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6 REAUTHORIZATION OF NTIA

7 THURSDAY, FEBRUARY 2, 2017

8 House of Representatives

9 Subcommittee on Communications and Technology

10 Committee on Energy and Commerce

11 Washington, D.C.

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15 The subcommittee met, pursuant to call, at 10:45 a.m., in
16 Room 2322 Rayburn House Office Building, Hon. Marsha Blackburn
17 [chairman of the subcommittee] presiding.

18 Present: Representatives Blackburn, Lance, Shimkus, Latta,
19 Guthrie, Olson, Kinzinger, Bilirakis, Johnson, Flores, Brooks,
20 Collins, Cramer, Walters, Costello, Doyle, Welch, Clarke,
21 Loeb sack, Ruiz, Dingell, Engel, Butterfield, and McNerney.

22 Staff present: Gene Fullano, Detailee, Telecom; Kelsey
23 Guyselman, Counsel, Communications and Technology; Dan

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1 Schneider, Press Secretary; Evan Viau, Staff Assistant; Gregory
2 Watson, Legislative Clerk, Communications and Technology; Alex
3 Debianchi, Minority Telecom Fellow; David Goldman, Minority Chief
4 Counsel, Communications and Technology; Jerry Leverich, Minority
5 Counsel; and Lori Maarbjerg, Minority FCC Detailee.

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1 Mrs. Blackburn. Good morning, everyone.

2 We are delighted that you all are here and that you're joining
3 us as the Communications and Technology Subcommittee is kicking
4 off the 115th Congress.

5 I guess kick off is the right word to use because we are
6 looking at the Super Bowl this weekend. So everybody pick your
7 team.

8 Our subcommittee features a few new faces and also some
9 familiar faces in new roles, and before we begin I'd like to take
10 a moment for a brief introductions.

11 Mr. Lance is our vice chairman and he is going to be a valuable
12 partner in all of our endeavors. His understanding on the issues
13 and his experience as a senior member of this committee will be
14 a great asset to us on the subcommittee.

15 I am also excited to introduce the new Republican member
16 of the subcommittee, Mr. Flores, Ms. Brooks, Ms. Walters, Mr.
17 Costello. We welcome their eagerness and their talents to these
18 issues.

19 I want to congratulate Mr. Doyle, the new ranking member.
20 He has been consistently active on these issues through the years.
21 I am looking forward to working with him.

22 As I have so focused on these coms and technology issues I've
23 appreciated the fact that Mr. Doyle kind of like me chose to opt

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1 himself in to the discussion on these issues and he is joined by
2 three new members on his side.

3 I know that he will -- he is going to be ready to introduce
4 them in a few moments. Let me begin with my opening statement.
5 Get myself organized here.

6 As we continue the subcommittee's work, modernizing the laws
7 around communications and technology and striving to promote
8 innovation and investment it only makes sense to begin by taking
9 a look at one of the agencies tasked with developing
10 telecommunications policy.

11 The last NTIA reauthorization was adopted in, get this, 1992.
12 It is far past time that we again reauthorize the agency and the
13 first step in the process is to examine the role of the agency
14 past, present and future in crafting policies that will achieve
15 our shared goals.

16 We are pleased to have three witnesses today that can speak
17 to their experiences as head of the NTIA. We are so grateful for
18 your time and for your insights and I am certain they are going
19 to give us the needed perspective on the work that the agency has
20 done and also, hopefully, give us some good ideas on how to empower
21 the NTIA going forward.

22 One of the biggest bipartisan priorities for the
23 subcommittee over the years has been satisfying the demand for

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1 additional spectrum for commercial use.

2 As the FCC winds down the broadcast incentive auction, one
3 of the last opportunities for reallocation of commercial spectrum
4 to other commercial users we are again turning our focus to
5 federally-held spectrum. The government holds a large amount of
6 spectrum and we recognize that they require much of it for
7 carrying out critical government missions.

8 However, we also want to be certain that the government is
9 armed with the best technology and is using that spectrum as
10 efficiently as possible. The dividend from this investment in
11 our government agencies will be more spectrum to meet more
12 broadband demands.

13 Broadband deployment is America's greatest infrastructure
14 challenge of this decade and it is up to us to rise to the occasion
15 of meeting this demand.

16 We will have long said that spectrum will need to be an above
17 -- all of the above solution and NTIA will be an essential player
18 in any discussion moving forward. In addition to spectrum
19 policy, NTIA plays a leading role in public safety and
20 cybersecurity policy.

21 They serve as a liaison for interagency cooperation and
22 standard setting in both of these areas promoting safer and more
23 secure communications networks.

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1 We have seen time and again in recent months how serious cyber
2 threats are we will need to use all our tools -- all of our tools
3 to combat these attacks, especially when it comes to critical
4 infrastructure.

5 NTIA has the capability to bring together a diverse group
6 of government stakeholders to address the problem and develop best
7 practices. We must ensure that we empower them to be effective
8 and efficient in combating cyberattacks and promoting strong
9 public safety networks.

10 The communication sector is vibrant, thriving and the
11 government agencies that handle these issues should reflect that.

12 Today, we are going to look at how to enable the NTIA to craft
13 thoughtful telecom policy that promotes continued innovation and
14 investment.

15 I thank our witnesses for their thoughtful testimony and I
16 look forward to a robust discussion on this important agency and
17 at this time I yield five minutes to the ranking member.

18 Mr. Doyle. Well, I want to thank you, Madam Chair, for
19 holding this hearing and I want to congratulate you on your new
20 role. I look forward to working with you and having a productive
21 partnership and I am glad you like opt in. I do, too.

22 I also want to -- I also want to thank my colleagues on the
23 committee for giving me this opportunity and introduce our two

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1 new members, Raul Ruiz from California and Debbie Dingell from
2 Michigan -- both good members and I think will be good members
3 for this committee.

4 I want to thank the outstanding panel that's here today. We
5 look forward to your testimony. As the chair said, we are here
6 today to discuss reauthorizing the National Telecommunications
7 and Information Administration, an agency charged with providing
8 the president and the executive branch with fact-based expert
9 policy recommendations on telecommunications, information and
10 internet issues.

11 NTIA is also responsible for managing the federal
12 government's use of spectrum and it has been instrumental in
13 clearing government-held spectrum and making it available for
14 commercial use.

15 In the process, tens of billions of dollars have been raised
16 for the federal government. NTIA is also working with federal
17 agencies to find new and creative ways to share underutilized
18 spectrum resources and that's important because maximizing our
19 finite spectrum resources will be critical as we move to the fifth
20 generation wireless networks and beyond.

21 NTIA's Institutes for Telecommunication Sciences located in
22 Colorado are key to this mission. Last year, the funding for this
23 lab was 23 percent below the president's request. Our lack of

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1 investment here could have serious implications for this agency's
2 ability to accomplish its mission.

3 We want to ensure that this agency has the authority, the
4 tools and the personnel it needs to do its job. NTIA also plays
5 a critical role in convening government agencies, industry
6 experts and academics to tackle complex problems through their
7 multi-stakeholder process.

8 This process has been used to address evolving issues such
9 as cybersecurity, the internet of things, UAVs and many others.

10 This is a well-managed, orderly and inclusive process that
11 enables the federal government to thoroughly grasp and
12 effectively address complex issues, and more than that, this
13 agency has repeatedly proved its worth beyond just clearing
14 spectrum.

15 Under the leadership of our panel, NTIA ran the DTV converter
16 coupon program and the BTOP program to deploy broadband
17 infrastructure and stood up FirstNet, the public safety broadband
18 network authority.

19 They have learned valuable lessons along the way. BTOP is
20 now Broadband USA, a program to help communities expand broadband
21 and promote its adoption.

22 My hope is that as we talk about infrastructure investment
23 in this country we look to agencies like NTIA which have extensive

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1 experience in this area to help manage and direct these
2 investments for our future.

3 My hope in reauthorizing NTIA is that we empower this agency
4 to continue doing its job and that they continue to have a seat
5 at the table and continue to provide fact-based advice to the
6 president and others.

7 Madam Chair, I'd like to ask unanimous consent to enter this
8 letter from the Electronic Privacy Information Center into the
9 record.

10 Mrs. Blackburn. So ordered.

11 [The information follows:]

12

13 *****INSERT*****

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1 Mr. Doyle. Thank you, and I would like to yield the
2 remainder of my time to my colleague, Ms. Matsui.

3 Ms. Matsui. Thank you very much, Mr. Doyle, for yielding
4 me time.

5 Today's digital economy demands that we bolster the
6 invisible infrastructure supporting wireless connectivity.
7 Spectrum is the building block for innovation.

8 Working with NTIA we made significant progress in the last
9 eight years to free up federal spectrum for commercial use.
10 Congressional oversight and cooperation from the administration
11 was critical. As a result, we made 300 megahertz of spectrum
12 available for the wireless broadband.

13 We must have continued leadership from both branches of
14 government including leaders at the agencies like the Department
15 of Defense to expand this progress.

16 We all know there is much more work to be done. The United
17 States must lead the world in 5G and I look forward to working
18 with my colleagues to free up more of our nation's airwaves for
19 the wireless economy.

20 We have always been a nation of innovators and our spectrum
21 policies should be no exception. With that, I yield back to the
22 ranking member.

23 Mrs. Blackburn. The gentleman yields back his time.

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1 Chairman Walden is not here for his opening. Is there any
2 member that would choose to take a portion of his time? Then let
3 me reserve that in case he makes it up and at this time -- Mr.
4 Pallone had requested time. Is that not correct?

5 Mr. Doyle. Could I -- could I claim his time to yield for
6 one more minute?

7 Mrs. Blackburn. Absolutely you can claim the time and
8 yield.

9 Mr. Doyle. Thank you, Madam Chair. I appreciate it.

10 Is there any member of the subcommittee that would like to
11 have time?

12 Mr. Ruiz. Chair.

13 Mr. Doyle. Yes, I'll yield to Mr. Ruiz.

14 Mr. Ruiz. Thank you, Chairwoman and Ranking Member.

15 In today's digital age, access to broadband internet is not
16 a luxury. It is a great equalizer that gives millions of
17 Americans the opportunity to pursue their education, find a job
18 and achieve their dreams.

19 But the fact is there are severe disparities in the
20 deployment of broadband in my district and across the U.S., felt
21 most acutely in rural areas and on tribal land.

22 The National Telecommunications and Information
23 Administration, or NTIA, has been instrumental in closing this

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1 digital divide and I am pleased to be here today to discuss how
2 we can build upon their successes to better serve our
3 constituents. And particularly, I want to highlight NTIA's
4 Broadband USA initiative launched in 2015 which empowers local
5 communities and tribes to expand their broadband capacity and
6 promote broadband adoption through online and in person technical
7 assistance, regional workshops and guides and toolkits with best
8 practices for achieving success.

9 This is a program that supports local solutions supported
10 by evidence-based best practices and technical assistance and is
11 a model that we should all be able to support.

12 I thank the ranking member again for the opportunity to speak
13 briefly about this critical program and look forward to working
14 together with the members of this subcommittee to find solutions
15 that move our nation forward into the digital age.

16 Thank you, and I yield back.

17 Mr. Doyle. Thank you. I'd like to yield some time to Ms.
18 Dingell, too.

19 Ms. Dingell. Thank you, Ranking Member, for yielding to me
20 and I'd like to thank the chairman for holding this hearing today.

21 I know this subcommittee oversees much of the new technology
22 that's reshaping our great nation and NTIA in particular has
23 helped usher in this new era of connectivity through its work

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1 supporting broadband deployment and clearing our airwaves.

2 Every day new high-tech marvels are unveiled including connected
3 and automated vehicles, which I care a great deal about, which
4 have the promise of reducing energy consumption and saving lives
5 on the road.

6 The continuing technological revolution is creating many new
7 jobs and bringing other benefits to society. But for all the good
8 this innovation brings to consumers in our economy, we have to
9 ensure that no American is left behind in this new technological
10 era.

11 As this transition occurs, we have got an obligation to use
12 every tool at our disposal to create jobs and get people back to
13 work. We are going to need to train Americans for the new jobs
14 that need filling and if any agency's up to the task of helping
15 to solve this problem I know NTIA is.

16 Keeping Americans on the job is critical to this new economy.
17 It's going to be a major focus for me on this subcommittee. I
18 thank the ranking member and yield back the time.

19 Mr. Doyle. Thank you. Does anyone else seek time?

20 Mr. McNerney.

21 Mr. McNerney. Well, again, I thank the ranking member.

22 The NTIA is the agency that's going to be advising the
23 president on internet policies, on privacy and security. These

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1 are really important functions, especially in the age of our
2 internet of things -- the IOT.

3 So I really advocate for a strong agency that has the
4 resources to do the research and to develop policy recommendations
5 that will make internet more competitive and will keep America's
6 lead in the internet activities and telecommunications
7 activities.

8 So we have a couple of issues like the broadband map, I think,
9 which needs to be updated so that we have the proper information,
10 security and privacy. Very, very important.

11 I've worked with the chairwoman of this committee on this
12 issue and I look forward to working with you again on that. But,
13 again, I advocate that we have a strong NTIA to help us move forward
14 working with the administration.

15 Mrs. Blackburn. Gentleman yields back.

16 Mr. Doyle. I yield back. Thank you.

17 Mrs. Blackburn. And this concludes our member opening
18 statements. I do remind all members that you've got five days
19 for submitting those opening statements.

20 They are all going to be made a part of the record and we
21 know that several of our members are on the member bus coming back
22 from the prayer breakfast and they are not here at this time.

23 We want to thank our witnesses for being here with us today

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1 and for taking their time and for submitting that testimony early.

2 That's always a good thing.

3 Our panel features three witnesses who are testifying today
4 in their capacity as former administrators of the NTIA.

5 They are the Honorable John Kneuer, who served as the
6 assistant secretary of commerce for communications and
7 information and administrator of NTIA from February 2006 to
8 November 2007. Welcome.

9 The Honorable Meredith Attwell Baker, who served as the
10 acting assistant secretary of commerce for communications and
11 information and acting administrator of NTIA from November 2007
12 to January 2009. Welcome.

13 And Ms. Anna Gomez, who was the acting assistant secretary
14 of commerce and acting administrator of NTIA from February 2009
15 to June 2009. Ms. Gomez continued to serve the NTIA as deputy
16 assistant secretary and deputy administrator of the NTIA until
17 2013.

18 We appreciate all of you, each of you being here today and
19 preparing for this. We will begin the panel with you, Mr. Kneuer.
20 You are now recognized for five minutes to give an opening
21 statement.

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1 STATEMENTS OF THE HONORABLE JOHN M.R. KNEUER, FORMER ASSISTANT
2 SECRETARY FOR COMMUNICATIONS AND INFORMATION, FORMER
3 ADMINISTRATOR, NTIA, PRESIDENT AND FOUNDER, JKC CONSULTING; THE
4 HONORABLE MEREDITH ATTWELL BAKER, FORMER ACTING ASSISTANT
5 SECRETARY FOR COMMUNICATIONS AND INFORMATION, FORMER ACTING
6 ADMINISTRATOR, NTIA, PRESIDENT AND CEO, CTIA; ANNA M. GOMEZ,
7 FORMER ACTING ASSISTANT SECRETARY FOR COMMUNICATIONS AND
8 INFORMATION, FORMER ACTING ADMINISTRATOR, NTIA, PARTNER, WILEY
9 REIN

10
11 STATEMENT OF MR. KNEUER

12 Mr. Kneuer. Thanks very much.

13 Good morning, Chairman Blackburn, Ranking Member Doyle,
14 members of the committee. It was indeed my privilege to serve
15 at NTIA as both the deputy and the assistant secretary from 2003
16 to 2007.

17 Since that time in private life I have served as a board
18 member, a consultant and an advisor to various companies and
19 institutions that have an interest in telecommunications and
20 technology markets.

21 But I want to stress I am here today in my personal capacity
22 and all of my views are my own.

23 So while NTIA has developed a diverse portfolio of issues

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1 over time, its core mission can really be broken down into two
2 functions -- the policy coordination and policy advisory for the
3 president function and as the manager of the federal government
4 spectrum.

5 Because of this dual responsibility, NTIA occupies an
6 important intersection of telecommunications policy in industry
7 as well as our national and homeland security.

8 But to be most effective I think any reauthorization statute
9 should focus NTIA on those areas where its core competency can
10 be leveraged to maximum effect.

11 With regards to policy coordination and development, under
12 the existing statute NTIA administrator serves as the president's
13 principal advisor on telecommunications policies pertaining to
14 the nation's economic and technological advancement and to the
15 regulation of the telecommunications industry.

16 This is a very, very broad mandate that can be read to include
17 essentially policy area that affects the telecommunications and
18 technology markets.

19 However, in my experience at NTIA I think it's at its most
20 effective when it focuses its policy coordination efforts on those
21 areas of its unique responsibility, namely, this intersection of
22 commercial and government interests.

23 Now, one very obvious example is with regard to cyber.

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1 Cybersecurity is an issue that cuts across commercial interest
2 as well as very important government equities. By providing the
3 perspective of industry and the experience that NTIA has there
4 into the interagency process, NTIA can help bridge the gap between
5 the executive branch interests and executive branch entities that
6 have national and homeland security responsibilities and the key
7 private sector interests that also support our collective cyber
8 defenses.

9 Similarly, NTIA can serve as a conduit from government
10 agencies with cyber experience back into the private sector so
11 they have that information flow as well.

12 With regards to spectrum management, you know, I think as
13 Secretary-designee Ross stated in his confirmation hearing
14 testimony, the Department of Commerce has to work with Cabinet
15 departments to free up more spectrum to meet our critical demand
16 for broadband, and it's not just broadband but it's also
17 autonomous vehicles, the internet of things, the range of
18 spectrum-dependent industries that are proliferating across the
19 economy. All have spectrum demand and we need to manage that
20 properly. But this doesn't have to be a zero sum transaction
21 where industry's gain is agency's loss.

22 With thoughtfully crafted policies, Cabinet departments and
23 agencies benefit both from commercial industry technological

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1 developments that produce not only spectrum efficiencies but also
2 new mission critical capabilities for government services, and
3 then the revenue from spectrum auctions can also be used to fund
4 these critical government facilities and ease budget pressure.

5 Because of its exposure to both industry and government
6 agencies, NTIA can help ensure that the spectrum relocation
7 results in both positive benefits for industry and the government,
8 and I think it had been mentioned by multiple comments the ITS
9 labs in Boulder can also help with cutting edge research in that
10 regard.

11 There are, however, limits to NTIA's authority. As a
12 sub-Cabinet agency in a single department it's beyond NTIA's
13 authority to dictate to other Cabinet departments their spectrum
14 and capital budget allocations and resources.

15 However, there is one section of the existing authorizing
16 statute that I think should be examined for potential
17 clarification in any future reauthorization.

18 Under existing law, NTIA is authorized to advise the director
19 of OMB on the development of policies relating to the procurement
20 and management of federal telecommunication systems.

21 In the past, this authority has been effective in combining
22 NTIA's expertise with OMB's government wide authority to promote
23 spectrum efficiencies. I think there is -- there is untapped

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1 potential in that relationship.

2 So, again, I appreciate the opportunity to testify and I'll
3 remain available to the committee as you consider the
4 authorization of this agency and I'll look forward to any
5 questions.

6 [The statement of Mr. Kneuer follows:]

7

8 *****INSERT*****

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1 Mrs. Blackburn. I thank you, and Ms. Baker, you're
2 recognized five minutes.

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1 STATEMENT OF MS. BAKER

2

3 Ms. Baker. Terrific. Good morning. My name is Meredith
4 Attwell Baker and I'm president and CEO of CTIA.

5 I first wanted to offer my congratulations to both Chairman
6 Blackburn and Ranking Member Doyle on your new roles. We applaud
7 your longstanding commitment to ensuring that all Americans have
8 access to global-leading communications.

9 As the head of an association that cares deeply about
10 spectrum policy and as a previous acting administrator of NTIA,
11 it's an honor to be a witness at this subcommittee's first hearing.

12 Your focus today on the reauthorization of NTIA rightfully
13 underscores the importance of this organization to so many of our
14 shared and bipartisan objectives.

15 Serving alongside my colleagues at NTIA was a distinct honor.
16 I have the highest opinion of the talented, extremely talented
17 and surprisingly small staff. From the digital television
18 transition that I helped lead to the AWS-1 and AWS-3 auctions they
19 helped enable, NTIA plays a critical role in our nation's
20 communication future in close collaboration and with guidance
21 from this committee.

22 While NTIA serves many important functions, I want to focus
23 my remarks on spectrum. As a nation, we need to have advanced

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1 communication networks to support mission critical government
2 programs and we need to continue to lead the world in commercial
3 wireless services.

4 NTIA plays a unique role seeking out win-win situations for
5 government and commercial users. They leverage new technologies
6 and auction revenues to provide government agencies more
7 efficient and effective systems.

8 In doing so they provide our industry with access to critical
9 new spectrum to better serve all of us. I hope this
10 reauthorization process can help empower NTIA to advance its
11 mission and ensure government and commercial users have the
12 communications resources they need. I believe we can benefit
13 from the lessons learned from prior reallocation efforts to
14 strengthen NTIA's role.

15 First, we should ensure that NTIA has the technical resources
16 and expertise it needs to serve as an impartial mediator of future
17 spectrum disputes.

18 For example, I hope we focus on NTIA's engineering lab, ITS,
19 and its ability to do cutting edge research with both government
20 and commercial partners. The lab has always played an important
21 role in AWS-1 and AWS-3 reallocation efforts.

22 Similarly, NTIA should be able to provide agencies with the
23 R&D support needed to evaluate potential sharing and reallocation

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1 efforts. Hand in hand with those technical resources, NTIA would
2 benefit from greater transparency tools to better hold agencies
3 accountable for their spectrum use and to simplify this
4 committee's important oversight role.

5 In my mind, given the importance of our sector to the economy
6 it is also overdue to elevate the NTIA administrator to an Under
7 Secretary level to better reflect their role as the president's
8 principal advisor on communications.

9 Strengthening NTIA now is particularly important. We are
10 about to have a revolutionary breakthrough in the next generation
11 of wireless, known as 5G. These networks will be 10 times faster
12 and five times more responsive than today's networks.

13 They will be able to support 100 times more wireless devices,
14 from beacons to wearables, and that will unlock powerful benefits
15 in communities of all sizes from Clarksville, Tennessee to
16 McKeesport, Pennsylvania.

17 America's wireless industry is ready to make significant new
18 investments to bring these benefits to communities all over the
19 country.

20 One recent study estimates that wireless operators will
21 invest \$275 billion over the next decade to deploy 5G. That
22 investment is projected to create a new 5G job for every 100
23 Americans -- three million total jobs.

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1 In local communities, increased 5G connectivity will mean
2 officials can more quickly respond to emergencies. It will make
3 our roads safer. Smarter energy solutions will lower our monthly
4 bills and mobile health care systems will instantly connect
5 patients with doctors. The speed with which these benefits reach
6 all Americans will largely depend on decisions made here in
7 Congress at NTIA and at the FCC. We need an infrastructure policy
8 to support denser networks with new small cells, hopefully a
9 future topic for another hearing soon.

10 And we need a plan for 5G spectrum with a clear pipeline of
11 new commercial spectrum under NTIA's steady hand. The wireless
12 industry is ready to invest in what's next.

13 We hope this committee will continue its record of helping
14 make that happen, help us create jobs and, most relevant for today,
15 help empower NTIA to provide for all Americans' communications
16 needs.

17 Thank you.

18 [The statement of Ms. Baker follows:]

19
20 *****INSERT*****

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1 Mrs. Blackburn. I thank you.

2 Ms. Gomez, you're recognized for five minutes.

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1 STATEMENT OF MS. GOMEZ

2
3 Ms. Gomez. Good morning, Chairman Blackburn and Ranking
4 Member Doyle, distinguished members of the subcommittee. Thank
5 you for the opportunity to appear before you to share my thoughts
6 regarding the important work NTIA performs.

7 I had the honor to serve as NTIA's deputy administrator from
8 2009 through March 2013 and a short stint as acting administrator
9 as well. I am proud to have served our nation alongside the many
10 committed professionals at NTIA and the Department of Commerce.

11 Given technology's large and growing contribution to our
12 broader economy, sound policy that supports investment and
13 innovation is critical. NTIA has an important and often
14 underappreciated portfolio in this regard.

15 First and foremost, Congress and through this committee's
16 efforts in 1992 enshrined NTIA's authority to serve as the
17 president's principal advisor on telecommunications.

18 As such, NTIA is responsible for formulating the
19 administration's telecommunications and information policy, a
20 role that has grown in importance and breadth with the evolution
21 of a digital economy.

22 NTIA enables the federal agencies to have access to spectrum
23 to meet their mission needs and has played an integral role in

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1 making additional spectrum for wireless broadband uses. NTIA
2 also provides valuable research and analysis to inform efforts
3 to identify additional spectrum efficiencies and potential
4 opportunities to increase spectrum access for all users.

5 With increasing demand for wireless technologies showing no
6 signs of abating, the need for an experienced and knowledgeable
7 manager of our federal agency spectrum resources is ongoing.

8 NTIA also play an important role in developing internet
9 policy. American businesses in the digital space both large and
10 small depend on an online ecosystem that has the confidence of
11 all users.

12 NTIA should continue convening multi-stakeholder processes
13 to address policies that affect the internet and it's also very
14 important that NTIA be at the table in policy discussions both
15 domestically and internationally related to practices that may
16 affect the digital economy and that it continue its strong voice
17 in the internet domain name system.

18 NTIA has also focused on increasing broadband access and
19 adoption. The Broadband Technology Opportunities Program helped
20 build lasting projects that increase access and adoption of
21 broadband throughout the country.

22 NTIA also co-chairs the Broadband Opportunity Council, an
23 interagency effort to produce recommendations to increase and do

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1 remove barriers to broadband deployment, competition and
2 adoption.

3 And through its Broadband USA program NTIA sponsors a series
4 of publications, webinars and conferences designed to help
5 stakeholders overcome broadband access and adoption obstacles.

6 NTIA also helps ensure that the nation's telecommunications
7 resources adequately support the needs of public safety.

8 NTIA administers grants to promote Next Generation 911 and
9 works with FirstNet, an initiative that is near and dear to my
10 heart. I believe strongly in its mission to provide broadband
11 services to all first responders.

12 NTIA also works with NIST on the public safety communications
13 research program whose laboratories provide research,
14 development, testing and evaluation to foster nationwide
15 interoperability in communications.

16 These highly valuable programs will help provide the
17 nation's public safety the technology they need to keep their
18 communities and themselves safe.

19 In conclusion, NTIA should continue its important role
20 coordinating federal policies in areas such as spectrum,
21 broadband, internet policy, public safety and research. In an
22 area like technology policy where there are many agencies with
23 overlapping jurisdiction, it is critical to have an agency like

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1 NTIA to shepherd interagency activities and to bring some thought
2 and rigor to priorities and interagency coordination so there is
3 less duplication of effort.

4 One example is with policies regarding the internet of
5 things. Myriad agencies have oversight over different
6 components of the IOT. IOT implicates spectrum policy,
7 cybersecurity, privacy concern, among others.

8 In the absence of a central approach to governance, we risk
9 having inconsistent and burdensome requirements. NTIA can and
10 should play an important role in convening and guiding the
11 numerous agencies and ensuring consistent federal policies that
12 promote innovation.

13 NTIA also should continue its efforts to identify barriers
14 to broadband deployment and to push interagency efforts to
15 streamline processes or eliminate requirements that show down
16 that deployment. In addition, NTIA is well positioned to manage
17 any grants or other infrastructure funding that would promote
18 broadband access and adoption. Any new program would benefit
19 from the NTIA's prior expertise and experiences.

20 I want to thank you again for allowing me to share my thoughts
21 with you this morning and I look forward to answering any questions
22 you may have.

23 [The statement of Ms. Gomez follows:]

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1 Mrs. Blackburn. The gentlelady yields back and we thank you
2 all for being here.

3 We will now move to questions and Mr. Kneuer, I would like
4 to begin my five minutes of questions with you.

5 As I've reviewed the testimony from each of you and we have
6 looked at the number of different funds, and you alluded to this
7 in your testimony and all of you did actually, how it is spread
8 out over different agencies. And I know Commissioner O'Reilly
9 at the FCC has also commented on his concerns with the way
10 sometimes we don't have one hand knowing what the other hand is
11 doing or the agency across the street hasn't coordinated.

12 And so as you were saying, Ms. Gomez, you end up with this
13 duplication of effort. What I'd like to hear from you is how best
14 can NTIA work to coordinate those funds and you mentioned --
15 touched on this when you talked about advising the OMB director.

16 And then what would you propose for them as they look to
17 coordinate those funds and utilize those dollars to the maximum?

18 Mr. Kneuer. Sure. I think, as you pointed out and Mr.
19 O'Reilly pointed out, lack of coordination is a fundamental
20 challenge and problem where you've got so many different pools
21 of money under different control.

22 But I think there is also not just different institutions
23 managing these pools of money. They sometimes have slightly

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1 different views and agendas. So some of these pools of money are
2 for loans versus some are for grants, some are focused on
3 underserved areas versus unserved areas.

4 The -- I think the path is, and particularly as you consider
5 reauthorization of NTIA, taking a broader look and collaborating
6 with other committees of jurisdiction, working with the executive
7 branch, working with OMB to the extent possible to bring these
8 under a single area of planning and oversight so that the money
9 that we are spending is focused, it's accountable.

10 It gets to with the highest priority on under -- on unserved
11 area, places that really have no opportunity to take part in the
12 broadband economy whether it is tribal lands or very rural areas
13 but a consolidation and coordination of effort and I don't know
14 if it'll be possible to make a singular place of focus. But the
15 challenge is going to be to tighten it up as much possible.

16 Mrs. Blackburn. Okay. So singular point of focus -- if
17 that's the goal then is NTIA the best place to house that?

18 Mr. Kneuer. In the executive branch I would certainly think
19 that.

20 Mrs. Blackburn. You would say so? Okay. That's great.

21 Mr. Kneuer. You've got still the other options under the
22 FCC. But NTIA, having the function of working directly with the
23 FCC, is the one place in the executive branch that has the

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1 expertise. I think the logical locus would be NTIA.

2 Mrs. Blackburn. Okay.

3 Ms. Gomez, I saw you making notes so I know you have something
4 you want to add.

5 Ms. Gomez. Actually, I was just making notes on what you
6 said. But I agree that coordination is very important. One of
7 the things that NTIA did with BTOP was it -- as part of its stage
8 of reviews of grants was to make sure that it got input from
9 industry and from the local governments and from others to make
10 sure there was not duplication of efforts or that they were not
11 targeting already served areas. There is always room for
12 improvement but I do think it's a good role for NTIA.

13 Mrs. Blackburn. Okay.

14 Ms. Baker, I want to ask you a little bit about the 5G
15 deployment. I see this is siting, utilization of health care
16 informatics. I am from Nashville. This is something that people
17 are working on every single day.

18 I -- and this is something we want to go quickly and I am
19 about out of time and I really want to get through this. Is there
20 anything that NTIA can and should do that would help facilitate
21 the 5G deployment? And about 30 seconds on that because I've
22 got one more item.

23 Ms. Baker. Absolutely. I am glad you asked the question.

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1 We can talk about health care in the future. But I think the
2 things -- the core functions that NTIA serves to streamline siting
3 would be very helpful, streamline and simplify siting these small
4 sites that need to be put up for 5G is critical for the rapid
5 deployment --

6 Mrs. Blackburn. Okay.

7 Ms. Baker. -- and I think we are going to need more spectrum
8 so we need to work on a spectrum pipeline for commercial wireless.

9 Mrs. Blackburn. That is terrific. I appreciate that, and
10 what I want each of you to submit, since I am out of time, if you
11 were the one with the pen and the pad working out the
12 reauthorization of the NTIA and modernizing the agency, what would
13 you see as the five critical items and what did you see as the
14 biggest stumbling blocks?

15 If you'll submit that for the record then I will turn and
16 yield five minutes to Mr. Doyle.

17 Mr. Doyle. Thank you very much.

18 Ms. Baker, I believe that spectrum like roads and bridges
19 are part of our critical infrastructure and I am starting to work
20 on some legislation to free up at least an additional 20 megahertz
21 of federal spectrum below 3 gigahertz available for commercial
22 use. Would that be something your association and industry would
23 support?

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1 Ms. Baker. Absolutely. I think it's -- the low-band
2 spectrum is really critical. I think the FCC has done a good job
3 this summer in bringing forth some high-band spectrum. But if
4 you look at a place like Montana that hasn't been sited there is
5 been a recent low-band spectrum that's been released there that
6 has caused the deployment of siting in Montana.

7 So I think that's -- it is very important for the future that
8 we have low, middle and high-band spectrum.

9 Mr. Doyle. Great.

10 Ms. Baker. So we absolutely support that.

11 Mr. Doyle. Well, Madam Chair, maybe that's something we can
12 make part of this reauthorization or perhaps as a standalone or
13 one of the proposed infrastructure packages. I'd certainly be
14 interested in working with you on that if you're interested.
15 Thank you.

16 Ms. Baker and Ms. Gomez, you both worked on spectrum issues.
17 How important do you think it is that NTIA lab in Colorado is fully
18 funded and tell us a little bit about what types of research the
19 lab does and what role they play in freeing up federal spectrum
20 and do you see that as critical to the future of federal spectrum
21 policy?

22 Ms. Baker. I'll be happy to go first.

23 I think ITS -- as I mentioned in my testimony, I think ITS

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1 is a critical part of future questions in spectrum. I personally
2 think that spectrum is a scarce resource. It's becoming more and
3 more difficult as we move forward.

4 Someplace like ITS can help us figure out how the sharing
5 -- how we can share where spectrum is critical and where it can
6 be geographically shared or some other sort of sharing. It was
7 very helpful in AWS-1 as well as AWS-3 to figure out how to move
8 critical government agencies' missions to different spectrum.

9 Mr. Doyle. Ms. Gomez.

10 Ms. Gomez. I agree. ITS, which is the Institute for
11 Telecommunication Sciences, served as a valuable resource to
12 NTIA's Office of Spectrum Management in identifying spectrum and
13 how it's being used.

14 They perform spectrum services that -- spectrum surveys that
15 assist with this kind of planning that we are talking about.
16 Their deployable team and measurement system go to sites.

17 They identify sources of interference. They, as Meredith
18 mentioned in her opening statement, performed spectrum occupancy
19 measurements in support of the AWS auction preparations, which
20 helped industry better understand the nature of the federal
21 operations.

22 They perform system to system measurements. Basically, they
23 are an objective and neutral arbiter of these issues -- technology

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1 issues, technical issues -- as we move forward with trying to
2 identify more spectrum and trying to get more efficient usage of
3 the spectrum we have today.

4 Mr. Doyle. Thank you. Let me ask you also, Ms. Gomez, as
5 we look at the challenges of repacking stations as part of the
6 incentive auction, do you believe that public telecommunications
7 and facilities program if funded could play a role in assisting
8 public stations and making the investments necessary to continue
9 operating?

10 Ms. Gomez. Yes. As you know, that program was defunded
11 some years ago and but it would have, if it were still funded,
12 been able to provide valuable support to these public television
13 stations.

14 Mr. Doyle. And let me ask you all, too, during your time
15 at NTIA what benefit did you see to having an agency act as an
16 interagency coordinator on telecommunications and what can
17 Congress do to strengthen that role to ensure that NTIA has a seat
18 at the table when government agencies are discussing technology
19 and telecommunications issues?

20 If you could each just take, like, maybe 10 seconds because
21 I have one more question.

22 Ms. Gomez. So NTIA is in this unenviable role of trying to
23 herd other federal agencies, not just with spectrum but with other

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1 policies, and pull them away from their own missions to try to
2 provide resources for the administration's telecommunications
3 policy and spectrum policies.

4 So anything Congress can do to help bolster NTIA's position
5 vis-a-vis those other agencies would be very helpful.

6 Ms. Baker. I think NTIA's coordinating and convening role
7 is critical. I think three things really will help NTIA. I think
8 an elevation of title to Under Secretary helps.

9 I think transparency as to what they are working on will help
10 and I think that being able to play the traffic cop for NTIA is
11 also a very critical function that they perform.

12 Mr. Doyle. And let me just close by saying that, Ms. Baker,
13 I received a letter from not only your association but several
14 associations and I know this isn't relative to NTIA
15 reauthorization but asking us to use the Congressional Review Act
16 to repeal FCC's privacy order.

17 I just want to say for the record that I was disappointed
18 to get that letter from these associations and that you would urge
19 Congress to use such a blunt and untested tool to remove privacy
20 protections for hundreds of millions of Americans. I think there
21 is a better way to work on that issue and I look forward to doing
22 that with you.

23 Thank you, Madam Chair.

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1 Mrs. Blackburn. Mr. Lance, you're recognized for five
2 minutes.

3 Mr. Lance. Thank you very much, Madam Chair.

4 To the entire panel, the Spectrum Pipeline Act updated
5 existing law to ensure federal agencies have the necessary
6 resources to undertake research and development activities that
7 would result in freeing up more spectrum for commercial mobile
8 broadband.

9 The act provides very specific instructions on when and how
10 the federal agencies may gain access to the \$500 million provided
11 under the act.

12 To the distinguished members of the panel, how do you think
13 NTIA could further safeguard the expenditure of this R&D fund so
14 that it funds activities that would truly improve the efficiency
15 and effectiveness of federal spectrum use?

16 Mr. Kneuer. There was originally money for similar purposes
17 in the Commercial Spectrum Enhancement Act as part of the
18 relocation funds for agencies.

19 So agencies would get some of the auction revenue for
20 relocation purposes and I think one of the challenges with that
21 process is that agencies had expenditures they wanted to make that
22 they believed would give them the ability to be more efficient
23 going forward but it wasn't tied directly to their immediate

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1 relocation efforts.

2 They were looking for spending money on tools that they could
3 apply in multiple scenarios with multiple different projects.

4 I think the money in the Pipeline Act sort of fills that
5 purpose. I think for it to be -- to be most useful, again, it's
6 coordination, having some ability to test, okay, how is that money
7 being spent and, again, I think the ability for NTIA to be
8 effective in an arbiter of that is leveraging their relationship
9 with OMB, that you can export the expert authority of -- expert
10 judgment of NTIA into the agency with the authority that can green
11 light those projects, which would be OMB.

12 Mr. Lance. Very good.

13 Ms. Baker.

14 Ms. Baker. So I think -- I think John is right. I think
15 one of the things that we have learned -- one of the lessons that
16 he's learned is that the spectrum relocation fund shouldn't just
17 fund the move.

18 It should fund the planning that goes into what a future move
19 should be and how that -- how that should be coordinated. So I
20 think that's one of the lessons that we have learned that I think
21 has been very good. I think that also the qualitative analysis
22 that NTIA has done has been very good. But I think it's this
23 committee that usually instructs.

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1 If you pick two targets that NTIA can fulfil then and focus
2 on, I think that oversight of this committee has really been
3 critical to future spectrum allocations.

4 Mr. Lance. Thank you.

5 Ms. Gomez.

6 Ms. Gomez. I would say that the Spectrum Relocation Fund
7 and the changes that were made in the -- in the Pipeline Act
8 actually have helped motivate the agencies to think ahead and to
9 plan. So it's an important process and I do think it was very
10 important to provide the funding for that planning.

11 The technical panel that reviews these investments, so to
12 speak, is already providing a lot of rigor to the process in
13 determining the funding is being utilized for the reasons that
14 it should be and I would not want to add more process to that,
15 given that you have the voice of NTIA, OMB and the FCC as part
16 of that process.

17 Mr. Lance. Thank you.

18 Ms. Gomez, you noted that the NTIA plays a critical role in
19 public safety communications including a role in the future of
20 the FirstNet public safety broadband network.

21 NTIA's role in public safety communications and in the
22 FirstNet is relatively new. The last time NTIA was authorized
23 there wasn't a FirstNet.

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1 Given that fact, on what should we focus as we reauthorize
2 NTIA regarding this critical component, moving forward?

3 Ms. Gomez. NTIA works with FirstNet. FirstNet is an
4 independent agency but it's housed within NTIA, and then NTIA has
5 some responsibilities that go hand in hand with FirstNet's
6 responsibilities.

7 It is the one that approves or provides grants to the states.
8 If states decide not to participate in the FirstNet deployment
9 then NTIA is the one that will run that process and they will also
10 be the ones that approve spectrum leases for any states that choose
11 not to participate in the nationwide -- in the FirstNet deployment
12 within the states.

13 So I think that NTIA will continue to have responsibilities
14 to its overseers to respond to its particular role within the
15 larger endeavor. It needs to support FirstNet to the greatest
16 extent possible. It's a large undertaking. It's unprecedented.
17 So this committee's oversight and support would be very important
18 to it.

19 Mr. Lance. Thank you very much.

20 Madam Chair, I yield back two seconds.

21 Mrs. Blackburn. Way to go. We are running on time today.

22 Mr. Loeb sack, five minutes.

23 Mr. Loeb sack. Thank you, Madam Chair.

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1 I do want to thank the subcommittee for holding this hearing
2 today and thank the witnesses for your expert testimony regarding
3 the important role NTIA has to play in our nation's technology
4 policy.

5 And again, I note that I can't believe it's been since 1992,
6 although knowing how Congress works I guess it's not surprising.
7 But so many things have changed since that time. And so I really
8 appreciate the chair's request that you provide in writing those
9 five items about -- regarding modernization.

10 I think that makes complete sense, and then we can all have
11 access to that so we know what we are talking about because so
12 many things have changed, as Mr. Lance just said, with respect
13 to FirstNet.

14 We didn't really have any of that. In 1992 -- we didn't have
15 a lot of things in 1992. But I also want to make sure that I
16 emphasize that when we do the reauthorization, assuming that we
17 get there and that may be a big assumption, but when we get there
18 make sure that we have the funding -- that we provide the funding
19 for that reauthorization too because just going briefly over what
20 NTIA does there is so much that it does and so the funding is going
21 to be absolutely necessary.

22 I can -- I am from Iowa -- southeast Iowa. I continue to
23 harp on rural broadband. I'll do that until my dying days, no

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1 doubt, even when I am not in Congress and, of course, yesterday
2 we had a great rollout of our bicameral bipartisan Rural Broadband
3 Caucus.

4 We all know that upwards of 49 percent of rural America really
5 isn't adequately provided for when it comes to the broadband --
6 sufficient broadband.

7 And we really know that, obviously, around the country, the
8 beginning of the 21st century we have to have that kind of coverage
9 out there in rural America. Rural America simply will not
10 survive, let alone thrive if we don't have broadband.

11 Everybody on this committee knows that. I appreciate even
12 my -- the folks who are from the urban areas here who do support
13 this extension of rural broadband -- expansion of rural broadband.

14 There is been a lot of talk on the infrastructure front, as
15 we know, with the new president. I think we have bipartisan
16 support for significant infrastructure improvements around the
17 country and we are talking perhaps as much as \$20 billion for
18 broadband development.

19 And I guess I'd like to ask all three of you, if you could,
20 to kind of weigh in. You know, what are the lessons learned from
21 NTIA's role in supporting broadband infrastructure development
22 in the past?

23 How can these programs be updated, if you will, to bring more

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1 broadband to underserved communities, assuming that we -- and,
2 again, it may be a big assumption but assuming in the coming months
3 perhaps we get a pretty significant infrastructure investment in
4 broadband.

5 Can you speak to that, all of you, please?

6 Mr. Kneuer. Sure. I think, you know, one of the stats that
7 Meredith referenced, close to \$300 billion in new cap ex from
8 industry over a decade.

9 These industries are spending an enormous amount of money
10 and they have incentives to spend a great deal of money. But that
11 incentive is tied to places where they've got enough population
12 density for their -- for their returns --

13 Mr. Loeb sack. Exactly.

14 Mr. Kneuer. -- on capital. So the challenge is to closely
15 monitor and evaluate where those market failures exist.

16 Mr. Loeb sack. Right.

17 Mr. Kneuer. All of these companies are in competition with
18 one another. The value of the network increases to the extent
19 it can reach other places. It's more valuable to us in
20 Washington, D.C. if we know that we can reach people in every part
21 of rural America.

22 So there is certainly a will and a desire to spend private
23 money. There is a manifest will and desire to lever the private

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1 money with government expenditures in those places that we can
2 identify and I think it's going to be a combination of leveraging
3 those two pools of capital in a focused way so that the money gets
4 to people where it's needed and new incentives for the private
5 sector to counter those market failures that may not be direct
6 expenditures of grants but it could be tax benefits and other
7 things. But it's measuring, focusing and being deliberate about
8 it.

9 Mr. Loeb sack. Thank you.

10 Ms. Baker.

11 Ms. Baker. So I think, as you know, I was privileged to be
12 at the Rural Caucus roll-out --

13 Mr. Loeb sack. Thank you for being there.

14 Ms. Baker. -- and I support both the House and Senate
15 bipartisan Rural Caucus. It's a wonderful endeavor to see and
16 very important.

17 As you said, 1992 is the last reauthorization. 1997 was when
18 Steve Jobs first introduced the smart phone, in January of -- and
19 so that was 10 years ago.

20 This smart phone -- the computing power of the smart phone
21 led to our 3G networks and in the 10 years that's now led to our
22 4G networks and what we have now is these data driven very fast
23 and what I am talking about for 5G, which is coming probably in

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1 the next -- you know, we have trials all over America -- you know,
2 10 times faster network is going to be gigabit fast.

3 So it will actually be a substitute for your wired broadband.
4 So I think we need to be careful when we define broadband to make
5 sure that we encompassed the fast growth of these networks and
6 how quickly they are turning over and improving.

7 I do want to say that the most important thing that NTIA can
8 do and that we can do as in oversight and as an industry is to
9 streamline the siting to make sure that these networks can roll
10 out fast.

11 Mr. Loeb sack. Thank you.

12 Ms. Baker. And they will also need more spectrum.

13 Mr. Loeb sack. Thank you.

14 Ms. Gomez. If that's okay, Madam Chair.

15 Mrs. Blackburn. Oh, yes.

16 Ms. Gomez. Okay. Some of the lessons that we learned, the
17 importance of a broad perspective in the community -- we want to
18 make sure that we have both the deployment and the adoption and
19 so those economics are very important.

20 Secondly, the importance of sustainability -- we don't want
21 to have stranded investments. You want to make sure that it
22 actually continues and one of the things -- one of the big
23 successes of the BTOP program is that 98 percent of its projects

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1 continue to operate today.

2 And then, finally, making sure that whoever gets funding,
3 whether through the Universal Service program or through other
4 grants, has the institutional knowledge and structure that it's
5 going to be able to succeed.

6 That's also part of sustainability. So these are all
7 important lessons learned.

8 Mr. Loeb sack. Thank you for indulging, Madam Chair.

9 Mrs. Blackburn. And the gentleman yields back, and Mr.
10 Shimkus.

11 Mr. Shimkus. Thank you, Madam Chairman. Thank you also for
12 holding this hearing in our conference and I think really on both
13 sides part of our responsibility is just oversight and then the
14 focus on addressing reauthorization of agencies is key. So your
15 expertise is welcome and we look forward to moving forward. So
16 it's the focus.

17 So you all have been here before. We have worked with you
18 closely for many, many years. So it's -- for those of us who've
19 been up here it's comfortable and we have got great trust and faith
20 in your expertise in your sector.

21 So let me start by going to Meredith. The committee received
22 the management plan developed by NHTSA and NTIA for administering
23 \$115 million in grants to update public safety. You all know that

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1 I've been involved with Anna on the public safety 911 stuff.

2 It appears that most of the actions are generic agency
3 actions that each agency could perform separately or jointly.
4 What specific expertise or contribution does NTIA bring to the
5 table apart from what NHTSA brings to the table? Does the burden
6 of coordinating with a separate agency outweigh the benefits of
7 the added perspective of the second agency?

8 Ms. Baker. Good question.

9 Mr. Shimkus. Yes.

10 Ms. Baker. Yes. I would say I think one of the most
11 important things NTIA does is its convening role and I think some
12 of the joint roles, whether it's been public safety
13 interoperability with Department of Homeland Security or NHTSA,
14 the future -- the future of these networks are -- is health care.

15 The future of these networks is Connected Cars. The future
16 of these networks are financial institutions. So I think
17 communications will cover every part of our lives and so it's --
18 this convening role only gets more important for NTIA.

19 Mr. Shimkus. So I think that it's better to talk and maybe
20 lose a little efficiency there but in the long run that's a better
21 process?

22 Ms. Baker. I think it's important for -- we have a Connected
23 Car Coalition that we work with the auto industry. I think it's

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1 important because our jurisdictions have traditionally been so
2 different but yet our lives are now intertwined. I think it's
3 important for us to understand both the history and the future
4 of the industries.

5 Mr. Shimkus. Thank you.

6 Anna, could you discuss your experience and role of NTIA in
7 the International Telecommunications Union?

8 When I was doing other things involved in the sector I was
9 not that excited about that. But there are some benefits that
10 I am going to try to raise.

11 As you know, this is an organization where international
12 spectrum allocation decisions are made which to me makes it seem
13 fairly important in the -- that the U.S. participate in a robust
14 way to maintain a voice in those decisions.

15 In your view, does the United States benefit from its
16 membership in ITU and is it important that we have a forum like
17 ITU?

18 Is it -- is it able to accommodate our commercial, defense
19 and other interests and does NTIA have the appropriate authority
20 and tools to participate in this -- in this new regime?

21 In international discussions I think this is -- might be more
22 important. Do you want to comment on those?

23 Ms. Gomez. Yes, absolutely.

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1 NTIA is very involved at the ITU both on the spectrum side
2 for allocations. NTIA works closely with the FCC, with the
3 Department of State to represent the federal agencies' interests
4 and the administration's interests.

5 It also participates in other areas including internet
6 governance. So yes, NTIA's role is very important and it should
7 continue.

8 The ITU is important to the -- to both the health of our
9 spectrum management system as well as for companies, for example,
10 that build to standards and to be able to have interoperability
11 -- global interoperability so that they can continue to
12 participate in the global economy and not have that hindered by
13 lack of participation.

14 The U.S. voice at the ITU is very strong and it needs to
15 continue to be strong to reflect the status of our economy versus,
16 I guess, everyone else.

17 Mr. Shimkus. Thank you very much, Madam Chairman.

18 I am finished and I yield back.

19 Mrs. Blackburn. Gentleman yields back 53 seconds on the
20 clock. We are doing well. Mr. Ruiz, you're recognized five
21 minutes.

22 Mr. Ruiz. Thank you very much.

23 In 2009, the NTIA was tasked with administering \$4 billion

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1 in grants to increase broadband access and adoption in underserved
2 and unserved areas of the country.

3 I understand the NTIA invested \$3.3 billion into
4 infrastructure projects, which 98 percent of those funded
5 projects still operating and serving communities across the
6 country.

7 I represent a remarkably diverse district with 11 tribal
8 nations, underserved, desert farm worker communities like Thermal
9 and Mecca, small desert communities like Chiriaco Summit and rural
10 mountain communities like Anza. So no one solution will address
11 the broadband needs of the people and the geography that I serve.

12 So, Ms. Gomez, in your testimony, you referenced the
13 Broadband USA initiative and how NTIA is using this program to
14 continue helping communities and tribes across the country
15 increase their access and adoption of broadband. Can you
16 elaborate on how Broadband USA might be able to help the diverse
17 set of communities I represent and in particular how tribal
18 governments might be able to benefit from the Broadband USA
19 initiative?

20 Ms. Gomez. What NTIA did was as it starts winding down its
21 BTOP program it has the staff that has this great expertise and
22 knowledge now in both how to deploy infrastructure in unserved
23 and underserved areas including tribal areas, as you mentioned,

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1 and also how to ensure adoption because, you know, if we build
2 them and they don't come that's not a good thing.

3 So we have this great staff now that has this technical
4 expertise so their goal is to provide as much technical assistance
5 as possible.

6 Mr. Ruiz. How does -- how does a tribe or a school district
7 get this support? What do they have to do?

8 Ms. Gomez. Well, first of all, NTIA puts together webinars.
9 They put together seminars. They can reach out to the NTIA or
10 NTIA can do the opposite in order to make sure that they go to
11 locations where these tribes are.

12 They've put together a toolkit specifically for tribal
13 broadband deployment and NTIA also, through the Broadband
14 Opportunity Council, is working with the Department of Interior
15 to also have programs to reach out to the tribes on these issues.

16 Mr. Ruiz. Thank you.

17 So on another topic, as an emergency medicine physician your
18 testimony on the First Responder Network Authority, or FirstNet,
19 was equally near and dear to my heart and in trauma situations
20 communications between first responders and physicians in the
21 emergency department can be critical to the survival and
22 well-being of a patient.

23 So what have you done and what is NTIA doing to ensure

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1 FirstNet's network deployment is patient centered and focuses on
2 improving outcomes and saving lives?

3 Ms. Gomez. FirstNet's mission is to deploy this network but
4 there is no requirement that any public safety entity actually
5 participate in it.

6 So FirstNet has very wisely paid a lot of attention to the
7 needs of every segment of the first response community and they
8 need to continue to do so.

9 They are engaging currently and will continue to engage in
10 consultation with each state and territory to make sure that those
11 needs are met because the only way they succeed is if in fact public
12 safety sees the value of the network.

13 Mr. Ruiz. And so what can Congress do to help EMS systems
14 engage with FirstNet and help foster that kind of relationship
15 and promote those services?

16 Ms. Gomez. You know, I think communication is very
17 important. What we find is that the state at the -- at the high
18 level is very engaged in FirstNet but it's not necessarily at the
19 very local level.

20 So the more we can reach into those localities and make sure
21 that they understand that this is a resource and that they need
22 to have a voice with the -- with the state point of contact that
23 works with FirstNet on these issues the better.

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1 Mr. Ruiz. Well, it kind of sounds like a visit to my district
2 would be warranted and we can get all the stakeholders together
3 and start talking about how we can help build that relationship.

4 Ms. Gomez. Yes. I am sure FirstNet is watching.

5 Mr. Ruiz. Good. I yield back my time.

6 Mrs. Blackburn. At 41 seconds. We are rolling. Okay.

7 Mr. Latta.

8 Mr. Latta. I hope I don't get in trouble now.

9 Madam Chair, thanks very much for having this hearing this
10 morning and to our witnesses, thanks very much for being here.
11 I've been very involved with the internet of things working group
12 and also with rural broadband, and with the rollout yesterday,
13 as was mentioned a little bit earlier from our friend and colleague
14 from Iowa, that, you know, there is great interest out there
15 because of what you have to have today.

16 Ms. Baker, if I could ask you the first question. It's clear
17 that wireless is the future and with limited spectrum availability
18 NTIA has a vital role encouraging efficient use by federal users.

19 What can NTIA do to ensure that there is sufficient spectrum
20 available for both commercial and federal purposes to meet the
21 needs of our increasing connected world?

22 Ms. Baker. So I think NTIA plays a critical part, obviously,
23 in managing the federal spectrum. I think they've just done a

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1 qualitative analysis, which I think is very helpful for us to take
2 a look at what spectrum bands we need to focus on for reallocation
3 next.

4 I think the federal government -- we now have devised a system
5 where it's a win-win. So the commercial spectrum -- the spectrum
6 comes to the commercial providers but yet the federal agencies
7 get updated systems.

8 It's a terrific tool for federal agencies to update their
9 system to also become more spectrally efficient. I think with
10 the help of this committee we can identify the next bands so that
11 we can have more commercial spectrum and it can move this process.

12 The FCC did a broadband plan but that was -- that was a while
13 ago. So I think it's time to take a look and see what we need
14 to do for the future and to build the spectrum pipeline.

15 Mr. Latta. Thank you.

16 Ms. Gomez, you spoke about overlapping jurisdiction in the
17 federal agencies, specifically how it relates to the internet of
18 things.

19 As I am sure you are aware, NTIA has already taken an active
20 role in the security of IOT by holding multi-stakeholders process
21 meetings and recently releasing a green paper discussing the
22 possibility of a national IOT strategy.

23 Do you believe that NTIA could be doing more to address

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1 securing IOT as well as other policies that touch these connected
2 devices such as spectrum policy and privacy concerns?

3 Ms. Gomez. I think it's a very important role for NTIA to
4 address these issues. The multi-stakeholder process in which it
5 has been engaging is a very good process for addressing these
6 issues that change so quickly in our technical system.

7 So yes, I do think NTIA could be doing more. I will say they
8 are very under resourced in this. So what they are doing right
9 now is what they can do at their current capacity.

10 If they could get some more capacity, absolutely. There are
11 lots of areas that they identified in the IOT green paper that
12 you mentioned in which additional multi-stakeholder processes
13 would be able to develop policies to address these challenging
14 issues that are probably better done via this consensus process
15 than via regulations that become enshrined for long periods of
16 time.

17 Mr. Latta. Let me follow up.

18 In addition, would it be harmful to have -- to the development
19 of the IOT to have multiple agencies asserting jurisdiction and
20 with that should it be more coordination?

21 Ms. Gomez. Multiple agencies have jurisdiction because of
22 the nature of the IOT. The IOT now touches the Department of
23 Transportation, the Federal Aviation Administration, the Food and

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1 Drug Administration, the Health and Human Services, because it
2 touches so much of our society today.

3 But, yes, you are correct -- we need more coordination to
4 make sure that we are not having one segment be the tail that wags
5 the dog of the entire IOT.

6 Mr. Latta. Thank you.

7 Ms. Baker, if I could ask, with my remaining time here, much
8 of federal infrastructure is governed by agencies other than NTIA.
9 How do you think NTIA could better work with agencies to accelerate
10 and expand access to necessary inputs like leases of federal
11 buildings or federal right of ways?

12 Ms. Baker. So a great amount of land, as we know, is owned
13 by the federal government and that is something that NTIA can
14 absolutely help in citing federal government lands and expedite.

15 At this point, it takes an average of 18 months to site a
16 tower. In the speed of which we need to roll out 5G, there is
17 a global race. America has won the race in 4G. We are the world's
18 leader in wireless.

19 For 5G, Japan, Korea -- they are right on our tails and I
20 think for us to win the 5G race, which is important for every aspect
21 of our life and economy, we need to make sure that we can roll
22 it out fast.

23 NTIA can help in streamlining federal lands, siting on

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1 federal lands. They can also help in best practices and figure
2 out -- Ohio just passed a bill. I think at every level of
3 government we need to pitch in to see if we can roll these networks
4 out as fast as we can.

5 Mr. Latta. Well, thank you very much and, Madam Chair, with
6 four seconds left I yield back.

7 Mrs. Blackburn. He made it in under the wire. All right.

8 Ms. Dingell, five minutes.

9 Ms. Dingell. Thank you, Madam Chairwoman.

10 First, I want to thank all of the witnesses for your public
11 service. People don't thank people enough for putting themselves
12 out there.

13 NTIA has a critical mission that's going to be even more
14 important in the coming years as technological advances promise
15 to change the way we live our lives.

16 Nowhere is that more evident than in my home state of Michigan
17 where the development of connected and automated vehicles
18 promises to transform the auto industry into the mobility
19 industry.

20 And while we all agree that we should be doing more to use
21 spectrum more efficiently, we also have an obligation to ensure
22 we allow connected and automated vehicles to be developed in a
23 responsible manner. Over 35,000 people die on our roadways each

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1 year and this technology has the potential to save lives, plain
2 and simple.

3 NTIA has played a critical role here through its support for
4 vehicle to vehicle and vehicle to infrastructure technology known
5 as dedicated short-range communications, or DSRC. There are more
6 initials in this.

7 I'd like to thank NTIA for collaborating with the FCC and
8 the DRT with really important work on establishing and executing
9 the test plan to find the best possible sharing solution for the
10 5.9 GHz band of spectrum.

11 I hope this continues to move forward and we keep finding
12 common ground. As you know, the auto industry is near and dear
13 to my heart, in case anybody missed that, and NHTSA has stated
14 that DSRC has the potential to eliminate or mitigate the severity
15 of up to 80 percent of nonimpaired crashes. But there are other
16 ways NTIA could help enable the deployment of these technologies.

17 As you all know, the president and many members of Congress
18 have said it's a priority to pass an infrastructure bill maybe
19 has high as a trillion dollars. And I would agree this is a good
20 idea if we do it right.

21 One thing that must be included is dedication to developing
22 the vehicle to infrastructure technologies. We should be giving
23 moneys to the states to help them build these systems up and giving

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1 them technical expertise as well.

2 So my question is for all three of you. Given NTIA's
3 successful history administering the Broadband Technology
4 Opportunity Program, do you believe the agency would have the
5 technical expertise and experience to effectively manage a grant
6 program to help states and localities adopt the V2Y technologies
7 and should this be something that Congress considers either in
8 a comprehensive transportation bill or legislation reauthorizing
9 NTIA?

10 Mr. Kneuer. I think absolutely NTIA has that ability and
11 there have been, you know, examples in the past. We worked very
12 closely with the Transportation Department to authorize something
13 as simple as E-Z Pass, a single frequency allocation that would
14 cover the entire world or the entire country and the entire highway
15 system that resulted in probably trillions of hours of saved time
16 with productivity gains across the economy by something seeming
17 so small.

18 You magnify that with the ability to essentially make it
19 highly unlikely to die in a car crash on the nation's highways.

20 It's not just the technical coordination but there is also
21 a leadership function of being able to articulate the benefits
22 of this, that this isn't a -- there are huge benefits to the economy
23 and to the nation by doing these things.

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1 So I think NTIA is sort of well situated in its dual role
2 both in the spectrum side and as a communicator of a unified
3 national policy.

4 Ms. Baker. I think you're going to find agreement here that
5 NTIA has effectively handled every single grant program that this
6 committee has given it and you have given NTIA a lot of grant
7 programs.

8 The staff is amazing. They have developed expertises in
9 places that I think they didn't think their core mission was to
10 begin with. They have very effectively done a terrific job.

11 It's a fair question for this committee to ask whether they
12 want NTIA to continue in grant programs and I think that that's
13 a conversation that is worth having.

14 Ms. Gomez. I agree it's a very nimble staff that understands
15 the importance of having a strong oversight mechanism and of
16 working closely with other agencies like the Department of
17 Transportation as well as with state and localities and tribes
18 and making sure that the grant dollars are stretched to the
19 furthest possible -- possible.

20 Ms. Dingell. Thank you. I don't have enough time so I'll
21 yield back my 20 seconds, Madam Chairwoman.

22 Mrs. Blackburn. We are on a roll.

23 Mr. Guthrie, see if you can continue it, for five minutes.

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1 Mr. Guthrie. Thank you. I'll definitely stay within the
2 five minutes. I appreciate that.

3 Mr. Kneuer, I want to -- thanks to everybody for testifying
4 here today but I want to start with a question regarding top level
5 domains.

6 In 2013, the Obama administration sided with foreign
7 governments and abstained from a vote at ICANN that led to the
8 rejection of Amazon's application for the dot Amazon top-level
9 domain, acting directly against the interests of a major American
10 company which happens to have facilities in my district.

11 Just made a major announcement that they are going to be
12 locating a new part of their business at Cincinnati Airport, which
13 happens to be in Kentucky across the river from Ohio, and a lot
14 of people are constituents of theirs as well.

15 Do you believe it would be appropriate for the Trump
16 administration to take specific steps at ICANN to assist Amazon
17 in its ongoing effort to resolve this matter and right the wrong?

18 Mr. Kneuer. Absolutely. I think the -- with the conclusion
19 of the transition of the IATA contracts, you know, without
20 speaking to the substantive decisions of the Obama
21 administration, the United States government can take
22 counterintuitively, perhaps, a more proactive role in favor of
23 domestic companies.

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1 I think there was at some point, when the U.S. government
2 had its oversight or its exclusive contractual relationship with
3 ICANN there was a -- some hesitancy to be perceived as abusing
4 that authority or overplaying that role.

5 With the IATA functions being fully enshrined in the private
6 sector, there are all sorts of examples where it is appropriate
7 and wholesome for the U.S. government to collaborate with U.S.
8 companies in front of myriad private and governmental bodies.

9 So I think that's exactly the kind of role that you would
10 expect to see the Commerce Department and NTIA in particular
11 playing in this new -- this new environment with the full
12 privatization of IATA.

13 Mr. Guthrie. How strong do you believe the U.S. position
14 would be in matters like this when advocating before the
15 Governmental Advisory Committee?

16 Mr. Kneuer. I think the comparative advantage the U.S.
17 government has in the Government Advisory Committee is our
18 expertise in the subject. All right. We stood up ICAHN. We
19 probably have the most dedicated and competent staff to work with
20 the Government Advisory Committee.

21 So while we are a nation of equals, our historic role and
22 our expertise, I think, gives us a comparative advantage.

23 Mr. Guthrie. Okay. Thank you.

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1 And Ms. Baker, one of the things in your testimony focuses
2 on ways to empower NTIA, especially as the agency has become more
3 important in the spectrum debates.

4 I'll leave it open ended if you'd like to expand on some of
5 the points you made and describe what more can be done to empower
6 NTIA on spectrum issues.

7 But one idea that has been raised with me would have NTIA
8 regularly collecting more information about how agencies are
9 actually using their spectrum rather than conducting
10 band-specific studies.

11 So in addition to other ideas you may suggest, is it worth
12 looking at giving NTIA a stronger coordinating role not just in
13 initial frequency assignments but also in monitoring how federal
14 spectrum is being used?

15 Ms. Baker. Thank you for your question, and I think that
16 that is a good idea. I think in my testimony I call it
17 transparency and I think that it would help both to have federal
18 government agencies be more transparent about what their use is
19 of the spectrum as well as what NTIA might be looking forward to
20 in relocation in the future and I think that would probably help
21 this committee in its oversight abilities as well.

22 I also would compliment you on your federal incentives bill
23 because I think that was -- also is a very good step.

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1 Mr. Guthrie. Well, thank you. Do you think the NTIA has
2 sufficient stature to tell federal users that they need to be more
3 efficient with allocations? Is there a problem with regulatory
4 by larger and possibly more influential federal departments such
5 as DoD, Homeland Security, FAA?

6 Ms. Baker. I think NTIA punches above its weight in
7 everything they do and I think that they do a terrific job in
8 coordinating federal agencies.

9 I do think raising NTIA's profile with the title of
10 undersecretary would help. It would make them equal to their
11 sister agency, NIST, and I think it reports directly to the
12 commerce secretary. So I think that that is a natural. In this
13 town, titles seem to matter and that seems like that might be a
14 good -- a good addition to their --

15 Mr. Guthrie. Okay. Would the other two of you like -- any
16 ways to empower NTIA?

17 Mr. Kneuer. I think the -- there is the coordination with
18 OMB is critical. So NTIA can use its expertise to gather
19 information from other departments and agents. But Under
20 Secretary or not, you know, Under Secretary of commerce calls the
21 Under Secretary of Defense, you know, it's going to be a different
22 story. The director of OMB calls and says, look, you've got a
23 new requirement -- if you want capital to spend on these things

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1 it's a different kind of conversation.

2 Mr. Guthrie. I only have about six seconds. I am not going
3 to run over because it appears that's the flow. So a couple of
4 seconds? Oh, well, I'll catch you up later. Sorry, I am out of
5 time. I yield back one second.

6 Mrs. Blackburn. Yield back, and we can submit for the
7 record. How is that? Because we do have a couple of things that
8 are coming in.

9 Ms. Clarke, you're recognized five minutes.

10 Ms. Clarke. Thank you, Madam Chair, and I thank the ranking
11 member. I thank our witnesses today.

12 Spectrum sharing in urban environments may pose particular
13 challenges since population density and user demand for wireless
14 services is very high.

15 In the previous administration, NTIA and the FCC started work
16 towards a model city program that would establish a pilot program
17 in a major city or cities to serve as a test bed to evaluate and
18 demonstrate spectrum-sharing technology for urban environments.

19 Additionally, FCC Chairman Pai recently announced the
20 formation of the broadband deployment advisory committee -- an
21 advisory committee that would provide advice and recommendations
22 to the FCC on how municipalities can deploy high-speed broadband
23 nationwide to close the digital divide.

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1 So my question is do you support the model city initiative
2 and what are your thoughts on NTIA -- what else your thoughts would
3 be in terms of NTIA being -- excuse me, doing -- what would you
4 be doing to promote spectrum sharing in cities? And it's for the
5 panel.

6 Mr. Kneuer. I think there is a great benefit if those sort
7 of model roll-outs. We conducted or we developed a spectrum
8 initiative for the 21st century when Meredith and I were working
9 together.

10 And one of its proposals was a test bed where you could take
11 potentially a block of federal spectrum that's under
12 consideration for reallocation and a block of perhaps
13 underutilized commercial spectrum and figure out what are the best
14 ways to share and how they can be best deployed.

15 You know, the challenge in urban environments is the
16 propagation characteristics and it's much more difficult to find
17 low-band spectrum that you can do those sorts of things that would
18 be of most benefit to an urban environment. But some of those
19 propagation characteristics have made some spectrum lie fallow.

20 And so I definitely think there are opportunities to combine
21 those two to explore in the real world and develop the data that
22 comes from that. So I think it's a fine idea.

23 Ms. Baker. So a couple different things. Sharing, I think,

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1 is important. I think it's the future. But it has to work for
2 all. It has to work for everyone.

3 I think these questions are less policy questions than they
4 actually are technical questions and I think that goes back to
5 my plea for the importance of ITS and the labs in Boulder.

6 A lot of our -- the FCC is rolling out one test program now
7 in 3.5. It's still to be seen if that's going to work or not.
8 We are all in. We are trying it.

9 We are going to see if it does work. I think in the future,
10 whether it's licensed spectrum, unlicensed spectrum, shared
11 spectrum, we are going to need it all and I think model cities
12 are terrific. A lot of our companies have focused on model cities
13 and I think when a city sees that they are saving, you know, \$160
14 billion in energy costs by being a smart city then it does catch
15 your eye and everybody wants to be one.

16 So I think it's -- there is a cost to the build out but the
17 savings is so exponentially great for smart city that I think the
18 more we can illustrate the more rapidly they will deploy.

19 Ms. Gomez. I can't say much more than that. I agree, smart
20 cities are so important for our future in 5G as well. So anything
21 we can do to support that is a good thing.

22 Ms. Clarke. Very well.

23 The next question is for you, Ms. Gomez. First, I want to

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1 say that NTIA is a very important government agency vital to
2 growing our innovative digital economy.

3 With the recent cyberattacks that have been -- that have
4 occurred over the past couple of months, a particular spotlight
5 has been placed on creating secure cybersecurity policies.

6 In 2015, NTIA began its cybersecurity multi-stakeholder
7 process. What are your thoughts on this approach and how will
8 it enhance NTIA's policy recommendations?

9 Ms. Gomez. I'm a big believer in the multi-stakeholder
10 processes. I think that they can be much more nimble and flexible
11 than actual regulations and they pull in all of the stakeholders,
12 not just whatever stakeholder a particular individual agency has
13 jurisdiction over.

14 So it's important to have these discussions, to have as many
15 stakeholders as possible including government, civil society,
16 public interest groups, industry, everybody together to come to
17 consensus to try to address these issues as they change on almost
18 a daily basis. So I would be a big supporter of what they are
19 doing.

20 Ms. Clarke. Very well, and I won't break the trend. I go
21 back, Madam Chair.

22 Mrs. Blackburn. We are on a roll.

23 Mr. Olson.

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1 Mr. Olson. I thank the chair for the time. On behalf of
2 all Texans, especially one of our witnesses from Houston, Texas,
3 thank you for the opening comments, the strong statements about
4 the best Super Bowl ever. Super Bowl LI, Falcons versus the
5 Patriots, NRG Stadium, Houston, Texas, kickoff 5:30 p.m. Sunday,
6 February 5th.

7 Well, to our witnesses a special howdy to our Texan, Ms.
8 Baker. Ms. Baker, you know, in our home state bigger is better.
9 Your testimony spent a great time talking about the deployment
10 of 5G over moving up from 4G.

11 In Texas, bigger is better. 5G is bigger. And Texans are
12 excited about the flood of new services they will have with 5G
13 deployment.

14 You mentioned medicine, transportation. My question is
15 where do we stand right now with deployment of 5G in the spectrum.
16 When do you think that will be truly available?

17 Ms. Baker. Great question, and we are excited for the Super
18 Bowl in our house, too.

19 I think when you look at the Super Bowl, for instance, you
20 look at the capacity of how many people are going to want to send
21 videos and tweet and take pictures and send them.

22 You see the importance of the capacity. It's grown
23 exponentially and we are expected to see it grow six times in the

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1 next -- by 2020.

2 So the data is just increasing so our network's capacity has
3 to increase. I was in Dallas not too long ago and we have some
4 trials going on there. I think there are about 117 trials of 5G
5 across the country at this point.

6 When I -- when I first started this job two and a half years
7 ago we were not necessarily thinking that we needed 5G. The
8 industry has changed that quickly to now we are seeing the rollout
9 of field trials this year and I expect that we will see commercial
10 roll-out of 5G by 2020.

11 Mr. Olson. Great. Thank you.

12 You talked about America leading development of 4G. We led
13 the world in 4G. It appears we are losing some advantages with
14 5G.

15 In today's global economy, as you know, speed kills. You
16 mentioned we are behind South Korea and Japan. I traveled there
17 with Chairman Upton and Chairman Walden, Mr. Shimkus, Mr.
18 Griffith, we saw it firsthand. We are falling behind those two
19 countries. Who else is ahead of us globally?

20 Ms. Baker. I'm hopeful we're not too far behind at this
21 point and we are catching up.

22 Mr. Olson. Okay. Great.

23 Ms. Baker. Our companies are really working hard and they

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1 are investing the money and they are -- they are working hard to
2 overtake that because of the importance of -- the reason the app
3 community is in the United States is because we lead the world
4 in wireless. The reason that every -- 98 percent of operating
5 systems are from the United States is because we rolled our
6 networks first.

7 So I think we understand how important it is and we are
8 working hard to that end.

9 Mr. Olson. Okay. Thanks.

10 Who's behind? Who should be consider as behind us but
11 catching up quickly maybe we should be worried about in the rear
12 view mirror?

13 Ms. Baker. I think we are doing well. Well, you know, our
14 4G -- our LTE networks are covering 99.7 percent of America. So
15 we have a good head start to build on.

16 Mr. Olson. Okay. One further question -- as former NTIA
17 administrators speaking only for yourselves, not for the
18 organization, is NTIA being helpful with the 5G rollout and where
19 can we help them with deficiencies with the reauthorization of
20 the agencies? One minute and 20 seconds. Ms. Gomez, you're up.

21 Ms. Gomez. 5G rollout, as Meredith has mentioned, is a huge
22 undertaking. I think continued support of their interagency
23 processes to get relief from the barriers to infrastructure

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1 deployment is the most important thing.

2 Mr. Olson. Okay. Ms. Baker.

3 Ms. Baker. More spectrum and streamlined siting.

4 Mr. Olson. Mr. Kneuer.

5 Mr. Kneuer. Because of our lead in 4G, we have the highest
6 economic incentives to roll out 5G. The barriers are going to
7 be in policy and so making sure that we have the spectrum
8 available, that everybody's pulling in that direction, the
9 industry's going to take care of it and we will be first in that.

10 Mr. Olson. Well, thank you. I yield back my time with 45
11 seconds.

12 Mrs. Blackburn. And he is under the wire.

13 Mr. Olson. I yield back.

14 Mrs. Blackburn. And I will remind the gentleman from Texas
15 that his Houston team left and came to Tennessee and became
16 Tennessee Titans.

17 And with that, Mr. McNerney, all yours for five minutes.

18 Mr. McNerney. Well, first, I want to congratulate the
19 chairwoman on assuming the chair. I look forward to working with
20 you and the ranking member as well.

21 My first question goes to Ms. Gomez. The rapid growth of
22 the IOT devices creates immense opportunities but also raises
23 serious concerns about issues like privacy and data security.

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1 Multiple federal agencies have recently been involved in
2 examining the challenges raised by these questions. Can you
3 explain the NTIA's role and why that might be important?

4 Ms. Gomez. So the NTIA is, of course, the principal policy
5 advisor for administration policy on telecommunications and
6 information issues, which includes the issues that you raised --
7 privacy, cybersecurity, any other issues raised by the internet
8 of things.

9 In that role it serves a convening function in two ways.
10 One, it coordinates interagency activities that lead to whatever
11 policies are implemented for the IOT and hopefully the removal
12 of barriers to deployment so that we can get to the rollout of
13 5G in a timely fashion.

14 And then, secondly, it's a multi-stakeholder process in
15 which it convenes stakeholders from all walks of life in order
16 to develop consensus policies to address issues like cyber
17 security and privacy issues writ large, both for the IOT and for
18 others.

19 Mr. McNerney. Thank you.

20 I am going to follow up on a question that the ranking member
21 asked Ms. Baker. Industry groups like the CTIA have been on the
22 Hill, sent a letter around asking Congress to use the
23 Congressional Review Act to overturn existing rules. This letter

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1 makes no mention of the fact that the CRA could prevent the FCC
2 for making substantially similar rules in the future.

3 Now, are you aware that the CRA could prevent the FCC from
4 making future rules regarding data breach notification or working
5 with industry to create new privacy rules in the future?

6 Ms. Baker. So we are absolutely 100 percent committed to
7 consumers' privacy and as such we distributed privacy principles
8 on Friday.

9 I think what we are looking for is a uniform and common set
10 of rules that apply to the entire ecosystem so that they --
11 everyone is competing with the same rules.

12 Mr. McNerney. But are you aware that the CRA could prevent
13 the FCC from making new rules regarding privacy and data breach
14 notification, for example?

15 Ms. Baker. We're looking for any -- any tool that will allow
16 privacy rules to be the same for the entire ecosystem.

17 Mr. McNerney. Ms. Gomez, it's been two and a half years
18 since the National Broadband map was updated. Although the NTIA
19 is no longer responsible for keeping the map up to date,
20 individuals, businesses and state and local governments still
21 rely on this map. Is it -- is having an accurate map important
22 for identifying geographical areas that are underserved or
23 unserved by broadband providers?

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1 Ms. Gomez. Yes. As you know, NTIA is no longer updating
2 the map. That function has been moved over. But it has not been
3 updated since 2015 and that was using 2014 data.

4 I do believe it's important to have data-driven decisions
5 and so having an updated map would be a good thing, just not the
6 current state.

7 Mr. McNerney. How fast does that map change?

8 Ms. Gomez. The map changes constantly. We have deployment
9 change every day. As Meredith mentioned, there is a lot of
10 capital expenditures every year, every day to get the
11 infrastructure deployed.

12 Mr. McNerney. So, I mean, in terms of the digital divide,
13 having this map up to date is important and should be funded.

14 Ms. Gomez. The map was an important tool and it would be
15 good to fund the map in the future.

16 The FCC also has the ability to do it. It just doesn't have
17 the funding.

18 Mr. McNerney. So is the NTIA the right organization to do
19 that?

20 Ms. Gomez. If the NTIA gets its grant program again that
21 would be the right way to do it or it would be a good way to do
22 it, I should say. I mean, the way that the map was developed was
23 a bottoms-up process in which the states provided the information

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1 to NTIA and NTIA worked with the FCC to create the map.

2 One way or another, you need to have that input and you need
3 to have the funding to be able to have an accurate map because
4 if it's not accurate then it's not useful.

5 Mr. McNerney. I'm just going to ask a question, and you
6 won't have time to answer it. Mr. Kneuer, you indicated that the
7 NTIA is the most effective -- it's most effective when it's the
8 working intersection between business and private and government
9 sectors and also can be effective in the -- advising the Office
10 of Management of Budget.

11 I'd like you to elaborate that in a written, since I am
12 running out of time. Thank you.

13 Mrs. Blackburn. And he made it before he went into overtime.

14 Mr. Johnson, for five minutes.

15 Mr. Johnson. Thank you, Madam Chairman, and I to want to
16 congratulate you on your chairmanship and looking forward to this
17 session, working with you.

18 You know, I -- and I want to thank our panel for being here
19 today, too. Really appreciate that.

20 I represent a district that struggles with the issue of the
21 digital divide, particularly when it comes to talking about
22 broadband access. I've got high school students in my district
23 that have to go a public library or to a neighboring town in order

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1 to do their school research or to check out the internet, to do
2 things that most of us, you know, just take for granted.

3 So broadband access is a very, very important issue for the
4 721,000 people that I represent.

5 Ms. Gomez, one of -- one important component of effectively
6 allocating resources for broadband deployment projects is
7 accurate comprehensive data regarding the current level of
8 broadband service across the country ideally at a granular level.

9 How can NTIA, in your opinion, be helpful in developing this
10 information?

11 Ms. Gomez. There's a couple of ways that NTIA has been
12 involved in this type of information. The first is with this tool
13 that we were talking about before, which is where NTIA
14 administered grants to get the data necessary to populate the map
15 that the FCC actually put together. They worked on that jointly.

16
17 It's not something that's currently funded by if it was that
18 would be a very valuable way to get more accurate data and give
19 the localities of tool that is visual and that provides them good
20 planning tools.

21 The second way is also with the work that NTIA does in working
22 with the Census to get accurate adaption information. That's --
23 that is a very useful way to understand where we might have our

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1 deployment but not necessarily the take-up. So understanding
2 from a demographic perspective who is using the internet, how they
3 are using the internet, also helps with this type of planning to
4 support localities that need to get broadband infrastructure and
5 adoption.

6 Mr. Johnson. Okay. Continuing with you -- I appreciate
7 that answer -- you were at NTIA during the broadband technology
8 opportunities program when NTIA administered more than \$4 billion
9 in grants to promote broadband employment and adoption.

10 What are some of the lessons that we can draw from that
11 program as we move forward and what is the appropriate -- what
12 role is appropriate for NTIA to play in future broadband
13 deployment efforts?

14 Ms. Gomez. We learned a few things from the BTOP program.
15 As I mentioned before, the importance of sustainability -- we want
16 to make sure that the funding is sustainable and continues.

17 The importance of providing the technical assistance to the
18 grantees and to the communities to make the full usage of the
19 grants and to make sure that the grants not just benefitting a
20 specific deployment but also had ripple effects throughout the
21 communities in both the adoption as well as the access for other
22 providers to be able to link to whatever infrastructure was being
23 deployed.

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1 The importance of a strong both team to both select the
2 grantees as well as to manage and oversee them. It really
3 requires a lot of resources and a lot of attention to make sure
4 that the grant dollars are well used and used in a timely fashion.

5 So there is still a lot of that expertise within NTIA because
6 that staff that became very expert at managing the grants have
7 now pivoted to the technical assistance they are providing through
8 the Broadband USA program.

9 So absolutely NTIA could continue to provide the grant
10 management that you might seek. Understanding that whatever
11 enabling statute is very important in setting parameters of the
12 program.

13 A lot of the criticisms of the program came from concerns
14 about the fact that, for example, the grants went to fund both
15 unserved and underserved areas.

16 The definition of rural was very important to managing the
17 grant program. So attention to the statutory language that NTIA
18 would use to implement the programs is also very important.

19 Mr. Johnson. Okay. Well, thank you.

20 Madam Chair, I yield back just under the wire.

21 Mrs. Blackburn. I tell you, we are rolling.

22 Let's see. Mr. Pallone, you're recognized five minutes.

23 Mr. Pallone. Thank you. Thank you, Madam Chairman.

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1 And, again, I know this is your first hearing so I want to
2 congratulate you and Mr. Doyle for being the chairman and the
3 ranking member.

4 Ms. Gomez, I've reviewed NTIA's most recent budget request
5 asking for only \$50 million total, and given the recent growth
6 in the communication networks that the agencies oversees, that
7 amount seems reasonable.

8 NTIA has also provided strong justification for their
9 request. So can you just tell us briefly what an authorization
10 of \$50 million would allow the agency to do for the American
11 people?

12 Ms. Gomez. You know, from my experience, NTIA is a very
13 resource-constrained agency. It is surprisingly small,
14 considering the breadth of its portfolio. And with the evolution
15 of the digital economy and the new and innovative uses, its role
16 is only going to get bigger.

17 So new funding can be used in a variety of ways. Spectrum,
18 spectrum, spectrum. Our innovation is very much centered on
19 wireless and we need to have both the staff that can manage day
20 to day the federal agency's use of spectrum but also continue to
21 plan for the future, continue to plan for the pipeline and continue
22 to work within the interagency process to identify more spectrum
23 for wireless broadband uses.

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1 On the internet policy front, we need to continue our strong
2 voice at the governmental advisory committee on the -- before
3 ICANN. That is going to continue to be important for
4 international and domestic internet presence but also addressing
5 cyber security and privacy issues is going to be important in the
6 multi-stakeholder process. Particularly with cyber security, we
7 need staff that has security clearances that understands the
8 issues so that they can convene and shepherd these
9 multi-stakeholder processes to develop these policies.

10 Both with the multi-stakeholder process as well as
11 intergovernmentally to work with the other agencies as they
12 develop their own security policies.

13 And on research, very important -- it's important for
14 supporting the spectrum initiatives as well as other agencies and
15 also industry. Industry relies on the laboratory for some of its
16 measurement and testing.

17 And so bolstering their ability is going to be very
18 important. I think the National Foundation found that they are
19 actually seriously underfunded. So that would be very helpful
20 in that regard.

21 Mr. Pallone. Thank you.

22 Ms. Gomez mentioned the privacy issues. So let me ask Ms.
23 Baker, NTIA found last year that around half of American adults

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1 limited their economic activity online because they were worried
2 about their privacy and data security.

3 A Pew study also found that a full 91 percent of adults
4 believe they have lost control of how personal information is
5 collected and used by companies.

6 And that's why I have been disappointed in CTIA's recent
7 attacks on consumer privacy protections. I am hopeful we can
8 still find some common ground though. So I think we may agree
9 that the Federal Trade Commission should be a strong protector
10 of consumer privacy.

11 Let me ask you, would CTIA support democratic efforts to
12 strengthen the FTC Commission -- the FTC's ability to protect
13 consumers by lifting the common carrier exemption, given the FTC
14 Rulemaking authority, giving the FTC more privacy staff. Would
15 you comment on that?

16 Ms. Baker. First, I think that CTIA believes strongly in
17 privacy and in consumers' right to privacy and data security. It
18 is a priority for all of our carriers and companies.

19 I think that we believe that the data that -- consumers are
20 served better when their privacy protections are based on the type
21 of information as opposed to the company that holds it.

22 And for that reason, we would -- we would like to see the
23 FTC's jurisdiction on privacy be consistent across all of the

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1 companies. The mechanism is to how to get to that. I would have
2 to get back to you on the languages too.

3 But yes, the idea is to having the FTC have jurisdiction over
4 the privacy of consumers' data. All companies would be
5 consistent with what we believe.

6 Mr. Pallone. All right. Let me just -- and I've run out
7 of time but I wanted to ask you a local question. Well, it's not
8 really local. But Ms. Gomez, one of my priorities is promoting
9 public safety communications and network resiliency, and I have
10 been a strong supporter of FirstNet, which is housed at NTIA.

11 And getting better technology in the hands of first
12 responders is really important. So I understand you were at NTIA
13 when FirstNet was formed, and from that perspective how would you
14 assess FirstNet's progress in starting up the nation's public
15 safety broadband network?

16 Ms. Gomez. I think FirstNet has made great progress. It
17 is a huge undertaking as well and it is very close to getting the
18 contract in place to be able to start the actual deployment in
19 services and working with the states.

20 So I, too, am a great supporter of FirstNet.

21 Mr. Pallone. Okay. We have run out. Thank you, Madam
22 Chairwoman.

23 Mrs. Blackburn. Well, actually, you went three seconds over

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1 but who's counting?

2 Mr. Kinzinger, you're recognized five minutes.

3 Mr. Kinzinger. Thank you, Madam Chair, and running a tight
4 clock. That's good. That's good. I am excited. It's going to
5 be a good couple years.

6 Quickly, just to all witnesses, since 2010 NTIA's office of
7 spectrum management has been tasked with executing a presidential
8 memorandum to make available a total of 500 megahertz of
9 federal-nonfederal spectrum by 2020. We are quickly approaching
10 the end of that 10-year window and do you all think there is a
11 need for the NTIA and the FCC to jointly establish and carry out
12 formal planning activities for the next decade through a new
13 national spectrum plan?

14 Mr. Kneuer. Yes, I think it's vital to have a pipeline to
15 have to have long-range visibility as to where the next spectrum
16 bands are going to come from to meet the growing needs that I think
17 we have all been talking about.

18 I think there is a challenge when you set numbers of megahertz
19 to be freed without some more detail and concept about what that
20 means.

21 If the agencies are put in a position to find spectrum, they
22 may find spectrum that is in the cupboard but is not very useful
23 and say we have met our obligation.

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1 So the focus less on specific targets and more on holistic
2 policies that will be deployed across the entire government that
3 this is part of your job, day in day out.

4 As a steward of these resources you need to account for them
5 and make sure you're taking steps that they are used across the
6 economy and not just held for isolated purposes. So I think
7 long-range planning is very important. I think the spectrum
8 pipeline bill is important. But yes, we have to keep looking down
9 range.

10 Ms. Baker. I think goals are important and I would certainly
11 welcome this committee, asking NTIA and the FCC to have set another
12 goal for 10 years. I think that the focus of this committee is
13 very helpful.

14 You have brought the AWS-3 auction. You have brought the
15 600 megahertz auction to bear. And I think that the guidance from
16 this committee is very important and we would love to see that.

17 Mr. Kinzinger. Ms. Gomez, do you have anything to add?

18 Ms. Gomez. Sorry. The only thing I would add is I agree,
19 planning is I agree planning is very important. Goals are very
20 important. I also want to make sure that NTIA continues to focus
21 on what it's doing today because it still has a lot of work to
22 do.

23 So whatever resources they need it would be good to bolster

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1 those resources so they can in fact engage in thoughtful planning
2 for the future.

3 Mr. Kinzinger. Mr. Kneuer and Ms. Gomez, how can the NTIA
4 most effectively promote the interests of the United States in
5 international discussions on internet and communications
6 policies?

7 Mr. Kneuer. Well, I think Mr. Shimkus asked about ITU and
8 our role there. That has been the vehicle in the world radio
9 conference where NTIA works with our colleagues in the State
10 Department. Aggregating all of the equities of the
11 spectrum-dependent agencies is very heavily focused on the
12 Defense Department, as you would imagine.

13 So maintaining a robust role and making sure that we
14 collaborate across those areas. With regards to internet
15 governance and those sorts of subject matters, you know, the
16 multi-stakeholder model has been very, very productive.

17 It was productive in collaborating and coordinating the IATA
18 functions. Some of these broader internet governance issues
19 probably don't belong.

20 The nontechnical issues don't belong in a technical body.
21 But the model of the multi-stakeholder model to bring diverse
22 coordinated interests and equities together for U.S. promotion
23 in a variety of international forums, NTIA plays an important role

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1 in that.

2 Ms. Gomez. I absolutely agree with John. NTIA's strong
3 voice and role in the governmental advisory committee is very
4 important, may even be more so important today to ensure that the
5 internet remains an open -- free and open resource and that other
6 bodies don't take over trying to manage the architecture that so
7 far has been so successful and open.

8 Mr. Kinzinger. And let me just ask you very briefly, Ms.
9 Gomez, one of the NTIA administrator's important roles is to
10 represent the administration and the United States and the
11 multi-stakeholder decision process, particularly when it comes
12 to settings like ICANN and the internet governance issues. Do
13 you see an obstacles to doing this?

14 Ms. Gomez. I would agree with what Meredith said earlier,
15 which is that this is -- or maybe it was John who said it. Sorry.

16 This is probably the best staff, the most expert staff and
17 the strongest and most strategic staff that we have to participate
18 in these -- in this body.

19 So it's important to continue to support that resource and
20 support their needs as we move forward with a U.S. presence and
21 voice in these -- in these meetings and associations.

22 Mr. Kinzinger. Okay. Thanks.

23 And I yield back now.

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1 Mrs. Blackburn. With military precision, yields back.

2 Mr. Butterfield, five minutes.

3 Mr. Butterfield. Thank you, Chairman Blackburn and Ranking
4 Member Doyle. Thank you for holding today's hearing on NTIA
5 reauthorization.

6 There is no doubt that NTIA will play a critical role as this
7 administration contemplates its goals related to our nation's
8 telecommunications policy.

9 By any definition, NTIA is critical in the communication
10 space. NTIA's past and ongoing work with FirstNet -- and I
11 appreciate the ranking member's comments a few moments ago -- work
12 with FirstNet as well as their work with the National Highway
13 Safety Administration to develop and implement next generation
14 9/11 services is to be commended.

15 NTIA also plays a critical role in safeguarding our nation
16 from cyber threats. There is no higher mission from members of
17 Congress than doing all that we can to protect our constituents
18 from potential threats.

19 At this point, it is underscored by the intervention of
20 Russia in last year's election and their state-sponsored hacking
21 of the Democratic National Committee.

22 Those incidents highlight that cyberattacks that threaten
23 our country can be carried out by highly funded and even

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1 state-sponsored actors.

2 In response to that type of attack on our democracy, we must
3 take steps to investigate all potential cyber security threats
4 including those posed by state sponsors like Russia, and I am
5 confident that NTIA will do just that.

6 Also important to my district and my constituents is
7 identifying ways to increase broadband adoption and reduce
8 barriers to broadband deployment.

9 In this regard, I understand that NTIA continues to engage
10 in several initiatives aimed to increase adoption. For example,
11 NTIA has engaged local communities through the Broadband USA
12 initiative to provide technical assistance and guidance on how
13 best to increase access to affordable broadband.

14 It has also been a key participant of the broadband
15 opportunity council which created to ensure -- which was created
16 to ensure federal agencies take specific steps to encourage
17 broadband investment and remove regulatory barriers.

18 Just one or two questions, Ms. Gomez. Do you think that the
19 new administration should continue these activities and why?

20 Ms. Gomez. Absolutely. All the activities that you
21 mentioned are important and especially to the continued
22 innovation and deployment of these new and important
23 technologies.

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1 So I would say NTIA is front and center in a lot of them and
2 these are initiatives that should continue.

3 Mr. Butterfield. Aside from the increase in the budget from
4 40 to 50, are there other things that we can do legislatively to
5 enhance the work of NTIA?

6 Ms. Gomez. I do think that there are ways that you can
7 empower and promote NTIA as it continues a lot of these interagency
8 discussions.

9 As we have discussed before, it's a small agency with a
10 mandate to push and prod its fellow agencies throughout the
11 federal government to lead to, for example, removing barriers to
12 infrastructure deployment.

13 That requires dedication and focus from other agencies that
14 NTIA sometimes doesn't have the muscle to force other agencies
15 to make a priority as part of their mission.

16 So to the extent Congress can help with bolstering NTIA's
17 ability to successfully get the other agencies to cooperate,
18 that's always very helpful.

19 Mr. Butterfield. Thank you very much.

20 Madam Chairman, I yield back.

21 Mrs. Blackburn. And gentleman is competing for first prize
22 in yield back.

23 Ms. --

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1 Mr. Butterfield. I was told -- I was told that you would
2 be in the chair, Ms. Blackburn. Your real title in the time is
3 I was when I was when I was a judge in the courtroom.

4 Mrs. Blackburn. Absolutely.

5 Mr. Butterfield. I understand the importance.

6 Mrs. Blackburn. Yes, sir. Ms. Walters, five minutes.

7 Ms. Walters. There is a lot of pressure.

8 First of all, there's a lot of pressure. First of all, I'd
9 like to thank the chair for holding this hearing and for the
10 witnesses being here today.

11 Cybersecurity continues to be a growing threat and I'd like
12 to get your thoughts on what role the government should play in
13 this area as this becomes a bigger concern to all stakeholder.

14 With that, Ms. Baker, with regard to cyber security, there
15 seems to be several agencies that are staking a claim of leadership
16 -- FCC, DoD, DHS, NTIA.

17 With respect to the commercial sector, do you have opinions
18 as to which agency should run point?

19 Ms. Baker. I'm glad you asked. It's a great question.

20 I do -- we do have an opinion here. Cybersecurity is
21 critical. These networks are going to change everyone's life
22 every job, our economy. But they have to be safe.

23 And so cyber security is the most important thing that we

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1 work on every day. I feel strongly that this needs to take place
2 within the administration, not an independent agency.

3 So I think there's a coordination role that needs to happen
4 between DHS, NTIA, NIST. I think we probably prefer DHS to be
5 the lead with coordination from the others. But I do think one
6 way or another it needs to take place in the administration, not
7 in the FCC. Thank you.

8 Ms. Walters. Ms. Gomez, one of the primary challenges we
9 face in security our nation's communication infrastructure and
10 networks from cyber threats is the rapidly evolving nature of
11 these threats.

12 Does NTIA have the ability to adapt quickly enough to adjust
13 to new and emerging threats in its efforts to drive interagency
14 cybersecurity practices?

15 Ms. Gomez. In keeping with your prior question, it is
16 important that we have some kind of a balance of the economic and
17 national security concerns in cybersecurity practices.

18 The point that you're making is it is a challenge to keep
19 up with changes in technology and that is why you need an agency
20 that can convene processes that are able to be flexible enough
21 to be able to address those changes.

22 NTIA could use more expert staff. They have very good expert
23 staff. But as we look forward to continuing and increasing

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1 challenges and new and novel issues in these areas, it would be
2 helpful to be able to bolster them.

3 As I mentioned before, they also need the security clearances
4 which is part of the reason why they need additional budget to be
5 able to get those clearances for their staff.

6 Ms. Walters. And Ms. Gomez, you have the most recent tenure
7 at NTIA. And how would you describe the relationship between NTIA
8 and DHS and in this cybersecurity framework? And do you think
9 NTIA and the FCC have sufficient authority and ability to
10 represent the interests of the commercial sector in
11 this conversation?

12 Ms. Gomez. NTIA and DHS has had a very good relationship
13 both on cybersecurity as well as on public safety. There are
14 established processes in place. There are interagency groups in
15 which they participate. So that is very helpful.

16 I think having specific authority is always helpful to
17 bolster an agency's jurisdiction and I think NTIA does have a very
18 good jurisdiction writ large but it always is helpful to give them
19 that specific jurisdictional authority in reauthorizing
20 legislation.

21 Ms. Walters. And Ms. Baker and Mr. Kneuer, do you have
22 anything to add, either one of you?

23 Mr. Kneuer. I think there's -- there is value in NTIA's role

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1 with its interface with the private industry. There is the
2 response part of dealing with the cyber initiative which is
3 probably not going to be NTIA's role.

4 But one of the greatest lines of defense in cyber is to share
5 information on the nature of threats and the nature of attacks.

6 Private industry sometimes is hesitant to share that kind
7 of information because they are admitting to a vulnerability or
8 they are exposing a vulnerability or they are concerned about
9 litigation exposure.

10 NTIA can play that role, taking some of the information of
11 the information from the private sector, bringing that into the
12 interagency and taking the best information from the interagency
13 and taking the best information from the interagency and
14 distributing it back into the private sector.

15 Ms. Baker. I think you've covered it.

16 Ms. Walters. Thank you, and I yield back the balance of my
17 time.

18 Mrs. Blackburn. Mr. Costello for five minutes.

19 Mr. Costello. Thank you.

20 Continuing on the cybersecurity issue, could you share your
21 thoughts, Ms. Gomez, and I would open up to the other panelists
22 as well, on NTIA's role in assisting FirstNet plan and its
23 cybersecurity strategies.

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1 We spoke on the commercial side already.

2 Ms. Gomez. Great. Well, cybersecurity is a very important
3 component of FirstNet. Again, we need to have public safety's
4 trust and confidence in the security of the nationwide public
5 safety broadband network to have -- to have -- to get them to
6 actually sign on to the service.

7 NTIA -- FirstNet has its own cybersecurity staff. I would
8 start with that. So to the extend NTIA is supporting FirstNet
9 I would say that's probably it's biggest role.

10 NTIA also participates with NIST in the public safety
11 communications research program and through that program is able
12 to coordinate support for FirstNet as well on cybersecurity
13 issues.

14 But this is fundamental to the success of the network will
15 be the ability to have a very secure network.

16 Ms. Baker. I would just add probably that I think FirstNet
17 it has probably one of the very most important missions of any
18 government agency.

19 And as I just stated, I think cybersecurity is one of the
20 most important jobs that we have as network providers. So I guess
21 you get double importance there.

22 Mr. Kneuer. I think that's right. I think there is an
23 opportunity for potentially a virtuous cycle to come into effect

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1 as a -- as a customer. FirstNet probably has higher cyber
2 requirements than a typical large enterprise company, right.

3 So as they put those requirements into the provider and the
4 contractor for FirstNet, those cyber requirements populate into
5 the commercial networks more broadly and as those technological
6 developments take place in response to FirstNet, you know, we get
7 this loop where the requirements get put in, the technology gets
8 developed and it's an improving cycle.

9 Mr. Costello. This could be a philosophical or a technical
10 question or both.

11 We are obviously dealing with a very massive network that
12 I think we can all agree needs to remain agile because as you get
13 new security technologies you want to make sure that you don't
14 have to sort of go back in time to reengineer.

15 How do you -- how does NTIA remain relevant and make sure
16 that it remains agile and nimble as new security technologies
17 enter into this?

18 Ms. Gomez. I think, again, this goes back to NTIA's
19 convening role. It both has the external expertise. It also has
20 the interagency expertise between NIST and DHS.

21 But, more importantly, it also needs to rely on the
22 stakeholders to come in and to educate it and the
23 multi-stakeholder processes on these new technologies and that's

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1 large part of what they do.

2 Mr. Kneuer. I would just build on something Meredith said
3 earlier about the administration being the best place for some
4 of these issues.

5 I think the danger in pursuing a regulatory approach to cyber
6 is that the incentives shift from network protection to regulatory
7 compliance and that creates a sort of sporadic function that
8 you're concerned about, that how do you stay relevant.

9 Enshrining things in regs is the quickest way to delay rapid
10 changes. So leveraging the coordinating function, leveraging and
11 taking advantage of the incentives that both industry and the
12 government have to protect themselves is the best way for us to
13 keep it as something that's top of mind rather than always backward
14 looking at a regulatory structure.

15 Mr. Costello. The state and local implementation grant
16 program -- the education and outreach to a state's local emergency
17 personnel is obviously extremely important. And the guidance --
18 the NTIA can offer in the decision making process for states
19 weighing challenges and how to opt in or opt out, can you sort
20 of explain, moving forward, how NTIA should approach that on a
21 -- particularly in my state of Pennsylvania, where it's an
22 extremely important issue?

23 Ms. Gomez. Yes. Congress was very wise to include what we

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1 call planning funding, just generally, in creating this state and
2 local implementation grant program because FirstNet needs to get
3 the input from the bottom up, from the cities and communities and
4 localities up through the state up to FirstNet, and that takes
5 dedicated resources. That's what the grant program does.

6 What NTIA does is administers that grant program and support
7 FirstNet's efforts to reach out to those -- to those individuals
8 so they can have a voice in the network.

9 Mr. Costello. Thank you.

10 Mrs. Blackburn. Gentleman yields back.

11 Mr. Cramer, you're recognized five minutes.

12 Mr. Cramer. Thank you, Madam Chair, and congratulations on
13 the gavel.

14 Thanks to all of our witnesses for this hearing and your time
15 -- time that is getting late.

16 Now, I've sat here a long time and I've listened to pretty
17 much everything and there have been a couple of passing references
18 to smart cars or autonomous vehicles. But I am going to bring
19 up a completely different topic so a completely different context
20 at least for a similar topic.

21 So my home state of North Dakota is home to the Northern
22 Plains UAS test site, one of the six FAA-designated test sites
23 designated in 2013.

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1 And as you likely know, remotely-piloted aircraft are going
2 to play an increasing -- are playing an increasing role in
3 important duties like disaster recovery, monitoring pipelines,
4 precision agriculture.

5 Obviously, there are the obvious military applications.
6 And as a result of our test site, we have a rather unique enhanced
7 use lease at the Grand Forks Air Force Base where there is a private
8 sector business park at the same place as the -- on the air base,
9 you know, with the appropriate security divisions and what not.

10 It's quite unique, and for military applications for defense
11 contractors, which we have attracted to the park, you know,
12 spectrum is fairly easy. It's a -- of course, it's a military
13 issue.

14 But for the private sector where I think the real opportunity
15 and real growth lies for testing, aircraft testing equipment, you
16 know, training pilots, research and development, there has been
17 a challenge as it relates. And, in fact, there was a specific
18 situation not that long ago where a company was testing and wanting
19 to illustrate, demonstrate the use of their cameras and video.
20 And they literally could not do it because of a fairly basic
21 spectrum issue.

22 All of that being said, going forward, how do you see spectrum
23 allocation as it relates to UAS and how do you see it being

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1 resolved, improved upon? NTIA -- obviously, their role in other
2 agencies and what can we as Congress do to help clarify it? And
3 I throw that to all of you and that will be my only question, Madam
4 Chair.

5 Ms. Gomez. So spectrum is going to be very important for
6 unmanned aircraft in a variety of ways. First of all, the command
7 and control of aircraft, particularly if you start looking at
8 beyond line of sights uses.

9 And there is going to be different types of needs depending
10 on the type of aircraft and the operations themselves. So right
11 now, you can fly using unlicensed but that's not going to be true
12 for the longer range flights.

13 So the spectrum is going to be very important. The FCC is
14 going to be important because they are going to have the rules
15 for commercial uses.

16 The FAA's going to be important because they are the ones
17 that are going to try to regulate to make it -- make everything
18 safe and make sure that they meet requirements to make them safe.
19 And NTIA is important because there is going to be interagency
20 coordination.

21 And so spectrum is something that the agencies are very
22 focused on currently. There is internationally allocated
23 spectrum for unmanned aircraft and it's specific aeronautical

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1 spectrum, and then there is also other spectrum that can be
2 utilized that will also be very significant for the expansion of
3 this industry that is moving so quickly and, as you've noted, the
4 North Dakota test site is an important part of that.

5 Mr. Cramer. So Ms. Gomez had beautifully described the
6 complication of the issue. So as a result going forward, how can
7 we help streamline? Because you articulated perfectly how
8 difficult this is, especially command and control, which is where
9 the real opportunity rests.

10 Ms. Baker. I would highlight, it's like -- many of the
11 things that we have talked about today, the future of our
12 communications networks, overlapped jurisdictions, and I think
13 what we need to encourage is to make sure that we remain on the
14 cutting edge of innovation and I think, you know, UAS is one where,
15 you know, they are using them in England. We are not using them
16 really here.

17 So I think its own place where -- I think with Congress'
18 oversight we can make sure that we don't over regulate budding
19 innovations and budding industries so that we can maintain our
20 innovative edge and competitive edge against other countries
21 around the world.

22 Mr. Kneuer. The only thing I would add apart from the
23 long-term deployment of unmanned vehicles, with regards to the

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1 test site, there are private test sites. There are military test
2 sites that are typically in very remote areas and those remote
3 areas are typically not at all spectrum constrained in the real
4 world but they're spectrum constrained by the issuance of those
5 licenses.

6 We issue licenses on national bases or wide geographic areas
7 and you can turn on a spectrum analyzer and say there is no one
8 here. But the authorities are held by someone else.

9 Creating governance processes where there are the
10 opportunity and the ability of diverse carriers to say you know
11 what, I am not out there, and, you know, here's how we can
12 collaborate and here's how you can use my spectrum, how you can
13 have transactional agreements in those areas, I think, clarifies
14 or will get the regulatory out of the way of the technological
15 in those test areas.

16 Mr. Cramer. Thank you all very much, and Madam Chair, I
17 yield back.

18 Mrs. Blackburn. Gentleman yields back.

19 Mr. Engel, we will get you in before we get called to votes
20 and be able to dismiss our panel and not have to come back.

21 Mr. Engel. Okay. Thank you. Thank you, Madam Chair, and
22 briefly, before I begin, I want to say how excited I am to be
23 rejoining this subcommittee after having served on it a number

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1 of years ago and how much I am looking forward to working with
2 you, Madam Chair, and all the members here on these important
3 issues of Congress.

4 Thanks to our witnesses. I wanted to focus on cybersecurity
5 and particularly the role NTIA plays coordinating our national
6 cybersecurity response between government and industry.

7 Last year, when Russian operatives breached the Democratic
8 National Committee and broke into John Podesta's emails, they
9 attacked our election, the very core of our government.

10 But even that attack never hit a government agency or
11 government-owned computer. The DNC is a private organization and
12 Mr. Podesta kept his email on a Google gmail account.

13 So the Russian hacking story is at least in part a story about
14 how cyber threats leave us vulnerable in these places where
15 governments and the private sector meet.

16 NTIA has emerged as a vital cop on that beat in its role at
17 the IPTF and as a liaison between industry, Commerce Department,
18 defense and intelligence communities, DHS and the rest of the
19 government.

20 So let me ask Ms. Gomez and Mr. Kneuer, I wonder if you could
21 talk a bit about what would happen to this multi-stakeholder
22 approach to cybersecurity, particularly on the government side
23 if there wasn't an agency to fill that role.

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1 Ms. Gomez. So what would happen if there wasn't an agency
2 to fulfill the role of coordinating with other agencies, as we
3 talked there's a lot of overlapping jurisdiction and interests
4 throughout government.

5 As I mentioned, I think it's very important that as we
6 continue to look forward to securing the networks that we make
7 sure we balance economic and national security interests because
8 each agency's mission is a little bit different.

9 The national security agency's interest is in protecting the
10 internet. That could lead to very draconian measures that would
11 not allow continued innovation.

12 So an NTIA is important because they are a convener and they
13 provide a balance. It's also important because it convenes the
14 multi-stakeholder processes to ensure that we have methods of
15 addressing a lot of these vulnerabilities and without having rules
16 enshrined in regulations that would then not be flexible for to
17 take into account changes in technology.

18 Mr. Engel. Mr. Kneuer, do you have anything to add?

19 Mr. Kneuer. I think I agree largely with all of that.

20 The legal and authorization structures around structures
21 around cyber touch everything. This is Title 50 authority
22 Defense Department -- it's Title 10 Authority under Espionage and
23 you've got all of the various law enforcement authorities on the

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1 response side of things.

2 I never -- I don't think it's ever going to be NTIA's role
3 or whether it would be wise for it to be NTIA's role to be in the
4 response change.

5 However, it does play an important role in, as we have talked
6 about earlier, sharing information that is developed from some
7 of those other expert agencies that are really designed to respond
8 to foreign and domestic threats.

9 Its role is best suited, I think, to making the commercial
10 industry aware of these threat vectors, what they can do to
11 practically defend themselves. And should the attacks come, the
12 response is going to be focused, I think, in other agencies.

13 Mr. Engel. Thank you. Let me ask Ms. Baker.

14 How valuable is the institutional expertise at NTIA and IST
15 and these other industry facing agencies that work with all of
16 you in cybersecurity -- what would happen to our national
17 cybersecurity strategy if we lost that expertise at that junction
18 between industry and government?

19 Ms. Baker. I think it's critical. I mean, I think
20 expertise as these networks evolve is having that housed in both
21 in the private sector and having that in the government so that
22 they can convene the private sector I think is integral to our
23 protection, going forward.

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1 Mr. Engel. Thank you. So let me just say, in conclusion,
2 that I am convinced that one of the biggest problems we are facing
3 now in confronting cyber threats is that everything is spread out.

4 There are precious few clearinghouses where actual decisions
5 are made about the best way to protect American interests.

6 We have this opportunity here with NTIA to build on and expand
7 our capability at this intersection of industry and government.

8 I believe it is very important to overcoming part of this
9 problem. So I want to urge my colleagues and chairwoman to keep
10 that in mind while this subcommittee moves forward with this
11 reauthorization progress -- process.

12 Thank you, Madam Chair, and I yield back the balance of my
13 time.

14 Mrs. Blackburn. The gentleman yields back and there are no
15 further members waiting to ask questions. So we will thank our
16 witnesses.

17 We are so pleased to have had you with us today. I remind
18 members you've got five days to submit opening statements. You
19 have 10 days to submit further questions to our witnesses.

20 We would ask for written responses within 10 days, and there
21 being no further business to come before the committee today, it
22 is adjourned.

23 [Whereupon, the hearing concluded at 1:01 p.m.]