trip to Delaware. Driving from Wilmington to Seaford, I noticed the bars start to drop in -- there are rural parts of Delaware.

Ms. Blunt Rochester. And in the urban parts as well.

Mr. Pai. And even in the urban areas as well, so that is one of the reasons why we are focused on making sure we have more accurate data.

With respect to the question that you have raised, part of the reason why I am proud that the agency spoke with a bipartisan voice on August 1 when it adopted a new digital opportunity data collection and upgraded the system, is that we included not just the shape file approach that you are talking about, but also crowdsourcing, to understand

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from consumers where they live, where access is, and, more importantly, where it is not, so we can have better data-driven decisions.

And there are a lot of things that make this issue very complicated, but I think at the end of the day, we want to understand not just from providers, but from consumers, where is broadband, to get as granular as we possibly can, while making sure that we understand the challenges that are out there in terms of broadband deployment.

Ms. Blunt Rochester. I want to also turn to Commissioner Rosenworcel to just kind of get your interpretation of this as well. I have a lot of very technical things that I can ask here on this page and people's eyes will glaze over, but bottom line, I would like to get your perspective.

Ms. Rosenworcel. I work on these issues all the time. I know what you mean about eyes glazing over. We got to get the most granular and accurate data possible. That is the bottom line. So if we are going to start with shape files, great. But if we can improve it with a broadband location fabric, that is where we are going to need to go next.

And I would point out that I think this committee in its Broadband DATA Act included both, so that is important. And just as important is that we get the perspective of people driving up and down the roads of Delaware who can tell us where they get bars and which houses where they don't get service. We are going to have to bring in crowdsourcing and public knowledge to really refine this to the next level.

Ms. Blunt Rochester. And, Commissioner Starks?

Mr. Starks. Yes, I agree as well. And you are exactly right on the issue of census tracks. I think that was a tremendous problem. We need it as granular as possible. And so I have also been somebody who said that for our maps, the shape files are a good

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place to start. Getting it more granular at the address level is what I have long called for, because that is -- people actually live at their addresses, turns out. And so we need to make sure that we are getting it as detailed as possible so that we can have the connectivity that people need.

Ms. Blunt Rochester. To the other commissioners?

Mr. Doyle. The gentlelady's time has expired.

Ms. Blunt Rochester. Sorry. I will hear from you following, but thank you so much for your work. And thank you, Mr. Chairman, for your leadership.

Mr. Doyle. I thank the gentlelady.

Seeing no more members ready to testify, the chair requests unanimous consent to enter the following into the record: A letter sent to me by Chairman Pai dated December 3, a letter from ITS America, a letter from the Motor and Equipment Manufacturers Association, a letter from the Ultra Wideband Alliance, a letter to the FCC from safety advocates, a letter from Global Automakers, a letter from Safety Spectrum Coalition, a letter from nine public safety railroads and public transit oil and gas and utility organizations, and a statement from the National Safety Council.

Without objection, so ordered.

[The information follows:]

***** COMMITTEE INSERT *****

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Mr. Doyle. I would like to thank the witnesses for their participation in today's hearing.

I remind all members that pursuant to committee rules, they have 10 business days to submit additional questions for the record to be answered by the witnesses who have appeared. I ask each witness to respond promptly to any such questions that you may receive.

And before I adjourn, I want to wish all the members of the Commission a happy holiday season. Good to see you all back, and to everyone in the audience too. Happy holidays.

The committee is adjourned.

[Whereupon, at 12:46 p.m., the subcommittee was adjourned.]