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CONNECTING AMERICA: BROADBAND

SOLUTIONS TO PANDEMIC PROBLEMS

WEDNESDAY, FEBRUARY 17, 2021

House of Representatives,

Subcommittee on Communications

and Technology,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to notice, at 11:00 a.m., via Webex, Hon. Mike Doyle [chairman of the subcommittee] presiding.

Present: Representatives Doyle, McNerney, Clarke, Veasey, Soto, O'Halleran, Rice, Welch, Cardenas, Kelly, Craig, Pallone (ex officio), Latta, Guthrie, Bilirakis, Johnson, Mullin, Walberg, Carter, and Curtis.

Also Present: Representative Pence.

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

Detailee; Jennifer Epperson, Counsel; Waverly Gordon, General Counsel; Tiffany Guarascio, Deputy Staff Director; Alex Hoehn-Saric, Chief Counsel, Communications and Consumer Protection; Jerry Leverich, Senior Counsel; Dan Miller, Professional Staff Member; Phil Murphy, Policy Coordinator; Joe Orlando, Policy Analyst; Kaitlyn Peel, Digital Director; Tim Robinson, Chief Counsel;

David Brodian, Minority Detailee, Communications and Technology; Sarah Burke, Minority Deputy Staff Director; William Clutterbuck, Minority Staff Assistant; Nate Hodson, Minority Staff Director; Olivia Hnat, Minority Communications Director; Sean Kelly, Minority Press Secretary; Peter Kielty, Minority General Counsel; Emily King, Minority Member Services Director; Bijan Koohmaraie, Minority General Counsel; Kate O'Connor, Minority Chief Counsel, Communications and Technology; Clare Paoletta, Minority Policy Analyst, Health; Brannon Rains, Minority Policy Analyst, Consumer Protection and Commerce, Energy, Environment; Michael Taggart, Minority Policy Director; Evan Viau, Minority Professional Staff Member, Communications and Technology; and Everett Winnick, Minority Director of Information Technology.

Mr. Doyle. Okay. Good morning, everyone. Can everyone hear me okay?

All right. I see it is 11 o'clock, and I think we will get started. So if you can hear this imaginary gavel, the committee will now come to order.

Today, the Subcommittee on Communications and Technology is holding our first hearing of the 117th Congress, entitled, "Connecting America: Broadband Solutions to Our Pandemic Problems."

Before we get started, I just want to, you know, express all of our concern for these weather emergencies occurring down in Texas and throughout the Midwest. Our thoughts are with all of those folks.

And I know, Dr. Anderson, in Kansas, there has been rolling blackouts, and the Governor of Kansas declared a state of emergency. And I think the schools in Topeka are closed this week. You might be able to fill us in during your testimony.

But anyways, I just want to express our concern for that, for all the folks that are going through that hardship right now and hope they get power restored quick.

Before I get started, I want to welcome some of our new and returning members on the Democratic side, including Congresswoman Robin Kelly, who has just joined the subcommittee. She is not new to Energy and Commerce, but she is new to the subcommittee, so I want to welcome Robin.

I also want to welcome Congresswoman Angie Craig, Congresswoman Lizzie Fletcher, who are all new to the committee this Congress. I am happy to have all of you join us.

I also want to welcome our new and returning Republican members to the subcommittee, especially my good friend and colleague, Ranking Member Bob Latta. It is good to have you back. And, Bob, during your time, I am sure you can introduce your

new members of the committee. We will certainly give you time to do that.

I look forward to working with all of you as we take on the important work of the Communications and Technology Subcommittee.

So back to the matter at hand. Due to the COVID-19 public health emergency, today's hearing is being held remotely. All members and witnesses will be participating via video conferencing. And as part of our hearing, microphones will be set on mute for the purpose of eliminating inadvertent background noise. Members and witnesses, you will need to unmute your microphone each time you wish to speak.

Documents for the record can be sent to Joe Orlando at the email address we provided to staff. All documents will be entered into the record at the conclusion of the hearing.

So the chair now recognizes himself for 5 minutes for an opening statement.

As we have all become far too aware over the last year, universal broadband connectivity is critical to our economy, to our education of our youth, and to keeping our communities safe and connected during this unprecedented crisis.

Americans throughout the country have struggled to get connected and stay connected. Too many households are going without broadband service because they can't afford it, others because it was too expensive before or it is too expensive now.

Free Press, in their testimony, says that some 77 million people lack an adequate home internet connection due to high prices or lack of connectivity. We all know that our Nation needs to invest in deploying new networks, particularly rural communities, if we are going to ensure that everyone can get online.

But what I think is more concerning about the data presented in their testimony is that far too many people go without because they can't afford service. That is why I am glad we were finally able to come together at the end of last year to include several

important broadband provisions in the COVID-bus package to address these challenges.

Among our accomplishments was the creation of a new emergency program, the Emergency Broadband Benefit Program, based on legislation introduced by our colleague, Congressman Veasey. This \$3.2 billion program will provide qualifying consumers with a \$50 credit each month on their broadband bills.

Congress wrote this legislation to give consumers a great deal of flexibility in how they use this benefit, and it is critical that the program be implemented as such.

I also hope the FCC will ensure that existing tools that are helpful and part of the Lifeline program are available and accessible to participating carriers to the greatest extent possible to help facilitate this new program as well.

While the Emergency Broadband Benefit is temporary, I sincerely hope we can work together to find permanent solutions to ensuring that broadband service is available and affordable to all.

Last week, this committee marked up legislation to fund remote learning in our Nation's classrooms. This investment is long overdue, and we have known about the homework gap for years, and the pandemic has really laid this inequality bare.

The new \$7.6 billion Emergency Connectivity Fund seeks to start closing that gap. The fund will help low-income students by subsidizing the cost of internet-connected devices and broadband service so that students can learn at home.

Dr. Anderson, in your testimony, you talk about the great lengths Topeka schools are going to to keep students connected, including setting up WiFi in school parking lots. But as you point out, too many students, and more importantly their parents, can't sit in a parking lot all day. It is critical that we give students and families the resources they need to allow kids to participate in their own education.

It is my hope we can get these provisions signed into law as quickly as possible and

get help to students and schools in need.

And, finally, as we have all said for many years, we need to invest in rural broadband. We have had more hearings than I care to count where the truth has been obvious. The only way to solve this problem is through Federal investment. The business case just does not exist for too many communities.

Last Congress, House passed H.R. 2, the Moving Forward Act, which included \$100 billion for broadband deployment and adoption. I hope we can work with the Biden administration and our colleagues in the Senate to take up similar legislation again this Congress and finally take real steps in this country to close the digital divide.

I look forward to working with my colleagues on both sides of the aisle as we take all of these challenges on together.

And with that, I will yield the remainder of my time to my good friend from Vermont, Congressman Peter Welch.

[The prepared statement of Mr. Doyle follows:]

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

Mr. Welch. Thank you, Chairman Doyle.

And I think all of us on the committee, Republicans and Democrats, are thrilled that you are starting out with this hearing. The issue of broadband is existential. The case has been made.

Many of us on this committee sent a letter to the President to support rural broadband. But what you are pointing out is that broadband is an equity issue. And it is not just getting access in rural America, it is getting affordability in urban America. So here we are with you from Pittsburgh, me from rural Vermont, and we have the same challenge. So this is about equity.

And there has to be two things. One, Federal investment. That is number one. But number two, local partnerships.

Now, we can partner with the private companies, but let me give an example. If they are not going to do the job, get out of the way. Let local communities that are developing their own co-ops move ahead. If you live in Peacham, Vermont, very small town, and you are on one side of Macks Mountain, Charter Spectrum will not answer your call and get you the broadband.

So this is about equity for all of our citizens in rural and urban America.

Thank you, Mr. Chairman, and we all look forward to working with you.

Mr. Doyle. Thank you, Mr. Welch.

It gives me great pleasure now to recognize my good friend and colleague, the gentleman from Ohio, our ranking member for the Subcommittee on Communications and Technology, for 5 minutes for his opening statement. Mr. Latta, you are recognized.

Mr. Latta. Well, thank you very much. And I appreciate my good friend for recognizing me this morning, and congratulations again for your leadership on the

subcommittee. And I also want to thank and recognize Mr. Pallone for his continued leadership as chairman of the full committee.

But also, thanks very much for our witnesses for being on hand today. Greatly appreciate it.

And also, if I can just make mention of our new members on the subcommittee, I would really appreciate it. Mr. Duncan, Mr. Hudson, Mr. Mullin, Mr. Guthrie, Mr. Curtis, and Mr. Carter. And I know they are all going to do a great job being on the committee -- it is a great subcommittee -- with us, and so I look forward to it.

But the COVID-19 pandemic has heightened the importance of reliable internet access as so much of our daily lives has moved online. From telehealth to education, closing the digital divide for all Americans has never been more critical. But even before the pandemic changed the way we live, work, and learn, Americans, especially those who live in rural communities, were being left behind because of the lack of access to the internet.

In June of last year, I called on the majority to hold this hearing because people across the country, and Ohioans in my district, need better access to the internet so they can participate in the 21st century economy, get the healthcare they need from home and learn remotely.

While our schools remain closed to in-person learning, Mr. Chairman, I would like to also submit the letter for the record that I have before us.

But even as this hearing is long overdue, it is better late than never, and I am pleased we are having it today.

Before moving forward, again, I want to thank our witnesses for joining us.

One of the most evident needs for improving broadband during the pandemic is our country's unprecedented reliance on telehealth. Telehealth services allow

Americans to continue to see their doctors without risk of contracting the coronavirus.

Congress appropriated over \$500 million to the FCC's COVID-19 Telehealth Program last year, and now we must pursue aggressive oversight to understand how the emergency funding is being used to ensure needs are being met.

In my district, telehealth visits have spiked since the start of the pandemic last March, and I am sure we are seeing similar trends in my colleagues' districts. This includes more than just primary care visits but also assessing mental health resources and substance abuse treatment as rates of suicide, drug abuse, and alcoholism are on the rise. But for all Americans to benefit from telehealth services, we must close the digital divide with long-term solutions.

Under the last administration, the gap between urban and rural Americans with access to broadband closed significantly. Americans with access to 25.3 megabits per second fixed broadband fell from 30 percentage points at the end of the Obama administration in 2016 to just 16 points to the end of 2019.

Thanks to Republican policies and historic tax cuts that include private investments, providers were well positioned to immediately step up to the challenge presented by the once-in-a-century crisis.

While this regulatory flexibility enabled broadband providers to immediately upgrade their services for consumers, earlier this week, E&C Republicans introduced the Boosting Broadband Connectivity Agenda, a package of broadband infrastructure and permitting reform bills, to make sure broadband gets to all Americans quickly.

We urge committee Democrats to join us in solving these important issues in a bipartisan fashion.

We often hear from our colleagues across the aisle about the need to get broadband to the home, particularly for low-income Americans and urban America. We

agree and worked with you all to provide \$3.2 billion at the end of last year to increase broadband access for all of those Americans.

While no American should have to go to a fast-food restaurant for internet, at least those Americans have access to it. Many of my constituents don't even have that option.

We must close the digital divide once and for all. The COVID-19 pandemic has required novel approaches to address new problems, but we can't forget about challenges that persisted before the pandemic that still demand our attention.

Internet connectivity and access are topics we must tackle together because they will be required for generations to come.

So thank you again to all my friends in the majority for holding this hearing today, and I look forward to today's discussion and thanking our witnesses again.

Mr. Chairman, with that, I yield back the balance of my time.

[The prepared statement of Mr. Latta follows:]

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Mr. Doyle. The gentleman yields back.

The chair would like to also recognize one of our new members on the Democratic side from the great State of New York, Congresswoman Rice. Sorry for missing you there, Kathleen, but we are thrilled to have you on the committee.

Now, the chair will recognize Mr. Pallone, chairman of the full committee, for 5 minutes for his opening statement.

The Chairman. Thank you, Chairman Doyle.

Right now, struggling families that lack internet connectivity have been shut out from school, work, telehealth, and other vital connections, and across the country, children are unable to attend virtual classes because they don't have a reliable internet connection.

In New Jersey, for example, studies have found that nearly 17 percent of residents have no internet access in their homes. Of the families making \$35,000 per year or less, only half have home internet connections, and for many school kids, the dining room table or a bedroom workspace have replaced their classrooms. So a lack of connectivity means that, in essence, they are locked out of school.

And it is not just kids. Struggling parents are trying to fill out job applications and complete educational courses on smartphones. Many, if not most, vaccine appointments require online registration. And to make matters worse, many libraries that once provided a reliable internet connection are now closed to protect public health.

But nowhere is this problem more acute than on Tribal lands. Many Tribal students who were sent home from college and schools for their own safety returned to homes without sufficient internet connections for video conferencing or uploading assignments. And many Tribal members can't work from home or sell goods online,

cutting off key sources of income. And these same Tribal communities are also among the last to receive important updates on health and emergency procedures, which are critically important for prevention.

Fortunately, Mr. Chairman, Democrats and Republicans came together at the end of the last Congress to pass the historic Emergency Broadband Benefit Program. Under this program, eligible households can receive a discount of \$50 per month for service or \$75 per month for service on Tribal lands, and the Federal Communications Commission is in the process of setting this program up.

We also passed, as you know, the Broadband Connectivity Grant Program in that end-of-the-year package that provides a billion dollars for a range of efforts to increase connectivity on Tribal lands. The National Telecommunications and Information Administration is working to set up that program now, including significant Tribal consultation.

And then just last week, this committee approved, as part of the reconciliation instructions, \$7.6 billion in funding to expand E-rate assistance for remote learning and remote library services. And we all want the schools and libraries to open, but we have to ensure they are opened safely, and until that is possible, we have to prevent our kids from falling into the homework gap. And this funding in the reconciliation bill will allow millions of teachers, students, and families to access the technology and tools they need to participate in virtual classrooms and other online activities.

So we are going to continue to support broadband deployment across the country through another infrastructure bill or economic stimulus, which I think, you know, will follow the budget reconciliation hopefully on a bipartisan basis in April or May. That, I think, will incorporate a lot of the things that we did in our committee in the Moving Forward Act, which was passed by the House last year, but we couldn't get the Senate

majority leader then, Mitch McConnell, to move it in the Senate. But I think that a lot of our Republican members will support a major infrastructure bill that has some major broadband deployment in underserved areas.

So I look forward to continue to find bipartisan solutions, Chairman Doyle, and I would like to yield the rest of my time to Marc Veasey of Texas.

[The prepared statement of Chairman Pallone follows:]

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Mr. Doyle. The gentleman is recognized.

Mr. Veasey. Mr. Chairman, thank you very much for recognizing me. I want to, first of all, thank you for gathering us here today to talk about this extremely important topic, about broadband expansion, because right now, this pandemic is more important than ever that we have fast, reliable internet.

Our lives are primarily taking place online with work, school, and healthcare, not to mention basic communication between friends and family. So we have to make sure that our kids don't get caught in the homework gap and to make sure that our workers can find their next job online and that we don't lose meaningful communication with one another.

Last year, I introduced legislation to bolster access to broadband for individuals that are facing unprecedented challenges amidst the coronavirus pandemic. My legislation provides free or low-cost internet service to families with children who qualify for free or reduced school lunch, to college students that have Pell grants, and to those who have been laid off or furloughed due to COVID-19, and those that qualify for the FCC's current Lifeline program. And I was very proud that my legislation was included in the sleep-in (ph) stimulus package that Congress passed at the end of last year to give Americans immediate relief.

In the upcoming months, I will continue to use my position on this committee to work with the incoming administration to ensure we facilitate a good rollout of this program, because I believe it is in everyone's interest.

And I wanted to thank everyone on the committee for all of their well wishes and prayers for everything that we are going through in Texas right now. I don't ever remember it being this cold here, and there are a lot of people out here suffering.

So thank you very much. And, Mr. Chairman, I yield back.

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

Mr. Doyle. Thank you.

It is my understanding that Mrs. Rodgers was unable to attend and that my friend from the great State of Ohio, Mr. Johnson, is going to claim her time. So, Mr. Johnson, you are recognized for 5 minutes.

Mr. Johnson. Good morning, Chairman Doyle and Chairman Pallone. I want to thank you for holding this important hearing to look at the impact of the COVID-19 pandemic that has had -- and all the terrible effects that it has had on our country's broadband networks.

It is certainly time that this committee holds a hearing to examine ways to close the digital divide and the homework gap, which House Energy and Commerce Committee Republicans urged you to hold last year in a letter to both you and Chairman Pallone. And though it took nearly a year, I am glad we are finally turning our attention to this matter.

These are two crucial issues facing Americans during the COVID-19 pandemic. And, Mr. Chairman, I request unanimous consent to enter the letter that was sent last year into the record.

Mr. Doyle. Without objection, so ordered.

[The information follows:]

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

Mr. Johnson. During the COVID-19 pandemic, our broadband networks have held our economy, our education system, and our communities together where access has been available. Despite the challenges that many American industries have faced, our Nation's broadband providers stepped up when it mattered most, and they were able to do this because our country's policies allowed them to do so.

The past 4 years of Republican-led, market-oriented policies created a competitive environment that facilitates innovation and investment in our networks, leading to increased speeds, extra capacity, lower prices, and flexibility to adapt when faced with the unexpected.

I can think of no greater test than the early challenges of the pandemic. More than 40 percent of America's workforce began working and learning from home overnight. Children began streaming classes and their favorite TV shows around the clock. Parents were juggling video calls with video weddings and reunions, family reunions, and even Congress began legislating over Webex.

All of the capacity that had been dedicated to office parks now suddenly needed to be made available at homes on short notice. And in a stunning show of American ingenuity, our providers kept the internet up and running at full speed, while other major countries in Europe failed.

I commend all of the providers who continue to work around the clock to ensure Americans have the connectivity they need. Our country's policies foster a competitive communications marketplace, and this competition only benefits consumers.

Now, we are not there yet in most rural areas of America. While bipartisan policies led by Republicans have enabled the ISPs to do much good work with existing broadband infrastructure, there are many places throughout our country that do not

have even the basic access to the 21st century digital economy. And we must continue to solve that problem.

Thankfully, we do not have socialized broadband in this country. Yet. In fact, as long as we continue to push bipartisan policies, we will continue to move in the opposite direction from a socialized solution.

Last summer, committee Republicans worked with our Republican colleagues in the Senate to outline a framework that would help connect all Americans during the COVID-19 pandemic. We then worked with many of our colleagues here today to find bipartisan agreement to enact many of them into law, including establishing a \$1.3 billion broadband grant program to connect unserved rural Americans and Tribes, increasing broadband access and digital opportunities in minority communities and for low-income Americans, increasing funding for telehealth programs, and providing funding for broadband maps and to secure our networks.

Though not in this committee's jurisdiction, Congress also funded a cumulative \$110 billion to the Department of Education to invest in hardware, software, and connectivity needed to safely reopen schools and continue remote learning.

Mr. Chairman, it is our duty to now make sure that money gets to where it belongs -- to Americans. Let's not abandon the American people when it matters most. We must make sure that money already appropriated gets to our children for distance learning. Without that, our efforts are in vain.

But there is more that can be done. With billions of dollars dedicated to connecting unserved Americans, we must now move swiftly to turbocharge that investment by removing barriers to deployment. We can start by working together to pass the Boosting Broadband Connectivity Agenda that committee Republicans unveiled this week. This agenda sets out an ambitious slate of proposals designed to roll back

regulatory red tape, to put Americans back to work, building next-generation networks, and maintain U.S. broadband leadership.

We have proven that when we work together, we can help Americans in need. I hope my colleagues across the aisle will join us in this effort to encourage speedy, affordable broadband deployment so all Americans can be connected.

Thank you for being here today. And thank you, again, Chairman Doyle, for holding this important hearing. Better late than never. I yield back.

[The prepared statement of Mr. Johnson follows:]

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Mr. Doyle. The gentleman yields back.

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

Now, I would like to introduce our distinguished panel of witnesses for today's hearing.

Dr. Tiffany Anderson, superintendent of the Topeka Public Schools. Welcome.

Mr. Matthew Wood, vice president of policy and general counsel, Free Press Action, a Pittsburgher who has testified before this subcommittee many times.

Welcome back.

Jonathan Adelstein, president and CEO of the Wireless Infrastructure Association, who has also testified before us both in his roles in government and in his current role many times. Welcome back, Jon.

And last but certainly not least, Chris Shelton, president of the Communication Workers of America. Chris, it is good to have you back also.

I want to thank all of our witnesses for joining us today, and we look forward to your testimony.

At this time, the chair will recognize each witness for 5 minutes to provide their opening statement. Well, I guess we don't have the lights up there anymore, do we, guys? Try to stick to your 5-minute time limit. I will let you know if you have gone over a little bit too much.

We will start with Dr. Anderson. You are now recognized for 5 minutes.

You need to unmute, Dr. Anderson.

STATEMENTS OF DR. TIFFANY ANDERSON, SUPERINTENDENT, TOPEKA PUBLIC

**SCHOOLS; MATTHEW F. WOOD, VICE PRESIDENT OF POLICY AND GENERAL COUNSEL,
FREE PRESS, ACTION; JONATHAN ADELSTEIN, PRESIDENT AND CEO, WIRELESS
INFRASTRUCTURE ASSOCIATION; AND CHRISTOPHER M. SHELTON, PRESIDENT,
COMMUNICATIONS WORKERS OF AMERICA**

STATEMENT OF DR. TIFFANY ANDERSON

Dr. Anderson. Yes, sir. I am making sure I was off mute.

First of all, good afternoon. It is a pleasure and privilege to be here. I have to tell you what, I am so filled up hearing people talk about collective energy and moving together to move forward in this area of addressing broadband.

With that in mind, let me first extend an apology in that we sent an amended statement to you, as was stated at the beginning by Senator Doyle. Thank you for the comments about Kansas. We are on a blackout, so, look, I am just glad to see y'all this morning. And if we go out, I have a couple of hotspots right here, because they run by battery.

But I will tell you that, like other States, we actually are on a scheduled blackout. Therefore, rather than you being with me in Topeka in my office, you are right here in my home. And as I talk, I am going to really try to touch base on a few things.

One, trying to give you a feel of not just Kansans but people around the country really in terms of how we are addressing the matters that we are faced with now. But I will tell you this, that the need for broadband, which has already been said, it is not new. This is something that we have needed for some time. And as we look at the homework gap, it has existed. It is the reason for the achievement gap and where we are now, which is just shining a bright light on things that we need to do. So I have to say in

advance, thank you for the steps you have already taken.

In Topeka Public Schools, I come with you with the energy of about 30,000 people. A little bit over 13,000 are students and the rest are parents and community members.

I will share with you, prior to the pandemic, we were one-to-one technology. We had a multimillion dollar bond. We had one-to-one technology for our students, pre-K through 12. We were what you would consider a future-ready district, like many districts.

We recognize that providing resources within the schools were key, but I will tell you for 73 percent of free lunch students, just providing that at school has never been enough. And I will tell you why. And even after the pandemic, I want you to remember this, because we are in the space now which is shining a light, but after this, we are still in a space of making sure that we need to provide some level of permanent opportunity in the future for people to access resources at home and outside of school.

With that, as we started in Topeka this last couple of years during the pandemic and we had to shut down, as has already been said, we gave families maps of the city to share where WiFi was, we provided hotspots on buses. We learned very quickly from our family that Quincy Elementary -- man, I wish you all could be with me in Topeka talking right now, but you can't, so I am going to tell you about some students and some families.

And I will tell you what, at Quincy, several of the families live at the rescue mission. We have 400 homeless families. They immediately -- they don't have broadband in that space; therefore, they needed hotspots. So through our district, we will be able to provide some limited access to that support just for students to be able to get online. That is for those families.

But, again, in 73 percent free lunches and solely in our rural areas, you also have

some transiency throughout the community, so families that move to different homes. And, again, if you don't have broadband, how are you going to access school?

Moving from that, as we now go into this next year, we have created a variety of opportunities. We have telehealth sessions, night school, morning school. We have students that access from work the services that we provide.

And so here is reality. Right now, we are certainly in need, and not just in Topeka, but certainly all of rural America as well.

You know, I thought when we first closed down, that we need to really focus just on our students and getting them ready, and now I know that one of our teachers, the vice president of the NEA, couldn't access the internet. Why? Because she lives in rural America. She could drive to school and fix that, but her students could not.

I want to tell you about Chrishayla Adams, and Chrishayla was just in D.C. being awarded for the JAG, Jobs for American Graduates. See, she wants to graduate early, but to do that, you have to take classes at night virtually. And so before the pandemic, we had virtual schools operating. So we have had this need, and this homework gap has been created, but now it is exponential.

So I ask and give you a plea from Topeka, but from all of our educators, our teachers, and our students, to really put the kind of resources that allow for expanded connectivity, that also allow for us to support students that are marginalized, such as our Native American students, our students in poverty, our rural American students, but all students deserve the access and the civil right to an education. Right now, they don't all have it.

If you have resources, when the pandemic is over, you will be able to access night school and tutoring and all of those other things, ACC tutoring. But when the pandemic is over, I am asking you to continue to look at this issue, put resources behind it. And I

welcome any questions.

In addition to being superintendent of Topeka Public Schools, I also serve on the Postsecondary Education Authority for the governor, and I also serve on the Commission for Racial Equity and Justice. This is an equity and opportunity gap, and I believe that you will help us close it.

Thank you.

[The prepared statement of Dr. Adams follows:]

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Mr. Doyle. Thank you very much.

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

STATEMENT OF MATTHEW F. WOOD

Mr. Wood. Thank you, Chairmen Doyle and Pallone and Ranking Member Latta. And it is an honor to be appearing before the subcommittee again. Of course appearing today means on your screens, not in Rayburn, where I think we all rather be. And in a sense, that is just what this hearing is about.

I can afford good enough internet service for three kids to attend school from home -- One of them is at the table with me now, in fact -- and for me to join you online this morning too.

But why can people who look like me more easily pay for this service while it is still out of reach for nearly a quarter of the people in this country? The answer is all too obvious. COVID has changed everything in some ways, as social distance showed beyond a doubt that broadband is an essential utility for learning and livelihoods. Yet it has also changed nothing, merely highlighting and heightening the racial injustice and income inequality at our country's root.

Measuring the digital divide depends on how we count people with mobile phones alone, but as Chairman Doyle said, our read of U.S. Census data shows that more than 77 million people lack adequate home connections today. This divide is based on income, for sure. Nine of ten in the top income bracket are on online. Only two-thirds in the bottom bracket are. And that group is overly reliant on mobile. Just 48 percent of low-income people have wired broadband.

But we are divided by race and ethnicity too. Twenty-six percent of White people lack wired broadband at home, compared to 34 percent of Black people, 35 percent of Latinx people, and 41 percent of indigenous people. So 13 million Black people, 18 million Latinx people, and 13 million indigenous Americans are without the broadband services they need.

This means affordability is an even bigger challenge than rural deployment. Nonadopters in rural and urban areas surpass the number who lack physical access to broadband. That is why Mr. Veasey's Emergency Broadband Benefit legislation, passed in the December spending and stimulus bill, was a landmark bipartisan achievement.

It provides up to \$50 a month or \$75 on Tribal lands, for any plan an eligible household can buy from participating ISPs. That is enough to give people better options and connect many who have never been online or who lost service in the pandemic.

That number spared disconnection by the previous FCC's pledge, by the way, as best as we can tell from rough estimates, with something like 1 or 2 million people. And that is a lot, but it is relatively few compared to the country as a whole. Yet that is likely because many people most impacted by COVID were already offline, so they couldn't lose what they already lacked.

Why are so many still unconnected? Well, it is high prices, plain and simple, in addition to the other barriers that members have mentioned this morning.

Many people, including many of us here today, likely can't even say precisely what we pay for broadband. That is because we may pay for it with less hardship, but also because broadband is often bundled with other services at promotional rates that vanish over time and with modem rental charges, overages, and other fees tacked on.

But even through that haze, we see concerning reports about price hikes and renewed data caps, all while big ISPs make record profits. Broadband has been a

pandemic-proof business in peak demand with ISPs' revenues rising and their subscriber rolls growing.

We need the FCC to collect more granular pricing data, for sure, to get the full picture, but what we do have is the Bureau of Labor Statistics Consumer Expenditure Survey, which shows average U.S. internet bills increased 19 percent in the first 3 years of the Trump administration. That means nominal broadband prices rose at more than four times the rate of inflation.

Wireless prices over that span weren't quite as bleak, but with the T-Mobile/Sprint merger closing last April, the wireless consumer price index spiked 4.1 percent in 2020. No other annual increase had exceeded 1 percent since tracking began in 1998. Coincidence? Not likely.

Prices are rising for entry-level tier too, and FCC data shows rates for lower priced, stand-alone broadband up 20 percent in 5 years, more than double the rate of inflation, while it is up 50 percent in some cities.

So the big question is, what can we do? And part of that, of course, is the Emergency Broadband Benefit, but there are more things as well. Stopping the prior FCC's attacks on Lifeline is a start, but we need bigger, permanent broadband benefits that come with a progressive sustainable funding source, not increased regressive contributions.

We also need lower prices and increased choice from competition policy and restored FCC authority so the agency can do more than just ask ISPs to pledge just and reasonable service for all.

My written testimony details the failed efforts of the past 4 years, explaining that the prior FCC Chairman didn't actually spur broadband deployment or decrease prices like he claimed. In fact, investment declined every year of Chairman Pai's tenure.

AT&T investment dropped 20 percent in 2020, and it is 52 percent down from its peak in the last year for the Obama FCC. Comcast dropped 4.5 percent last year, down 22 percent from 2016.

But even if deregulation alone had increased deployment -- and it didn't -- build-out alone would not lower price or increase adoption in the absence of competition, oversight, and more robust adoption subsidies.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Wood follows:]

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

Mr. Doyle. Thank you very much, Mr. Wood.

The chair now recognizes Mr. Adelstein. You are recognized for 5 minutes.

STATEMENT OF JONATHAN ADELSTEIN

Mr. Adelstein. Well, thank you, Chairman Doyle, Ranking Member Latta, and members of the subcommittee.

WIA certainly shares your goal of ensuring that all communities benefit from broadband, and this subcommittee has showed great leadership to do just that. You are taking this rare opportunity to address long-standing inequities, as Congressman Welch noted, and we can now build the best workforce to expand broadband across the country. WIA applauds your efforts.

I have heard every witness agree and every member agree that the pandemic underscored the importance of broadband like never before. From virtual school to working from home, to telemedicine, connectivity is essential. And as a result, the pandemic generated unprecedented demand for wireless services, and the wireless industry is meeting the challenge. The network has performed exceedingly well, thanks to massive investments our industry made in infrastructure, like no other industry.

As bad as the pandemic hit our families and businesses, just think how much worse it would have been before the era of broadband. Think back just 10 or 20 years ago. This hearing wouldn't be possible. I think our economy and quality of life would have collapsed. Congress, the FCC, and the industry worked together over many years with this committee in a lead role to make this happen. It was a miracle.

Yet as we have heard today, a large portion of this country, particularly

communities of color and rural areas, still don't have access to broadband or can't afford it. The negative economic and social consequences for those left behind contrast with the many businesses and finances that were saved by broadband when working from home.

Some rural residents, of course, were left without economic opportunities, and the homework gap hurts too many students. This subcommittee took real impactful action, we have heard about today, from the leaders of the community to address the digital divide, from funding accurate maps, to telehealth programs, to helping minority and underserved communities, to the Emergency Broadband Benefit Program, and, of course, last week's amazing action on the Emergency Connectivity Fund.

Now, the pandemic only exacerbated the damage of the digital divide. WIA's mission is to work with you to find a sustainable solution so that all communities can benefit. I think the Congress can really build upon your longstanding efforts to expand broadband deployment. And given the dramatic benefits we have seen in the pandemic, sufficient subsidies for deployment are needed.

I think legislation along the magnitude of Majority Whip Jim Clyburn's Affordable Internet for All Act is warranted. The connectivity package released yesterday by committee Republicans also includes a lot of helpful policies.

So we will work with all of you to promote broadband infrastructure legislation that is designed to meet the challenge. I think it can be developed in a bipartisan manner, given the broad level of support it enjoys amongst so many on this subcommittee. An infrastructure package to make the best use of co-location, which officially leverages existing infrastructure and capital for new infrastructure as well, while reducing disruption to local communities. Congress should ensure that funds can be used for operational expenses, such as leases as well as capital expenses, and hold

recipients accountable for outcomes. And it should be technology neutral. Building infrastructure with the most cost-efficient means to get the most bandwidth to the most consumers.

As part of making historic investments like this in infrastructure, I think it can really also prioritize building a more skilled workforce, with good new jobs that you create, workers that can meet the new demands of the latest 5G and broadband technology. We have an opportunity to put Americans hurt by the pandemic back to work in high-wage jobs that provide opportunities for advancement.

And as the wireless industry continues to grow, these workers will speed the economic recovery and they will grow along with us. So funding in any infrastructure package should support employers and programs that adopt registered apprenticeships, a proven technique that is ideally suited to broadband. That will help us develop the skills needed to deploy quickly, efficiently, and absolutely safely. Congress can seize this opportunity to re-skill dislocated workers, to diversify the workforce, to do these jobs.

We look forward to working with CWA President Shelton and the labor community to grow this workforce together.

Along with supporting employers, Congress should strengthen programs in institutions of higher education, such as community and technical colleges and HBCUs and TCUs. Academic institutions haven't kept pace with how fast our industry has grown. I think Congress can fund partnerships, driven by employers, with educational institutions that can develop programs in broadband and 5G.

And here is some news. A new Gallup Poll will be released today. It found that 90 percent of the public supports investing in the broadband workforce as a priority, with overwhelming majorities from both parties. Ninety percent. That is big news.

Chairman Doyle and Ranking Member Latta, we certainly appreciate your focus on

these critical issues. I look forward to continuing our work with you and this subcommittee because I really believe together we can make progress on our shared goal of expanding broadband across both rural and urban America, and to all of our citizens, especially those in need.

Thank you.

[The prepared statement of Mr. Adelstein follows:]

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

Mr. Doyle. Thank you, Jonathan.

And last but certainly not least, we have Chris Shelton. Mr. Shelton, you are recognized for 5 minutes.

STATEMENT OF CHRISTOPHER M. SHELTON

Mr. Shelton. Good morning, Chairman Doyle, Ranking Member Latta, and members of the subcommittee. Thank you for the opportunity to testify today.

CWA represents hundreds of thousands of workers, including more than 150,000 employees in wireline and wireless telecommunications.

My own experience in the industry goes back to 1968, when I was hired by New York Telephone as a technician. I have worked in telecommunications and represented telecom employees my entire adult life.

The pandemic has made something clear to people across the country that CWA members have known for a long time: Affordable, reliable broadband internet connections are critical for all Americans. Yet millions of families do not have access to these connections.

We are living in an America where if you have \$10,000 to spend on an ad in The Wall Street Journal, you can get quality internet access at home. But if you are a single mom struggling to pay the bills, your children have to sit in a McDonald's parking lot, using the free WiFi to do their homework.

This problem has been years in the making and was exacerbated by deregulation across the industry, as major telecom companies allowed their networks to deteriorate and failed to upgrade low-income communities to fiber optic service.

In 2006, CWA called for better FCC broadband maps, faster broadband speeds, a strong Lifeline subsidy program, and robust public investment to spur broadband deployment. We also worked with partners to address the fact that the digital divide also harmed many urban communities of color excluded from fiber broadband networks. And here we are, 15 years later, still discussing the same issues. Had our recommendations been enacted, we might not be facing the challenges the pandemic has exacerbated.

This committee's work, including the recent enactment of an Emergency Broadband Benefit and last week's directive for E-rate funding is a good start, but I know the majority of this committee agrees that more must be done to achieve lasting structural change.

For example, we must strengthen the Lifeline program and protect the millions of consumers who rely on it. We must fight efforts to undercut it, like making funding contingent on the annual congressional appropriations process. We must modernize Lifeline so that the digital divide does not get worse.

Today, the funding mechanism that supports the USF is unsustainable because it levies fees only on traditional voice service, despite the shift to broadband. The Commission should explore options, including broadening the USF funding base, in order to fulfill the promise of universal service. And companies must not be allowed to shirk their responsibility to provide affordable access through Lifeline. For example, as proposed, the Verizon/TracFone transaction could curtail availability of the Lifeline program for millions of low-income consumers.

Even a strengthened Lifeline won't be enough without bold action to reinvigorate broadband deployment. Major telecom companies' lack of investment has made the digital divide worse.

My written testimony describes AT&T's merger build-out. The company, once the leader in universal service, has made fiber to the home available for fewer than one-third of the households in its 21-State network.

While many have placed enormous faith in the idea of competition in this sector, competition alone is not an adequate solution to ensure universal access in a capital-intensive industry like telecommunications. We need an infrastructure bill that will expand broadband access and create and protect good jobs, as President Biden has laid out in his plan to Build Back Better.

This means \$80 billion in funding, as in Whip Clyburn's Accessible Affordable Internet for All Act, to help close the digital divide. The bill sets standards that ensure the workers who build and maintain federally subsidized broadband networks can exercise their collective bargaining rights free from employer coercion and intimidation.

The bill also prohibits outsourcing of work, with the intent of circumventing a collective bargaining agreement. This provision addresses the growing trend of major broadband companies avoiding accountability by contracting and subcontracting work, harming workers and consumers in the process.

CWA members who build, maintain, and service our telecom networks know better than anyone how broadband policy can help address the struggles our Nation faces. We are grateful that the Biden administration and congressional Democrats have begun to take the necessary steps to address these glaring digital inequities that the pandemic has exposed.

I look forward to answering any questions you might have. Thank you.

[The prepared statement of Mr. Shelton follows:]

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

Mr. Doyle. I thank the gentleman.

We will now -- this has concluded opening statements. I am sorry. We have concluded our witness statements, and we are 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.

Mr. Wood, Congress established the Emergency Broadband Benefit Program in December of last year. This program allocated \$3.2 billion to provide low-income consumers with \$50 a month on their -- benefit on their broadband bill. Why is this type of program so important now, and what kind of lifeline could it provide?

Mr. Wood. Thank you, Mr. Chairman. I mean, it is incredibly important because of the price. I talked about how prices have gone up for broadband pretty much across the board and especially at the lower end of the tiers that are offered.

But wherever they are going, we all know that Lifeline, as Mr. Shelton discussed, is incredibly important. It is only \$9.25 a month, and it basically gets people a free phone with limited data. So getting more money into their hands so they can get plans that are available from ISPs today off the shelf at a much higher speed or a much more robust package is just crucial to getting people connected and keeping them that way.

Mr. Doyle. Yeah. Are you concerned about objections raised by some that this program that we just marked up in full committee could target some of the same households?

Mr. Wood. No, I wouldn't say I am concerned. I mean, obviously, the new FCC can take account of that and maybe try to look for ways to be efficient and look for duplication. But even there is some duplication, I wouldn't say I was concerned by it because we all know that kids need connectivity at home. And if the kid has

connectivity, that is great for the student, but the parents need internet too. So if a parent gets a device or has some broadband capability to conduct their own work, look for jobs, do telehealth visits, everything else that is part of our virtual lives right now. I certainly wouldn't think that is bad. Most of us take that for granted, in fact, and that is something that many households would benefit from who don't have it today.

Mr. Doyle. Thank you.

Dr. Anderson, as you know, many folks are eager for schools to safely reopen for in-person instruction, and as an educator and superintendent, you are responsible for facilitating that transition. Do you believe, as many of us do, that the additional funding for remote learning, like the \$7.6 billion this committee passed last week, will help schools safely reopen sooner?

We have some of our colleagues that are arguing rather strongly that the funding for distance learning would actually slow down the reopening process. What do you believe?

Dr. Anderson. Absolutely not. First of all, Topeka Public Schools, we actually reopened at the beginning of the year, K-12. So we had in-person learning in small groups, and that is for over 13,000 students. As our virus spread, we did go back to remote learning.

I will tell you that schools across the country, if you have that added service for remote learning, that is not going to slow down opening, because as I said at the beginning, prior to the pandemic, we needed these services. Virtual schools were already in place, telehealth has already been in place. In many ways, it is just a light being shined on it.

I think you further, I believe, would further open schools more quickly if we have the flexibility to address the current pressing needs from the pandemic, but we also have

the flexibility to continue to address the needs that were already existing prior to the pandemic occurring.

So I especially don't think additional funding would slow down by any measure the reopening, and many schools, particularly in rural America, have been opened throughout this pandemic. Perhaps because of the small size, again, in Topeka, we are not quite rural, but we were open as well, and all of our neighbors have been open as well, in Shawnee County, for most of their school districts, certainly throughout elementary.

Mr. Doyle. Thank you, Dr. Anderson.

Mr. Shelton, tell me, why do you believe that legislation like H.R. 2, the Moving Forward Act, which would invest a hundred billion dollars in broadband deployment and adoption, will succeed in closing the digital divide where deregulation and consolidation have really failed to result in service getting deployed to my colleagues' constituents in rural communities, or in lowering the cost of service for folks who are already struggling to pay their bills?

You need to unmute, Chris.

Mr. Shelton. The only way to improve broadband deployment is getting the companies that know how to do it to move forward, and the only way that is going to happen is with Federal money used to help these companies get this done.

And, you know, it is obvious that deregulation, which has been going on for years now, is not doing the trick, because if it was, we wouldn't be having this meeting today. There has been so much deregulation that these companies get away with abandoning their copper and not replacing it with any. As that fellow in California proves when he put a \$10,000 ad in The Wall Street Journal, all of a sudden he had broadband put in about 3 days later.

Mr. Doyle. Okay. Thanks, Mr. Shelton.

I see my time is just about up, so I will yield back. And I will recognize my good friend, the ranking member, Mr. Latta, for 5 minutes for questions.

Mr. Latta. Well, I thank the gentleman for yielding. And, again, I appreciate you holding the hearing today.

I would like to start my questions -- before I start my questioning today, just correcting some of the facts that were listed in Mr. Shelton's opening statement that he made.

First, it is really essential that we have all the correct facts as we go forward, but it is important that we know first that the \$3.2 billion Emergency Broadband Benefit was a bipartisan priority that was included in the funding package at the end of 2020 to respond to the pandemic.

And, second, the Office of Connectivity and Growth, which are called for in the statement, was also codified in that same bipartisan legislation.

And we all are here because we want to close that digital divide and we really want to work and make sure, in working with our colleagues across the aisle, that we are working in a bipartisan way. And I really appreciate the work that we have done in the past on this subcommittee.

My first question is for Mr. Adelstein. Again, thank you for your testimony. And one of the reasons our networks have performed so well during the pandemic is because our country's light-touch regulatory approach enabled providers to have the necessary flexibility to respond quickly to the increased traffic. It helped providers step up voluntarily to expand low-income programs, open up our WiFi hotspots, and provide needed relief to many Americans.

Yesterday, I introduced the Wireless Leadership Act, which would require State and local governments to provide timely responses to applications that deploy wireless

infrastructure, which will help the U.S. lead in 5G and improve connectivity for Americans.

How will my bill and the other 27 permitting bills that were introduced by E&C Republicans yesterday help responsibly roll back regulations and ensure our country's broadband networks can continue to handle more internet traffic?

Mr. Adelstein. Well, Congressman Latta, we are very grateful for the package of bills that you introduced. They really are full of thoughtful ideas. You know, I am especially appreciative of the fact that they will promote public safety in the deployment of -- you know, we are talking about the pandemic and how essential it is to have service.

And people say, well, we want backup generators, we want backup power, but then they don't let us site a generator here or they make it difficult. Well [inaudible] is going to make it easier to put in emergency power, make it easier to put in FirstNet for public safety which people rely on. And, frankly, it makes it easier to put in equipment of all kinds that could benefit people that are having health emergencies, that are working from home. You know, we need to get infrastructure in place in order to do it, and we need to do it responsibly.

I think what I love about the bill is it focuses on co-location. I mean, this should be the low-hanging fruit. We are talking about siting on existing infrastructure. It shouldn't be that controversial to, you know, swap out equipment that is on existing infrastructure, to upgrade to 5G.

Now, we need to work together. Municipalities are our partners. We have worked with them on these things, and, you know, many municipalities are doing a great job of rolling out the red carpet. And I have to say, the pandemic to realize, please invest, we need your investment to do it, and they made it -- you know, they bent over backwards during the pandemic to help us, make sure that we could continue the process, get emergency equipment in place to deal with bottlenecks that affected that.

But, you know, we need smart policies to build out, you know, 5G, and close the digital divide. We are going to contribute \$1.5 trillion of the U.S. GDP through 5G, 4.5 million jobs in virtually every sector.

And if this committee is talking about investing large amounts, it makes sense to think about, how do you co-locate that equipment on property, you know, wireless equipment, how do you streamline the process, shot clocks, Federal lands. Lot of good ideas we can sift through together. I look forward to working with you on them.

Mr. Latta. Well, thanks very much. Let me follow up with this, and it is real interesting the information you gave on how much money that we are looking at 5G is going to have out there in the economy and also with the number of jobs. But do you have any information how much money and time carriers spend on complying to all the regulations necessary to deploy broadband in both our cities and rural communities?

Mr. Adelstein. You know, because that information is so dispersed, we don't actually gather it. I mean, every time there is a delay in getting something sited, you know, workers aren't working to put that in place, people are paying for, you know, time that is not being used or leases that could have been, you know, started earlier. It is almost impossible to quantify.

I think what we can quantify is the benefit to the economy. I mean, if we are talking about, you know, basically one in six Americans are affected by this [inaudible]. You know, we have such a dramatic impact on the economy that it is just essential that we get that done quickly.

And, you know, it is not just our industry that it costs money for when it is delayed. It costs everybody. You are talking about the homework gap and equipment that serves them. We are so grateful for the committee's work to try to address that.

Of course, the industry helped so many families at home. We want to help every

family. And many were left behind, but so many were able to benefit, as Matt talked about with his family. We would need to bring those benefits to everybody and do it quickly. And private investment largely drives that.

We need help, I think as well, from public investment, but, you know, if we are going to do that, having the most efficient means to deploy, and reasonable. We don't need to, you know, do it just rolling over, steamrolling this economy. But there is certain reasonable limits that we should have shot clocks, it is expedited, let's get it done.

Mr. Latta. Well, thank you very much.

And, Mr. Chairman, my time is expired, and I yield back. And I will submit my other question for the record. Thank you very much.

RPTR ZAMORA

EDTR ROSEN

[12:01 p.m.]

Mr. Doyle. I thank the gentleman. The gentleman yields back. And now the chair recognizes Mr. Pallone, the full committee chairman, for 5 minutes to ask questions.

The Chairman. Thank you, Chairman Doyle.

I want to thank all the witnesses. I am going to try to get three quick questions in here, hopefully with some quick responses, although each of them could take an hour to respond to.

So last month -- this is for Mr. Shelton -- last month I sent a bunch of letters to internet service providers cautioning them against raising prices, instituting data caps during the pandemic. And, you know, this has been an issue in my district where one provider instituted some large increases just before the pandemic, and other ISPs have tried to institute data caps during the pandemic.

Luckily, at least some of the major ISPs have decided to temporarily lift these data caps following our congressional oversight, but caps remain in some areas, and it is questionable at any time, but particularly during the pandemic, when so many people, you know, have to be online.

So, Mr. Shelton, can you talk about why, in your view, data caps are problematic, both for consumers and for labor, especially during the COVID pandemic? If you could spend about a minute responding to that, I would appreciate it. I think he is muted.

Mr. Shelton. The pandemic has really forced millions of working families to use far more data than they would normally be using, and to put data caps on them, to make them pay more money, would just make this matter -- make this problem worse. You know, anybody, or any company, putting in data caps now and charging more for people

that go over data caps is just exacerbating an already terrible situation.

The Chairman. Thank you, Mr. Shelton.

Now, Mr. Wood, as you know, under the emergency broadband benefit, which I mentioned earlier, that we put in in the end-of-the-year package, the FCC is going to be working with participating providers to fund a \$50 discount on struggling families on their broadband bills, or \$75 for families on Tribal lands. I know we would like this program to be perfect, but it -- and it needs to be implemented, but that said, I do hope that we can create a long-term solution -- because this is short term -- a long-term solution that all Americans can afford and take advantages of services necessary.

So what are some of the principles we should look to in formulating a long-term solution to the affordability issue, and is gathering and distributing better broadband pricing data a factor in that, in your view, in about a minute to respond?

Mr. Wood. Sure, Mr. Chairman. There is a lot there, but, yes, better data is crucial, and we need to know what we are addressing before we try to launch into it. We need to have more funding. I think it is about as plain and simple as that. As I said, it needs to be progressive and not a regressive tax, frankly, on people who already have trouble affording the service.

It needs to be sustainable over the long haul. So many members here have worked on the Lifeline program for so many years, and it is wonderful, it is necessary, but it is only \$9.25 a month and it is about 26 percent participation rate at the end of 2020, even with the pandemic putting so much economic pressure on people.

So we just need to get more money into the system, although we also need to account for the prices. We can't just forever subsidize rising retail rates without any attempt to lower those costs through competition and more choices and other measures that would help to bring prices down, even as subsidies go up.

The Chairman. All right. Thank you.

And then, lastly, Dr. Anderson, our committee just approved a reconciliation measure that would provide \$7.6 billion for emergency connectivity and end-user devices to connect teachers and students. And I know some like to think of it as funding for hot spots, but actually, it includes in-home broadband and other technological solutions. And some of my colleagues have said that money from the CARES Act is more than enough to solve this digital divide, and that, you know, we don't need more funding. Of course, I hear the opposite.

So with that, Dr. Anderson, how much has the Topeka Schools received from Federal COVID relief funding? What kinds of expenses have you covered with this funding, and how are you using it to resolve the homework gap? And, you know, would you say that the digital divide in your district is now resolved, or do we need to do more? And you have a minute or less.

Dr. Anderson. All right. A minute or less, well, then, I will speak really fast. I am pretty broadly over much of that. Let me start off with that funding overall. I know that is the area that is probably the hottest spot that you really want to talk about. I do know that that funding for us -- and I will just kind of speak pretty broadly -- in the terms of the CARES Act and those funds, for us we had a little bit over \$3 million, and 40 percent went to nutrition programs, 20 percent to transportation. We had 22 percent that went to PPE equipment, you know, then another percentage that went to disinfecting items.

So the CARES Act can't take care of all of broadband and connectivity issues, is my point in that regard. Now, certainly, we need to continue to do more. We need to make sure that we provide the level of services and resources for families to be able to connect at home.

Let me give you an example. We have parent conferences tonight. I bet you are wondering how? Well, through internet services at home that parents are doing with us. We have families right now that are still quarantined. We have families right now that are still addressing medically sensitive students that can't come back because they have some level of disease or cancer or whatever the items are that won't allow them to come back even if we reopen right now because they are medically fragile.

Those individuals are relying on those services, and they certainly deserve them. Those -- that is kind of a broad brush. So we certainly need the investment. CARES Act can't do it all. We need this additional money for remote, in-learning services.

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

The Chairman. Thank you, Mr. Chairman.

Mr. Doyle. The gentleman yields back.

The chair now recognizes Mr. Scalise. Is Steve there? Steve, you need to unmute, if you are there.

If not, let's move down to Mr. Guthrie. We will go back to Steve if he is here. Mr. Guthrie, you are recognized.

Mr. Guthrie. Thanks, Mr. Chair. Appreciate it very much.

Mr. Adelstein, I understand there may be some carriers that have Huawei or ZTE in their networks that anticipate having difficulty ripping and replacing that equipment within the timeline laid out by the Secure and Trusted Networking Act because of delays on obtaining the necessary permits. Even though Congress just appropriated \$1.9 billion to carry out this bipartisan reimbursement program, is there anything we can do to help providers meet this national security imperative?

Mr. Adelstein. I believe there is a piece of legislation introduced in your package that addresses this that would expedite permitting for rip and replace. You want to get

that done quickly. It is a national security issue [inaudible] network is, I think, an essential step, and we very much appreciate Congress providing the funding to make that happen and to make [inaudible].

Mr. Guthrie. Okay. Thank you. And then also, Mr. Adelstein, the China task force led last year by House Republicans identified broadband permitting as an important way to help speed broadband deployment domestically, which, in turn, helps support trusted suppliers beat by Huawei. How important is the speed to achieving scale and infrastructure deployment to supporting trusted suppliers in the deployment of open RAN technologies?

Mr. Adelstein. Well, you know, it is a part of the solution. I mean, there is a lot of things we need to do to keep up with China. They don't play fair, you know. Shield their IP, they have got a command economy. [Audio malfunction] when you have a command economy, you know, South POC is right twice a year, and they picked 5G. I think they picked the right thing in this case to just shove it down the throats of their people.

If they need permitting, there is no problem. If they need equipment, there is no problem. If they need a workforce that can build out these networks, you think they have trouble recruiting people or training them? No, they say, you will go and work in this industry, and we are going to train you and you will be set. So we are not playing with the same hand.

We are expecting the private sector to [audio malfunction] we will do it. And we are not asking for, you know, command economy. We are not asking for anybody but a helping hand in partnership with government, which we have seen in spectrum policy, we have seen it in infrastructure policy, we have made a lot of progress, and we would love to see with you together on workforce development as well.

Mr. Guthrie. Okay. I have a third question for you, Mr. Adelstein, and you led right into it. And so, I just want to say, you know, my focus, I was on Ed and Workforce before I -- I was on Ed and Workforce before now. I am just on Energy and Commerce this time. But it has always been -- I have always enjoyed that committee because I wanted to make sure people just didn't have access to a job, they had access to a career, a career that paid well where they could raise their family, and in a way that we all want people to have the quality of life.

And it all comes from having the skills. It means showing up with the skills that people are willing to pay for. And there is demand for those skills in your area, and what we are talking about. As a matter of fact, it will be hard to close the digital divide by deploying the necessary infrastructure without people with the skills.

Could you talk about what your association is doing about workforce in this area, and, hopefully, highlight to anybody listening the quality of career that you are offering people?

Mr. Adelstein. Yeah. These are great jobs, as Mr. Shelton knows. You know, these are high-paying jobs, and it is a growing industry, and we need a workforce pipeline to make sure we have skilled workers coming into it. So we could, in an organization that brought apprenticeships into the wireless industry for the first time called telecommunications industry registered apprenticeship program. [Inaudible] apprenticeships, you know, and people are going to seek it out. We have 2,000 apprentices. We have 15 employers that are signed up to do it.

Secretary of Labor, in his confirmation hearing, Secretary Walsh lauded what we are doing at WIA. We are partnered with Power & Communications Contractors Association. We also are working with technical schools, with community colleges in States across the country, including in Kentucky, Somerset, that [audio malfunction] could

even help us build this out.

And we would like to work with HBCUs, with Tribal Colleges, because the academic world hasn't kept pace with us. So we are teaching schools how to help our industry basically develop the skills because, you know, you can't go to schools and learn field tech work. I mean, apprenticeships teach people to be on the ground. We want schools feeding people into apprenticeships, then get, you know, good jobs with our companies, then get good jobs [inaudible], you know. But why not get them the best skills possible?

So if the Federal Government is making an investment in infrastructure, that investment can be spent efficiently with people that know what they are doing, the people who can diversify the workforce, can bring in people who were hit hard by the pandemic and give them good, high-paying jobs, start them in apprenticeships and they will have a career pathway that will last for many years to come and leads to very high-wage jobs they can support their families with.

Mr. Guthrie. Okay. Thanks. Well, I was going to have Mr. Shelton talk about that as well, but I only have about 5 seconds left, So hopefully, he can touch on that in some other testimony as we move forward. So I am now out of time. I am sorry. I will yield back. Thank you.

Mr. Doyle. The gentleman yields back.

The chair now recognizes Mr. McNerney for 5 minutes.

Mr. McNerney. Well, I thank the chairman for the great hearing, and I thank the witnesses for coming out on a cold day today.

Mr. Wood, I want to make sure that everyone who is eligible to participate in the emergency broadband benefit program can easily do so. In California, the State has a program to help low-income individuals pay their utility bills. This is a self-certification

process for initial enrollment. Ninety-five percent of eligible households participate in the program. This is much higher than participation in the Lifeline program.

Mr. Wood, why would it be important that we minimize the burden for eligible households to enroll in the emergency broadband program?

Mr. Wood. I think, as you said, Congressman, it is crucial to get everybody connected and online, and we can't really tolerate the low participation levels we have seen with Lifeline. You mentioned self-certification or some kind of after-the-fact documentation, and it is great to hear about the successes in California.

I know that in the current FCC proceeding to implement the emergency broadband benefit program, some internet service providers have suggested that, so have some public interest groups. I think it would obviously depend on how that is done.

But anything we can do to lower the barriers, and especially to increase outreach, I think those are the two keys, to make sure that people can get into the program and they know about it in the first place, and that is what will make it a success.

Mr. McNerney. Well, thank you. I am concerned that during and prior to the pandemic, there has been a real lack of transparency with respect to the information disclosed by providers to consumers and the Federal Communications Commission. Mr. Wood, if we don't have full transparency from providers about their offerings, including pricing, and detailed reporting about participation, they would be -- they are seeing in their EBB program, what risks could this pose for the program's success?

Mr. Wood. Yes, definitely. We were so glad to see the letters that you sent along with both chairmen to the companies to ask about their practices and policies, both in pandemic and afterwards. We generally need more transparency about what they are doing. I laugh sometimes when ISP say, The market is really competitive, and we

say, Well, what are your prices? And they say, Well, we can't tell you.

Mr. McNerney. Right.

Mr. Wood. So it is a little bit of trust and verify that we would like to see. But also in the pandemic and for this program, we need to make sure that, A, people are getting the best deal they can with this large and flexible benefit, and that providers are not doing anything like raising their rates artificially so they can get more subsidy out of taxpayers' dollars.

So that is why transparency in the program is important, both for the individuals, but also for the program as a whole and for the country.

Mr. McNerney. Right. Well, in your testimony you noted that prices have been increasing for internet service. As you know, I have expressed concerns that some providers have been doing this during the pandemic. Can you discuss how the price increases have correlated with capital investments by these providers?

Mr. Wood. Well, I mean, I think we should be clear. Investment by these companies is always high, it is just not consistent enough. As many members will attest, it is not getting into rural areas quick enough. But it hasn't taken the path that some have suggested. In fact, it has gone down over the last few years, because regulations don't actually drive much of the investment. It is actually competition and, most importantly, most likely, the technology evolution and the cycles that they go through.

So many wire providers, especially, are on a downward path, and have been for the last 4 years, and that is why we said deregulation alone, without consideration of these economic factors, is not going to put us back in a better direction, and really get everybody connected.

Mr. McNerney. Well, very good. Very good. You would think that all -- with all the talk today by our Republican colleagues about streamlining, that it is a silver bullet

to bringing broadband to everyone in the country. Unfortunately, I am not at all convinced, especially after the Trump FCC spent 4 years prioritizing deregulation and made little, if any, progress toward narrowing the digital divide.

Mr. Wood, would deregulating the infrastructure setting process lead to increase in broadband access on affordability for families living in unserved and underserved areas?

Mr. Wood. No, Congressman, I don't think meaningfully so, no. Obviously, that matters. Streamlining and shot clocks like Mr. Adelstein is talking about, those are a fine idea, and we would be happy to consider how those work and the interplay between cities and providers. But, as I said, deregulation alone is not enough, and we need to also have policies that increase competition and that provide people support, because the price is too high right now, and we need to make sure the people have more options from the whole suite. They are not just forced into the cheapest plan they can get, or the low-income plan as helpful as those may be for some people.

Mr. McNerney. Excellent. Well, I want to emphasize that we must do everything possible to ensure that the most vulnerable are connected. In my district, many individuals living in public housing do not have broadband service. That is why I am currently working on legislation to improve broadband in public housing, and I will also be introducing -- reintroducing the Digital Equity Act.

Thank you, again, Mr. Chairman. Thank you, all the witnesses, and I yield back.

Mr. Doyle. The gentleman yields back.

I don't see Mr. Kinzinger, so I am going to go to my fellow suffering Pittsburgh Pirates fan, Gus Bilirakis. You are recognized for 5 minutes.

Mr. Bilirakis. Thank you, Mr. Chairman. We did sign a pretty good pitcher last night, so I can still retain my position in Congress, which is a good thing. I don't think I

would do very well.

Before I get to my questions, Mr. Chairman -- I appreciate it -- I want to take an opportunity to acknowledge the hard work that the telecommunications industry has done throughout this pandemic. Programmers committed to \$100 million to facilitate distance learning for children, and are now engaging in the development of tools to help spread accurate information for vaccines, and how we -- how one gets an appointment. I know this is a tough task, but I want to commend them for doing that.

Additionally, providers stepped up with billions of capital investment to offer low-cost services to those financially strained by COVID-19, and free broadband to students and teachers for nearly a year to do their part in helping the next generation achieve success.

And, lastly, I have to thank the essential, on-the-ground technicians who literally have kept us all connected as they enter homes of businesses to maintain the sense of normalcy that is our internet services.

So, again, I want to thank them. Sometimes they don't get the thank-you that they deserve. And I know we have to do much more, Mr. Chairman, but we can build on their successes.

As part of the -- this is my question: As part of the boosting broadband connectivity rollout, I reintroduced the Coastal Broadband Deployment Act. In short, this legislation would codify an FCC action that reduces red tape for broadband projects in a floodplain where the applicant has met certain safety standards.

Mr. Adelstein, can you explain the importance of codifying regulatory action from the perspective of business development and investments?

Mr. Adelstein. Congressman, I believe the bill makes it so the flood plains are not subject to NEPA and NHPA. It is, you know, an important area to review. It is

something that I would like to look at closely with my members and provide any assistance I can. We certainly appreciate the effort.

I am familiar with the issues you face in Florida with regard to this. I mean, we need to make sure that we get broadband where it needs to be. Sometimes these difficult-to-reach areas need a little bit of help, and we need to get that out there quickly, efficiently, and we will work with you on your legislation. We will get back to you on the details. I was just reviewing it late last night, so I don't have a lot to offer right now, but we will pledge to work with you on that, and supply any further thoughts for the record.

Mr. Bilirakis. And I believe it is a bipartisan piece of legislation too, so -- but I think it is crucial.

The second question, it is personal. In recent weeks, national attention has been drawn to the city of Oldsmar in my district. And, by the way, that is the -- the founder of Oldsmar is R.E. Olds from Ohio, obviously, but he had a business in Michigan. But he founded Oldsmar in Florida and he is the inventor of the Oldsmobile. So every year, we have an Oldsmobile parade. It was a great car. They should bring it back.

Folks, the city's water treatment facility was the subject of a cyber attack where a hacker breached our critical infrastructure systems and attempted to increase water treatment chemicals to fatal levels. I am sure you have heard this. The breach was immediately discovered and neutralized. The infrastructure liability was strengthened and the public was never at risk.

The incident is currently under Federal investigation and the hacker remains at large, but preliminary reports show that a lack of infrastructure upgrades are a contributing factor. For our jurisdiction, I think this highlights the importance of making it as easy as possible to create and enhance our telecommunications infrastructure.

Again, for Mr. Adelstein, do you believe that reducing regulatory burdens would

quicken infrastructure development to meaningfully reduce the chances of breaches like the one that we have seen in our district? And, again, folks, I would recommend you check with your cities because this could have been devastating if this guy was successful in hacking this particular program. So, but, sir, could you answer that question?

Mr. Adelstein. Yes.

Mr. Bilirakis. I would appreciate it. Thank you.

Mr. Adelstein. Yeah, I had heard about that incident, and, you know, 5G --

Mr. Doyle. -- your answer as your time is expired, but, go ahead and finish out, Mr. Adelstein.

Mr. Adelstein. So, quick, 5G presents great opportunities to improve network security. And, so, we need to build out 5G. My industry is committed to spending \$270 billion to do it. We need to also educate cybersecurity professionals that are specifically trained in 5G, because there are unique characteristics and technical details. 5G is not your father's Oldsmobile, so to speak, but it does create some great opportunities to increase network security. But we need to maximize them by also investing in human capital to make sure we can program those networks to protect against attacks like those.

Mr. Bilirakis. Right. Thank you very much, Mr. Chairman. I appreciate it.

Mr. Doyle. Okay. Thank you. The chair now recognizes Ms. Clarke for 5 minutes.

Ms. Clarke. Thank you, Mr. Chairman. And I thank the ranking member, Mr. Latta, for convening this timely hearing today.

I would first like to applaud the Energy and Commerce Committee for passing our bold proposals out of committee last week, which included \$7.6 billion to ensure students and their teachers had access to the internet. This was a much-needed step to help

rescue the American people.

Since the start of the pandemic, I have repeatedly stated the exacerbating inequities COVID-19 has displayed in low-income communities and communities of color, these inequities span from public health disparities to economic pressures that are compounded in our most vulnerable communities. But today, we must discuss the access and affordability of issues of broadband.

Dr. Nicol Turner Lee, director of the Brookings Center for Technology Innovations, stated, we are running up against a roadblock of digital access, and in particular, digital access for disproportionately low-income people of color, older Americans, and those in rural areas. I wholeheartedly agree with Dr. Lee and go further to add that urban America faces unique challenges in this conversation.

I do recognize that there have been good-faith efforts to address the digital divide inflamed by this pandemic. Longer standing programs, like Lifeline, that help provide affordable service for qualifying low-income consumers, should be protected and maintained. And newer programs, like temporary EBB program, should continue to thrive and provide connectivity support for those in need.

There have been more good-faith efforts like the donation of connected devices to families who need them, but this is a Band-Aid solution to a much larger access and affordability issue. More can be and needs to be done to undergird vulnerable communities.

So my first question is to Matt Wood. Mr. Wood, in your testimony, you stated that broadband is an essential utility for learning and livelihoods, and I couldn't agree more. Could you expound on the statement, and weigh in on how agencies, like the FCC, could further protect this essential utility by going further than efforts brought forth by former Chairman Pai's Keep Americans Connected pledge?

Mr. Wood. Certainly, Representative Clarke. Thank you for the question. I think it is just beyond doubt at this point that this is an essential utility. Anybody who wants to say otherwise I think is running up against the facts and will not be -- get a lot of head nodding to agree with them because people need it now and during the pandemic and before it as well, and certainly well after, too.

The problem with the pledge we filed, it wasn't a bad thing in a vacuum, but it was basically a request to the internet service providers not to cut people off for nonpayment during the pandemic. And the FCC could and should be able to require that, not simply ask companies to provide just and reasonable service during a pandemic but to say, hey, this is a special situation. You can't do that now. You can't throw people off just because of the economic downturn they are facing. So that is the kind of thing that we think a revived FCC could do, take a little more serious role in requiring that service be available, not just asking that it be made available.

Ms. Clarke. Very well.

And, Mr. Shelton, would you -- is there something that you would like to add?
Okay.

So for my next question is to Dr. Tiffany Anderson. Dr. Anderson, in your testimony, you explain that there are additional E-rate expansions necessary to ensure that E-rate is meeting the 21st century needs of both rural and urban students and families during and beyond the pandemic. What would the program we just funded in the committee's \$7.6 billion appropriated through the E-rate authorities in the Communications Act mean for school systems nationwide desperate for much-needed tools and resources for equitable educational opportunity?

Dr. Anderson. Thank you so much for that question, Representative Clarke. It means a great deal. It gives us flexibility. The less flexibility you have as a school

system, the less that you can really serve the needs of all the most vulnerable.

You know, as examples, as you talked about all that happened last week and the approval of being able to provide eligible equipment, you know, hot spots and modems and all of those things, internet services in homes and being able to extend those services just allows us to reach beyond where we currently are. You talked about urban school districts, and so, we are talking about districts that have everything from a transiency population and a mobility rate that is very high, to a homeless population that is very high.

Here is what we can do even right now. This new access in this proposal, we actually will be able to take you to meet families where they are. How beautiful is that? Which means, if you are someone that is moving from house to house, we can give you a phone as opposed to giving you a hot spot for that space. If you are someone that has a need for Cox and you have a stable place to live, and we can provide you that.

So flexibility, Representative Clarke, is what it allows us -- what it will allow us to do on the proposal, what has been passed. And certainly the expanded E-rate, the more that you can expand that level of flexibility of meeting families where they are, the more you help families move out of poverty.

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

Ms. Clarke. And I yield back, Mr. Chairman. Thank you very much.

Mr. Doyle. Thank you, Ms. Clarke.

The chair now recognizes Mr. Johnson for 5 minutes.

Mr. Johnson. Well, thank you, Mr. Chairman. You know, the COVID-19 pandemic did not create the urban/rural digital divide, but it has certainly exposed and highlighted it. Students on the wrong side of this digital divide can't attend virtual classes, and workers aren't able to work remotely at their jobs. The divide is creating

winners and losers in our country right now. In a Nation as prosperous and innovative as ours, this lack of access here in the 21st century, when virtually everything is dependent on the digital economy, is more than unfair. It is immoral. It is wrong.

The lack of broadband in rural America is not a new problem; it is one that has been talked about for decades. Furthermore, while I acknowledge that affordability may play a factor in the availability of broadband for some in urban and rural locations, the lack of infrastructure and accessibility in rural America means that broadband simply is not an option, period. That is especially true in many of the places I represent.

You can't pay for a service that doesn't exist. You don't even have the option. And while I wholeheartedly agree that the digital divide is an issue we must address, I am disappointed that this hearing on connecting America pays little attention to the primary reason why those residing in rural America are left behind. The reason is because access, the infrastructure, is simply not available.

I was pleased to join my Republican colleagues in introducing legislation earlier this week to boost broadband connectivity. My bill, H.R. 1056, the Wireless Broadband Competition and Efficient Deployment Act, would be a step in the right direction. It would remove the requirement to prepare an environmental or a historic preservation review in order to add new or upgrade wireless facilities on existing infrastructure. These burdensome reviews that are often repetitive, unnecessarily slow down broadband expansion. So I am pleased to introduce this commonsense legislation to help streamline the process.

Lastly, I acknowledge and commend the many internet service providers who have stepped up to the connectivity challenge during this pandemic, including those who voluntarily committed to Chairman Pai's Keep America Connected pledge to ensure Americans would not lose their broadband or telephone service, despite financial

constraints stemming from COVID-19.

I am also aware that several ISPs are offering reduced rates, or even free broadband access for low-income families, particularly for students who otherwise couldn't afford to connect to their virtual classrooms. Broadband has proven to be a necessity regardless of where you live, and the continued investments into broadband creative solutions and flexibility of ISPs to provide reliable broadband access wherever possible is important.

So, Mr. Adelstein, can you talk about how helping providers quickly upgrade existing infrastructure and reduce the environmental footprint of networks would help lower consumer prices? Is facilitating competition and consumer choice a good thing for low-income consumers?

Mr. Adelstein. Absolutely. I think competition is critical, and the way you get competition is putting more equipment up more quickly. And so, you know, your bill, for example, would exempt co-location from NEPA and NHPA. It would, as I read it, codify the national programmatic agreement that was arrived at on a bipartisan basis. This is, you know, common sense. We are talking about co-locations here.

Again, on existing equipment, why shouldn't we be able to invest more? Why should we be held up for a year on a NEPA or NHPA review spending time and money when that could be facilitated by legislation like yours, or by the good work that the FCC did to amend the programmatic agreement under leadership of Commissioner Carr.

So there is, really, a lot to be said for this kind of work. You know, we work in partnership with municipalities, but this kind of approach is important to facilitate. I mean, the kind of investment we are making, a record in the last 4 years, \$29 billion in wireless infrastructure investments in 2019, these are unparalleled.

Mr. Johnson. Good.

Mr. Adelstein. And that is why we have what we have.

Mr. Johnson. Well, good. 5G promises to help us realize higher broadband speeds across the Nation, especially in -- for people that live in the most rural parts of our country. In practice, however, promised speeds won't be realized without a significant investment in backhaul. As you know, there is a significant shortage of trained telecommunication workers to build out these 5G fiber networks. So do you believe Congress should both support the workforce needs of 5G and fiber network deployments?

Mr. Adelstein. Absolutely. Fiber and 5G fit together hand in glove. They are all part of the network. Every 5G antenna has to have fiber, and, you know, we need more people trained to do this. There are a lot of good workers out there that do it today, but we could re-skill workers, we could diversify the workforce, and this is a traditional area where government works with the private sector.

If we are willing to lead, you know, develop apprenticeship programs, we would like some support for training to expedite it. And the reason is, our industry is critical for the entire economy. Virtually every industry in the country is going to rely on 5G networks, and, so, we need those technicians to boost jobs not just in our industry but throughout the economy, 4.5 million jobs in virtually every sector. So I applaud your efforts, and I think we could work together on that.

Mr. Johnson. All right.

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

Mr. Johnson. Well, thank you, Mr. Chairman. I yield back.

Mr. Doyle. I thank the gentleman. The chair -- let's see, I don't see Mr. -- oh, I do, okay. Mr. Veasey, you are recognized for 5 minutes.

Mr. Veasey. Mr. Chairman, thank you very much. And I want to thank all the

witnesses today to come and talk about, again, this emergency broadband benefit.

Again, this is a program that can be very instrumental in keeping vulnerable communities connected during the time that we are in right now, especially the time that we are going through right now in Texas.

Right now, our goals should be to help make the process of accessing this benefit as easy as possible for consumers. People are dealing with a lot right now. Things are very difficult. And, again, we will try to make life as easy for these vulnerable communities as we possibly can during this time period, because now things, especially here, have just been compounded.

According to a January 2021 GAO report on how the FCC has implemented the Lifeline National Verifier program, we know that many eligible people will abandon their applications when they can't successfully navigate the system or it is too cumbersome. I don't know that this happened in the Emergency Broadband Benefit program. I have a lot of confidence that the new chairwoman of the FCC is going to be thoughtful about this program, and I know that they had a great roundtable put together last week so that they can build on that.

Mr. Wood, what else should the FCC be thinking about to make sure it is as easy as possible for people and families who qualify to access the Emergency Broadband Benefit?

Mr. Wood. Thank you, Congressman Veasey, and thank you for your leadership on that bill that was passed by the House first last May, and then finally, was passed by the Senate as well at the end of the year.

We definitely need low barriers to application and verification, and, as you said, there are some concerns about that, even though we think that there are ways to speed that up. And hopefully, you know, most people that go through the automated process

have a relatively quick and accurate eligibility determination, but what you are talking about is people who have to provide additional documentation, sometimes they can't do it. If you are not online, it is very hard to upload something online to prove that you should be able to get online. So we have to think about those barriers and make sure that the process is both centralized and localized, I would say.

The FCC should be collecting a lot of data and making information available to people, but then we also need local supports and community organizers, local governments, digital inclusion specialists to aid people in that application process so that nobody falls through the cracks.

Mr. Veasey. Right, exactly. And I think that is so key for a lot of these communities. I think that we saw that, you know, even with COVID-19 with some of the business assistance programs like PPP, some of these smaller businesses being able to access things when they are poor, working day-to-day is much more difficult, and you can make the process for cumbersome.

Following up on that, we need to make sure that we have robust provider participation in this program. The more providers that participate, the farther this program can reach consumers all across the Nation. What are some things that we in Congress or the FCC should consider to ensure there is a high participation -- that there is high participation on the provider side?

Mr. Wood. Yes, thank you. I mean, I think you have already done a lot of the work there. The flexibility to us at Free Press Action was a key part of this bill, and thanks to your leadership and the committee staff as well and Chairman Doyle's staff, because we wanted to get people as much aid as we could as quickly as possible for the plans available to them today.

So rather than have people either shunted into low-income plans that might not

meet their needs or the opposite extreme, forced to pay more than they can afford, even if they get some discount off of that, we thought those would both be bad outcomes. And so giving people the flexibility to pick which plan they want should be good not only for the individuals, but also for the ISPs who can take that discount and get that reimbursement for basically any plan they offer.

Mr. Veasey. Thank you.

Mr. Chairman, thank you very much. I yield back the balance of my time.

Mr. Doyle. Okay. The gentleman yields back. Let's see, I think next is Markwayne Mullin. Mark, are you here? Markwayne, you need to unmute if you are here.

Okay. What about, let's try Mr. Walberg, are you here?

Well, I see Billy Long there, so, Billy, I am going to recognize you because you are the only one I can see on my screen so far. So you are recognized for 5 minutes.

Mr. Long. I appreciate that. I -- yeah, I had a Snowmageddon here today. We had 13 below yesterday, and so I was late for the gavel, but I appreciate you letting me in. I took the daughter over to run around at the hospital today and the battery died and all that good stuff, but I am here, so I will join in.

Mr. Adelstein, President Biden told Senators last week that he wants Congress to move fast on a big infrastructure plan to keep up with China. And one of the biggest ways to do that is to reduce the barriers to deployment so public and private investment can be deployed as quickly as possible to connect more Americans. How important are these streamlining reforms to winning the technological race to 5G with China?

Mr. Adelstein. Well, it is essential to winning the race to 5G. As I said, you know, they are basically using government fiat to try to shove it through and try to win on the global basis by stealing IP, by using inappropriate means, and by just shoveling it

down the throats of people as they do so many things in China.

The United States has the private sector leading, and we talked today about the need to fill some gaps. You know, I think it is a great opportunity for bipartisan agreement. For rural broadband, I used to work, you know, Louisiana, across the country on -- at the rural utility service to get broadband out to rural America, and working with you and this committee to find the resources on a bipartisan basis to get that done in infrastructure bill would be most welcome.

And, you know, that requires many different steps. If you are going to do that efficiently, you need to have, you know, the processes to get that infrastructure in place efficiently. You need the people trained to build it efficiently and safely. You need to have really a public/private partnership with educational institutions, with companies that are going to invest, because primarily this is going to be driven by private investment.

We spend \$30 billion a year investing in wireless networks and much more if you combine it with wireline networks. That is what has delivered the greatest network in the world here in the United States that responded to this pandemic in an unparalleled fashion.

So I think all of these elements are necessary to beat China in the race to 5G and create 4.5 million jobs in virtually every sector of the economy.

Mr. Long. I am kind of like my buddy, Bill Johnson, and we called each other to see how to dress today, and -- but I have a lot of rural area just like he does, and I have been on this 5G and rural broadband hunt for a long time. So I appreciate anything we can do to -- I don't think a student should be limited. You know, their internet access shouldn't be limited by geography. They shouldn't have to go over to Starbucks or drive up 20 miles to McDonald's or wherever to get a signal, and so I appreciate all of that.

Also, I would like to point out that in -- a recent report shows that investment in 5G will result in the creation of 4.5 million jobs, and contribute \$1.5 trillion to the gross domestic product from 2020 to 2030, So doing this sooner rather than later matters quite a bit.

Also, Mr. Adelstein, Chairman Pai's Keeping Americans Connected pledge asked internet providers to take many actions before Congress could pass the large-scale relief that we got through last year. On top of the essential aspects of the pledge, such as keeping the internet on, regardless of payment, waiving late fees, overage fees and data caps, many companies went above and beyond by opening their WiFi hot spots for the public for anyone to use and work closely with schools, libraries, and hospitals to ensure connection. How important was the light-touch regulatory approach in this place as a result of longstanding bipartisan policies facilitating this industry-led response?

Mr. Adelstein. Well, light-touch regulatory approach has led to the world's greatest broadband networks, including our leadership in 4G, which we need to maintain 4G. And it was, you know, a sacrifice for everybody, the pledge, no terminations, inability to pay, we waived late fees, we opened millions of WiFi hot spots to those in need, and the industry worked overtime to try to address this, realizing that it was a Lifeline for people.

So, you know, you are exactly right. And to answer your other question even further, you know, as we are thinking about a broad infrastructure package, you want to make that as efficient as possibility so you can stretch taxpayer dollars. I mean, you can encourage co-location on existing infrastructure, as your legislation does. You can make sure it is technology neutral, so that wireless as well, as wireline solutions, are eligible. If you allow for OPEX as well as CAPEX, that also helps stretch taxpayer dollars.

Mr. Long. I appreciate it. And I would like to add right here at the end that

with a daughter that is a pediatrician, and she has been staying at our house the last few days so Dad could drive her in the snow to get to work and get to the hospital to make her rounds to see the new babies, her phone started ringing early this morning. All of her nurses and everyone could not get to work, and so now she is doing all her visits over the internet today, so that just -- to prove the point how important all this is.

And, Mr. Chairman, thanks for letting me in. I yield back.

Mr. Doyle. The gentleman yields back.

The chair now recognizes, let's see, I don't see Don.

Darren Soto. Darren, are you there? Darren, you need to unmute if you are here.

Okay. Let's try Mr. O'Halleran. Is Mr. O'Halleran here?

Okay. Let's go to Miss Rice.

Miss Rice. Thank you so much, Mr. Chairman.

Mr. Wood, as you pointed out in your testimony, this pandemic has exacerbated the adoption gap, you know, that is people who have access to broadband but can't afford to purchase it, or, in some instances, choose not to adopt it. In my district, this adoption gap has resulted in students having extremely different outcomes with at-home learning who live just blocks away from one another, because one student can get online while the other can't. Now, this could be because they simply don't have access, or because the whole family is utilizing one hot spot.

So can you just expound a little more on how the Emergency Broadband Benefit program could help close this adoption gap, because once these kids get behind, it is very, very difficult for them to catch up.

Mr. Wood. Yes, thank you, Congresswoman. I think that is the key is that it is really about the whole household. So a lot of the E-rate program, rightly and crucially, is

aimed at connecting students, but, of course, they are a part of family situations, and if the family isn't connected, then the student can't get online.

I think, you know, luckily for many of us, we couldn't imagine having to share a single device for an entire family, and that is why this -- you know, we have to think about efficiency. We can't have a ton of duplication in these programs. But, frankly, I am not concerned or worried that a student might have a device and their parent might be able to get online affordably and reliably for the first time in too long.

So, it really is, as you said, it is key to having the whole family be part of that educational system, I am sure Dr. Anderson could attest to.

Miss Rice. Mr. Wood, so I know that my colleague, Mr. Veasey, kind of touched on this, do you agree that encouraging broad participation in this program by ISP providers will help maximize both consumer choice and increased enrollment? We have seen the problems with the Lifeline programs, so we are trying to avoid that. Do you agree that encouraging broad participation would help maximize both consumer choice and increase enrollment?

Mr. Wood. Yes, definitely. And as I said, we were happy to see that kind of flexibility that I think will allow more ISPs to come in, not to say we are picking and choosing for them a particular plan. The Lifeline benefit is crucial. We should never discount it or say that it is not something we must preserve, but it is only \$9.25 a month and it tends to be a wireless plan only.

So, you know, 26 percent participation rate at the end of the pandemic perhaps for a Lifeline, that is pretty low. And we think that is for a myriad of reasons, but one of them being some people will pay for the service, even if they would qualify for Lifeline, because that Lifeline phone is just not enough to meet their needs, either as an individual or as a family.

Miss Rice. So, Mr. Wood, we have talked about different communities that are more likely than others to lack broadband service at home, but one group that really hasn't received as much attention is older Americans. There was a report that was issued earlier this year that estimates that as many as 22 million older Americans lack home broadband service. There may be many reasons for this, including affordability, and digital literacy, but this is so troubling, especially now, as the pandemic has severely impacted older Americans.

So lack of home broadband makes it harder to get critical health information, to make -- I can't tell you how many complaints I have gotten from constituents who said I don't -- I can't make an appointment to save my life to get a vaccine, to say nothing of, you know, meeting the requirements for their telehealth services.

So what more can we do to increase broadband adoption by older Americans? I mean, this is not just in my district. I am sure every single one of my colleagues on both sides of the aisle have older Americans in their -- as their constituents who are facing this problem.

Mr. Wood. Yes, it is definitely a problem. And I think that the numbers are probably moving in the right direction as we have all gotten more used to the technology. More and more older people are online, and the percentages aren't quite as low as they were, say, 5 or 10 years ago. But it is not getting better fast enough, and especially in a pandemic, but, really, anytime. People need access to telehealth and all sorts of other things to conduct their lives and stay safe.

So what we can do more, I think, is it is obviously about affordability and price. It is about access, as many members have talked about today as well. And it is about literacy as well and making sure that people have the tools they need. The only reason I hesitate to say it is all about digital literacy is I do think we shouldn't stereotype. Many

older Americans are very aware of the internet and what benefits it would bring to them, so we can't assume that people just don't realize what they are missing. I think it really is that unhealthy cocktail of factors of people not being able to afford it, not having good access, and then sometimes, just not having the tools they need to really make use of it.

Miss Rice. To your point, Mr. Wood, I have a 95-year-old aunt who is better at using her iPad than I am, so point well taken. Thank you so much to all of our witnesses, and I yield back now, Mr. Chairman. Thank you.

Mr. Doyle. I thank the gentlelady.

Now the chair moves to Mr. Mullin. Mr. Mullin, are you here?

Mr. Mullin. Yes, sir. Thank you, Mr. Chairman.

Mr. Doyle. You are recognized for 5 minutes.

Mr. Mullin. Thank you, Mr. Chairman.

And, you know, guys, we have been talking about broadband for rural parts, and I just want to point out, I live it every day. I live in the middle of nowhere and then you turn and you go another mile to get to my house. The nearest town to me is maybe a 15-minute drive; with weather like we are having today, it's a 30-minute drive; when my kids go to school, it is a 30-minute drive. I am on that last mile to which we talk about.

And in less than 50 percent, literally, less than 50 percent of my district has broadband coverage, and, yet, almost my entire district is out of school and have been out of school for a week, not because of COVID, because of the winter weather. I have six kids, as we speak, that is upstairs around our kitchen table, around our kitchen bar, that -- not a drinking bar but one you eat at -- that is doing their homework as we speak.

And it wasn't until last year, December of last year, that our electric co-op actually brought us broadband down here. Until then, we used a hot spot, and a hot spot is not reliable. A hot spot is not something you can rely on and not something you can do your

work on. And especially, if you are live streaming your classes, it is nearly impossible.

But we have an issue. We have an issue in the rural parts of the country. We have an issue with our small internet providers, our ISPs that are having to make a hard decision, because we have, you know, companies like Netflix and Amazon that pays literally nothing to live stream their videos, and to bring them that last mile and especially the middle mile to us.

And when you start dealing with this, you know, what -- when you are dealing about wireless or fixed wireless in rural parts of the country, I guess, Mr. Adelstein, do you see a role that our rural broadband providers play in this? Because a lot of them are having to make a decision to either upgrade their system or get farther out there because they can't keep up the live stream demand from Netflix and Amazon that pays nothing to deliver their product to customers' homes, but yet customers pay for it.

Mr. Adelstein. I couldn't agree with you more. I mean, these companies, look where the profits are going, look where the market cap has gone up. It is not in, you know, the carrier, the wireless carriers. It is the companies that don't pay anything for infrastructure.

Mr. Mullin. Right.

Mr. Adelstein. They don't invest \$30 billion a year like we do, but reap far outsize profits. And meanwhile, we are competing. You don't see any ads for Google to use us, not DuckDuckGo on the Super Bowl, but you see all of the wireless carriers fighting and offering consumers, you know, more megabits for less down, you know, 90 percent increase in price per megabits since 2011.

I mean, this is -- we have invested enormous amounts. And there is a lot of talk today about, you know, ISPs and pricing and, in fact, consumers are getting a great deal. And our rural Americans, it is a tougher business model out there. And things like RDOF

matter, when the FCC puts out \$20 billion to help, you know, fill that gap and universal service needs to be targeted to help build out in rural America; an infrastructure bill that would help, you know, that business case to get us to that last mile in rural America is really essential. I hope we can get bipartisan support for the infrastructure package that will close that gap in rural America and get access out there.

Mr. Mullin. Can you speak of the major impact that the permitting reforms laid out in the Republican package would have in this cost?

Mr. Adelstein. Well, you know, every bit of cost is sort of, you know, essential to reduce, because there isn't enough capital to go around. I mean, this is what we are talking about here. \$30 billion is a massive investment we make --

Mr. Mullin. Right.

Mr. Adelstein. -- virtually every year, but yet, it is not enough, and we are talking about the need and the shortfall in rural America. So every dime that goes to expensive and costly delays is one dime less going to a worker from CWA, or one dime less going to, you know, getting broadband out to actually investing it in the network so we can get further into rural America.

So we very much appreciate the thoughtful consideration. I think, you know, most rural areas, frankly, are a little bit better about being reasonable. They recognize they need the investment. We sometimes have tougher -- much tougher time in urban and suburban districts frankly getting, you know, permitting done. But some rural areas are tough too. And, you know, like I say, every dime that is saved in a suburban areas on needless, you know, fees, et cetera, why would you tax broadband when it is saving people's lives every day --

Mr. Mullin. Right.

Mr. Adelstein. -- connecting people to telehealth? So --

Mr. Mullin. Right, I agree. So let me ask you, would you support adding like an FCC study to the Affordable Internet Act, H.R. 7302, which you spoke about in your testimony?

Mr. Adelstein. Yeah, you know, absolutely. I mean, the more data we can get on this, the better, so I think that would be a useful tool.

Mr. Mullin. Yeah. Well, with that, I am out of time. Chairman, I yield back. Thank you, sir.

Mr. Doyle. The gentleman yields back and we thank him.

Let's see, next is Mr. O'Halleran. Are you there, Tom? Tom, you need to unmute if you are there.

Mr. O'Halleran. I am here.

Mr. Doyle. Okay. You are recognized for 5 minutes.

Mr. O'Halleran. Thank you, Mr. Chairman Doyle and Ranking Member Latta, for holding the hearing, and for our panelists. It has been a great discussion.

I greatly appreciate this committee's continued focus on closing the digital divide, which still impacts far too many Americans in rural America, Indian country, and throughout urban America too. In rural Arizona, only 66 percent of population has access to broadband at the FCC's minimum speed standard. It is far worse than that in my district.

I am thankful that last Congress, this committee bipartisanly had efforts that resulted in an omnibus package that -- with programs to help the underserved, such as the Emergency Broadband Benefit program, to address broadband affordability, nearly \$1.3 billion in dedicated funding to expand broadband on the Tribal lands at Tribal Colleges, universities, and minority institutions, and new Federal offices to better coordinate multiple broadband programs and more.

There is clearly more work to be done to expand broadband access nationwide. We must continue working together across the aisle to help implement these new programs and improve existing programs as well. I guess, my biggest issue is that if we don't do that working across the aisle, we are going to continue to see, as was mentioned earlier, issues raised in 2006 and still not recognized as being accomplished by now.

We are still going to get to the point that we are today that rural America was -- has basically been forgotten for a couple of decades to get us to where we are competitive for our towns, our cities, our economic development, our hospitals, and our children's education.

Mr. Shelton, in your testimony, you discussed how the FCC's Universal Service Fund is relying on a declining contribution base, which supports many critical programs. Could you highlight the importance of funding a bipartisan and consensus-based path forward to provide stability to the USF contribution methodology in a way that preserves the success of its programs helping underserved Americans?

Mr. Shelton. The Universal Service Fund only takes into consideration voice, taxes on voice, and voice keeps going down. And we have to figure out ways to make sure that that Universal Service Fund is actually applied to broadband, because broadband is the future here, as everybody said, and that there is places in this country, rural places, not mostly, but a lot of rural places that companies are not willing to go in and put in broadband because it is too expensive.

Well, we have to figure out a way to have those companies, by private and public partnerships, to get access in rural places, because people in rural places need broadband just like anybody in an urban environment needs broadband. And my members are willing to go to wherever they can to put it in.

The other thing that I have to say here is there has been some talk about a

shortage of telecommunications technicians to do this work. Well, I can tell you that the big companies have laid off tens of thousands of my members who are absolutely trained and ready to go anywhere they need to go tomorrow morning or this afternoon, to put in broadband and maintain broadband.

So, you know, the Universal Service Fund is just one of the ways to do this, but without public and private partnerships, we are never going to get this done, and we have got to get it done because this country cannot go on like this.

RPTR MOLNAR

EDTR ZAMORA

[1:00 p.m.]

Mr. O'Halleran. Thank you, Mr. Shelton.

Dr. Anderson, thank you for everything you do to help our students during this pandemic. My wife is a former educator.

Could you briefly discuss the specific needs Tribal students are facing in your community to distance-learn due to lack of access to connected devices or fixed services?

Dr. Anderson. I want to speak to, really complement to what Mr. Shelton shared, it is infrastructure. And so we have Tribal students that they don't have the infrastructure in place, much like our rural students as well, but they don't have the infrastructure in place. So there really can be almost extreme isolation in terms of access and ability.

The kinds of things that we might provide other students right in the city of Topeka is not as accessible, because those students in those families, the manner of where they live, even the libraries and the buildings that they have, doesn't have any infrastructure in those Tribal organizations to be able to serve those students as well as we should.

I do want to mention, although I know this wasn't part of the question, our rural America piece, when we gave out that map, what we learned really quickly is, much like our Tribal students, they didn't have access to the store for WiFi. They didn't have access to a McDonald's for WiFi. They didn't have access to any of the places that inner city Topeka had access to.

So, again, that infrastructure is the issue. And so even with the items that we began to provide, if there is no infrastructure in place, we are just putting a Band-Aid on

items.

Mr. O'Halleran. Okay. I am way over my time, and I yield. Thank you, Mr. Chairman.

Mr. Doyle. Okay. Let's see, next I think we can ask to go to Mr. Curtis. Mr. Curtis, are you here? Ah, I see you.

Mr. Curtis. Yes.

Mr. Doyle. You are recognized for 5 minutes.

Mr. Curtis. Thank you, Mr. Chairman and Mr. Ranking Member.

I got to tell you, as I have listened to this hearing, I kind of regret it that we don't have more of our internet providers here today. I feel like they need to defend themselves. And it is not my job to speak for them, but it feels like we have searched the country over for some bad examples during COVID, and I would like to know that most, if not all, of our providers lifted caps or offered free service for limited periods during the start of COVID. I think over 800 of them took the Keep America Connected Pledge.

I don't know, it just feels like that some in this area would focus on punitive measures rather than see these as partners and people who can actually help us solve our problems.

The committee might be interested to know that before I came to Congress, we all brought very different backgrounds. I served as the mayor of a city, and we were actually able to work with the private sector, and for the last 7 years, the residents of my city have had free internet. And that wouldn't happen without partnering with these good partners. And I can tell you from this experience, there is more to the challenge than just getting free internet to everybody. We struggle with devices and even getting people to take free internet.

Through this experience, I also learned, because I inherited a broadband network, just how difficult it is for government to run a broadband network. And I wish we could have a whole hearing just on that. I would love to share more thoughts.

But let me pivot just quickly. And I would like to give a shout-out to my colleagues, Mr. Duncan and Armstrong, who have worked on this issue and introduced some legislation.

Mr. Adelstein, in my rural Utah, we received quite a few public dollars, but our bottleneck is the Federal bureaucracy and removing barriers. We have heard today how we have removed too many barriers. How do we streamline our Federal permitting process so that we can get to these areas where that is the bottleneck?

Mr. Adelstein. You are absolutely right. I mean, trying to site on Federal lands is such a nightmare that a lot of my members that want to make private investments can't do it or shy away because it just takes -- it can take a decade to get sited on Federal lands, and a lot of those are in rural areas where we talk about rural shortage.

And administration after administration has tried, going back to the Clinton administration, to Bush, to, you know, Obama, to Trump. Everybody has tried to get this thing done. I think we need real Federal leadership, whether it takes legislation or getting President Biden to focus a working group, to get these agencies together to make sure that they are permitting leases in an expedited fashion, not putting, you know, undue burdens on private sector investors that want to build a tower or a network on Federal lands but are stymied.

I mean, it is incredible how difficult it is to get through that. But I know that you have talked about a bill that allows the Department of Interior to use FCC maps that you have introduced and would help siting process on Federal lands.

I was the chairman of a working group that the FCC had in the so-called BDAC on

Federal lands. We had a unanimous report we laid out. I would like to submit for the record that report, if that is okay. It outlines in great detail all of the steps the Federal Government could take to facilitate siting on Federal lands.

Mr. Curtis. Great.

Mr. Chairman, I would like to ask that we submit that report for the record.

And you point out very well, these lands that I have in my district -- most people don't understand this -- they are 90 percent Federal lands, and it can take a decade to permit across these.

Also, thank you for giving my bill a shout-out, the Federal Broadband Deployment in Underserved Areas Act. What it is trying to, like, get these Federal agencies to coordinate better, and one of my questions to you is, do we need more collaboration with State and local partners.

It is clear from this hearing that we all have very, very different districts, and if we are trying to legislate one way from the Federal Government, it is near impossible. What is your thought on getting local and State governments more involved?

Mr. Adelstein. Well, I think so, and Tribal governance as well. You know, Tribal areas you talked about. I worked in the -- I used to run the RUS and worked with the Gila River Nation. And there is major roadblocks on Tribal lands, which are the most underserved in the United States. I come from Indian Country myself in South Dakota.

And it is just kind of tragic, because nobody needs it more and has worse conditions, and yet no place is it harder to get siting done. So I think working with Tribal lands, working with State governments together, cooperatively, because there is a lot of State land as well where it is very difficult to get sited.

We all agree on the goal. It is just getting the bureaucracy to let us invest and serve those populations.

Mr. Curtis. Thank you. I am regretfully out of time, but in my district, I have this trifecta of public lands, Native American issues, and rural. And, boy, that is a tough combination. Thank you, and to our other witnesses for being with us today.

Mr. Doyle. The gentleman yields back. I thank the gentleman.

The chair now recognizes Mr. Welch for 5 minutes.

Peter, are you here? Unmute if you are.

Mr. Welch. Thank you.

Mr. Doyle. There we go.

Mr. Welch. Thank you very much, Mr. Chairman.

I am going to pick up where my colleague, Mr. Curtis, left off. Because I think what he showed, and also Markwayne Mullin, is how when we talk about broadband, ultimately, we get down to the very particular circumstances in a very particular location. And it is not a one-size-fits-all deal.

And my sense on our committee is that, number one, there is total support to get affordable and accessible broadband throughout America. Number two, there is a dispute, maybe just an emphasis about how best to do it.

There is a point of view that more deregulation, more consolidation will get that done. In some places that actually might work, but in the case of Vermont, deregulation and consolidation has led to less access and higher costs.

So it may be that we have to be particular and not general about when the various tools can help us achieve the shared goal.

I want to ask Mr. Adelstein -- and this sort of exemplifies our dilemma here -- we have a town in Vermont, Peacham, Vermont, 732 people live there. If you are on one side of Macks Mountain Road -- and there is about 15 families there -- they can't get high-speed internet. And they have got Charter Spectrum, that is the company that

does it. When they call, there is no answer. They just won't do it.

Now, I understand that economically they may not want to, but they have a territory where, unless they do it, it is not going to be available. Can you explain to me what we do about that, Mr. Adelstein?

Mr. Adelstein. Yeah. You know, I think there needs to be a public-private partnership to get these out to rural areas. I have spoken to --

Mr. Welch. No. Be specific. I want to -- like, I am on the phone wanting to get Charter Spectrum to do it, so I am the person that needs the internet. How do I get it when they won't answer the phone, they won't do the job? You say public-private partnership. And, you know, in all candor, it sounds like the rhetoric, not a solution.

Mr. Adelstein. Well, I am talking about Federal investment --

Mr. Welch. Does the company have some obligation in the service territory?

Mr. Adelstein. I mean, they are not a member of mine, so I can't speak to that particular, you know, company because I don't represent the cable industry. The wireless, you know --

Mr. Welch. All right. I am going to interrupt. The point I am trying to make here is that if it is not profitable for a company, whether it is this company or another one, they are not going to invest. So there has to be some Federal role here.

I am going to ask Mr. Wood. The problem I just outlined, is that a common problem throughout the country, not just in parts of Vermont?

Mr. Wood. Yes, Congressman, I think it is definitely a problem, and it is a very localized business, even though there are these nationwide players that are working in so many different territories.

And the mapping issues that you have led on, that Mr. Loeb sack and Mr. McEachin did, Mr. Latta and Long also, across the aisle, helped to get that bill passed

last year, and the FCC is still working on it. But here we are, what, almost 12 months later, and we still don't have much better data.

Mr. Welch. All right. So we had fairy tale maps. But how do we address the situation in Peacham, Vermont, or Markwayne Mullin's road or other places all around the country where we just don't have companies that are willing to make the investment because there is not the return on the investment?

Mr. Wood. Yeah. I think it has to be about the Federal investment or State-level or local too. There is lots of ways to get taxpayer dollars into both commercial and cooperative and municipal providers.

And we have to be smart about it. So if we don't know where we are lacking service -- we see in things like the FCC's Rural Digital Opportunity Fund, or RDOF, a lot of that money is going to flow to places that need it, and some of it seems to have been misdirected.

And so we just need to get better about taking those precious Federal dollars we have, realizing there is an acute need, and making sure they go to the right place.

Mr. Welch. All right. Okay. So whether you come at this from the perspective -- I am talking about Mr. Johnson, where he does advocate for deregulation, for instance -- we have to have that information, whether it is in Mr. Johnson's district or my district, in order to deploy the money that we do have effectively. Is that correct?

Mr. Wood. Yes. And I think as you said, Congressman, you know, it is about profit too. So I want to be clear, ISPs do invest tens of billions of dollars around the country. What we are seeing now, though, is that their investment has been going down for the last few years. Their profits and their subscriber numbers and their revenues are going up, and people are paying higher prices.

Mr. Welch. By the way, I have total concerns, we all do, for low-income folks. I

also have concern for middle-class folks who are trying to pay their bills on limited incomes. So there has to be public policy here where we get our rates down, and we shouldn't be paying the highest rate compared to all of the European market competitors. And we do, is that not correct, Mr. Wood?

Mr. Wood. Yeah. I think there are different ways to look at the international comparisons. I am focused on the U.S. figures and the fact that we are seeing broadband prices go up at four times the rate of inflation. Again, as investment levels stay high but trend downward over these last few years.

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

Mr. Welch. I yield back. Thank you.

Mr. Doyle. I thank the gentleman.

I think I see Buddy Carter in his mobile office. Buddy, are you ready for your 5 minutes?

Mr. Carter. I am. Thank you, Mr. Chairman. I appreciate the opportunity. I especially appreciate this hearing, which is so very important, and appreciate all the people [inaudible].

Mr. Doyle. Well, Buddy, I think you are frozen there.

Mr. Carter. Am I frozen?

Mr. Doyle. Okay. I think we can hear you again. Try it again.

Mr. Carter. Okay. Mr. Adelstein, I wanted to ask you. A lot of your testimony has focused really on permitting and siting reforms and how any funding should go hand in hand with those efforts. I just wanted to ask you, could you tell me some of the top issues that are facing the wireless industry now when it comes to expediting build-out?

Mr. Adelstein. Well, you know, the top issue really is just having enough capital to build to the entire country. I think that, you know, it is very important in terms of

bipartisan infrastructure bill that we get a substantial investment, be able to get to that last mile in rural America. We talked about it with Congressman Welch.

You know, the business case gets tougher as you get out there, and having, you know, costly burdens makes it more difficult to make that happen. I mean, for example, you introduced a bill, I saw, in a package that takes section 6409 and makes it so they are not subject to NEPA, which is something that, you know, the FCC has worked on.

I think, you know, these kind of legislation to codify the good work the FCC has done would be helpful, particularly for co-location. Again, you know, it should be the easiest thing to do if you are going to co-locate, if you are going to upgrade so you can get service out to more people, that should be the last place you have regulatory hurdles. And we appreciate your thoughts on that.

Mr. Carter. Well, and appreciate you bringing up my bill and mentioning it. It is called the Proportional Reviews for Broadband Development Act. It is really just common sense, and it really just says that, you know, the changes, unless they are significant, but these minor changes that don't really impact the footprint of a tower, of a wireless tower, that those won't have to go through the environmental or the historical review, and that this could speed things up, which would expedite this and help everyone, and obviously save us a lot of money.

Can you think of any -- give us any examples where this has happened before?

Mr. Adelstein. Absolutely. I mean, regularly we are trying to co-locate an existing tower, and there can be an environmental and historical view. What has changed in the history since you put a tower up there, and you are trying to put more equipment on a tower that has already been sitting there, and you have already done an historic review [inaudible] again sometime [inaudible].

I mean, this is just -- it could take a year. It could take, you know, quite a bit of

time, and there is no environmental impact, there is no historic impact. There is a tower sitting there. So, you know, it is just common sense. And this is something that the Federal Government has its own authority [inaudible] Federal rule for something that is so nonsensical on an area where the Federal Government is trying to get broadband out there. I think that kind of reasonable step, you know, the municipalities won't be upset about it because it applies to the Federal Government, they are not municipalities. And it makes perfect sense.

Mr. Carter. And not -- yeah, obviously it has a monetary impact, but the time factor too. I mean, you know, if a child misses a year, has got to wait a year in order to get high-speed internet, I mean, that is a year behind that they are.

Mr. Adelstein. You are exactly right. We are talking about 5G, which will allow schoolchildren to do all kinds of things they can't do with multidimensional learning, 3D, very exciting for school kids. We see how important distance learning is now, with the pandemic. Let's get that 5G equipment up there and not have to wait a year in order for an historic or environmental review when there is already a perfect wireless facility sitting there.

Get that piece of equipment up there more quickly, and this supports the efforts that the FCC has done to the treatment of existing facilities under section 6409.

Mr. Carter. I was at the Georgia State legislature today and, you know, they were making a big push. You know, you have always heard Georgia -- there are two Georgias. There is Atlanta and everywhere else. We have a large rural community in Georgia, and one of the things that they are talking about is cell reception mapping and especially during the pandemic.

How are your members addressing the mapping issue?

Mr. Adelstein. Well, I am very pleased that this committee supported funding

for mapping. It was approved by Congress. Because we do need to mark the maps. If you are going to target where you have uncertain areas, you need to know where they are, and it has been an issue we worked on for many years trying to [inaudible] those maps.

And the FCC needed those funds provided late last year in the bill, so we are grateful for that. I think that whole plan enabled us to get more accurate maps and target relief where it is needed.

Mr. Carter. Okay. Thank you very much.

Mr. Chairman, I appreciate, it and I yield back.

Mr. Doyle. Okay. Thank you, Buddy.

Let's see, the chair now recognizes Mr. Cardenas for 5 minutes. Tony, are you there?

Mr. Cardenas. Yes. Can you hear me?

Mr. Doyle. You are recognized.

Mr. Cardenas. Okay. Thank you.

Thank you, Mr. Chairman and also Ranking Member Latta. Thank you for having this important hearing.

I just want to point out that, once again, that at the end of December of last year, Congress passed a \$3.2 billion Emergency Broadband Benefit Program, which would provide eligible folks across America with a discount of up to \$50 per month towards their internet bills. In addition, eligible households can receive a one-time discount of up to \$100 to purchase a device or a tablet or laptop or desktop, et cetera. This benefit will be critical for those who are desperately in need of being able to be connected.

And we all know that when you are not connected, you have issues of not being able to get your telehealth appointment, not being able to get the opportunity to get

back to work by filling out those employment contracts, and also when it comes to children missing school. It has now been over a year, and many of our children around the country are falling behind, way behind, and it is really important that we get this right.

And also, Mr. Wood and Mr. Shelton, you provided concerning testimony about how communities of color are most likely to be caught on the wrong side of the digital divide, and this is something that existed before this pandemic.

Mr. Wood, how can we make sure that people that most desperately need the help will know about the Emergency Broadband Benefit Program and how to access it? And how do we capture people who are not currently in the Lifeline program today but are still eligible for the broadband benefit?

Mr. Wood. Thank you, Congressman. We definitely need to make sure we do that. Obviously, the higher dollar amounts available and the more robust plans people can get will hopefully help with that, but it can't just be a, you know, set it and forget it kind of approach.

We need to make sure that there is outreach in local communities, that there is advertising, that it is in the dominant languages in different communities and not just in English or even just in Spanish. It has to be in any language that a community is populated with.

And it has to be a support. So as I said earlier, I think we need centralized information from the FCC but also localized information and efforts on the ground to make sure that however well the program is designed, people know about it and they can take advantage of it.

Mr. Cardenas. And that awareness is definitely an opportunity for public-private partnership, right?

Mr. Wood. For sure. I mean, the ISPs are a big part of this. They have been

good partners in this thus far. We don't have the FCC's rules yet, but the companies have a self-interest here. They will get this money back in terms of reimbursement, hopefully for people paying more for a plan but having the taxpayers help them out with that in this crucial time to make sure everybody is connected.

Mr. Cardenas. And also, when people are uplifted economically, then they can afford long term these opportunities to keep these kinds of services once they graduate from being out of being low income and unemployed.

Similarly, Mr. Wood, many multifamily resident rentals are multidwelling units, such as senior and student living, mobile home parks. They have bulk billing agreements with internet service providers. Because these residents are not directly billed for services but instead pay a monthly fee for broadband services to their landlords, these households would otherwise be eligible, and they would also be likely to receive the Emergency Broadband Benefit to help pay their internet bills.

Again, how do we ensure that residents of these multifamily rental properties, including those in public housing, are eligible and able to receive this incredibly important benefit?

Mr. Wood. For sure, that is a key, and that is why the statute is written as it is, and the Lifeline program operates in this way too. We talk about households, and so that means a family unit or other group of people who decide to live together and make a household together. It is not just about a single physical address.

As you said, sometimes many different people share the same physical address, and sometimes people don't have a permanent physical address, for the unhoused populations or those who are moving from place to place. So, clearly, we need to focus on the household and not just the physical address in that case.

Mr. Cardenas. Excellent. Thank you, Mr. Wood. I would also like to share

that my colleagues and I are planning on sending a letter to the FCC asking them to expand eligibility for this program to be as inclusive as possible. We must eliminate potential barriers and maximize the number of households that are able to receive this incredibly important monthly broadband benefit so that we can help families across America stay online and connected.

I have a question for Mr. Shelton. How long does it take for somebody to be trained to become one of your members? Do they have to go out there and get a Ph.D.? Is it 7 years of training, or about how long does it take?

Mr. Shelton. It is all done on the job, and it is -- I would say, to be fully trained, it probably takes a couple of years, but, you know, the folks that --

Mr. Cardenas. But you could be on the job training within weeks or months, right?

Mr. Shelton. Yes.

Mr. Cardenas. Okay. So you could actually start feeding your family while you are being trained?

Mr. Shelton. Yeah. And we would love to have you start feeding your family while you are being trained. The problem is that we are losing members in the tens of thousands that could be putting all these broadband connections in, that are fully trained already.

Mr. Cardenas. Okay. Thank you very much.

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

Mr. Cardenas. I yield back.

Mr. Doyle. I thank the gentleman.

Let's see, I see Jeff Duncan sitting there patiently. You are recognized for 5 minutes.

Mr. Duncan. Thank you, Mr. Chairman.

Before I get started, I would like to enter into the record the Walberg workforce letter, dated January 27, from Mr. Adelstein and others. I think staff has that.

Mr. Doyle. Sure. Without objection, so ordered.

[The information follows:]

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

Mr. Duncan. Thank you.

This is my first hearing on the Telecom Subcommittee, so let me take a moment to say it is a privilege to be here. I look forward to working with you and my colleagues on both sides of the aisle to address the issues that have come before the subcommittee.

And I would be remiss if I didn't mention a giant in the communication realm passed away today. That was Rush Limbaugh and -- 70-year-old, died of cancer, and he is going to be missed within the communication realm.

You know, in the 1930s, after dual disasters of the civil war and reconstruction had left the rural South nearly a century behind the industrialized North in terms of technology, President Roosevelt made a decision to work to electrify the South with hydropower, and Universal Service Fund was born. And out of that also came rural electric cooperatives, who have been providing these important services to my constituents for about eight decades now.

I believe that after electricity and telephone services, broadband internet is the third wave of infrastructure investments needed to keep rural America competitive with our urban compatriots.

And I will say, I live on that last mile as well. I am served by a rural telephone cooperative and a rural electric cooperative.

So with any of these infrastructure build-outs, I believe the Federal taxpayer deserves the maximum return of investment for every dollar they spend. That doesn't just mean lower costs up front. It means those investments need to be in infrastructure that lasts and stands the test of time.

For the purposes of this conversation, I believe that that means fiber optic cable in the ground. More expensive up front, I get that, but with a much longer service life and

much greater reliability down the road.

This also means, as Mr. Adelstein has testified today, that we need to reform the permitting process in ways that will allow installation of these assets more quickly and more cost effectively than has been done to date.

Another way we can maximize our ROI is not to try to reinvent the wheel. The electric cooperatives are in a unique position to take advantage of existing and new Federal programs with the greatest impact at the least amount of cost to the taxpayer. I believe this means, whenever possible, partnering and creating synergy with the cooperatives to ensure that the power lines and fiber optic cable move together to provide the services necessary to close the homework gap and rural broadband gap.

And, finally, I believe it is absolutely necessary to have the right data before we make these decisions. If we are going to invest billions of taxpayer dollars in these assets, we must simply ensure that we are not duplicating our efforts and wasting those dollars. That can be achieved by making sure we are using data that maps to the rooftop, not just to a Census block, and we need to have that level of precise detail before we spend to add broadband services.

So I thank you for having this hearing today. You know, the government doesn't set the pricing for telephone, satellite, TV, water, or electricity, and I don't think the government should set the pricing for rural broadband as well.

And so I want to ask Mr. Adelstein. Mr. Adelstein, some witnesses have expressed concerns about broadband prices in the United States. Do you think the competitive marketplace or the government should determine the price of communication services?

Mr. Adelstein. Well, the private sector is doing a fantastic job. I don't know where some of these numbers come from. I mean, the cost per megabit has gone down

98 percent in the last 10 years. Ninety-eight percent. You know, you can look at the price 9 years ago for a plan. \$114 for one line unlimited. Now that plan costs \$64.95, a decline of 52 percent, inflation adjusted.

I mean, these are -- that means the subscribers save \$576 a year compared to 2010 prices. So if now is to go back to, you know, a 2015, 2014 plan, we will sell you one. You won't get nearly the same deal. The market is working very well. It is highly competitive.

I mean, you can see that the ads on television trying to get those prices down is working. The competitive marketplace in wireless has reduced costs dramatically per megabit, and people are getting much better service at lower prices.

As a matter of fact, wireless drove down the overall CPI for the first time, you know, in 7 years in 2017. We reduced the CPI. So I am not sure where some of these numbers are coming from, because wireless, actually prices have been going down, lowering the overall CPI for the United States to the point where actually it declined as a result of wireless in 2017, and it has been lowering inflation consistently. And we have the stats, I could submit for the record, to prove that.

Mr. Duncan. There is no doubt about that. And, you know, I hear you saying that the marketplace competition -- we are in our infancy in broadband services and even cellular realistically compared to telecommunications, and so competition will drive the price down. When companies compete, I save money.

Do you think it is a market failure that suggests that government should set the broadband prices? I don't hear you saying that. It is not a market failure.

Mr. Adelstein. The market is working. I think a 98 percent reduce in the price per megabit is pretty effective in the marketplace.

Mr. Duncan. Yep.

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

Mr. Duncan. I am out of time. I appreciate you being here.

I yield back.

Mr. Doyle. The gentleman yields back.

Let's see, next I believe we have Robin Kelly. Robin, are you there? Yes, I see you.

Ms. Kelly. Yes, I am.

Mr. Doyle. You are recognized for 5 minutes.

Ms. Kelly. Thank you, Mr. Chair. And it is an honor for me to be on your committee. And thank you to the witnesses for being here.

The pandemic continues to shine a light on the broadband problem, but the digital divide has been an issue in this country for such a long time. In my district, which is urban, suburban, and rural, there are still areas that lack connectivity.

As of 2017, I worked with local government officials and industry to bring WiFi to Pembroke Township, one of my rural areas in Kankakee County in Illinois. It was the first time that the town was connected to high-speed wireless internet.

Pembroke shows what we can accomplish if we all work together. We can close the digital divide, but it is going to take all of us working together -- government, industry, and consumers.

More liberal-leaning organizations and large companies like Verizon have put out ideas to close the digital divide. This shows me that we can come together on commonsense ideas to address a digital divide, even on topics like affordability and municipal broadband.

I encourage other companies to join in taking a long-term view and come forward with their ideas for closing the digital divide, so we can drive real solutions to these

problems.

Mr. Wood, the Emergency Broadband Benefit is likely the fastest way that we can get more people connected without having to create unique tiers or plans. How do you think the program should evolve to ensure customers are getting a good product and ISPs are holding up their end?

Mr. Wood. Thank you, Congresswoman. I think it really is about that choice and making sure people can apply that up to \$50 -- it would be less than that if they can get a plan for less than that -- to whatever service tier they would like. And so giving people that kind of choice and that kind of robust investment in their own ability to connect is what we see as the key to making sure that program succeeds.

Ms. Kelly. Okay. And, Mr. Adelstein, do you have anything to add?

Mr. Adelstein. Yeah. You know, I think you are right. My wife is from Chicago. I appreciate the work that you have done to get WiFi out there. She is from the northern part, you from the southern. But, yes, I mean, you know, there is a lot of progress we need to make. I think this committee is making the right investments in the Emergency Broadband Fund and making sure that people can afford it.

You know, that is a real issue, and we need to work together with you to help people afford it. And you know, the prices, as I have said, are -- the service is going up, prices are going down. But it is still not affordable to some people. And because this is so essential, it is really something that we need to work together, and I think this committee is doing a great job on that front.

Ms. Kelly. And even in Chicago, where they had the connectivity program, some parents still did not take advantage of that, because I guess they were afraid because they owed Comcast or whoever they have, they owed them money, so they were afraid to get back on to connect, even though it was for e-learning.

As chair of the CBC Health Braintrust, I have witnessed COVID-19 devastate communities of color, and the relief efforts that benefited others often never reach minority communities.

In particular, I am concerned by the lack of transparency in the FCC's COVID-19 Telehealth Program. Congress just appropriated another \$250 million for this program in December.

Dr. Anderson, in your testimony, you talked about the lack of telehealth services available to Native populations in your State. How can the FCC better use this new pot of money to ensure that communities of color, including Native populations, benefit from the Telehealth Program?

Dr. Anderson. Well, and just so that we are all on the same page in terms of even that impact -- and thank you for asking that question -- I want to speak to just Kansas. As we know, the FCC has over 600,000 Native households that lack standard broadband access. It is truly an issue. That is four times higher than the general population.

And so, you know, as we think about what can be done and we talk about -- I know it sounds like rhetoric -- private-public partnerships, but I think there are some accountability measures that we certainly need to put in place and ask for. I think transparency is definitely an issue, and I think what you shared in that regard is also an issue. And in collecting data to make sure that we hold people accountable.

You know, at this point, in Kansas, you know, we have several Tribal areas that do not have any access. And so even though we have reduced cost of broadband services in some areas, that is not accessible to our communities of color and to our Tribal groups.

And so I would suggest many of the things that have already been shared, that that [inaudible] transparency data collection and holding of accountability.

Right now, that 600,000 Native households lacking access, it is unacceptable.

Ms. Kelly. No, I definitely agree. It is unacceptable anywhere.

Dr. Anderson. Absolutely.

Ms. Kelly. Mr. Chair, I will yield back my 3 seconds.

Mr. Doyle. I thank the gentlewoman for yielding back.

Let's see, I don't see any Republicans right now. We are going to go to Angie Craig. Angie, you are recognized for 5 minutes.

Ms. Craig. Well, thank you so much, Mr. Chairman, and thank you for running a very efficient meeting. I am really grateful that the committee has taken the time here today to tackle this issue of dependable and affordable broadband.

At the end of the last Congress, I was proud to support the Broadband DATA Act, to make sure that the FCC produces accurate, reliable, and granular maps of broadband coverage. Additionally, in the omnibus package at the end of the year, Congress again came together to provide the funds necessary for the agency to begin developing the maps.

I know my colleague Buddy Carter brought this up, but even with the funding that Congress provided, it is going to be, we all know, a Herculean task for the FCC to coordinate the numerous efforts throughout the FCC and the Federal Government to improve broadband mapping.

That is why earlier this week, I introduced the Broadband Measuring Availability and Aligning Policies Task Force Act, Broadband MAPS Act. This bill directs the Chair of the FCC to create an intra-agency task force to ensure that all of the appropriate parts of the agency are working in the same direction to produce these accurate maps.

Just this morning, the acting chairwoman announced she will be implementing my bill administratively. I thank the acting chairwoman for her partnership.

In wake of COVID-19, the Congress has put substantial investment into broadband. We have got to make sure that these maps are accurate to ensure Federal dollars get to the most underserved communities.

Mr. Wood, could you please discuss the importance of accurate mapping, and also speak to the importance of mapping when planning broadband build-out. And also just as someone who is brand new to this subcommittee, talk a little bit about the barriers that have existed to make sure that these maps are accurate.

Mr. Wood. Yes, Congresswoman. It is not a very pleasant story. I mean, it doesn't seem like it should take this long, but there is finally some movement. Thank you for that bill and for the FCC's willingness to take it on.

I think it was last March, as I mentioned earlier, that the Mapping Act passed, and the FCC also has had a proceeding underway to try and implement that. They call it the Digital Opportunity Data Collection. And only an administrative lawyer like me could love this. They are on something like their third order to consider how to do that.

So, you know, we are moving in the right direction, as you said, but sometimes it takes a lot of nudges or even shoves in that direction to get things done. And I think there was \$65 million set aside for the FCC in December to fund that mapping program, and industry is ready to go and to get there.

So as we have seen, you know, without the maps and even the well-intentioned Rural Digital Opportunity Fund Auction that just concluded, we can send money to places that are actually served today. Sometimes those maps actually understate coverage. As often if not more often, they overstate coverage. And until we get that right, we are going to be putting money in places that it doesn't need to go and leaving other places unfunded, even though they desperately need that kind of Federal investment.

Ms. Craig. Well, as someone who is new to understanding all this, I look forward

to trying to understand why this is so difficult and what those barriers are and how we can either help eliminate those barriers or get out of the way, depending on the issue.

I would like to just switch slightly now to broadband's impact on our educators. As the wife of an educator and the mother to a son who is in the basement here today, doing distance learning, and who is moving back to hybrid learning here in the next couple of weeks, I know that the stress this has put on our parents, our educators, and our students.

Dr. Anderson, in your testimony, you mentioned the importance of the expansion of the E-rate program. Can you talk a little more about the financial burden that the pandemic has placed on school districts who are trying to connect their students and teachers; and, additionally, how Congress can continue to assist our teachers in deploying these new teaching technologies meant to help make all of this effective for our students?

Dr. Anderson. Absolutely. And thank you for that question. And when we talk about the financial burden, let me take make sure that I speak about specifics. So if you are not in a school -- and I love it that your son is in the basement, but if you don't have a son in the basement and you don't know, reality is, if your child is on free or reduced lunch and you are someone on reduced lunch, that is about 70 cents for breakfast and lunch.

In Topeka, if you wanted service, internet services, we do have a partnership, you could pay \$10. I literally had a parent that emailed one of our principals at Jardine Middle School to let them know that they actually had to give up lunch to pay for service unless something else happened.

And so we were able, with a grant, to be able to help in that case, but that is a burden for families, even the reduced cost. So right now, those costs are really being

shifted to families that have to literally pick, am I going to eat or am I going to actually be able to provide service. So that is one piece in terms of connectivity and just that continued burden.

Now, the other piece is a burden financially, and I will talk about E-rate. Eighty percent of our internet services is through E-rate for Topeka Public Schools. Eighty percent. And so we rely heavily on that within the school system.

Now, I will tell you that it is not just infrastructure. I know my time is out, but let me tell you this. Fifty percent of our families in Topeka right now, while they may have internet -- and this is not unusual for free-lunch families -- they don't have quality internet. They can't get the video, they can't access, they don't have the speed. And so that, again, puts the burden on families, or they just do without, and we are seeing more and more doing without.

Ms. Craig. Thank you so much, Dr. Anderson.

And as I am way out of time, Chairman, I will yield back.

Mr. Doyle. The gentlelady yields back.

Let's see. Mr. Butterfield, I believe you are next, and you are recognized for 5 minutes.

Oh, wait, I see Mr. Walberg just come on the screen, and he is their last speaker. Tim, are you able to hear me?

Yeah. I will recognize you for 5 minutes.

You need to unmute, Tim.

Tim, you are still muted. Can you hear me? If you can, you need to unmute.

Well -- Tim, maybe we will go to Mr. Butterfield and try to come back to you.

Are you unmuted?

Mr. Walberg. Did that work now?

Mr. Doyle. Yeah, yeah. Okay. There you are. You got 5 minutes.

Mr. Walberg. Okay. The fingers are too big to get the job done there, so I appreciate you taking the time with me on this. And I appreciate the fact that this issue has been brought up today. It is an important topic that we would do well to spend significant time on.

If I can bring up my -- why don't you go on to Mr. Butterfield, if I could ask that. I am having trouble getting my questions up.

Mr. Doyle. Okay. We will do that. Thanks, Tim. We will come back to you. Okay. Mr. Butterfield, you are recognized for 5 minutes.

Mr. Butterfield. Thank you very much, Mr. Chairman, and thank you for your leadership. We have been working on this for a very long time, and it is time to get something done in the 117th Congress. Thank you very much. And to our witnesses, thank you as well for your testimony.

Let me start with Mr. Wood. Mr. Wood, could you just talk, please, a little bit more about the EBB Program, the Emergency Broadband Benefit Program, specifically the benefits of consumers being able to choose from a wide variety of broadband providers and service offerings? Help me a little bit with that.

Mr. Wood. Certainly, Congressman, happy to. It is a much larger available amount of money which will help with that flexibility. And so the current Lifeline program, as I mentioned, is usually limited to \$9.25 for a subscriber just to go up to \$50 or \$75 on Tribal lands, and that will allow people to get a more robust plan, wired or wireless, frankly.

We found that to our organization it was important not to try and pick and choose for people what they should pick for themselves, and that they should be able to take that money and apply it to any of those services that they might find best suits their

needs in this very unusual and extraordinary crisis we find ourselves in, and perhaps going forward. I mean, we need to think about making this permanent and doing other things to lower prices people are paying, but this was a great start, in our view, to get people that injection of cash they need now.

Mr. Butterfield. So are you a strong proponent -- you are a strong proponent on flexibility in the EBB Program? Are you supportive of flexibility, and do you think that would be important to making the program successful?

Mr. Wood. Yes, definitely. And I think I should say, you know, I feel like there is a little talking past each other today. We have talked a lot about competition at our organization and about this program as well, and so not trying to remake the broadband market or how we set prices or anything like that with this program or frankly any other; we just want to make sure people have what they need to get those services even as, despite what we have heard, prices are going up at the bottom end and especially recently.

I think the problem with Commissioner Adelstein's testimony versus mine is he was talking about 2017. I am talking about 2020. We saw wireless CPI spike last year, even though wireless has been more competitive for a while, for sure, but once the T-Mobile/Sprint merger went through, prices started to shoot back up. And that is what we have to be concerned about, is that people not be left behind as they are putting more out of their pocket, whatever is happening with the quality adjusted prices for people like me who can already afford the service.

Mr. Butterfield. Let me switch over very briefly to Commissioner Adelstein. It is good to see you again, sir. I wish I could be there with you in person, but thank you for all that you do for the Wireless Infrastructure Association.

In your testimony, you discussed the need for apprenticeship programs to ensure

a diversity pipeline of job-ready workers who would then be instrumental in delivering broadband to those who need it the most. We have talked about that, and I know how strongly you feel about this. How might these apprenticeship programs help us close the digital divide?

Mr. Adelstein. Well, you know, our industry is committed to diversity, and I appreciate all your leadership over the years to do that. I think that, you know, we want our workforce to look like the people that we serve, which is as diverse as the United States is.

And apprenticeships are a great way to get people of color, veterans, disadvantaged communities, women, involved in our industry, to diversify the workforce, and to give them skills where they can have jobs that continue to grow as our industry grows.

You know, apprenticeships are perfect for wireless. That is why Secretary of Labor Walsh has lauded the efforts that we are doing now. We started the first diverse program in the industry, but we need a lot more work. And I think one way we could work together with you, we talked about, is to go to HBCUs and Tribal colleges, to have them teach programs that don't exist in almost any school today about 5G to really get kids --

Mr. Butterfield. What about community colleges?

Mr. Adelstein. Absolutely.

Mr. Butterfield. I know we talked about that, yes.

Mr. Adelstein. Yeah. Community colleges can do the field tech work and get people into, you know, whether they go to CWA or they go to one of the other companies that are doing this kind of work, they could come out fully trained, ready to go, and start, you know, in 5G.

This is the most complex technology yet, the most complex generation. And I think at, you know, HBCUs, you have got Carnegie Mellon cranking out great EEs, but we need a lot more of them. We can't just do it at MIT and Carnegie Mellon. We need them at HBCUs. This would be a great place to get higher skilled workers, more diversified, engineers, you know, RF engineers.

Mr. Butterfield. You mentioned Communication Workers of America. Let me next go to Mr. Shelton. Thank you for all that your union does. We are great friends, and just want to encourage you to keep doing what you guys have been doing over the years.

In your testimony, Mr. Shelton, you say that strengthening the Lifeline program is key to promoting digital equity among communities that have been left behind. My question is, what reforms could we make to the Lifeline program that will address the digital divide?

Mr. Shelton. Well, you know, the Lifeline program needs to be strengthened, and I think we need to talk about how it gets strengthened. But I think one of the things that would probably destroy the Lifeline program is supported -- being funded by a yearly congressional appropriations, which, you know, would leave it to the vagaries of Congress, sorry to say. I think that the Lifeline program is too important to do that, and I think that we would really hurt it or destroy it if that happened. So --

Mr. Butterfield. Lifeline has a lot of support on this committee, I believe, on both sides of the aisle. So thank you so much for your words.

Mr. Chairman, I yield back.

Mr. Doyle. The gentleman's time is expired. I thank the gentleman.

Tim, are you ready?

Mr. Walberg. I hope so. You can tell me. Can you hear me?

Mr. Doyle. We can hear you fine. You are recognized for 5 minutes.

Mr. Walberg. Good. I am glad I can make technology work the second time.

Thank you, Mr. Chairman.

All of us here have recognized the importance of staying connected during the COVID-19 pandemic, and we should take pride in the fact that our networks here in the U.S. were able to withstand the stress test of increased capacity.

I am told that in other parts of the world -- Europe and Australia, for example -- regulators were forced to take extraordinary measures, such as reducing video quality and speeds and even urging consumers to ration their internet usage.

There is no doubt about it, the light-touch regulatory framework that has governed the internet for most of its existence has enabled us to build resilient networks. But there is much more to be done, and the digital divide is more prominent than ever.

Recently, Jennifer, a constituent of mine from Manchester, Michigan, wrote to me that she has to drive her kids to a nearby business parking lot so the children can complete their school assignments. This is unacceptable, and we must continue to work towards permanent broadband solutions that meet the needs of rural and urban America.

As part of the solution, I am pleased to introduce, with my colleagues, commonsense permitting reforms that will remove red tape, will lower deployment costs, and allow companies to put resources towards skilled workforce training and apprenticeship programs to meet the needs of next-generation broadband technology.

In fact, in my district alone, it is estimated that the 5G economy will create over 6.6,000 new jobs and almost 90,000 jobs in the State of Michigan over the next 10 years. This is why I am pleased to introduce, with my Democrat colleague, Representative Clarke, the Telecommunications Skilled Force Act, H.R. 1032.

This bill will help foster greater collaboration between the Federal Government, State workforce boards, higher education, and industry, to accomplish the ultimate goal of reducing unemployment and developing a pipeline of skilled technicians that our country sorely needs to meet our broadband and 5G deployment goals.

Mr. Adelstein, yesterday, I spoke with Dr. Kojo Quartey, president of the Monroe County Community College, about workforce training initiatives. Many players in the telecom industry are collaborating with institutions like Monroe County Community College to address the significant shortage of skilled workers to build out 5G and fiber networks.

Could you elaborate on the role that community and technical colleges can play in helping to deploy advanced wireless and wired broadband services?

Mr. Adelstein. Absolutely. We appreciate the bipartisan leadership of you and Congresswoman Clarke, and we just heard from Congressman Butterfield, about apprenticeships and the role that they can play in making sure that we have, you know, really the latest skills to our workforce. And Monroe County Community College is leading the way.

As a matter of fact, at Monroe County Community College, we are, together with our partners at PCCA, creating the first small-cell technician program at any school in the country. So Michigan is leading the way.

I mean, small cell is our whole new technology. We are going to put as many as a million of these things up. And it gets very complicated, because you are putting more antennas closer to end users, which leads to a congested RF environment, and most field techs never had a course in radio-frequency engineering, you know. Just a one-on-one, someone out there in the field, they know when they are doing.

So we need to, you know, give them -- and these are new people coming into the

industry. We talked to Congressman Butterfield about diversity. You know, we could get diverse people in there, we could get veterans in, women, you know, minorities, and bring them in. People that have been displaced because of the pandemic, train them in wireless technology, especially 5G, because 5G is the most complex G yet, and yet schools across the country aren't teaching it.

We have come up really fast. People don't think about, you know, 10 years ago before the iPhone. It was pretty simple. You put up an antenna and you were done. Now you are talking about small cells. You are talking about very complicated equipment at the top of the tower. You are talking about a lot of software engineering, and earlier we talked about cybersecurity.

I mean, this is a new world of educational needs. And so we need the academic world to keep up with the fast pace of the wireless industry so that we can get people coming out of our schools that are ready to do the job safely, efficiently.

If taxpayers are going to invest money in building it out, let's have people from Monroe County Community College be the ones to build that out with this new degree in small cell engineering.

Mr. Walberg. Super. Amazing stuff.

Do you agree that permitting reforms, such as the proposals recently introduced by Republican members of this subcommittee, will help lower deployment costs for providers so they can focus on dedicated resources toward resource workforce development and apprenticeship programs?

Mr. Adelstein. Yeah, we -- you know, it is all part of the deal. If we are going to do an infrastructure package, I think, you know, major investments are in order to get it out to rural America, as you noted. I mean, there is a need for that. We realize now that broadband is essential.

So if we get all of the elements in place, we get the right siting regime, which you have talked about, you have introduced legislation on that, we get the right spectrum policies, we get the right workforce policies, all three legs of the stool are covered, and we can win the race to 5G.

I think we are positioned to do it. I think we have the smartest workforce, the smartest engineers. We have, you know, some great cooperation with Congress, with the FCC. We have won the race to 4G. Through some partnership and cooperation, I think we can win the race to 5G, and we can make sure that it gets to rural America, so that our entire economy can grow with as much as 4.5 million new jobs.

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

Mr. Walberg. Thank you. I yield back.

Mr. Doyle. Okay. Thank you, Tim.

Now, we have saved the best member for last. It is my pleasure to yield 5 minutes to my good friend and colleague from California, Doris Matsui.

Ms. Matsui. Thank you so much, Mr. Chairman. And you are the best chairman too. I will give that to you also. And thank you to the witnesses for being here today. And this is such an important subject.

First of all, I want to talk about cybersecurity, K-12. While the shift to distant learning has helped keep students safe and engaged, it has also highlighted a growing threat. Cyber attacks targeting schools are increasing in regularity and sophistication.

In December, the FBI Cybersecurity and Infrastructure Security Agency and the Multi-State Information Sharing and Analysis Center issued a joint cybersecurity advisory noting that the significant risk of cyber attacks is expected to continue during the current academic year.

Dr. Anderson, have you heard concerns about this disruption to distance learning

that a cyber attack could cause?

Dr. Anderson. Trying to get this unmuted. Here we go.

First of all, thank you for that question. You know, one of the things Topeka has done most recently is to have a full audit of our security systems. And I would encourage that, again, if we have the appropriate resources to free up, instead of directing them to other matters that could be addressed by E-rate and other items, if we have those resources available, everyone could actually do that.

From our own audit that we had, we really began doing some other matters to further protect our students and our staff as it relates to ensuring that we are not open to the kinds of threats that we would otherwise be open to.

Ms. Matsui. Okay.

Dr. Anderson. That is going to be an ongoing audit as well.

Ms. Matsui. Okay. Thank you.

Last Congress, I introduced the Enhancing K-12 Cybersecurity Act, with Congressman Langevin, to help increase school cybersecurity during this pandemic and beyond. And just like roads and bridges, cybersecurity staff and technology are an important part of modernizing American infrastructure. And that is why this bill would authorize \$400 million in new funding.

And while this public health crisis has revealed preexisting vulnerabilities, this underlying cyber threat facing K-12 schools remains even after we crush the coronavirus.

I want to now talk about workforce. In order for the United States to remain the global leader in communications technologies, we need to ensure that there is a skilled workforce ready to install the fiber towers and antennas that power them. However, there is still a significant shortage of qualified workers that is limiting our progress in closing the digital divide and deploying next-generation communications networks.

That is why I am working on legislation to boost apprenticeships and job training to meet this demand.

Mr. Adelstein, how has limited telecommunication sector workforce funding affected the climate, and what would an additional, let's say, \$75 million in apprenticeship grants allow us to accomplish? Mr. Adelstein?

Mr. Adelstein. It would make a huge difference. Thank you so much. Yeah, I can see, you know, why you are our congressional wireless workforce champion. We gave you an award about a year ago because you have been so committed to workforce development and to funding it properly.

And apprenticeships are the right way to go, as Congressman Walberg was mentioning. You know, even in cybersecurity, it doesn't have to be just traditional jobs of building out in the field, but you can have a cybersecurity apprenticeship. And we can get kids coming out of technical schools and colleges and HBCUs that are learning cybersecurity specifically for 5G. Because, again, it is different.

I mean, this 5G is a whole new world, and if we want to win that race, we have a lot of good people who do the work as, you know, has been noted in testimony here, that know how to do it, but 5G, we want to make sure that the skills keep up with the development of the technology and they grow from the technology.

So if Congress is going to invest, you know, along the lines of Congressman Clyburn's bill, a hundred billion dollars, that will create hundreds of thousands of new jobs to fill. And hopefully, you know, there will be good union jobs, there will be good other companies that are doing that work. Make sure that we have people ready to do that, and spend those congressional dollars efficiently and effectively, and give people from diverse backgrounds careers in our industry that is going to keep on growing. I mean, our industry isn't going away. We are going to keep growing, and these are really

good, well-paying jobs that people can grow in their careers. You know, they can go from being a field tech to being an RF engineer. Your leadership on this has been absolutely essential.

Ms. Matsui. Well, thank you very much for that.

I just want to -- I have a few seconds here. I was joined with Congressman Guthrie in sending a letter to the Department of Labor, requesting Secretary Acosta -- that is the last Congress -- to write us with details on steps the Department is taking to support the development of a qualified telecommunications workforce.

Looking to the future, I believe as an initial step that a 5G and fiber workforce plan must be a foundational strategy for addressing this workforce challenge.

Mr. Adelstein, a quick answer, do you believe a 5G and fiber workforce plan could help coordinate the disparate Federal agencies involved in our telecommunications workforce?

RPTR ZAMORA

EDTR ROSEN

[1:59 p.m.]

Mr. Adelstein. Absolutely. We need to plan ahead for this because it is going to be a big, growing demand, especially if you have a big infrastructure package. I am pleased to say that Secretary Walsh had very positive comments about the importance of wireless apprenticeships in his confirmation hearing and what WIA has been doing through TIRAP. So I think we have all the great pieces together, the great people here in the room right now have done.

Ms. Matsui. Okay. Thank you.

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

Ms. Matsui. Thank you very much. I yield back.

Mr. Doyle. Okay. Now, let's see, I want to request unanimous consent to enter the following into the record, a letter from the Fiber Broadband Association to Chairman Doyle; a letter from U.S. Telecom in support of the Emergency Broadband Benefit program; a statement from the Wireless Internet Providers Association; a statement from Filemon Vela; a letter to Ranking Member Latta -- from Ranking Member Latta to Chairman Pallone and Doyle; a January 27th Industry Association letter; a study from George S. Ford, the Phoenix Center for Advanced Legal and Economic Public Policy; letter from Utilities Technology Council in support of broadband deployment; a January 2018 report from the FCC's Broadband Deployment Advisory Committee. Without objection, so ordered.

[The information follows:]

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

Mr. Doyle. I want to thank the witnesses for their participation in today's hearing. I want to remind members that pursuant to committee rules, that they have 10 business days to submit additional questions for the record to be answered by the witnesses who have appeared. And I would ask the witnesses to respond promptly to any such questions you may receive.

I want to thank everybody that have participated in this hearing. And, at this time, the committee is adjourned.

[Whereupon, at 2:03 p.m., the subcommittee was adjourned.]