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CLOSING THE DIGITAL DIVIDE:
BROADBAND INFRASTRUCTURE SOLUTIONS
TUESDAY, JANUARY 30, 2018
House of Representatives,
Subcommittee on Communications
and Technology,
Committee on Energy and Commerce,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:58 a.m., in Room 2322, Rayburn House Office Building, Hon. Marsha Blackburn [chairman of the subcommittee] presiding.

Present: Representatives Blackburn, Lance, Shimkus, Latta, Guthrie, Olson, Kinzinger, Bilirakis, Johnson, Long, Flores, Brooks, Collins, Cramer, Walters, Costello, Walden (ex officio), Doyle, Welch, Clarke, Loeb sack, Ruiz, Dingell, Rush, Eshoo, Butterfield, Matsui,

McNerney, and Pallone (ex officio).

Also Present: Representative Tonko.

Staff Present: Jon Adame, Policy Coordinator C&T; Ray Baum, Staff Director; Karen Christian, General Counsel; Kelly Collins, Staff Assistant; Robin Colwell, Chief Counsel, Communications & Technology; Adam Fromm, Director of Outreach and Coalitions; Elena Hernandez, Press Secretary; Zach Hunter, Director of Communications; Tim Kurth, Deputy Chief Counsel, Communications & Technology; Lauren McCarty, Counsel, Communications & Technology, Katie McKeogh, Press Assistant; Evan Viau, Legislative Clerk, Communications & Technology; Hamlin Wade, Special Advisor, External Affairs; Everett Winnick, Director of Information Technology; Jacqueline Cohen, Minority Chief Environment Counsel; David Goldman, Minority Chief Counsel, Communications & Technology; Tiffany Guarascio, Minority Deputy Staff Director and Chief Health Advisor; Jerry Leverich, Minority Counsel; Jourdan Lewis, Minority Staff Assistant; Dan Miller, Minority Policy Analyst; Tim Robinson, Minority Chief Counsel; C.J. Young, Minority Press Secretary; and Catherine Zander, Minority Environment Fellow.

Mrs. Blackburn. The Subcommittee on Communications and Technology will now come to order. The chair now recognizes herself for 5 minutes for an opening statement.

Welcome to the subcommittee's first hearing of the new year. And I must say, we are off to a very promising start. We wanted to have a very inclusive hearing today to discuss all of the great ideas from subcommittee members on both of sides of aisle to create broadband infrastructure deployment, and a goal of closing the digital divide.

Whether you agree or disagree with any individual idea, it is so important that we get the conversation started, and we have got a lot to talk about with 25 bills introduced in time to be a part of today's hearing.

I very much appreciate all of the thoughtful proposals and the great work from the staff of both the Republican and the Democrat side, and I look forward to seeing progress as we move through the next few weeks.

These legislative initiatives follow the leadership of President Trump's recent efforts on broadband infrastructure. The bills to be examined in this hearing are targeted at promoting the innovation, cutting red tape and advancing public safety.

It is impossible in my allotted time to highlight each bill, but I do want to call attention to a couple of resolutions expressing the guiding principles on broadband infrastructure that should underpin our efforts.

First, as noted by Vice Chairman Lance, any funds for broadband

in an infrastructure package should go to unserved areas.

Second, as noted by Congressman Latta, the Federal Government should not be picking winners and losers in the marketplace. Any Federal support for broadband infrastructure should be competitively and technologically neutral. If we adhere to these principles, I am confident we can avoid the pitfalls of waste, fraud, inefficiency that marred the previous administration's efforts on broadband infrastructure.

Lastly, and perhaps most important, Congress should be mindful of the significant amounts of private capital spent to support broadband deployment. Since passage of the bipartisan 1996 Telecom Act, the private sector has invested roughly \$1.6 trillion in their networks. This investment includes wireline, wireless and other broadband technologies.

However, this investment experienced a decline that coincided with the FCC's 2015 decision to reclassify the competitive broadband marketplace under Title 2 of the Communications Act, an outdated relic of the 1930's monopoly era.

I want to reiterate our support for Chairman Pai, who corrected this ill-conceived policy and returned us to the light-touch regulatory approach that allowed the digital economy to flourish. This light-touch approach has been the bedrock of communications policy since the Clinton administration.

As I previously stated, history makes clear that countries with the best communications have the highest economic growth. Continuing

our Nation's leadership is, and most important, must remain a bipartisan effort. And I am pleased to note that our effort has broad support from a cross section of the industry.

At this time, I would like to enter into the record several letters of support from American Cable Association, CTIA, NCTA, Competitive Carriers Association, Telecommunications Industry Association, U.S. Chamber of Commerce, Power and Communication Contractors Association, and the Wireless Infrastructure Association.

[The information follows:]

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Mrs. Blackburn. I am pleased to convene this hearing. I look forward to the testimony of our witnesses. And with that, I yield the remainder of my time to the vice chairman of the subcommittee, Mr. Lance.

Mr. Lance. Thank you very much. And first of all, the State of the Union is that the chair is doing a terrific job at this subcommittee.

Since 1996, the wireless and wireline industries have invested over \$1.6 trillion in private capital investment. As we consider how best to promote broadband deployment and Next Generation Networks, it is important that we remember the success of private investment in the past and pursue Federal policies to help and encourage an emphasis on private investment in the future.

As our economy becomes more digitized, we must ensure broadband access to all areas of the country.

It is important that we recognize that any Federal funds for broadband deployment will be finite, and our focus on unserved or underserved areas of the Nation.

I am pleased we are considering the Access Broadband Act, which I have introduced with Congressman Tonko on a bipartisan basis. I commend the chair and the members of the subcommittee on both sides of the aisle on the impressive package of broadband infrastructure bills we are considering today. I look forward to hearing the testimony from the panel.

Madam Chair, I yield back.

Mrs. Blackburn. The gentleman yields back. Mr. Doyle, you are recognized, 5 minutes.

Mr. Doyle. Thank you, Madam Chair for holding this hearing, and thank you to the witnesses for appearing before us today.

I want to start off by saying that I share Chairman Blackburn's and this committee's goal of ensuring that all Americans have access to broadband, and that we need to come together, on a bipartisan basis, to address the challenges that millions of Americans face today from a lack of broadband access, a lack of sufficient speeds, and a lack of affordable option. While it is crucial that nobody gets left behind, I believe we cannot ignore the lack of competition, particularly among wireline providers, and the high cost of service that results in far too many foregoing service.

That being said, I am concerned about the approach we are taking here today. We are considering 25 bills at this hearing. I can't remember a time when this committee held a hearing on so many bills with a single panel of witnesses. We are simply not giving these bills the time and expertise required for the members of this committee to fully consider each of these bills and the ramifications. It would seem to me far more prudent to have hold a series of hearings so that members would have an opportunity to discuss and understand the proposals before us. Rushing this process gives short shrift to many worthwhile ideas for members on both sides of the aisle, and precludes these bills from undergoing a truly deliberative process.

It is my hope that Chairman Blackburn and the committee staff for

the majority can work with us to avoid this unnecessary problem for the future. It is my hope, Madam Chair, that as we move forward on broadband infrastructure legislation, we can do so on a collaborative and bipartisan basis.

That being said, I am concerned that many of the majority's proposals do not actually address the primary issue of getting broadband to rural America, and that there is no business case for that private investment. If we are serious about solving this problem, and we believe that people living in rural areas should have access to reasonably comparable service, we need to appropriate the funds necessary for that buildout.

With that Madam Chair, I would like to yield a minute to my good friend, Ms. Eshoo from California, and then a minute and a half to my good friend, Mr. Welch.

Ms. Eshoo. I thank the ranking member.

Here it is, the second decade of the 21st century, and too many Americans cannot fully participate in modern life, because they do not have a robust broadband connection. It is either unavailable to them, or it is unaffordable, and it is our responsibility to remedy this. That is why I have introduced several bills to clear the way for communities to take control. The Community Broadband Act and the Climb Once Act both ensure that communities are empowered to create their own municipal broadband networks, and streamline pole attachments to improve efficiency and competition.

Where muni broadband is deployed, and where Climb Once policies

are in place, such as Louisville, Kentucky, Nashville, Tennessee, and soon, San Francisco, California, consumers enjoy more access, better service and lower prices. And a recent Harvard study showed that communities with municipal broadband were up to 50 percent lower in cost than private alternatives. And the Community Broadband Act will open the doors for all communities to explore that option. And most especially, both of these bills will really boost and make a difference in rural America.

So I thank the gentleman for yielding time to me, and I yield back to him.

Mr. Doyle. Yes. And I yield the remaining time to Mr. Welch.

Mr. Welch. Thank you. We know about 40 percent of rural America has no broadband. Not slow broadband, no broadband. And there is no economic future for any part of our country if it doesn't have high speed internet. And rural America is being left behind. And the other issue here is that it makes no economic sense for private markets to be expanding in the rural areas. There is no payback. Bottom line: We need funding to make certain that rural broadband is real. And we have a group on this committee that wrote to President Trump, Mr. Cramer, Mr. Kinzinger, Mr. Latta. We want infrastructure funding that is real so that there is broadband in rural America.

Now, absent funding, there is no broadband. It is as simple as that. This is a good hearing on several good bills, but there is nothing before us that is going to address the funding that we need for infrastructure for rural broadband.

In my call to the committee, is that we get real and acknowledge that we have to have money for this buildout, much as our predecessors in Congress provided funding for the buildout of electricity in rural America. No funding, no broadband. It is as simple as that. I yield back.

Mrs. Blackburn. The gentleman yields back.

At this time, Chairman Walden, you are recognized for 5 minutes.

The Chairman. Thank you, Madam Chair, and thanks to all our members, and especially to our witnesses. We got a big panel of witnesses because we have a lot of really important ideas from our members. We have got 25 bills, as you have heard; eight of them from Democrats, the other 17 from Republicans. Obviously, this committee is used to dealing with big, important issues. Sometimes we have had bills that are maybe hundreds of pages long. These are, I think, important policy statements in some cases, streamlining processes in other cases.

The whole concept here is to look at the broad range of ideas that members have brought to this committee for its consideration. And that is why at the subcommittee level, we thought it was important to put as many of these bills as possible up for the public to see, because it is on our agenda and our website, but also for us to begin getting our heads around as we move forward in our legislative process.

So I am delighted to have the bills before us. I am delighted you all are before us. I remember when the last administration did the stimulus bill. It was a whopping \$7 billion they pushed out the

door before they produced the maps to tell us where unserved areas were in America. They only did that after the fact.

So as you know, we are trying to get the other side of that coin and identify where are the really unserved and underserved areas? What kind of reporting mechanisms are poorly being conducted today to show us that? We want NTIA and other organizations to help us figure that out. So when the taxpayer or ratepayers' money is invested, it is not invested to overbuild, it is invested to reach out to the 29 million Americans, 23 million Americans, 39 percent rural areas that don't have access to high speed broadband.

Because you know, at \$7 billion, you have to remember in the market, they are spending close to \$80 billion a year on broadband deployment; \$1.6 trillion between 1996, I think it is, and 2006. But anyway, the big investment here is done on the private sector. There is public money that is spent. Our job is to make sure that public money is spent appropriately and helps close this digital divide.

You want to talk about rural? My district would stretch from the Atlantic to Ohio. It is 69,341 square miles. I have got places in my district where there is one person for every 9 miles of power line. We live this gap every day, and we are trying to close it. And there are multiple ways to close it, but one of the best ways is to make sure that we can expedite the closure of that through reform siting, targeting the financial resources of ratepayers and the government, specifically to those areas that are underserved, and helping move this country forward to connectivity like we have never seen before.

In 2012, we worked in bipartisan manner in this committee to free up spectrum. That is now being built out. We want to move forward with 5G development. Oh, by the way, we are not Venezuela where the government doesn't need to own, operate, control through a command structure that kind of a network.

Now, there may be security issues, and I imagine there are, and we all ought to be apprised of, and I have asked for a briefing, either classified or non, to figure out what those issues are. We want to be smart about having a secure network for the newest innovation. But I don't know that having the government run it is necessarily the best way to go. So we are looking at those issues, too.

This is an exciting time for America. We want to be in the lead. We don't want to wait. We can do a hearing every week for 25 weeks and then move forward, or we can do one hearing with 25 bills, figure out our ideas among ourselves, come together as a committee in a bipartisan way, deal with making America, again, clear on the forefront on development of connectivity, wired and wireless, and the newest innovation and technology, much like we are trying to do with autonomous vehicles. I look at my friend and colleague from Ohio with the Self-Drive Act. We have a lot before us. Let's get it done.

With that, Madam Chair, I yield back.

Mrs. Blackburn. The gentleman yields back. Is there any other member requesting his time? Not seeing anyone --

Mr. Welch. Madam Chair?

Mrs. Blackburn. -- I will -- yes.

Mr. Welch. I just have a request to -- the letter that was signed, sent to the President asking for funds can be submitted into the record.

Mrs. Blackburn. Without objection.

Mr. Welch. Thank you.

[The information follows:]

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Mrs. Blackburn. Yeah. Mr. Pallone, at this time, I yield you 5 minutes.

Mr. Pallone. Thank you, Madam Chair. One year ago, President Trump promised us \$1 trillion infrastructure package that would bring Democrats and Republicans together. And for our part, in May of last year, committee Democrats introduced a comprehensive infrastructure package across all areas of this committee's jurisdiction. Yet here we are, hours from the State of the Union without serious legislation from the President, and instead, we have proposals from House Republicans, that mostly conflict with the plan that was just leaked out of the White House.

In stark contrast, committee Democrats developed a legislative proposal to build the type of modern resilient infrastructure Americans need and deserve. At a time when our Nation's infrastructure is either crumbling or in desperate need of modernization, it is time we make real and significant investments for the future.

The LIFT America Act authorizes \$40 billion for the deployment of secure and resilient broadband. It would also provide over \$22 billion for drinking water infrastructure; over \$17 billion for modern; efficient and resilient energy infrastructure; over \$3 billion for health care infrastructure; and almost \$3 billion for brownfields redevelopment. And the LIFT America Act puts real dollars where they are needed: creating jobs, revitalizing communities, and addressing serious threats to human health and environment. It would address lead in school drinking water, fund medical facilities in Indian country,

reduce carbon emissions, and improve our resilience to the impacts of climate change. And it would do all that without rolling back environmental safeguards, as we are now hearing is a majority component of the President's plan. And when it comes to broadband, we have also put forward additional thoughtful proposals building on the strong foundations of the LIFT America Act. Our bills would ensure we are investing in our infrastructure efficiently, basing our decision on good data and reaching urban, rural and tribal lands.

Over the last couple of weeks, we have seen bipartisan and bicameral agreement that we need dedicated funding to improve access to broadband nationwide. Yet despite this rare consensus, Republicans on this committee have decided to unveil a series of partisan bills that don't address the real problems. These bills are simply window dressing. They unnecessarily pit urban versus rural, industry versus local government, and broadband access versus our environment. And the Republican proposals will not improve broadband development, and may, indeed, hurt workers and the economy in parts of the country.

So I appreciate Republicans scheduling a hearing on broadband deployment and including some Democratic proposals, but I am concerned that the majority is simply trying to jam too much into this one hearing. Seven witnesses discussing 25 bills will not help the American public understand these proposals, let alone the members of this committee.

What is more, we do not even have the relevant agencies here to help us understand how they will interpret the often-conflicting directions that are included in the Republican bills. And we are now

a little over a year into this administration, and all Washington Republicans have to show the American people, in this subcommittee's purview, are a check-the-box hearing to design to paper over this Republicans' failure on infrastructure, the erosion of our privacy rights, and the elimination of net neutrality. And when it comes to governing, this subcommittee, in my opinion, is falling short.

And with that, I yield the balance of my time to Mr. Ruiz.

Mr. Ruiz. Thank you. In today's digital age, access to high speed internet is simply essential. That is why we must do more to bridge the digital divide. Today, the committee is finally beginning to advance the bipartisan commonsense solutions that we were sent here to find. For example, the bipartisan Rural Wireless Access Act introduced by Mr. Loeb sack, would help the FCC provide targeted Federal assistance to deploy wireless service in rural areas with the worst coverage.

In my bill, H.R. 1581, the Tribal Digital Access Act would help close the digital divide in Indian country by codifying and reinforcing the importance of the FCC Universal Service Fund programs that serve tribal communities.

Tribal lands are the most underserved regions in our Nation in terms of broadband access. We have a responsibility to honor our legal and moral obligations, and this commonsense bill helps do just that. I urge the committee to move these bills as quickly as possible along with other bipartisan solutions before us here today.

And I yield back my time to Mr. Pallone.

Mr. Pallone. And I yield back, Madam Chair.

Mrs. Blackburn. The gentleman yields back, and this concludes our member opening statements.

I would like to remind all the members that pursuant to the committee rules, you all have your statements that can be made a part of the record. And we want to thank our witnesses for being here today and for taking their time to testify before the subcommittee.

Today's witnesses will have the opportunity to give opening statements, followed by a round of questions from the members. Our panel for today's hearing will include Mr. Jonathan Spalter, President and CEO of USTelecom; Mr. Brad Gillen, executive VP of CTIA; Mr. Matt Polka, President and CEO of the American Cable Association; Ms. Shirley Bloomfield, CEO of the NTCA-the Rural Broadband Association; Mr. Scott Slesinger, the Legislative Director of the Natural Resources Defense Council; Ms. Joanne Hovis, President of CTC Technology and Energy; and Ms. Elin Swanson Katz, the Connecticut Consumer Counsel.

We appreciate each of you for being here today and for preparing for this committee, submitting your testimony. Today, we will begin with you, Mr. Spalter, for 5 minutes, and we will work right through the dais. You are recognized.

STATEMENTS OF JONATHAN SPALTER, PRESIDENT AND CEO, USTELECOM; BRAD GILLEN, EXECUTIVE VICE PRESIDENT, CTIA; MATTHEW POLKA, PRESIDENT AND CEO, AMERICAN CABLE ASSOCIATION; SHIRLEY BLOOMFIELD, CEO, NTCA-THE RURAL BROADBAND ASSOCIATION; SCOTT SLESINGER, LEGISLATIVE DIRECTOR, NATURAL RESOURCES DEFENSE COUNCIL; JOANNE S. HOVIS, PRESIDENT, CTC TECHNOLOGY AND ENERGY; AND ELIN SWANSON KATZ, CONSUMER COUNSEL, CONNECTICUT CONSUMER COUNSEL

STATEMENT OF JONATHAN SPALTER

Mr. Spalter. Thank you. Chairwoman Blackburn, Ranking Member Doyle, and other distinguished members of the subcommittee, thank you for the opportunity to appear before you. I am Jonathan Spalter, President and CEO of USTelecom, representing our Nation's broadband providers, large and small, urban and rural, and everything in between. All of our members are deeply committed to and are on the front lines of the massive effort underway to connect all Americans to the opportunities and possibilities of broadband. So we greatly appreciate this subcommittee's leadership and the growing momentum we are seeing throughout Congress on both sides of the aisle to aid this effort.

In a few short hours, we know the President will deliver his State of the Union address, and according to the pundits, topics that draw consensus will probably be few and far between. But infrastructure

is one of those rare issues with a powerful centrifugal force pulling us all together. From the administration's statements and actions to Senator's Schumer's blueprint to the 25 bills now making their way through this committee, Washington has caught up to the connected times, and not a moment too soon, acknowledging the pivotal role of information infrastructure, the 1's and 0's of broadband networks to our Nation.

Since the earliest days of our internet as we sought to rise above the honk and screech of dial-up service, expanding and upgrading the Nation's broadband networks has largely been a private sector endeavor. America's broadband providers have invested, as Vice Chairman Lance and as Chairman Walden mentioned, more than \$1.5 trillion over the last two decades, building out U.S. digital infrastructure, and that is more than our Nation spent in public dollars to put a man on the moon, and to build out our interstate highway system combined.

So why must we continue to commit public funds to the cause? Because we risk leaving millions of U.S. households and citizens behind if we do not. We know the private investment model works well in reasonably populous areas, but the business case breaks down when the average \$27,000 per mile of LAN fiber, not to mention the network upgrades and maintenance costs associated with it that are constantly required, must be spread across an handful of users.

Broadband companies, USTelecom members, want to connect everyone from our most populated urban areas to the most remote rural communities in our Nation, but they need a committed partner in these final

unserved, high-cost areas. And that partner should be all of us, including government.

So what specifically does that mean? First, new and direct public funding is needed to supplement private investment in connecting the final frontier. Second, care must be taken to ensure broadband funding is not merely an option on a vast spending menu, but has its own specific allocation. A position now being championed by the bipartisan cochairs of the rural broadband caucus. And thank you very much for that.

Third, public dollars should prioritize connecting unserved areas using proven mechanisms, chief among them, universal service fund, to move quickly and with accountability while minimizing administrative costs to U.S. taxpayers. Fourth, connectivity also should be factored into physical infrastructure projects. Adding more of our bridges and roads to broadband connectivity makes them smarter, safer, more cost effective, and extends their useful life.

Last, a stable streamlined regulatory environment can accelerate and extend the impact of both public and private dollars.

Earlier this month, the President signed an executive order to expedite Federal permitting so broadband companies can build infrastructure in rural areas faster. Continuing these efforts reduces deployment costs, stretching limited resources further. When it comes to broadband, this grand aspiration of a truly connected Nation truly is within striking distance. Working together, we have the means and the opportunity to relegate this challenge to the history books.

All that remains is a question of will.

For that reason, I really greatly appreciate the subcommittee's interest today and your ongoing leadership. The Nation's broadband provider stands ready to link arms with the Nation's policy leaders and anyone else who wants to help step up to finish the job. Thank you very much.

[The prepared statement of Mr. Spalter follows:]

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Mrs. Blackburn. The gentleman yields back. Mr. Gillen, 5 minutes.

STATEMENT OF BRAD GILLEN

Mr. Gillen. Good morning. Thank you, Chairman Blackburn, Ranking Member Doyle, and the subcommittee for including wireless as part of this conversation.

The sheer number of bills and proposals before us underscores the scope of the challenges we face together, as well as the opportunities we have working together to solve them. For us, we really see the infrastructure as the opportunity to create jobs, drive economic growth and expand opportunities for all Americans for better broadband to more Americans.

The subcommittee has really two core challenges before you. The first is the digital divide. From Vermont to eastern Oregon, there are too many Americans today, despite billions invested and years of work that do not have access to the wired and wireless broadband solutions that all of us rely on every day. We look forward to working with this subcommittee to shrink and address that gap and drive both wired and wireless broadband deeper in America.

Our second challenge is one of global competitiveness. We lead the world today in 4G wireless services. Just last month, the International Standards body set the rules for the 5th generation of wireless, or 5G, and the race is now on. Other countries have seen

what leadership has meant here, and they want to take that a mantle from us. China and others are investing billions and accelerating their deployment schedules with over 100 active trials ongoing today.

In the U.S., we like to win, too, and we are ready to invest as well. We have our own trials ongoing. We are investing in the technology we think we are going to need to win, and ultimately, we are ready to invest approximately \$275 billion in private capital over the next 10 years to build out those networks.

So we don't need Federal funding from this committee to solve the 5G problem. We do need help to modernize our approach to siting. Because these networks will be different because we are going to build them with these, small cells, hundreds of thousands of these attached to street lights and to sides of buildings. And the challenge we face today is that too often, a device that takes 1 to 2 hours to install, can take 1 to 2 years to get approved.

The challenge we face is that because at every level of government, local, State and Federal, we treat these like a 275-foot tower along the side of a highway. In short, our new networks need new rules, and that is why we appreciate this committee's focus on this issue, particularly today, focusing on the Federal impediments we face. Representative Shimkus is focusing on how do we modernize our Federal regulation to expedite deployment of things like this and other new infrastructure. Congresswoman Brooks and Representative Matsui, how do we marshal Federal assets to drive broadband deeper into rural America by better utilizing Federal lands.

The other thing for this committee, we would hope for in future sessions to talk about, is this committee's leadership and role with respect to State and local siting as well. It is the committee's leadership in 1992, 1996, and most recently in 2012, to give guardrails and guidance to local communities as the how siting can and should work to ensure we have deployment of wireless and broadband. And just like Federal rules need to be updated, so does that Federal guidance. And when we get those rules right, 5G will be transformative to all of your communities. It will unlock remote surgery, self-driving cars, and the Internet of Things. It is going to create jobs. It is going to create 2800 jobs in downtown Pittsburgh, 3 million across the country. It is going to build communities.

Clarksville, Tennessee, will see over \$200 million added to its economy, \$500 billion nationwide. That is why we are excited about winning the 5G race. That is why we think it is so important. And we also need to make sure in doing that, we also make sure that all Americans have access to broadband at the same time. So we think with bold bipartisan leadership by this Congress, this committee, we can and need to do both.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Gillen follows:]

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Mrs. Blackburn. Thank you so much. At this time, Mr. Polka, 5 minutes.

STATEMENT OF MATTHEW M. POLKA

Mr. Polka. Thank you, Chairman. As you know, for the last year, ACA and its members have been discussing with members on both sides of the aisle, the administration, and the FCC, about how to effectively and efficiently close the digital divide. ACA appreciates and supports the subcommittee's commitment to bring broadband to all Americans.

Over the past decade, because of many hundreds of billions of dollars of private investment by ACA members and others, and the FCC's reforms to its universal service programs, we are closing in on this goal. Today, more than 100 million homes have access to broadband speeds greater than 100 megabits per second. And only 5.3 million remain with speeds less than 10 megabits. Not only have ACA members been investing billions to upgrade and expand their networks, but also many with their own money have deployed 840 thousand homes that would otherwise be eligible for FCC's support.

We should recognize and build upon those successes. We know, however, there was much more to do, but from my travels visiting with ACA members across the country, I can tell you that ACA members are committed to serving the Nation's most challenging corners. They believe we can close the digital divide, and they believe we can keep

it shut by following four principles: First, encourage private investment; second, remove barriers to deployment; third, before spending Federal funds, let us take account of successes; fourth, provide broadband subsidies efficiently.

Let me expand. First, let us encourage private investment. Fixed and mobile broadband providers today are spending \$75 billion annually to upgrade and expand broadband networks. This will continue for the foreseeable future, and should be encouraged by avoiding governmental action that would hinder these investments. For example, it would not be helpful if government funds were used to overbuild unsubsidized providers or measures were adopted that were not competitively and technologically neutral favoring one class of providers or an industry sector over others.

Second, let us remove barriers to deployment. Building high-performance broadband networks is costly, and you will get the most bang -- and note this -- without spending a buck by lowering those costs.

Here are some steps to take: Facilitate access to utility poles by removing impediments, such as fixing the make-ready process; apply the Federal Pole Attachment Law to electric cooperatives, and require cost-based nondiscriminatory rights-of-ways fees, and prohibit charging such fees on a per service basis; third, don't neglect successes before determining where to spend Federal money and how much is needed. ACA calculates that by removing barriers, the cost of network deployment will be reduced such that 1.2 million homes would

become served with fiber infrastructure through private investment alone. Moreover, we believe that the new tax law will enable more than 400,000 unserved homes being served.

Finally, the Connect America Programs will reduce the number of homes receiving less than 10 megabits to 2 million by 2020.

Fourth, let us provide broadband subsidies efficiently. Through its Connect America Programs, the FCC has given us an effective roadmap for awarding government support more efficiently by targeting support only to unserved areas and awarding support using a reverse option.

With any new money, let us employ these two principles and also limit the amount of Federal support to account for State subsidies unless any additional broadband performance is required.

The four principles that I set forth will maximize consumer welfare, increase economic growth, make communities throughout the country thrive, and it will enable you to bridge the digital divide sooner and with more sustainable results.

ACA and its members stand ready to assist you in every way. Thank you.

[The prepared statement of Mr. Polka follows:]

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Mrs. Blackburn. Ms. Bloomfield, you are recognized for 5 minutes.

STATEMENT OF SHIRLEY BLOOMFIELD

Ms. Bloomfield. Thank you, Chairman Blackburn, Ranking Member Doyle, members of this committee, I can't tell you how excited we are that you are actually talking about this incredibly important topic of broadband and how we ensure all Americans actually have access. I am Shirley Bloomfield. I am the CEO of NTCA-The Rural Broadband Association, and we represent approximately 850 small businesses who are providing broadband across this country in 46 States.

For decades, these small community-based telecommunication providers like my membership have really led the charge in terms of connecting rural Americans with the rest of the world by deploying advanced networks that respond to the need and the demand for cutting edge, innovative technology. These companies serve areas where the average density is about seven customers per square mile, and we actually have a rough density, as Chairman Walden had referenced that, but that is essentially in the entire average population density of the State of Montana.

To emphasize the work that these hometown providers have done, a recent survey found that 87 percent of NTCA members' customers can actually purchase broadband at 10 megabits or higher, and 67 percent can access speeds above 25 megs. But the job is simply far from done.

With the statistics I noted, they are good news, but unfortunately, they also still tell the story of a lot of rural consumers that need access. And the story is still bleaker for those who are not served by NTCA member companies.

Finally, it is not as if the job is done once the network is actually built. There is a lot of ongoing work to ensure that quality service is still available in very rural areas. So the question remains, how do we overcome these challenges of deploying and sustaining rural broadband? In the first instance, you actually need a business case to even consider deploying rural broadband. Questions relating to permitting and regulation are very important, of course, but if you can't afford to build or sustain a network, these questions never even come into play. The economics of broadband are very difficult, if not impossible, in many rural markets. The rates that rural consumers actually pay is rarely sufficient to cover the actual cost of operating in these rural areas, much less the large capital expenditures required to deploy the broadband.

I wish I had an easier answer for you but, frankly, the infrastructure is expensive and you simply have fewer consumers spread across to actually cover the costs. And that is why the ongoing support of the High Cost Universal Fund Program overseen by the FCC is so critical in making a business case for rural broadband.

A bipartisan letter last year, led by many on this subcommittee, was signed by 101 Members of Congress in the House encouraging the FCC to ensure sufficient resources are available to enable the USF

mechanisms to work as they are designed. This incredible show of support by Congress was greatly appreciated by NTCA and our members, and reaffirms the fact that the USF high-cost program is the foundation for rural broadband in America.

If the foundation is strong, we can then focus on the next most significant challenge, and that is the barriers to deployment itself.

And this is where the questions and the legislation presented in today's hearing become so very important, especially with the potential infrastructure package hopefully on the horizon, and Chairman Blackburn, I had the privilege of being with you in Tennessee when the President signed the memorandum and executive order on broadband. It is encouraging that the members of this committee are considering measures that are aimed at some of the very unique challenges presented by rural broadband.

Many of your initiatives also mirror some of the work that was done on some of the FCC BDAC working groups that I had the privilege to serving on, addressing permitting reform, disaster relief, broadband mapping, and supporting innovation on a technology-neutral basis must be the central part of a coordinated and comprehensive effort to help address challenges across the broadband landscape.

Smaller providers, like those in NTCA's membership, have neither the staff nor the resources to navigate complex Federal agency structures for companies and cooperatives who have an average of about 25 employees per system. That time and money that is spent on navigating the effort relates to money and time that is not spent on

deploying broadband.

This committee's desire to obtain better mapping data is also much needed and greatly appreciated. We need accurate, granular data. We need transparency on availability to ensure the government resources are used to support broadband build-outs that are deployed as efficiently as possible. And we also welcome the subcommittee's consideration of innovative ideas to support and enable broadband. Today's small rural broadband providers are using all communication technologies available to them to provide world class service to their members and to their customers.

Just as we transition from telephone-focused to broadband-focused companies, we need flexibility and access to additional support and resources to deploy new technologies and address the remaining challenges.

In closing, small rural broadband providers, like those in my membership, have made great strides in reducing the digital divide in rural America, but the job is far from done. With millions of rural Americans still without access to robust, high speed broadband and millions more served only through the help of the FCC's Universal Service Programs, we must continue to work diligently to ensure that no child is left behind without internet access for homework, no rural area is left behind without access to telehealth capabilities, no farmer is left without precision agriculture tools, and no main street business is prevented from participating in a global economy.

On behalf of NTCA-The Rural Broadband Association, your

leadership and your commitment to this issue in identifying these challenges and looking for creative solutions is so greatly appreciated.

I appreciate the invitation to be here with you, and I am looking forward to engaging with all of you further.

[The prepared statement of Ms. Bloomfield follows:]

***** INSERT 1-5 *****

Mrs. Blackburn. The gentlelady yields back. Mr. Slesinger, you are recognized.

STATEMENT OF SCOTT SLESINGER

Mr. Slesinger. Thank you, Chairman Blackburn, and Mr. Doyle. Thank you for the opportunity to testify today. My name is Scott Slesinger. I am the legislative director of the Natural Resources Defense Council. I will concentrate my oral remarks on the impact of Federal environmental reviews on new infrastructures, including broadband.

The poor State of our infrastructure is not because of Federal environmental reviews or permitting. Our problem is cash. The solution is a political will to appropriate the needed dollars.

Numerous studies from GAO and CRS show that it is not Federal rules that are causing delays. The number one problem is lack of funding, followed by State and local laws, citizen opposition to projects, and zoning restrictions. Mr. Chairman, broadband deployment is not delayed by environmental impact statements. In fact, no broadband project was ever required to do one by the FCC. Drinking water projects suffer from a lack of financing, not environmental reviews. Scapegoating NEPA may be a cheap applause line, but we cannot streamline our way to universal broadband access, new tunnels under the Hudson, or bridges over the Ohio River, or new sewer systems.

I would like the committee to appreciate why NEPA is so important.

In many cases, NEPA gives your constituents their only opportunity to voice concerns about a Federal project's impact on their community. Because informed public engagement often produces ideas, information, and solutions that the government might otherwise overlook, NEPA leads to better outcomes for everyone. The NEPA processes save money, time, lives, historic sites, endangered species, and public lands, while encouraging compromise and resulting in better projects with more public support. Most recommendations to cripple the process try to limit public notice and comments and are undemocratic.

The first time a rancher learns of a pipeline going through his property shouldn't be when an attorney shows up at his door with an offer to purchase under threat of taking the property by eminent domain. Because many congressional committees have tried to assert jurisdiction over NEPA, there has been numerous and contradictory changes in the NEPA process made by Congress in 2005, 2012, and 2015.

Various provisions have shortened public comment periods, changed the statute of limitations to four different time periods, limited access to courts, and set up arbitrary deadlines for permit approvals.

DOT can now find other agencies that miss deadlines, a provision that makes as much sense as debtor's prison. The FAST Act, based in large part by the Rapid Act promoted by Mr. Shimkus, was passed in 2015, made dramatic changes in the process. The law created a new interagency administrative apparatus called the Federal Infrastructure Permitting Improvement Steering Council, which is

largely controlled by OMB, to set deadlines, push through resolution of interagency disputes, and allocate funds and personal resources to support the overall decisionmaking process.

President Trump's first infrastructure permitting executive order -- as the chief sponsor, Senator Portman wrote in a letter to the President -- contradicted authorities and responsibilities already in FAST-41 to the consternation of project sponsors that were already participating in the permitting board's existing process, and this slowed projects. Even the business roundtable has said that we should be looking at existing law, not layer on new laws to the NEPA process.

Despite enactment of these laws, the Congress has many bills go to the House floor that would further amend the NEPA process without regard for their impact on process changes already made. Rather than simplifying current processes, these bills would create new conflicts, sow confusion and delay project reviews. The recent draft infrastructure proposal from the White House should not be taken serious. The leaked provisions would repeal critical clean air, clean water, and endangered species protections. It would also set up a process guaranteed to neuter public input into Federal actions, such as giving agency heads free rein to virtually exempt any project from NEPA free from court challenge.

To fix our infrastructure, we don't need to give the Interior Secretary carte blanche to build pipelines through every National Park. We do need NEPA to help build a modern infrastructure system that is

resilient, energy-efficient, and takes into account the impacts of a changing climate in the needs of the 21st century. We can do this smarter and better by using, not crippling, the environmental review process.

Thank you for the opportunity to testify, NRDC looks forward to working with the committee on bold and effective solutions to our Nation's infrastructure challenges. Thank you.

[The prepared statement of Mr. Slesinger follows:]

***** INSERT 1-6 *****

Mrs. Blackburn. The gentleman yields back.

Ms. Hovis, 5 minutes.

STATEMENT OF JOANNE S. HOVIS

Ms. Hovis. Chairman Blackburn, Ranking Member Doyle, members of the subcommittee, thank you for your commitment to bridging the digital divide. I am Joanne Hovis. I am President of CTC Technology and Energy, a communications engineering and planning consultancy. I am also CEO of the Coalition for Local Internet Choice, a coalition of public and private entities that believe solving our Nation's broadband challenges requires a full range of options, including locally-driven efforts and public-private collaboration.

As we look forward to Super Bowl Sunday, I suggest today that our country's drive to bridge the digital divide is a critical test of our ability to develop a winning strategy on one of the most important playing fields of the 21st century. Let me ask a couple questions in this regard. First, do we actually have a winning strategy?

Much of the current discussion here in Washington seems premised on the idea that a winning broadband strategy will smash so-called barriers such as environmental processes, local process and cost of access to public facilities. In my experience, the premise is wrong. As multiple members of this panel have said, the fundamental reason we do not seek comprehensive broadband deployment throughout the United States is that areas with high infrastructure costs per user,

particularly rural areas, fail to attract private capital. To solve this, all levels of government can take steps to improve the economics of broadband deployment in areas where investment has been insufficient. These include not only rural communities, but also underserved urban area, such as small business locations in cities and suburbs, and low-income areas where adoption is low and incumbents see no return that justifies network upgrades. Particular attention and support must be directed to those areas. Without such efforts, private dollars will continue to flow primarily to the most profitable areas.

A focused game plan would involve these plays. First, support public-private partnerships that ease the economic challenges in constructing rural, urban, and tribal infrastructure; second, incent local efforts to build communications infrastructure, infrastructure that private internet service providers can use by making bonding and other financing strategies more feasible, potentially through reduced interest payments or expanded use of tax exempt bonds or expansion of the new market tax credit programs; empower local governments to pursue broadband solutions of all types, including use of public assets to attract and shape private investment patterns so as to leverage taxpayer-funded property and to create competitive dynamics that attract incumbent investment; require all entities that benefit from public subsidy, including assets to public assets, to make enforceable commitments to build in areas that are historically unserved or underserved; and maximize the benefits of competition by requiring that all Federal subsidy programs are offered on a competitive and neutral

basis for bid by any qualified entity.

The current strategy doesn't squarely face the challenge. Many current efforts at the FCC and in this body are focused on reducing the private sector's cost of doing business, such as by blanket removal of local process and by forcing local communities to subsidize carrier access to public property. All of this simply makes more profitable the already profitable areas of the country rather than changing the economics of broadband deployment in areas where there is no return on investment.

And if these strategies are premised on the idea that removing so-called barriers will lead to rural deployment of 5G, it is critical to know that no credible engineer, market analyst, or investor, is claiming that 5G deployment is planned or technically appropriate for rural areas. This is because 5G is a wireless technology for very fast communications over very short distances and is, thus, not well-suited to low density areas.

If the goal is to attract private capital to rural communities, making wireless deployment more profitable and high-return metropolitan markets is exactly the wrong way to do it. Rather, this approach is like moving the ball a few inches and calling it a touchdown.

My second question is, Do we have the right players on the field? Let me suggest that local governments have been most valuable players in creating and incenting broadband deployment for years, and that it is counterproductive to vilify localities based on the evidence-free assertion that local efforts and local processes restrict or deter

private investment. The assumption that the Federal Government is more motivated to enable deployment of broadband, ignores the immediacy of the digital divide for local officials. And the assumption that the Federal Government is more competent to develop strategies ignores the experience of the past decade, which demonstrates across a wide range of public-private collaborations that local governments, given the opportunity, will apply creativity, local resources, physical assets and diligence to try to solve broadband problems.

My testimony includes examples of a wide range of different public-private collaborations that are in existence or in development in communities ranging from West Virginia to Wyoming to New York City, to the coastal cities on the West Coast.

Let me say, finally, that preempting local efforts and authority is not a winning strategy, as it simply removes from the playing field one of the most important players.

My thanks for your consideration.

[The prepared statement of Ms. Hovis follows:]

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Mrs. Blackburn. The gentlelady yields back. Ms. Swanson Katz, you are recognized for 5 minutes.

STATEMENT OF ELIN SWANSON KATZ

Ms. Swanson Katz. Good morning, Chairman Blackburn.

Mrs. Blackburn. Microphone.

Ms. Swanson Katz. Yes. Good morning, Chairman Blackburn, Ranking Member Doyle, and distinguished members of the committee. I am the consumer counsel from the State of Connecticut -- go Patriots -- and which -- you brought it up. I am head of a small, independent, nonpartisan State agency that advocates for consumers on issues relating to electricity, natural gas, water and telecommunication.

In that capacity, I serve as Governor Malloy's designee to the Intergovernmental Advisory Committee to the FCC, in which I serve as chairman. I am also President of the National Association of State Utility Consumer Advocates, an organization of 44 consumer advocates across the country, including the District of Columbia. And in that capacity, I serve on the FCC's Joint Board for Universal Service. So my interest in this and my time spent on this is deep.

So I thank you for your interest and your attention to this important issue of the digital divide. As you know, there are, as we have heard, there are many, many Americans who -- and particularly small businesses -- that do not have access to broadband.

According to Pew Research Center, that is about 25 percent of Americans do not have a broadband connection in their home. That number rises to an astonishing 39 percent in rural America. And there is approximately 5 million homes with school-aged children which are equal over 17 percent of those homes with school-aged children do not have a broadband connection. And it is particularly egregious in low income households.

In Connecticut, we wanted to learn more about the digital divide, particularly as it impacts children. And you may be surprised by that, since Connecticut is generally seen as an affluent State with generally-sound broadband infrastructure. However, like every State, we have unserved and underserved communities. We, therefore, commissioned a report with the Hartford-based group called Strategic Outreach Services to assess the affordability of an accessibility of broadband for students in the north end of Hartford. That is a predominantly ethnic minority community with predominantly low income but, nonetheless, an area known for its community pride and commitment to its schools.

And we worked in that partnership with Janice Flemming-Butler, who is the president of that organization, and founder. And I mention her, because she is in the room today, which is a testimony to her commitment. And for those of you who are interested, I urge you to talk with her.

So we met in that capacity. We met with educators and parents and students. We met with church leaders. We met with neighborhood

watch site organizations. We met with city leaders. We talked to literally hundreds of people in the North End of Hartford. And what we learned is that many students in the North End suffer from the Homework Gap, that area that we define as generally between 6:00 to 10:00 p.m. when students need access to connection to do their homework.

And what we heard is that many students take extreme measures, because they don't have a broadband access at home, either for affordable or because of access. And we heard stories that students would go to fast food restaurants to try to do their homework. And in fact, one of the local restaurants changed its policy so you could no longer sit there that long, seemingly in response.

We also learned that students venture out at night into all kinds of weather trying to catch WiFi from other buildings. People were upset that the public schools shut down the WiFi after hours, so students can sit nearby, although we learned they did it because of safety concerns.

We heard from parents who recognized that broadband was important to their children, but simply found it unaffordable or unavailable at any price, or the back balances prevented renewals. We saw long lines of students queued up at the public libraries to use their computers, although when they closed at 6:00, they had nowhere to go. And in fact, since we have done the reports, some of those branches have closed.

There is also frustration expressed that policymakers saw a smart phone as a substitute, but that is not an adequate substitute. It is very expensive to do your homework on a smart phone, and it is very

hard to type a paper. So there is simply not an adequate substitute.

So what troubled me as a consumer advocate, as a former teacher, as a parent, and as a human being is that if it is happening in Connecticut, it is happening everywhere. And no child should have to sit in Dunkin' Donuts or McDonald's to do their homework, or sit outside in the dark trying to finish a project. And the implications for our education system and the quality of education that we deliver to children in low income urban communities, and rural communities, is profound.

We would never say to students whose parents can't afford textbooks, I am sorry, you don't get to learn history, or math, or English. Or if you don't live near a library, I am sorry, you don't have access. But that is, in effect, what we are saying to these children, to the entire generations by failing to address the Homework Gap in so many areas.

So my ask for you today is that you consider the urban communities as well as the rural communities. We are working with both in Connecticut. And it is not just this question of adoption. It is not just simply that they can't afford it, it is also a question of quality. And that makes a difference as well.

So thank you very much.

[The statement of Ms. Swanson Katz follows:]

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Mrs. Blackburn. The gentlelady yields back. And Ms. Swanson Katz, would you please recognize your guest again?

Ms. Swanson Katz. Yes, Ms. Janice Flemming-Butler.

Mrs. Blackburn. Janice, would you please stand?

Thank you for your good work.

By way of correcting some statements that were made earlier, and for the information of those with us today, I wanted to reiterate the subcommittee hearing activities relative to infrastructure that have taken place.

You had November 16th, a hearing on The Race to 5G; October 25th, FCC Oversight Hearing; July 25th, we had the FCC Reauthorization Legislative hearing; June 21st, the hearing on Defining and Mapping Broadband Coverage; and actually, we had some on the committee that felt that one was redundant because we had already had a March 21st hearing. An April 5th, Fueling the Wireless Economy hearing; March 29th, Realizing Nationwide NG911; March 21st, hearing with the discussion draft, some of those bills were now in bill form; and Ms. Eshoo's Dig Once bill, which has bipartisan support was a part of that; and then February 2, Reauthorization of the NTIA.

So it is time for us to stop talking and get bills in front of us and pass them and get to work. And I am going to yield first to Chairman Walden for questions.

RPTR TELL

EDTR ZAMORA

[11:00 a.m.]

The Chairman. I thank the gentlelady for her leadership on these issues but also for yielding, as I have another commitment I have to go to.

I just want to ask a couple of questions and, first of all, thank you all for your testimony and your shared commitment with us to get broadband out to all Americans: students, seniors, everybody in between.

Mr. Slesinger, in your testimony, I was intrigued, on page 3 you said, "Broadband deployment is not delayed by environmental impact statements. In fact, no broadband project was ever required to do one by the Federal Communications Commission."

You are not really saying no broadband deployment project has ever been required to do an EIS, are you?

Mr. Slesinger. That is correct. Many have had to do environmental assessments and some may have done -- gotten --

The Chairman. Yes. So --

Mr. Slesinger. Excuse me. There is -- of the 50,000 Federal activities a year, there is only about a couple hundred EISs, and none of the ones that we could find in the FCC has never required a full environmental impact statement.

The Chairman. Yes. Reclaiming my time, because I think it is

actually required through other agencies. I mean, again, 55 percent of my district is Federal land, so I am somewhat familiar with this, and as I said, it is 69,341 square miles. By the way, Connecticut is about 5,544, not that we are counting. New Jersey, 8,722, Mr. Pallone.

But the point is, I mean, I run into this all the time on siting. You know, we are trying to get broadband out there. We are trying to get three-phase power into -- some of our communities have waited 3 years to get an EIS to do four power poles on BLM land, and so I think there is an issue here with siting. And I think -- I just think there is more there than what you represent in your testimony.

I want to go to Mr. Gillen. Thank you for your testimony as well. As you know, we have seen these situations with various Federal laws and State laws that have delayed. I know Mr. Shimkus will probably speak to this because it was in his district, I guess. 2016, a company was looking to expand by adding a 14-by-10-foot area of land adjacent to its existing facility in a parking lot. The study they were required to do took 5 months to complete and cost thousands of dollars.

Have you or Mr. Polka or anybody else on the panel who actually does deployment, have you run -- tell us about the things you have run into. Tell us what you like about these bills. You have referenced some in the testimony, but your member companies and all, what are you seeing? Is this a problem or isn't it? Because on one end of the panel we hear it is not a problem. On the other end we hear it is a problem. I sort of live in a district like mine firsthand. So, Mr. Gillen, do you want to start off?

Mr. Gillen. Thank you, Mr. Chairman. Your example is a good one. It is something we face every day throughout the country. Carriers are running into challenges that, particularly when we start talking about things like this, that to install 23 of these in a parking lot costs \$173,000 in environmental and historic reviews and takes many months. We don't think that makes any sense. There are times where it is appropriate to have those types of things --

The Chairman. Right.

Mr. Gillen. -- but streamlining that Representative Shimkus and others are pursuing is the type of things that will actually expedite deployment now.

The Chairman. Could you say that again, that was in a parking lot?

Mr. Gillen. In a parking lot at NRG Stadium for the Super Bowl last year.

The Chairman. And it cost how much?

Mr. Gillen. \$173,000 to site 23 of these.

The Chairman. Wow.

Mr. Polka, do your folks ever run into any siting problems that we could address?

Mr. Polka. Absolutely, Mr. Chairman. I have visited with members all across the country. Our members literally build into their budgets time and money because of how long it takes for attachments to poles to produce broadband to be approved and permitted and to move forward. Thousands and thousands of dollars where application fees

are made for makeready, then additional engineering studies are made. Further requests for engineering studies, duplicating the process. The fact that a member company has to build in at least 6 months of time, at least, before they can move forward on a broadband deployment is actually causing broadband deployment not to be deployed in these most important areas.

The Chairman. Ms. Bloomfield?

Ms. Bloomfield. I would love to jump in on that as well. Just to cite a couple of examples, I have a company up in South Dakota that had a year-long delay because of needing to get some U.S. Forest Service permitting through. You are in South Dakota. Your build time is very short, as Congressman Cramer knows. You have got, you know, periods of time where you miss that opportunity.

The Chairman. Right.

Ms. Bloomfield. In Wyoming, we have had a State BLM office that actually wound up treating the broadband build like it was a pipeline. So they actually had to get bonding to go ahead and do the construction when it was really just a broadband conduit. So, absolutely, there are instances. And to my fellow panelist's point, time and money is needed to be built into the process.

The Chairman. I know my time is about expired. I would argue, I am probably one of the few if only chairs of this committee that has ever actually been through a tower siting process and antenna siting process. I was in the radio business for 20-plus years. And while I never climbed a tower, I was involved in a lot of that. So I share

your pain.

And I don't think any of your companies want to do environmental damage. I think it is a complete false argument that somehow we are going to run roughshod over the environment. I reject that. That is not the point. The point is that we can streamline the discussion process, the siting process in the Federal Government that is an analog process in a digital environment.

With that, Madam Chair, I yield back.

Mrs. Blackburn. The gentleman yields back.

Mr. Doyle, 5 minutes.

Mr. Doyle. Thank you, Madam Chair.

I want to start by recognizing a great Pittsburgher on the panel and great CEO of the American Cable Association, Matt Polka. Matt, welcome. I think Matt will agree with me, most of us from Pittsburgh rarely root for the Philadelphia Eagles, but when they are playing the New England Patriots, we are all Eagles fans. I hope they win.

Mr. Polka. Don't forget the Steagles too, back in World War II.

Mr. Doyle. That is right. Exactly.

So, Mr. Gillen, I want to make sure I just understood. You were holding that box up and said you don't need any money from the Federal Government, just make it easier to streamline, you know, deployment of that. And you are not suggesting that you are going to -- your member companies would take care of the deployment in unserved areas in all of rural America or are you talking -- are those little white boxes going to solve our problem in rural America if we just streamline the

process?

Mr. Gillen. We think there are two separate and important problems. This helps us drive 5G. It certainly will be in dense areas in cities and towns, but, no, it won't solve the problem for unserved --

Mr. Doyle. Okay. I just wanted to clarify that, that this is not a solution to rural broadband.

And, secondly, are some of the impediments to deployment State and local issues or are they all Federal issues?

Mr. Gillen. Absolutely it is a mix of both.

Mr. Doyle. It is a mix of both. Okay. Thank you.

I want to ask Ms. Hovis, in areas that are unserved or underserved we see municipalities, either through public-private partnerships or even on their own, provide broadband to their communities. And in some cases when a municipality offers broadband as an alternative to an incumbent that may be there, we have seen the incumbent actually lower prices. It has been better for consumers. But we are also seeing a number of States are passing laws to prevent municipalities from providing broadband or engaging in a public-private partnership. What effect do you think these State laws are having on broadband deployment?

Ms. Hovis. I think it is detrimental to deployment because, as I said earlier, it takes important players off the field, but it also stops a competitive dynamic from emerging. The cities and towns and communities where we have the most robust broadband and the most robust competition are places where some kind of competition has come into that market and incumbents have reacted to that competition and invest

as a result.

I will say also that for smaller and rural communities that are unserved and underserved, sometimes the only entity that is willing to step up and invest is a community either by itself or through a public-private partnership, and I hate to think that we here in Washington would try to interfere with local collaborations and processes when we are seeing, frankly, a thousand collaborative processes bloom around the country.

Mr. Doyle. Thank you.

Let me ask everyone on the panel, and this is just a yes-or-no question, does anyone here on the panel believe that we can successfully deploy unserved areas in rural America or underserved areas without some sort of Federal investment, that it can just be done through streamlining regulation and making deployment easy, which I think is important too and we should be doing that. But is there anyone here that thinks that we don't need to appropriate any money to solve this problem? Just yes or no.

Mr. Spalter. No. We need direct funding by a universal service funding mechanism.

Mr. Doyle. Thank you.

Mr. Polka. Agreed.

Mr. Doyle. Mr. Gillen.

Mr. Gillen. Funding would be helpful on a technology-neutral basis.

Mr. Doyle. So you agree that we need funding, though? I

understand your technology.

Mr. Gillen. Yes, absolutely. Sure.

Ms. Bloomfield. Support is needed to make the business a case model in rural America.

Mr. Doyle. Thank you.

Mr. Slesinger. Yes, definitely needed.

Mr. Doyle. Thank you.

Ms. Hovis. I agree.

Ms. Swanson Katz. Yes, I agree.

Mrs. Blackburn. Okay. And lastly, Mr. Gillen, we saw this memo that leaked out of the White House, the 5G memo that focused in detail on our network cyber vulnerabilities particularly when it comes to foreign actors and the proposal of nationalizing our wireless telecommunications infrastructure. I think many of us here on the committee on both sides of the aisle seems uninformed. I am concerned that the White House and the President have not fully addressed and rejected this very troubling proposal. We heard some of that today.

That being said, the security of our Nation's broadband issue is critical. And at the beginning of his tenure, FCC Chairman Pai rolled back a number of Commission items related to cybersecurity, including a notice of inquiry specifically questioning how the FCC could best secure 5G networks. I am concerned that rolling back these measures is part of what has caused so much concern amongst members of the National Security Council.

Mr. Gillen, I just want to ask you, do you think it is wise for

the FCC to roll back cybersecurity initiatives such as this 5G notice of inquiry? I mean, if the relevant Federal agency cannot merely ask questions about how best to secure 5G networks, how can we hope to address this problem?

Mr. Gillen. Thank you, Congressman. It is a great question. Cybersecurity is critical to everything we do. If you don't have a safe and secure network, we are not serving the American people and we are not doing our jobs.

With respect to the specific question you asked, we think that cybersecurity is best handled through a partnership with the Department of Homeland Security. They are the experts in those we work closely with. And I think the White House proposal, I think Chairman Walden and all five FCC commissioners have characterized it very well, so I won't say anything further about that right now. But in terms of the cybersecurity, that is something we work on every day and we do need a partnership with the Federal Government to make sure that we understand the threats, and a lot of what this community and other committees have focused on information sharing is critical to doing that.

Mr. Doyle. Thank you. Thank you, Madam Chair.

Mrs. Blackburn. The gentleman yields back.

I will recognize myself for some questions, and I want to start with Mr. Spalter, Gillen, and Polka. You all talked a little bit about tax reform and how that would help with investment. And sometimes I think as we talk about the changes in regulatory relief and tax reform,

people focus on big companies and not on the smaller companies. So if you would take just a moment and talk a little bit about how tax reform regulatory relief affects your companies in the deployment of broadband.

Mr. Spalter. Thank you, Chairman. They effect our companies both large and small across the board. I had the opportunity recently to visit with some of our smaller companies in western New Mexico, western Wyoming, Alaska, and Montana. And to a company, each of them have been elated by the idea that they are going to be able to invest more in deploying more broadbands to unserved communities, invest more in research and developments to be able to expand next generation networks, and also provide new incentives for their employees, even though they have not met many employees. This is a meaningful step forward and augurs well for the future of closing the digital divide.

Mrs. Blackburn. Great.

Mr. Gillen.

Mr. Gillen. I agree with Mr. Spalter. In terms of the wireless industry, it means we have seen promises of new jobs, we have seen commitments to build out more networks and add capital expenditures, bring money back home. And really it does underscore the capital-intensive industries like wireless. This tax reform regulatory relief will make a real difference. Particularly for smaller carriers, a lot of the regulatory relief we are talking about, they don't have the staff -- as my colleagues have said, they don't have the staff to manage these processes, so any types of streamlining

or standardization helps them actually do their day jobs and serve consumers.

Mr. Polka. Thank you. As I said in my testimony, let's take a count of the successes that exist. Our member companies certainly use private funds to deploy broadband, but the benefit of the recently passed tax act cannot be underestimated when you look at the investment that now our members as smaller internet service providers have to put back into their systems, which they are doing. I have heard from members all over the country who have said to me that the difference in the corporate tax rate will make more money available for the company to reinvest broadband serving now hundreds, thousands more homes that would otherwise be uneconomic to serve. So that has helped tremendously already to give a boost to smaller businesses, not to mention the deregulation that has already occurred.

For smaller companies, regulations affect them disproportionately. They have fewer customers per mile over which to pass that cost of regulation. When the Federal Government takes into account that there was a difference between small and rural and big and urban and allows for those smaller companies to be able to deploy sensibly and take into account the burden of regulation, it makes a big difference on getting rural broadband out there faster.

Mrs. Blackburn. Thank you all.

And, Ms. Bloomfield, I want to come to you now. We spoke briefly about some of the good things in Tennessee. I know north central Tennessee spent like a quarter million dollars on historical reviews

and \$14 million in investment just to build out this. And Mr. Welch mentioned 39 percent of rural America is without broadband, and I think people lose sight of that, that there is just not that access there. And in Tennessee, we were talking about the first round of grants, almost \$10 million that has gone out, and we have got the Scott County Telephone Co-Op got \$1.9 million. They are going to use that in Hawkins County. DTC Communications, \$1.765 million to use in Smith and Wilson Counties, and Sunset Digital got \$1.4 million to use in Claiborne and Hancock Counties to expand that footprint and to bring more people online, and that type investment we want to see.

At the Federal level, of course, we have got \$4.53 billion that is there in the USF that is going to be over 10 years to expand this service, and \$2 billion for rural broadband deployment that should come from the competitive reverse auction.

So I want you to talk just a little bit on specifics of how this serves to get more people online.

Ms. Bloomfield. So, Chairman, I think you raise a really important concept, and that is coordination. How can we ensure that what is going on at the Federal level coordinates with what can happen on the State level? And I think that is where some of the things the committee is looking at, like accurate mapping and making sure we know where the underserved and unserved areas are, so that we can focus those limited resources, whether they are universal service dollars. And we are pleased that the FCC is currently circulating an order that looks to restore some of the funding that had been subject to the budget

mechanism, which will go a long way in terms of giving folks regulatory certainty. How do they know that they have got the resources to actually deploy? And you combine that with some State initiatives.

What Tennessee has done is really interesting. Minnesota has done something similar. Wisconsin has done something similar. How do you actually take all of these different pieces so that we can thoughtfully, as a country, build out to those consumers that actually have not had the opportunity to have access. CAFTA is going to be really important. We look at those areas, when that auction comes up, as an opportunity for my companies to potentially edge out into communities that are unserved that are neighboring their areas where they may have an opportunity to bring robust broadband like they have to their own incumbent areas out to those who are waiting for service. So we are hopeful that those rules will be helpful.

Mrs. Blackburn. Thank you.

At this time I yield Mr. Welch 5 minutes.

Mr. Welch. Thank you very much.

I want to talk about two things. One is a bipartisan bill that I have with Mr. McKinley, and then second is this question of the rural broadband buildout. And by the way, thank you all for what I thought was very, very good testimony.

Mr. McKinley and I have a bill that would require the FCC to define, on an ongoing basis, what is reasonably comparable service and reasonably comparable prices in rural and urban America. And we have seen, from my perspective, an alarming approach by the current FCC chair

that is essentially dumbing down, as I see it, with successes in rural America.

Ms. Bloomfield, could you just respond to your view about the value of having the FCC, on an ongoing basis, give a concrete and scientific answer to the question of reasonably comparable in rural versus urban areas? Would that be helpful?

Ms. Bloomfield. So I think that is -- you know, as I mentioned in the statistics that we have in terms of the number of my carriers and what the capacity is, I think we do have to figure out how you ensure that particular consumers' demands increase. I mean, the bandwidth demands that people are looking for grows exponentially. So how do we make sure that you are not creating two different services between rural and urban America, and how do you make sure there is comparability there?

Part of the issue that continues to be the underlying problem, however, is the high cost of deploying that network. So, for example, when you look at something like the ability of a rural provider to do standalone broadband for the consumer who simply wants the ability to access broadband, they may not want the telephone service, they may not want some of the other things that come with it. Right now, you know, based on support -- sorry. It is going to be very important, but it is going to take resources and it is going to take support from things like universal service.

Mr. Welch. Thank you.

Now, Mr. Doyle asked the question that everyone said

affirmatively we do need Federal funding, and I want to go back to that, because I have heard a lot about regulatory reform and I have heard a lot of good ideas. That makes sense to me. I have heard a lot, by the way, that the local efforts are very important, so what we do should enhance them, not diminish them. But bottom line, there has got to be money just like there was with rural electrification.

And, Mr. Gillen, in your written testimony, as I read it, you didn't believe there was a need for Federal funding to deploy 5G. So if that is the case, would your folks be able to commit that you will be deploying 5G services at the same speed and pace in rural America as in urban America?

Mr. Gillen. 5G will start in dense areas throughout the country. A rural town in Burlington, Vermont, will see it. University of Vermont will see 5G. It really is to start dense. When you talk about reaching the unserved households, you are going to need money.

Mr. Welch. That is like obvious, right? I mean, you go where the market is. And there is no expectation, on my part, that anyone who has shareholders and has some obligations to the shareholders would do anything different. There is a fundamental policy question that only Congress can answer. Are we going to -- you know, show us the money in rural America.

So there is a bill that Mr. Pallone has that is based on a study that the FCC did saying that we really need \$40 billion. And Mr. Walden raised questions about spending that wisely, and we want to do that, make sure it is done right. But of the panelists here, does that FCC

figure, \$40 billion for this buildout for reasonably comparable service in rural America, sound like a good number to you? I will start with you Jonathan, Mr. Spalter.

Mr. Spalter. Congressman Welch, there are numbers of studies that have indicated that more monies are needed for reaching ubiquitous access for Americans, a goal that we all share. Not necessarily agreeing with one or another set of numbers, what we all agree to is that we do need direct funding where there is no business case to deploy high-speed broadband, especially in unserved areas, and using universal service fund as the platform for doing so we know is most efficient and most administratively logical.

Mr. Welch. And even assuming we do the things that have been recommended with regulatory reform and local partnerships, the number that we are going to have to spend is in the billions of dollars. Does anyone disagree with that?

Mr. Spalter. No.

Mr. Welch. Ms. Hovis?

Ms. Hovis. I do agree. Unfortunately, it is far more costly to build in rural areas on a per-user basis. It gets more and more costly with lower density, and not just for capital costs, but also for operating costs, and that is the fundamental challenge that we face. But directing the funding there and making sure that the funding is well suited to the needs there, and the needs are the same in rural America as in urban and suburban America. We all need high speed. We need scalable networks that are capable of growing over time. We don't

need second-rate services in rural America.

Mr. Welch. My time is up. I want to thank the panel.

Mrs. Blackburn. The gentleman yields back.

Mr. Latta. No, Mr. Lance, you are recognized. Five minutes.

Mr. Lance. Thank you very much, Chairman.

Mr. Spalter, in your testimony, you mentioned that finite Federal resources should be targeted to ensure that funding to unserved areas, that that funding is prioritized, and I couldn't agree more with that. And I have introduced a resolution stating as much. Could you please expand on the importance of prioritizing Federal funds to unserved areas of the country, and are we able to learn from past mistakes related to this issue when we are deciding how best to spend Federal resources?

Mr. Spalter. As stewards -- thank you very much for the question, Vice-Chairman Lance. As stewards of Federal dollars of broadband providers in Congress, all of the American republic have to be very, very cautious about how we use those dollars, and we have to make sure that they are being used efficiently and to targeted purposes. And we are all focused on doing so in ways that will achieve those goals.

With respect to reaching unserved areas where there is no access to broadband. Those high-cost areas require a partner in government-directed funds using universal service fund methodologies is, we believe, the appropriate way to go. And there is no doubt that in order to fulfill the obligation that we have of closing the digital divide, thinking very carefully, as we are doing here today and I hope we are going to continue to do, of how we actually can expand that

universal service budget to -- universal service fund budget to meet this great goal of closing the digital divide is, I think, a great priority for all of this.

Mr. Lance. And, Mr. Spalter, do you believe that this will require statutory change or can this be done administratively or will it be a combination of both?

Mr. Spalter. I believe it can be a combination of both. It will be left to Congress to decide its commitment to, in fact, fulfilling this great goal we have of closing the digital divide. To do so we understand it is going to cost tens of billions of dollars. Universal service funds and the universal service fund platform in the direct funding model has been proven to be most efficient in doing so. And we think both administratively and through statute there are going to be mechanisms of actually achieving this goal, and we are looking forward to working with you in doing so.

Mr. Lance. Thank you.

Would other members of the panel like to comment?

Yes, Ms. Bloomfield.

Ms. Bloomfield. I would just like to jump in and say, you know, when I look at my membership, it is a combination of universal service along with support, like the USDA has with our U.S. So you build the business case with universal service that allows folks to get the capital funding through things like USDA to actually build these networks. And the one thing I would say it is going to be really important for us to be thinking about building future proof networks,

to make sure that as we look at that underserved and those finite resources, that we are using them to build networks that will last into the future.

Mr. Lance. Thank you.

Anyone else like to comment?

Mr. Polka. Congressman, I would agree. I would totally agree. There certainly is a need, as has been demonstrated in very hard to reach unserved areas where Federal funds can be very important to closing that aspect of the digital divide. But then as we look at past programs, whether it is at the reform of the Connect America Fund, which is focused on unserved areas ensuring that we are using reverse auctions to spend money wisely, these are good ideas to employ.

The last thing we want to do, as I said, is to discourage private investment, and one way you would do that, and you recognize this because of your resolution, is by permitting any situation where an unsubsidized internet service provider would have to face subsidized competition. That is a disincentive to further investment in deployment of broadband.

So, otherwise, I think you are right on target as it relates to focusing on areas where broadband is unserved. Let's make sure that we are not overbuilding the subsidized -- the unsubsidized providers.

Mr. Lance. So we have to be careful regarding subsidies and those nonsubsidized.

Mr. Polka. Correct.

Mr. Lance. Yes. Anyone else on the panel care to comment?

Yes, of course.

Ms. Hovis. Congressman, my perspective would be that competition in this environment, as in any environment, gets better results. And if there is going to be public funding for broadband deployment, then offering it on a competitive basis so that the best situated, most efficient, perhaps most motivated, strongest set of partners are able to bid for that kind of thing, rather than offering it to a single set of companies where there is no competitive benefit. I think that is a proven strategy.

Mr. Lance. I would agree with that.

Yes. Connecticut near New Jersey, although we have to be careful as to whom we root for in New Jersey.

Ms. Swanson Katz. My remarks concerning the New England Patriots are my own and do not reflect the nonpartisan views of the Connecticut Consumer Counsel.

I would just like to add that I think when you are talking about effective deployment of dollars, Federal, State, at any level, we have to recognize the role -- the very legitimate important role of State and local governments in maximizing those dollars, and I would just encourage you to think about including them in this and not excluding them.

And as an example, in the northwest corner of Connecticut, we have 26 municipalities, all nonpartisan, have banded together and are looking at models for how they can get a network deployed into their neighborhoods. And it is much more efficient to have 26 small towns

working together in trying to do things like streamlining, permitting, and finding siting for these companies then and working with private sector as their model. So, you know, keep that in mind, that we will be much more effective if we allow municipalities and local leaders to work on this level.

Mr. Lance. Thank you. My time has expired. My thanks to the entire panel.

Mrs. Blackburn. The gentleman yields back.

Mr. Pallone, you are recognized.

Mr. Pallone. Thank you, Madam Chair.

I think we all agree that better broadband can help provide more opportunities for more people. And to make ubiquitous broadband a reality, Democrats on this committee have been working on ways to make sure everyone, whether they live in rural areas or urban areas, has access to better and more affordable broadband services, and that is why we introduced the LIFT America Act that would provide \$40 billion through a mix of reverse auctions and State programs. The bill would prioritize sending money to underserved areas and then funding underserved areas, anchor institutions, and building our next generation of 911 systems.

I wanted to start with Mr. Spalter. In your testimony, you discuss the need for Federal funding to support a more expansive broadband network. Can you just elaborate on why this is necessary?

Mr. Spalter. There is a demonstrable need in America today because of the challenging business case of delivering broadband to

our unserved areas, our hardest to reach areas for a direct funding model. We understand that with best intentions American broadband providers are doing everything they can to extend the opportunities that broadband can bring, but there still are areas that are going to require a partnership with government. We know that the direct funding model, again, using platforms like Universal Service Fund, is the most efficient and administratively logical way to actually advance that goal. Direct funding has been and will be the principal and most sound funding model for actually making the reality of closing the digital divide actually happen.

Mr. Pallone. Well, thank you.

Over the past year, Republicans have eliminated our privacy rights online and destroyed net neutrality, and now they want to eviscerate our environmental and historic preservation laws, and they have done all of this in the name of broadband deployment. So I wanted to ask Ms. Hovis, have you seen any evidence that elimination of these protections will bring broadband to the millions of Americans who are not yet served?

Ms. Hovis. No, Congressman. I think that this will make for more profitable companies, whether better profitability leads to more deployment, particularly in areas that are not going to result in profits themselves. It is just not clear to me that there is a link between those things. I am concerned frequently that certain kinds of regulatory relief, deregulation, or other kinds of things are extended to the companies based on the premise that it will lead to

new deployment in rural areas, but there is no commitment or enforceable mechanism for making sure that that actually happens. And given greater profitability, companies may or may not further invest.

Mr. Pallone. All right. Thank you.

I understand that the elimination of our environmental laws will not make a meaningful difference in connecting the millions of Americans that don't have access to broadband, but I do think we need to better understand what the effect of some of these proposals would actually be. So I wanted to ask Mr. Slesinger, if I could, in your opinion, what would be the effect of carving up longstanding environmental protections as some of the bills before us would do?

Mr. Slesinger. Thank you, Mr. Pallone. I think that the impacts can be very big. I mean, broadband cells that we are talking about are not large environmental problems to this country. There are ways that the Forest Service and BLM on their lands could do a programmatic impact statement that would make it very easy to get any required Federal approval. It is not a major issue. We have programmatic impact statements for solar; we could do it easily for broadband. And I don't think that is a big problem.

However, I think we are missing the issue here. And in many of these cases, it is State and local zoning and other things that are the problem. But I think the issue that I was talking about was mainly in the LIFT bill where we are talking about things well beyond broadband that can have large environmental impacts, and in that case, we need to keep the environmental laws strong and enforced so that people's

communities are not adversely affected by large Federal projects. Clearly, the FCC, as I said, has never required an EIS. There is not a big burden in this, but it is an excuse not to do unprofitable broadband in rural areas.

Mr. Pallone. All right. Thank you very much.

I yield back, Madam Chair.

Mrs. Blackburn. The gentleman yields back.

Mr. Shimkus, you are recognized.

Mr. Shimkus. Thank you, Madam Chairman. Thanks for being here on an issue that we seem to continue to talk about.

You know, I am pretty proud of my co-ops, my small telephone companies in these areas that are trying to do just that. So there is a need for government involvement to provide some certainty financially because the return on investment is just not there. I always talk about the need on the Universal Service Fund to get that right and start parlaying that towards a broadband deployment.

But I think when we hear the testimony -- I am sorry, I am bouncing back like a lot of members between two hearings. When we just beat up large corporations and their profitability, we really want to incentivize these small co-ops and these small family privately owned companies to do that, I mean, to do what they are trying to do right now, and then bring -- and then bring competition. This came from my local newspaper just January 28, not that I solicited it. And I would like to ask unanimous consent to submit this for the record.

Mrs. Blackburn. Without objection.

[The information follows:]

***** INSERT 2-1 *****

Mr. Shimkus. It just talks about a community in my district, Highland, Illinois, that because they were -- they felt they were held hostage to the local provider, they built their own fiber system.

Now, the editorial is pretty good because it says there was just a report out, the Harvard University study, and they were fifth out of 27 public utilities that said you are doing a good job. But at the end of it, it also says, but there are hidden costs when you have a government run system, right, the government is assuming some of those costs just on payroll and insurance and all those other things. So I just thought it was timely, and I wanted to submit that for the record because this does really segue into this debate.

And I do believe regulatory burdens slow the process up, and especially for these smaller companies, whether privately or public. So that is why we did the SPEED Act, which is an attempt to alleviate some of these additional reviews, especially in the environmental and historic reviews.

Now, the key to this small provision of this package is that it is in right-of-way and it is already being used. So it is not like new. It is not like a green field area. It is not like you are building over new territory untouched pristine land. It is using current right-of-ways and current systems and with a focus on size.

So, Mr. Gillen, can you elaborate on the challenges of the environmental and historic reviews that present for a deployment and how this bill might address those?

Mr. Gillen. Absolutely. Thank you, Mr. Shimkus. Thank you for

your leadership on this issue. I agree with everything you said. When you are talking about siting rights-of-way or siting devices like this, like your bill addresses, right now, that adds thousands and thousands of cost and months and months of review that we don't get back that is delaying deployment and increasing the cost of deployment. So absolutely the SPEED Act would address a core impediment we face.

Mr. Shimkus. Let me follow up. And as you follow actions going around through the States, is this similar to what some of the States are doing in this venue in this way?

Mr. Gillen. Absolutely. I think sort of the notion that we need both State and local governments to tighten how they do this, and we need the Federal Government. It is going to take both for us to do this.

Mr. Shimkus. Mr. Spalter, how important is it for communications, this whole debate, a policy to apply equally regardless of technology?

Mr. Spalter. Technology and neutrality is extremely important as we think about the opportunities of actually closing the digital divide. We support any innovation that actually will be able to deliver broadband through whatever technology that most suits community and the institutions that support that community. What we also realize, though, is in the current moment that we are living in, that the most effective mechanism is to pull broadband fiber to as many communities as possible, and to do so needs creative partnership that has to exist between private investment, which is on the table, with

a strong partner in government through direct funding.

Mr. Shimkus. And let me follow up with Ms. Bloomfield. Are small providers disproportionately impacted by regulations?

Ms. Bloomfield. You know, part of that is just that they have fewer staff and they have fewer resources so, obviously, time you spend dealing with regulations you are not dealing with building broadband. But I also do want to commend you for your leadership, because I think the other initiative in your legislation is you recognize that it is also about upgrading the network. So it is not just building it, but what you are trying to address is the fact that these networks are living and breathing networks, and they need to constantly be upgraded, so that certainly eases the process.

Mr. Shimkus. Thank you. And, Madam Chair, my time has expired.

Mrs. Blackburn. The gentleman yields back.

Mr. McNerney, you are recognized for 5 minutes.

Mr. McNerney. Well, I thank the chair for holding this hearing, and the witnesses.

I am going to start with Ms. Katz. I am concerned that the FCC's recent action of eliminating net neutrality and Lifeline will actually open the digital divide. Is the FCC's current lifeline proposal to cut 70 percent of the Lifeline program counterproductive to closing the digital divide and making broadband widely available to lower income Americans?

Ms. Swanson Katz. Well, I think the short answer to that is yes. The rationale for eliminating, severely curtailing the availability

of the lifeline is that it would enhance broadband deployment, but I think that is comparing apples and oranges. I mean, this is a situation we are trying to put communication capabilities in the hands of our lowest income people, and to take those away from them, yes, absolutely will aggravate the digital divide, exacerbate it, and have negative impacts on many different populations. I mean, there is just a lot of talk of how lifeline phones are being used by the homeless to connect with family and find resources. And so it not only broadens the digital divide, but it sort of has a ripple effect on the way we can see our most vulnerable citizens impacted.

Mr. McNerney. Thank you.

Ms. Hovis, I appreciate your direct testimony. I heard in some places the best way to deploy high-speed internet access that Americans deserve is to go to public-private partnerships, and you stressed that in your testimony. Can you provide us with some illustrations from your work regarding the effectiveness of public-private partnerships?

Ms. Hovis. Absolutely. Thank you, Congressman. I am seeing around the country hundreds, possibly thousands, of local initiatives with the willing and enthusiastic participation of the private sector in communities like Sublette County, Wyoming, where the local community is planning to deploy infrastructure that will be made available to their private partners and to business areas, to business districts where there is no adequate broadband at all, just speeds of a megabit or two, at best, in order to allow businesses to thrive in that part of the community. There are efforts like that underway in parts of

Kentucky and parts of West Virginia, all over the country. And then even more ambitious and farsighted efforts, the city of San Francisco is considering a public-private partnership that is focused on ensuring that the 150,000 people in San Francisco who don't currently have broadband, mostly because they can't afford it, have access to adequate speeds, not one megabit speeds but the same kinds of speeds that you and I consider to be appropriate for our families. There is enormous creativity on both the public and the private side, and the private sector is willingly participating and engaged.

Mr. McNerney. Thank you. I cosponsored a bill with Congressman Lujan that would help public-private partnerships get low-interest financing. Would that be helpful for building out access?

Ms. Hovis. Yes. I think it is an incredibly helpful approach, because what it does is it makes it feasible for a local community to have low-cost financing to build infrastructure and then potentially to make that infrastructure available for private sector use. We have all agreed on this panel that the cost of infrastructure deployment in certain markets is prohibitive. If there is a way that public's State, local, and Federal efforts can be targeted toward infrastructure, then allowing for private sector service provision, in some cases public service provision, it is going to differ from community to community, but that is a mechanism for ensuring that we get infrastructure to places where it does not exist in an adequate way.

Mr. McNerney. Thank you.

Mr. Spalter, I am going to move to cybersecurity. We have had security experts testify in front of this committee that most -- many or maybe most of the IoT devices are unsecure, Internet of Things devices. By 2020, it is projected there will be 20 billion to 50 billion IoT devices in use. Should we be concerned about the risks that unsecure IoT devices are posing to our broadband networks?

Mr. Spalter. Thank you for the question, Congressman. It is a concern that all broadband providers share, that we have to be much more focused and increasingly focused on the resiliency, the security, not only of our wired networks, but also of our wireless networks. The Internet of Things is an opportunity of great promise for the economic productivity of our country.

The focus that we have been giving as a broadband community to this initiative is also being done in partnership with a broader set of colleagues in the internet ecosystem. Our cloud companies, our internet information technology companies, internet companies increasingly are joining to share the responsibilities with us to extend greater and more secure -- greater security for our broadband networks, including for the Internet of Things, and we are doing so in partnership with the Department of Homeland Security and other agencies of government that we have to work closely with to solve this problem.

Mr. McNerney. Very good. Well, I have a lot more questions, but I have run out of time, so I am going to yield back.

Mrs. Blackburn. The gentleman yields back.

Mr. Latta, 5 minutes.

Mr. Latta. Well, thank you very much, Madam Chair, for holding today's hearing. This is very, very important.

As co-chair of the Rural Broadband Caucus and co-chair of the Rural Telecommunications Working Group, access to high-speed broadband in rural areas is a top priority of mine. I believe Congress should facilitate the development of robust broadband networks by creating a regulatory environment, promotes competition, and encourages innovation. That is why I introduced a resolution I expressed to be sent to the House that broadband deployment should be competitively and technologically neutral. I have also introduced the Precision Agriculture Connectivity Act with Congressman Loeb sack to help close the digital divide faced by the agricultural communities in rural America.

And, Ms. Bloomfield, if I could pose my first question to you. Agriculture operations generate significant value to the national economy and are an essential source of revenue in jobs in our rural communities. Today, modern high-precision farming requires access to high-speed broadband to support advanced operations and technologies that significantly increase crop yields, reduce costs, and improve the environment. My bill, the Precision Agriculture Connectivity Act, requires the FCC to recommend steps to obtain reliable measurements of broadband coverage in order to gain a better understanding of the true lack of access in America. It is my understanding that finding adequate, accurate broadband mapping and coverage managements is

nearly impossible.

And so, Ms. Bloomfield, in what ways would it be beneficial for the FCC to obtain such data for the purpose of deploying high-speed broadband on agricultural croplands in other rural areas?

Ms. Bloomfield. So, Congressman Latta, I appreciate the question, and greatly appreciate the leadership that you have shown on a lot of these issues. Smart ag is truly the next frontier when we think about economic development vitality for rural America, and I think a lot of the initiatives you are looking at is how do you gather more of that granular data so that we can really look at the census track level and figure out, you know, where is the infrastructure and where is the void. Because we certainly know that, you know, you need to be able to see it, whether it is street level or whether it is literally on the cropland, you know, in terms of where that infrastructure resides.

So I think that when we look at the FCC and some of the work that they have been doing in gathering 477 data and trying to take that data and figure out in a granular, transparent, and accurate way and measuring apples to apples -- and the thing I always worry about is when you get different entities trying to measure, they are measuring different ways of measuring where that deployment is. So I think your focus on how do we coordinate, how do we actually aggregate this will go a long way in terms of seeing where we really need to focus some of our future energy and resources.

Mr. Latta. Let me ask you just to follow up when you talk apples

to apples and not apples to oranges here. What would you be looking -- what should we be looking at then to make sure that they are looking at the right data and, you know, everyone is on the same page here and they are not looking at two different things, the same coming with two different answers.

Ms. Bloomfield. So I think we saw a little bit during the stimulus where there was actually national broadband map that was built, but it was very inconsistent, and it wasn't checked, so people were kind of putting in their own data. There was really no resource to basically say is this the real data, is there really coverage there. And as somebody who represents small carriers, I understand that there is always that competitive concern about what data you are releasing. But I also worry that if you have got an entity like NTAA looking at data and you have got the FCC and they are using two different measurements, two different land tracks, different speeds, I think the ability to actually kind of house it in one place where you have got the ability to be consistent, you have got the ability to be transparent, I think folks need to actually see as it gets developed, and you need to be able to have the ability to check it. I think those are things that are going to be very important check posts as we go forward on that. But it is going to be the foundation for where we go in terms of future investment.

Mr. Latta. Thank you.

Mr. Polka, there is legislation as part of our hearing today which I support that incentivizes 5G wireless deployment. I have also

introduced a resolution setting the policy of competitive tech neutrality so the government isn't picking winners and losers out there. Is the cable industry doing anything comparable to the 5G rollout with similar speeds in coverage?

Mr. Polka. Comparable and surpassing when you look at the amount of broadband service that is being delivered by our members in rural America. I had the chance yesterday to hear from a number of members all over the country telling us what they are doing. I heard from one small company in eastern Kentucky, Big Sandy Broadband. They are delivering gigabit speed in eastern Kentucky. I heard from a company called Hickory Telephone, which is building fiber to the home in underserved areas, one of our members in western Pennsylvania. We have members all over the country that are providing gigabit service: 100 megabit, 200 megabit, 300 megabit service. So we are building that service as our customers and our community want us to do. And what we ask, and which is why we appreciate your resolution, that as we go forward as a country and we look at regulations that apply to helping broadband be deployed more effectively, that we do so on a competitive technology-neutral basis.

I can tell you we have a lot of area out there that I have visited personally with our members. It is amazing how much rural area there is out there. Not one company is going to solve these problems, which is why our policy needs to encourage competitive technology-neutral proponents. So, yes, we are providing the service. We are building the backbone that actually can help to deliver 5G service down the road

as it comes farther out into our areas. So we are up to the challenge.

Mr. Latta. Well, thank you very much. And, Madam Chair, my time has expired, and I yield back.

Mrs. Blackburn. The gentleman yields back.

Mr. Loeb sack, you are recognized.

Mr. Loeb sack. Thank you, Madam Chair. This is really great.

Normally, I would be asking questions earlier, but I was a little bit late. I had some things in my office I had to do, some meetings, but I got to hear from so many of my colleagues and all of you folks. And, you know, the first thing I want to say is I guess when we talk about the funding, making sure that we do have broadband in these rural areas. I represent about a fourth of Iowa, not quite as much. The State of Iowa isn't quite as big as Chairman Walden's district, he likes to remind me, but we have a lot of rural areas in Iowa, as you might imagine. But it is pretty clear to me that we have got to have some public funding. We have got to have a lot of private investment. There is no doubt. We have got to make sure we deal with regulations. Chairman Walden and I have worked together on that to make sure that small internet service providers in particular are not unfairly subject to too many regulations so they can actually put their resources into building out and making sure that rural America is served, instead of simply filling out paperwork regulations that are unnecessary, that kind of thing.

So I think we actually have more bipartisan support, and I think the chairwoman would agree that we actually have some bipartisan

support on a number of these issues here.

Mrs. Blackburn. Oh, yes. I am accustomed to hearing from broadband Loeb sack.

Mr. Loeb sack. That is right. Exactly. And thank you very much, Madam Chair, I do appreciate that.

And working with Representative Latta; we talked this morning earlier today. I didn't realize he was going to quite steal so much of my thunder, but really happy to work with him on the Precision Agriculture Connectivity Act. Very important, obviously, in my district in Iowa.

But, of course, related to what he was talking about with mapping, I actually did introduce, and with Mr. Costello, last year, the Rural Wireless Access Act. And we got it out of subcommittee, but the FCC paid close attention to that. That comes down, essentially, to I like to call garbage in, garbage out. You know, if we don't have accurate maps, then we are not going to be able to make accurate decisions and good decisions going forward.

And so a lot of this, you know, people from Iowa like to say we have a lot of common sense, but a lot of what is going on here is just common sense that, you know, if we don't have accurate data, whether it is an agriculture or that being a subset of something larger, then we are not going to be able to make a decision, public policy decisions, or even investment decisions on the part of the private sector.

One last point on that. Chairman Pai last year, I did ask him because I had heard he had been to northwest Iowa. He drove from my

home town Sioux City up to southern Minnesota, and he found out just how many problems there are in rural Iowa with dropped calls and all kinds of things, not to mention, you know, actual broadband service as well.

So I just want to ask, I guess, that, Ms. Bloomfield, you have already pretty much responded to what this is all about, so I am going skip you for a moment, if that is okay.

I would like to go to Mr. Gillen, talk about that issue, if you would, mapping issue and making sure that we have good data.

Mr. Gillen. As you said, Congressman, thanks to your leadership, I think we have all listened and heard. And I think working with both national and regional carriers, we have worked with the FCC, that will hopefully have a better map to inform the mobility fund going forward. And, you know, what that \$450 million a year the FCC is starting to give out will do is hopefully start serving those areas in those communities that don't have service today, but the condition precedent to doing that is the data that you have been looking for, and that will start very soon.

Mr. Loebsack. Yes, the 477.

And, Mr. Spalter?

Mr. Spalter. I would agree with Mr. Gillen. And I also want to thank you for your leadership in understanding that important management principle: what you can't -- what you can't measure, you can't manage. And this is particularly true with respect to delivering broadband.

Form 477 has taken great strides as it has been streamlined to provide more precise geocoding longitudinally and latitudinally for customers that actually have service. The next frontier is to try to do so with that kind of geocoding specificity for locations that don't have broadband yet. And we believe that we have to think creatively and innovatively and slightly out of the box in thinking how to do so, as long as we have uniformity of data.

One idea is as the Census Bureau itself is looking at its own 2020 effort. Their resources might be profitably brought to bear to actually bring that longitudinal and latitudinal specificity to help pinpoint areas where broadband is not yet.

Mr. Loebsack. I would even suggest, mostly jokingly, that the FCC talk to all of us who have rural districts, because we can actually identify where the gaps are and where they are not, if we get around our districts like I do all the time.

Ms. Bloomfield, would you like to elaborate a little bit?

Ms. Bloomfield. The only thing I would add is we talk about, you know, your initiative on some of the wireless front is that, just a reminder, that wireless needs wires so that those networks can't even be built if you don't have the backhaul out there. And as we have more and more need for capacity and more and more, you know, ability for you, if you are like me and I have gotten lost in northwest Iowa, you know, the ability to pull over and actually pull up a map and see where you are, to do that data you actually need that infrastructure, so they really go hand-in-hand. They are complimentary services, and I think

they are going to all be very important for rural Americans.

Mr. Loebsack. Thanks to all of you. And thank you, Madam Chair.

Mrs. Blackburn. The gentleman yields back.

Mr. Olson, 5 minutes.

Mr. Olson. I thank the chair. And welcome to our seven witnesses. A special welcome, Mr. Gillen. And please give our warm regards to your boss, Meredith Attwell Baker. As you know that family is a legend in Houston, Texas, iconic. So please give our regards.

I would like to brag about Texas and give perspective on Chairman Walden's comments about square miles. He talked about Connecticut and Oregon. For the record, Texas is 268,597 square miles. Now, my district, Texas 22, is a small portion of that, 1,032 square miles. Very small. Basically, it is split halfway between rural and suburban. But because it is so close to Houston, all the challenges with the telecom industry, the 5G aren't really applicable. But we did suffer a disaster. Hurricane Harvey hit us in August, and we weren't alone.

After that, Puerto Rico was hit with Maria and the Virgin Islands as well, and Florida was hit by Hurricane Irma. And we have seen catastrophic wildfires in California and subsequent floods and just rushes of mud because of the loss of the cover. And when these disasters hit, as you all know, it is critically important that we get the communications infrastructure up and running as quickly as possible to give these communities the help they need to recover as quickly as possible.

And that is why I have this bill that is probably on top of your

pile. It is H.R. 4845. It is called the Connecting Communities Post Disasters Act. And this bill makes a simple step by allowing local communities to bypass long and unnecessary environmental and historic views and to replace damaged or lost towers and communication infrastructure. Not to have new ones but replace ones that are hit by disaster.

My first question is for you, Mr. Gillen. Houston made a strong effort after Hurricane Ike to bury their communications cables, and that was very successful. In fact, FCC Commissioner Pai came down a couple days after the storm hit and wowed about our buried cables, but he also noted we have a lot of cell towers that are exposed to the storm, especially where she came ashore there by Corpus Christi. How important is it for you to get communications up and ready following a disaster? How important is that to fight the disaster?

Mr. Gillen. It is critical. And I think it is critical for, particularly, for temporary facilities to be marshaled immediately, because as we learned in these most recent storms, that smartphones is what Americans need to reach public safety, to reach their families, to let people know that they are safe, and that cell coverage is critical. And that bill is very important because when the storm is over, our jobs are really just getting started. And it is how do we restore services, and not only restore them, but make them better, and that we have the opportunity in your district to start giving you the most advanced networks. And thanks to your bill we can start doing that more quickly.

Mr. Olson. They go off the whole night for three straight nights, got all these warnings on a cell phone about tornado watches, flood warnings. That was valuable information that was coming, not from the phone lines, not from the TV, it was coming from the cell phones that my kids had, I had, my wife had, so it was very important.

Do you agree that it makes sense to suspend parts of the NEPA review when reconstructing these telecommunications towers, the infrastructure, just to suspend them a certain amount of time to get rolling quickly, as opposed to dragging this thing out month after month, year after year?

Mr. Gillen. To bring back your economy, to bring back your constituents, absolutely, and I think it is a very targeted relief you are proposing.

Mr. Olson. Mr. Spalter, Ms. Bloomfield, any comments on this issue about disaster?

Ms. Bloomfield. I would just add that we had about four carriers that were in the path of Harvey, and I checked in with each one of them. Thanks to the ability to build these future-proof networks and the bury plant and the ability to put their switches underground, we actually, every one of my companies that were in the path actually were able to be up and running instantaneously, actually never even lost service, so very important.

Mr. Olson. Mr. Spalter.

Mr. Spalter. Congressman, your initiative to actually move forward with H.R. 4845 is meaningful, not only, I know, to citizens

in your community which were served by companies in U.S. telecom like Consolidated and Smart City that were running towards danger to support the broadband needs, but also your initiative is going to be meaningful for communities around the country, including places where I used to live near earthquake faults in California.

It is an absolute necessity that we as a Nation provide any mechanism to provide efficiencies so that broadband facilities can be put back into place to serve communities that have been affected by disaster, and your initiative is one such step, and we are grateful for it.

Mr. Olson. I am out of time, sir. I have one question before I yield back. There was discussion, some sort of concern, a little hostile, about the football game coming up, the Super Bowl, between the Patriots and the Eagles. I have a yes-or-no question for all the panelists. Are you all okay, do you have a problem with the Houston Astros being the world champs for 91 days now?

Mr. Spalter. As long as you legislate about it.

Mrs. Blackburn. The gentleman's time has expired on that one.

Ms. Eshoo, 5 minutes.

Ms. Eshoo. Thank you, Madam Chairwoman. I am not going to get into that since I don't have a dog in that fight, but good luck to all.

Thank you, Mr. Olson, for bringing up some of the issues that are related to disasters. And I know there was a response here, but I think that it is important to note that in the fires in northern California, in Napa and Sonoma Counties, the cell phones didn't work.

Life is not tidy. I mean, fires just don't occur between the time people get up maybe 7 o'clock in the morning and retire at maybe 10 o'clock at night. Were it not for the public safety people actually going door-to-door and banging on doors in the middle of the night to arouse people to get them out of their homes, and they fled in their nightgowns, in their underwear, that was it, because the fires were even at the back of their houses and their roofs had started burning. And the other alert was dogs, their own dogs barking so much that it awakened them.

So we can't live in a bubble that we have something, this one -- which I think is wonderful. It is an American invention. It is a computer in our pocket. But we shouldn't allow ourselves to dream on and say we have something, and it is going to alert everyone. So we have to think outside the edges of the envelope. But I want to thank the gentleman for raising that.

I want to go to Ms. Hovis and Ms. Katz. I have to go downstairs for another hearing of the Health Subcommittee and wanted to come back and ask a few questions here.

RPTR KEAN

EDTR ZAMORA

[11:59 a.m.]

Ms. Eshoo. What do you think are the biggest impediments to deployment that you see in communities? It is certainly in rural communities. There are many specifics that belong to rural communities, but you spoke very clearly about the Hartford area. I was born and raised in Connecticut, so it is nice to have someone from Connecticut here, just outside of the Hartford area, actually. But I think what the committee needs is some pinpointing by you of specifics that will actually remove impediments to employment.

Now, I mean that as a softball question because I have legislation on it, and neither bill costs a dime. But anyway, to both of you, whomever wants to go first. You want to do it alphabetically?

Ms. Hovis. Thank you, Ms. Eshoo. I couldn't agree more about the importance of some of those particular issues. And we have talked a lot about rural challenges, but I would say that there are some very acute urban challenges that, unfortunately, get a lot less discussion. And I think sometimes they are not even recognized.

For example, small business areas in urban and suburban areas are remarkably less served in many cases than residential customers, and that is because the traditional footprint of the cable industry, to its credit, was to go to all of the residences in the community. That is great in most metropolitan areas because there will be a phone

company provider and a cable company provider.

Ms. Eshoo. But you see all the advertisements on TV for the commercial site, come do business with us and, you know, we are the ones that can serve your small business the best. So --

Ms. Hovis. If the infrastructure is not there, it is going to be incredibly costly to get the infrastructure there. A large business will be able to afford to pay whatever it takes, but a small business that can spend \$79 or \$99, \$129 a month, there is simply not a business case for the private sector to build best-in-class infrastructure to them. That is not a slam toward the private sector. That is how private investment works, and the private sector is doing exactly what it should. But I think there is an undiscussed conversation that should be had about the fact that small business areas struggle at remarkable levels, as do very low income neighborhoods, in many cases, because there is simply not business case for upgrade of the networks.

Ms. Shoo. Thank you. I want to go to your --

Ms. Swanson Katz. Yeah. If I could just --

Ms. Eshoo. -- seat mate there because I have 30 seconds.

Ms. Swanson Katz. Sure. If I could just add to that, the reason we focused on Hartford is that we were contacted by Hartford officials who had done a survey of their small businesses and found that they were being -- they were unable, for the reasons Ms. Hovis was discussing, to connect to the internet because they were being quoted prices of \$8,000, \$9,000, \$10,000, \$30,000 for a street crossing. And, again, it is because of the high cost of the street crossings and things

like that. So I don't fault the industry, but I do note that that is a reality, and so that is where we need to make some progress.

Ms. Eshoo. Well, I think that that is very helpful.

Madam Chairwoman, I am going to ask unanimous consent that I be able to place the Harvard study that I referenced in my opening comments today that deals with communities being able to set up their own municipal broadband.

Mrs. Blackburn. So ordered, without objection.

[The information follows:]

***** INSERT 3-1 *****

Ms. Eshoo. Thank you. Thank you to all of the witnesses. A good hearing. Important one.

Mrs. Blackburn. The gentlelady yields back.

And now the gentleman leading our broadband expansion effort, Mr. Johnson, you are recognized.

Mr. Johnson. Thank you, Madam Chair. I appreciate it.

And this is such an important hearing. I can tell you, living in rural Appalachia, I hear all the time about the urban rural divide. It is very, very real. Places that businesses will not come into because they can't get access to their suppliers, to their customers, provide training for their employees. You have got children that have to go to another county or to another -- a local township or to a public library to get access so that they can do their school projects. We have got a lot of intellectual capital and a lot of economic potential in rural America that is being just ignored because of this rural urban divide.

And that is one of the main reasons that I was pleased to sponsor H.R. 4810, the Mapping Now Act. Because an important step to solving the rural broadband issue and expanding deployment is, first, accurately identifying where those unserved areas are. We need an accurate map to do that. And as some of you on the panel and I have discussed, just because one facility or one location in a census block says that there is coverage, that is not true. I can tell you from somebody that lives there, that is simply not true.

And so we need this legislation that directs the assistant

secretary of Commerce for Communications and Information to create that national broadband map and reassert NTIA's authority to do so. Many rural areas in Appalachia or Ohio find themselves on the wrong side of that urban rural divide.

We all know that high-speed internet is no longer a luxury; it is a necessity today for education, for business, especially in this technology-driven global marketplace. So I am going to continue to drive this issue very, very hard and working with my colleagues to break down the barriers to broadband deployment, particularly in rural areas.

Mr. Gillen, from CTIA's perspective, in your written testimony, you mentioned that any new funding should also ensure that reaching areas unserved by wireless is reflected in the program's objectives. In making funding decisions, better data is key, and rural broadband is no exception.

First of all, do you agree with my assertion that the maps are inaccurate, that we really don't have a good definition of where the unserved and underserved areas are?

Mr. Gillen. We certainly agree. We can and we need to do better.

Mr. Johnson. Okay. All right. Do you have any suggestions on how we can ensure better data of unserved areas?

Mr. Gillen. Absolutely. I think there are commercial tools available that we can start informing our process as well, but I think it really comes down to, we have to have a set idea of what we are measuring for? What do we decide broadband is? What is satisfactory

coverage? Just a baseline of what we think we need to do and then measure it consistently across-the-board. And we think it is important to have one person in charge as you direct.

Mr. Johnson. I can tell you what satisfactory coverage is. Satisfactory coverage is coverage. I mean, that is what it is. It is access. But I appreciate your answer.

Ms. Bloomfield, could you please explain the benefits of having an accurate broadband map?

Ms. Bloomfield. Absolutely. And I know we have all discussed this. And again, thank you for your leadership. But the ability to actually get granular, get clear, get transparent, and making sure that you are coordinating, so when you talk about whatever Federal entity actually is controlling the mapping, the making sure that actually we are coordinating between all of those who are gathering data. So again, you are comparing. You don't have those inconsistencies, which I think have led to some of the confusion in the past. And I think the whole focus on the ability to access spectrum will also be very important in the future.

Mr. Johnson. Okay. You know, in your written testimony, Ms. Bloomfield, you mentioned the need for a single authoritative source that can provide accurate data at a granular level and on a consistent basis to help drive better-informed decision-making. So when updating the broadband map, should NTIA use Form 477 data? And is that data detailed enough? And if not, how would you recommend obtaining more granular detail?

Ms. Bloomfield. So I think you make an excellent point, and I think 477 is the best data so far that really is collected from all broadband providers, which is going to be important so that you make sure that everybody that is in the pool actually is submitting the data.

Now, the problem is it is still self-reporting, so you are still going to have to make sure that there is some way to check to make sure that there is verification that what people report is actually true, other than driving through your district and actually doing it anecdotally. So I think that is going to be important. But it is going to be -- I think having it spread across different entities is going to just lead to some confusion and not get the results that you are looking for.

Mr. Johnson. All right. Well, thank you very much.

I had a lot more questions but, Madam Chair, my time has expired. I yield back.

Mrs. Blackburn. The gentleman yields back.

Ms. Clarke, you are recognized for 5 minutes.

Ms. Clarke. I thank you very much, Madam Chairman. I thank our panelists for their expert testimony here this morning.

This Congress, I have had the honor of introducing and establishing the Congressional Smart City Caucus along with my colleague, Congressman Darrell Issa. As co-chair of this bipartisan Smart City Caucus, I know deploying broadband in our cities is critical.

We in Congress must do more to make sure that, first of all, the

deployment is ubiquitous, but to address the 10 million Americans in urban areas who do not have access to broadband as defined by the FCC. And that is why I have cosponsored the Connecting Broadband Deserts of 2018, with my colleague, Congressman Bobby Rush. Under this legislation, the FCC will be tasked with reviewing the state of deployment in urban broadband deserts, and will be required to take action to help speed deployment if it is not occurring at a reasonable pace.

So, Ms. Katz, what types of issues -- and we heard a little bit about this when the question was asked, I believe it was by Ms. Eshoo, what issues do we currently allow to fester when we assume that every part of a city is already connected? And what could we do to help address these issues?

Ms. Swanson Katz. Well, thank you for your leadership, and thank you for the question. It is an excellent one. I talked a little bit about the homework gap. We have seen continuing impacts on small businesses. There is also in my testimony a report we did on that issue. And so we see that you continue the cycle of lack of opportunity for these areas when they don't have access to broadband. This panel, it is delightful that it is almost undisputed that it is a utility at this point, that everybody needs access to it.

And so I think some of the most effective things we can do is to allow State and local governments to be part of the dialogue. It does concern me, as chair of the Intergovernmental Advisory Committee, when there is repeated references to removing barriers at State and local

levels. And, in fact, State and local governments are trying very hard to move the needle on these things. For example, in Connecticut, we have been working for years on a single pole administrator, one-stop shopping for connecting to utility poles. That is one of the things that is most expensive.

We are also working, it is very important for smart cities, dig-once policies, how can we coordinate on the digging up of streets. These are very important but very complex issues, but these are some of the initiatives that State and local governments are working on.

Ms. Clarke. Very well.

Ms. Hovis, did you have something that you wanted to add with respect to this, a concern?

Ms. Hovis. I would say just that from the smart city standpoint, and the smart communities, because we are going to have smart counties and smart rural areas as well, the infrastructure is so critically important. And as long as a divide persists and who has access to the best infrastructure, then as services in a smart community environment move on to the infrastructure more and more, there will be less access by some members of the community.

So our risk here is that the digital divide, rural/urban, and that that impacts low income folks and that impacts small businesses will get more and more pronounced over time. We can't double down on the existing divide.

Ms. Clarke. The other concern that has sort of been flagged and part of this conversation is one of cybersecurity. So that if we are

talking about smart cities and we are talking about gaps in coverage, would any of you speak to what having sort of those vulnerabilities could mean from a national perspective?

Ms. Bloomfield. I would be happy to jump in. I have the opportunity right now to serve on the FCC CSRIC working group talking about, you know, what is the importance of protecting those networks. And one of the things that we think is really important is to ensure -- you know, I have 850 carriers across 46 States. People tend to think of the large carriers, but we need to make sure that the small carriers have the ability to protect their networks, because sometimes it is the assumption that, you know, where the networks are vulnerable is where the problems will actually happen.

So we are spending actually a lot of time in resources this year educating our small network operators on how to protect their assets, how to protect their consumer assets. And that is going to be really important as we move on to the Internet of Things.

Mr. Spalter. And if I could as well, I applaud your efforts to make our city smarter, and I also applaud your efforts to make our broadband infrastructure for our cities and all of our communities safer, more secure. We at USTelecom are taking that mandate very, very seriously. We have recently launched a small and medium business initiative to make sure that, not just our largest companies, but also our smallest companies, as Ms. Bloomfield said, who share a vulnerability, can actually do incident response, reporting, and information sharing much more effectively.

But our enemies in this domain are getting smarter and more wily by the day. We have to think of this as not just a challenge carried by broadband providers, but by the entire internet ecosystem.

Ms. Clarke. The ecosystem.

Mr. Spalter. We have to join in common cause in doing so.

Ms. Clarke. Very well. I yield back, Madam Chair.

Mrs. Blackburn. I thank the gentlelady.

Mr. Guthrie, you are recognized.

Mr. Guthrie. Thank you very much. Sorry, I have been bouncing between a couple of hearings today, so I apologize.

But I did hear Mr. Johnson's testimony -- or questioning. And I understand there were some other questions about mapping. And I know that is what we are talking about, and the fact that we have to get more granular data and the 477 may not give enough information.

So this is really to the providers, so for Mr. Spalter and Ms. Bloomfield, the questions. Given the need for service providers to protect the proprietary asset information and our need as policymakers to get more granular broadband availability information, is there even a pathway forward to get to a street-level understanding of broadband service availability that meets both needs? I will just start with Mr. Spalter.

Mr. Spalter. Technologically, I think there is a pathway forward. I mean, the technology is not only being deployed by our Federal Government, particularly by the FCC, but also by those that are being advanced by the private sector. I think that this is an

opportunity going forward to think about how we can actually streamline and make a uniform approach to a mapping exercise so that we are not merely identifying addresses, but actually geocoding longitude and latitudinally relevant locations where we need to deliver broadband. Which is why I said earlier, first, that it is fantastic via H.R. 4810. You and Mr. Johnson are working to come up with creative solutions going forward, but also knowing that the FCC is going to be driving this process forward. To the extent the NTIA is going to be involved, it needs to meaningfully coordinate with FCC to avoid duplication and, therefore, confusion. And also, we collectively have to think about other assets can be put on to the table, including, as I mentioned, whether the Census Bureau can use its resources to help map and locate, again, longitudinally and latitudinally, areas where there is not institutions, residences where there is not yet broadband access.

Mr. Guthrie. Okay. Thank you.

Mr. Gillen.

Mr. Gillen. Thank you for the leadership on this issue to bring more attention to it. I think we are seeing progress. I would echo Mr. Spalter's comments. I think it is important we marshal all resources, and it is going to take a partnership of all of these companies and the government to figure out how best to do this. But I think a lot of that, as Mr. Spalter said, are right on track.

Mr. Guthrie. Thank you.

Ms. Bloomfield. And if I would just add, you know, we talked a lot about streamlining. The one thing I would encourage is that we

don't look at creating multiple burdens so that you are not having small companies like the ones I represent having to do onerous reporting to three or four different agencies. So, again, that coordination is going to be important.

Mr. Guthrie. Are there mechanisms you would put in place that would relieve that burden?

Ms. Bloomfield. You know, I think it is actually helpful to figure out a way to designate, you know, who takes the lead. Not dissimilar to some of the other efforts that the committee has been looking at is how do you actually designate where that point is and agree to kind of one form of process, one form of data to be collected. And then certainly a challenge process so that folks can ensure that the data is accurate.

Mr. Guthrie. Okay. Thanks.

Mr. Polka?

Mr. Polka. Completely agree. Mapping is essential. We have to know where we need to build. There does need to be a partnership. There is no question about it. Whatever technological means that we can determine to help better determine where broadband is necessary, but ultimately this is going to come down to information from the provider.

In the most hardest-to-reach areas, you are going to have small companies that do have very, very small staffs, very few people. The people that they employ are the ones that are literally climbing the poles and serving the customers at the counters. They don't have deep

legal staffs, nor regulatory staffs. So for them to take the time to fill out the information that is required is a burden. So that has to be factored in. Certainly, that self-reporting is important and essential as a piece of how we determine where broadband is and isn't as part of the mapping process. But this has to be, I think, a much broader, deeper discussion on what is the baseline of information that we want to obtain, how can we obtain it, and who will be the providers to help provide that information.

Mr. Guthrie. From some of the previous mapping efforts, the SBI mapping that the NTIA administered from 2009 to 2014, what are some of the deficiencies and maybe lessons learned that can be applied? I only have about 45 seconds. So the providers can go as you want to go. But what are the deficiencies in that and what should we do different?

Mr. Polka. I would say paperwork. I mean, it is as simple sometimes as paperwork. When you have forms to fill out, again, by small companies who do not have the background, the regulatory, the legal background, even then determining more particularly census block, census tracts, obtaining the data, the cost of the data to even populate the maps, it is extremely difficult for small companies to accomplish. It is vital, but here, again, it has to be part of a public-private purpose to deliver that information.

Mr. Guthrie. Thank you very much.

My time is expired, and I yield back.

Mrs. Blackburn. Mr. Collins, you are recognized for 5 minutes.

Mr. Collins. Thank you, Madam Chair. I would like to thank you also for just holding this hearing and having such a diverse group of witnesses.

Broadband access, as we all know, is important to our rural communities as our reliance on the internet continues to grow. Unfortunately, some States like New York are now working to complicate this issue, but we will set that aside for a second, and say I am at least glad to see some bipartisan bills here as the subject of this committee hearing.

And as we focus on infrastructure, the inclusion of broadband is something that I bring up again and again. It is not just roads and bridges and airports. Sixty-five percent of my district, eight counties, very rural, lot of dairy farmers, are certainly underserved.

My bill, H.R. 4798, is the bill that considers inventory of assets for the Communication Facilities Act of 2018. Let's know what we have got. Let's at least make it easier for some of the smaller carriers. Somebody, when we introduced this, made the comment, "Well, don't the big guys already know what we have got?" And, you know, maybe they do, maybe they don't. It never hurts to make it easier, but certainly some of the smaller suppliers, I think, may be those that end up coming in to some of my rural communities, if they can see some value.

So, you know, maybe specifically, Mr. Spalter, I will ask you. As common sense as some of this is, I am presuming you would support such an inventory of assets, and could you speak to how that might help?

Mr. Spalter. It is not only common sense, but it is music to our ears when the Federal Government wants to actually try to identify and map its assets. Great. And we encourage that to happen.

I would also say that we know that when and as that mapping takes place and as inventories are done, we will be able to deliver more broadband more efficiently with the speed to market that will be much more effective. When our Federal infrastructure and assets are connected to broadband, they became more cost effective, safer, and have longer lifespans. So this is an important initiative that you are undertaking, and we applaud your effort for thinking it through, and we are going to support you.

Mr. Collins. Good. Thank you.

Mr. Gillen?

Mr. Gillen. I think this is something actually both big and small companies don't know where those assets are, so I think it is a critical resource to be able to know when you are trying to deploy, particularly trying to deploy as quickly as you want to deploy, where we can and can't go. So I think it is a critical transparency vehicle for us to be able to start building faster.

Mr. Collins. Yeah. Ms. Bloomfield.

Ms. Bloomfield. I was also just going to commend you for keeping it technology neutral, which I think is really going to be very important as we actually assess the assets.

Mr. Polka. Finally, I would just say access to technology is important. And if -- particularly for a smaller company where you have

fewer customers per mile, but the cost of technology that you need to deploy the same mile of broadband is just about the same, whether you are in rural New York or in the middle of Manhattan.

So having access to additional resources for small businesses is extremely important. In fact, I am not aware of any other idea like that before that has existed where such information would be made available to smaller companies. So we certainly appreciate the idea and really look forward to working with you on it.

Mr. Collins. So, Mr. Gillen, you brought your 5G device in. Is this even more critical as we -- we are going to have a lot more 5G devices hanging out there than we are the big towers.

Mr. Gillen. Absolutely. And I think when you talk about Federal assets, there is the post office, there is the Federal building in town, and it is critical for us to go in town and know exactly where we can start. Because if we want to win the 5G race against China and others, we need all the information we can get.

Mr. Collins. Do any of the other witnesses care to make a comment? I was going to say if not, but go ahead.

Ms. Swanson Katz. Yeah. No, I think it is incredibly important to know where the assets are, where the broadband is, what is available to consumers. And I think it is also important that it be independently verifiable, because I think it is important for the public to know that they can rely on the data and its transparently available.

Mr. Collins. We will make sure it is accurate.

Thank you, Madam Chair. I yield back.

Mrs. Blackburn. The gentleman yields back.

Now to the patient Mr. Cramer.

Mr. Cramer. I have patience. I am not sick. But thank you. And by the way, Madam Chair, thank you for the hearing. And thank all of you for your testimony, for being here. And it really didn't require any patience at all. This is really quite interesting to me and fascinating. So I appreciate everybody being here.

I have to admit that sometimes when I hear about these sparsely populated States like Vermont and their digital divide, I start feeling a little guilty, because when I look at North Dakota, it is hard to claim a divide. Now, there are some places, but we have over 90 percent of our population that has 100 Mbps or more, and 93 that are over 25. So while there are still a few spots, our folks do a great job.

And, Ms. Bloomfield, you know well that, and this is one of the concerns I want to get to here with regards to some of this policy, that many of your members in North Dakota were broadband before broadband was cool. They were efficiently using Federal support funds to build out broadband long before it was, you know, mandated by either tradition or policy. And one of the things I worry a little bit about, as we talk about, and I support, let's get to unserved before underserved. That is really important. We want to have that bridge. I mean, it would be kind of crazy to have an interstate that if they decided to gravel, you know, for a couple miles in Montana or something. But as each generation comes and the demands get greater in places like North Dakota, where it is not just education, it is not just health

care -- huge, really huge -- other business, really important, access to market is really important. But even safety, environmental safety, SCADA systems that, you know, that have to work on our oil pipelines and our gas pipelines and, of course, our big transmission lines as we generate a lot of electricity. All of that will require upgrades.

And so as we talk about the efficient deployment of Federal funds, I want to make sure that we have protections for upgrading as well. Does that make sense? Maybe I will start with you, Ms. Bloomfield, to comment, and anybody else that would like to.

Ms. Bloomfield. You are absolutely spot on. And again, thank you for your leadership on all of these issues. And I think people are always surprised that North Dakota actually has probably one of most fiber-rich States in the country, because when you look at that land mass, it is pretty amazing. But in part, when you are really that rural, you actually see what broadband can do to kind of narrow that gap that geography creates. So the ability to do telemedicine, the ability to actually bring communities together, to do economic development. And then when you had the oil industry coming in, the ability to make sure that that economic enterprise was absolutely able to be supported.

So the fact that you are focused -- because people get so focused on building and they forget about the fact that you have got to maintain that network, otherwise, you know, down the road, you don't have anything but a capacity that is limited by, you know, what it was when it was actually built. So the ability to live and breath.

The other thing that I would tout, particularly in a State like North Dakota, is the ability of the carriers to collaborate with one another. They have created DCN, a State fiber network, the ability for them to realize that all boats rise. If they are able to build that infrastructure out further, all of the carriers in the State actually benefit from it, and the State itself benefits from it.

Mr. Cramer. Well, I might, just to add a couple of statistics for others to comment, there are only three States that have less population density than North Dakota, but there are 20 States and territories that actually have less connectivity than North Dakota, so it can be difficult.

But I also wonder, some of these other States have a lot of Federal lands, and we have been talking about that. We do not. We have some, but not a lot. It is not a barrier for us. I think State policy does matter. And while I agree that communities ought to have some, you know, competitiveness about how they -- and some control over their own regulation, there should be a minimum standard that makes sure that the country is connected as well.

But Mr. Spalter, you wanted to comment?

Mr. Spalter. Well, I couldn't agree with you more that the cost of maintaining and upgrading networks for underserved areas is only escalating. It is a multiplier of what the bill costs actually are. And we know that particularly as we are seeing this extraordinary spike in the data that is being put through these networks from an increasingly small number of, actually, internet companies that are

sending video to customers around the country, that this is even becoming more profound.

So I completely agree with your insight but also your initiative via 4832 to not only think through opportunities to serve communities that have been impacted by disaster, but also to better serve communities that already have broadband.

Mr. Cramer. Yeah. Well, I think we have certainly learned some things in the last year that can be helpful in; that, so why not apply it across the board and avoid special circumstances.

Anybody else?

Mr. Polka. I would just offer, sir, when you talk about upgrades, it is really, really important to remember how these upgrades are accomplished. One of the things that I mentioned in my comments were about, you know, this sexy issue of pole attachments. It is incredibly important when you have either -- you know, whether it is an attachment to a pole or a conduit, it seems like our policy is any time something new happens to the pole or the conduit, that is a new starting point for a long application process, for fees and other things of that nature, rather than saying, how can we simplify this process? One Touch Make Ready, simplifying this to make sure that we get attachments on the poles, internet lines, through the conduits to get broadband out there faster. So I hope you factor that into your thinking as well.

Mr. Cramer. Another reason not to nationalize anything.

And with that, I yield back.

Mrs. Blackburn. The gentleman yields back.

This hearing is so popular today we have uc'd Mr. Tonko onto the committee for his questions. The gentleman is given 5 minutes.

Mr. Tonko. Thank you, Chair Blackburn. Thank you, Ranking Member Doyle, for hosting this hearing today.

I hear from constituents across my district all the time on the need for broadband expansion. I was excited to see that the ACCESS BROADBAND bill included in today's discussion, which I have sponsored, is part of the focus. But I fear that we don't have the time to have an in-depth discussion on many of these important issues.

I am proud to have worked on this legislation with Congressman Leonard Lance, and thank the bipartisan group of Members who have cosponsored the legislation, including eight members of the Energy and Commerce Committee who have worked together and agreed that this is an issue worth supporting.

I also want to thank Jonathan Spalter with USTelecom for your call to action to move forward on vital bills like ACCESS BROADBAND that offer responsible solutions. I have engaged with industry and many organizations and believe this is a bill we can all work on together and support.

Chair Blackburn and Ranking Member Doyle, I ask that as we move forward, we take a closer look at pieces of legislation like ACCESS BROADBAND that have strong bipartisan support. Let's have a discussion on what we can improve and let's move the bills forward.

H.R. 3994, the Advancing Critical Connectivity Expands Service, Small Business Resources, Opportunities, Access, and Data Based on

Assessed Need and Demand, or ACCESS BROADBAND -- that acronym took a bit of work -- would establish a coordinating office for Federal broadband resources. It would use existing resources to streamline management of Federal broadband resources across multiple agencies and simplify the process for small businesses and local economic developers to access them.

Broadband internet access is often the difference between success and failure for students doing homework, job seekers training for a new career, doctors reading a medical scan, or entrepreneurs starting a small business. However, to date, the Federal Government has done a poor job of tracking broadband deployment.

Currently, there is no comprehensive system that tracks where Federal dollars are going and how the funding is impacting communities. Investments are made with little accountability and oversight on behalf of the taxpayer.

So, Ms. Hovis, can agencies do a better job of coordinating Federal resources? And what are some of the current problems we see with a lack of coordination?

Ms. Hovis. Congressman, I think coordination would be exceptionally helpful. It is obviously not a simple matter in any large organization, whether public or private, but it would be helpful, not only because we would be collecting better data of all types and knowing exactly how public funds are being spent and the impact they are having on the broadband environment, Federal Government is a big buyer of services and so its dollars are being spent to deploy

infrastructure in certain places and to make it more economical in other places. It would be helpful from that standpoint, but it would also be helpful with things like -- and I think many of my colleagues have spoken to this sort of thing -- knowing where public assets are and knowing how public assets can be used.

An example of this would be that there is at the State and local level, I think, some confusion among private companies, but also departments of transportation about whether assets built with Federal funds for transportation purposes can be used, excess capacity can be used for broadband purposes, whether public or private. Clearing up some of that confusion, having coordination among different levels of government and among different government entities would be enormously helpful and timesaving.

Mr. Tonko. And, obviously, that coordination could unlock more broadband development?

Ms. Hovis. Yes, I think it could. I mean, that information is always going to be better, and lack of information, like a map that is insufficiently granular, or lack of information about what different agencies are doing and spending makes it just that much harder to plan in an efficient and pragmatic way.

Mr. Tonko. I have a question for both you, Ms. Hovis, and Mr. Spalter. Can we better coordinate to simplify the process for companies, for small businesses, and local economic developers to access Federal resources?

Mr. Spalter. Well, I think we can. And I must say, Congressman,

that the ACCESS BROADBAND Act is an innovative step towards unlocking that opportunity. Not only do you recognize at its core that we have to do better in managing and streamlining and making more efficient Federal broadband resources, but the more that our smaller enterprises can have a greater understanding of where those -- how those resources are being directed and how they are being managed, there will be opportunities to create even more efficiencies for broadband deployment and for their participation in that process.

And so we are very grateful for your insight, but also your foresight in making sure that we can do better in unlocking the opportunities of managing our Federal resources in a more efficient way.

Mr. Tonko. Thank you.

And, Ms. Hovis?

Ms. Hovis. I totally agree. And I would just add to that that it is critically important, obviously, that those assets and resources were built for particular purposes having to do with the agencies that built them and their critical mission. And so it is critical that no asset is ever compromised by a secondary use, as important as these secondary uses are. Transportation, public safety, all of these kinds of infrastructure assets have that first primary use. But subject to protection of that use and security and so on, there is enormous potential value of this kind of coordinated planned approach.

Mr. Tonko. So I would assess that the Federal Government, knowing where it spends on broadband and understanding the impact of

this spending, are going to provide a lot of direction as we go forward.

So were you going to add --

Mr. Spalter. I am just agreeing with you, sir.

Mr. Tonko. Okay. Thank you. Thank you so much to our witnesses too, and thank you for allowing me to participate.

I yield back.

Mrs. Blackburn. The gentleman yields back.

And seeing that there are no further members --

Mr. Doyle. Madam Chair?

Mrs. Blackburn. -- asking questions -- yes, Mr. Doyle, you are recognized.

Mr. Doyle. I would like to get unanimous consent to enter a few things into the record. A press release from PCCA on today's hearing, an Axios story on the National Security Council's plan to nationalize 5G networks, the PowerPoint slides and memo discussing that story, and a letter from Tipmont REMC.

Mrs. Blackburn. Without objection.

[The information follows:]

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Mr. Doyle. Thank you.

Mrs. Blackburn. And pursuant to committee rules, all members have 10 days to submit questions, and we would ask that you respond in 10 days to those questions.

Without any further business coming to the subcommittee today, the committee is adjourned.

[Whereupon, at 12:35 p.m., the subcommittee was adjourned.]