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PROGRESS TOWARD A NATIONWIDE PUBLIC SAFETY BROADBAND NETWORK

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

JUNE 16, 2015

Serial No. 114–57

Printed for the use of the Committee on Energy and Commerce
energycommerce.house.gov

U.S. GOVERNMENT PUBLISHING OFFICE

97–652 PDF WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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PROGRESS TOWARD A NATIONWIDE PUBLIC SAFETY BROADBAND NETWORK

TUESDAY, JUNE 16, 2015

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 2:18 p.m., in room 2322 of the Rayburn House Office Building, Hon. Greg Walden (chairman of the subcommittee) presiding.

Members present: Representatives Walden, Latta, Shimkus, Blackburn, Lance, Guthrie, Olson, Kinzinger, Bilirakis, Johnson, Long, Ellmers, Collins, Cramer, Eshoo, Doyle, Welch, Clarke, Loebsack, DeGette, Matsui, McNerney, Luján, and Pallone (ex officio).

Staff present: Ray Baum, Senior Policy Advisor, Communications and Technology; Andy Duberstein, Deputy Press Secretary; Gene Fullano, Detailee, Communications and Technology; Kelsey Guyselman, Counsel, Communications and Technology; David Redl, Chief Counsel, Communications and Technology; Charlotte Savercool, Legislative Clerk; Jeff Carroll, Democratic Staff Director; David Goldman, Democratic Chief Counsel, Communications and Technology; Ashley Jones, Democratic Director of Communications, Member Services, and Outreach; Lori Maarbjerg, Democratic FCC Detailee; Margaret McCarthy, Democratic Senior Professional Staff Member; Timothy Robinson, Democratic Chief Counsel; and Ryan Skukowski, Democratic Policy Analyst.

Mr. WALDEN. I will call to order the Subcommittee on Communications and Technology, and I apologize for the delay in getting started. We had some votes, and a couple of member things I had to deal with, but we are here now.

OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

When we last convened to discuss FirstNet, my goal was to leave that hearing with a higher level of comfort with regard to FirstNet's progress and confidence in the way it was conducting its business. As we all recognized then, and continue to acknowledge today, FirstNet has before it an undertaking which rivals the network deployments of our largest national carriers. In fact, given its mandate to build an interoperable wireless broadband service for all of our Nation's first responders, its task will take to all corners of the United States.

Now, early shortcomings in FirstNet's approach to consultation with States and other interested parties had resulted in considerable uncertainty and concern among stakeholders. Confused messaging, a perceived lack of transparency, and unanswered questions regarding FirstNet's vision for the network, and even FirstNet's vision for itself, further complicated things. Questions like, How would FirstNet provide service? Would it build a network, or partner with commercial carriers? What is FirstNet going to charge, and how does the opt-out work? Each contributed to the concerns raised at the hearing, and answers were far from forthcoming. Now, on top of all the policy concerns, FirstNet was also under investigation by the Inspector General of the Department of Commerce into alleged conflicts of interest and contracting concerns when we gaveled in last time.

Now, much has happened since then. There has been some turnover in management, and—with the release of the IG's report in December of last year confirming much of what we feared, that FirstNet had been operating without proper processes in place, and without compliance with the laws that guard against impropriety. It is my hope that the missteps are now behind us, and I believe they are. But that is not to say that there aren't additional challenges.

On April 28 the U.S. Government Accountability Office released a report on FirstNet's progress in establishing the network, concluding that while FirstNet has made progress carrying out its responsibilities, weaknesses in FirstNet's internal controls remain. For example, it remains unclear how FirstNet is internalizing the lessons learned from the Early Builder projects. Those are the five jurisdictions that are already deployed—or deploying public safety broadband networks using FirstNet spectrum. And while the GAO report recommends fixes, it is GAO's succinct statement of what lies ahead that must inform our oversight. FirstNet faces a multitude of risks, significant challenges, and difficult decisions in meeting its statutory responsibilities, including how to become a self-funding entity.

To give FirstNet credit, it has made progress. We witnessed FirstNet's information collections, and consultation, and outreach activities accelerate through 2014. The feedback gathered has informed discussion on deployment and brought productive debate among all stakeholders. Today's hearing reflects the subcommittee's commitment to continued and thorough oversight of FirstNet. We all share the goal of ensuring that our Nation's first responders realize the promise of truly interoperable state-of-the-art emergency communications networks envisioned by the law. With those early missteps behind us today, we look not only at the progress FirstNet has made, but also what new challenges lie ahead, our goal being to leave with a higher level of comfort in FirstNet's progress, and confidence in the way it is conducting its business.

So I look forward to hearing from Mr. Kennedy, who can provide an update on FirstNet's progress, put some of the pieces together, and share with more specificity developments in FirstNet's considerations and visions for the public safety broadband network. I also would like to thank Mr. Davis for appearing a second time before the subcommittee to share his experience as a State Chief Informa-

tion Officer, and his assessment what needs improvement, and where FirstNet is headed.

[The prepared statement of Mr. Walden follows:]

PREPARED STATEMENT OF HON. GREG WALDEN

When we last convened to discuss FirstNet, my goal was to leave that hearing with a higher level of comfort with regard to FirstNet's progress and confidence in the way it was conducting its business. As we all recognized then and continue to acknowledge today, FirstNet has before it an undertaking which rivals the network deployments of our largest national carriers. In fact, given its mandate to build an interoperable wireless broadband service for all of our Nation's First Responders, its task will take it to all corners of the United States.

Early shortcomings in FirstNet's approach to consultation with States and others interested parties had resulted in considerable uncertainty and concern among stakeholders. Confused messaging, a perceived lack of transparency, and unanswered questions regarding FirstNet's vision for the network and even FirstNet vision for itself further complicated things. Questions like: How would FirstNet provide service; would it build a network or partner with commercial carriers; what is FirstNet going to charge; and, how does the "opt out" work each contributed to the concerns raised at the hearing and answers were far from forthcoming.

And, on top of all of the policy concerns, FirstNet was also under investigation by the Inspector General of the Department of Commerce into alleged conflicts of interest and contracting concerns when we gaveled in.

Much has happened since then. There has been some turnover in management, and with the release of the Inspector General's report in December of last year confirming much of what we feared—that FirstNet had been operating without proper processes in place and without compliance with the laws that guard against impropriety—it is my hope that the missteps are behind us. And I believe they are.

But that is not to say that there aren't additional challenges. On April 28th, the United States Government Accountability Office released a report on FirstNet's progress in establishing the network—concluding that while FirstNet has made progress carrying out its responsibilities, weaknesses in FirstNet's internal controls remain. For example, it remains unclear how FirstNet is internalizing the lessons learned from the early builder projects—the five jurisdictions that are already deploying public safety broadband networks using FirstNet's spectrum. And while the GAO report recommends fixes, it is GAO's succinct statement of what lies ahead that must inform our oversight—"FirstNet faces a multitude of risks, significant challenges, and difficult decisions in meeting its statutory responsibilities, including how to become a selffunding entity."

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Mr. WALDEN. With that, I turn to the vice chair of the subcommittee, Mr. Latta, for any opening comments that he may have.

OPENING STATEMENT OF HON. ROBERT E. LATTA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mr. LATTA. Well, thank you very much, Mr. Chairman, and again, thanks for holding today's hearing, and thanks to our wit-

nesses for being back with us today, I really appreciate it, especially Mr. Davis, coming from Ohio. Public safety and emergency communications are critical to protecting the lives of Americans. That is why we must ensure that the implementation of FirstNet is very successful. A reliable nationwide network is essential for first responders to facilitate their communication needs and support their everyday missions.

While I understand developing a nationwide interoperable public safety network is a significant undertaking, it is imperative that it is properly established to meet the needs of all Americans, especially our first responders. Furthermore, I am eager to see the future developments, as consultations are underway to better incorporate the States' input into planning and implementation of the broadband network.

Mr. Chairman, I look forward to today's hearing, and again thank our witnesses for appearing.

Mr. WALDEN. I thank you for your comments and leadership. Turn now to the ranking member, my friend from California, Ms. Eshoo, for 5 minutes.

OPENING STATEMENT OF HON. ANNA G. ESHOO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. ESHOO. Thank you, Mr. Chairman. Good afternoon, everyone, and thank you to the witnesses for being here. It has been a year and a half since our subcommittee last held a FirstNet oversight hearing, and progress has been made. I think that there are—we have a lot of questions. Obviously, since we haven't been together for a year and a half for—to do the oversight that needs to be done. But—and we look forward to—I look forward to asking those questions, and I am sure that my colleagues do as well.

Now, in terms of progress, I think amongst the biggest milestones include the release of a strategic road map, ongoing collaboration with States, and most recently the draft request for proposals intended to provide FirstNet with extensive stakeholder input. And that is—in my book, that is one of the—that is really key. You have to talk to customers. You are not in touch with customers, your company or endeavor is going to flop, in my view.

So, thanks to the success of the recently completed

AWS–3 auction, FirstNet will soon have the funds it needs to deliver on the first-ever nationwide interoperable public safety network. And I remind everyone that this was the one recommendation of the 9/11 Commission that the Congress had not made good on, but we did for the American people. So a lot rides on this effort. A lot rides on this effort, and we got the money for you, and did the legislation. It became law, and we want to make sure that this is not only done, but done very well, because it is a very big deal. It is a big deal for our country.

Going forward, I think there are three key areas which FirstNet's leadership should give special consideration to. First, I think it is critical that wireless carriers of all sizes have an opportunity to partner with FirstNet, just be an equal opportunity outfit, in my view. In particular, regional and/or rural providers will have an important role to play, both in building the network, as well as

being able to provide consumers with enhanced wireless broadband service when the network is not needed by emergency personnel.

Second, device competition is critical to the success of FirstNet. $5,000 public safety radios are out, o-u-t, so there is—I don't even—I don't want to hear about them anymore. As far as I am concerned, they don't exist, and I don't think any of the dollars that are being provided should go to anything like that. That is yesterday. What is in? Highly innovative broadband enabled devices that can transmit live video from a robot sent to, for example, to assess a suspicious package, view floor plans of a burning building, access medical history of a patient in distress, as well as the wide range of other mobile applications. In other words, you have to be just as 21st century as the rest of the—of this ecosystem is in our country. These devices have to be truly interoperable, and capable of withstanding the physical challenges that first responders face very day.

And finally, I think that FirstNet should ensure its core operations align with the standards and the technologies related to next generation 911. Congressman Shimkus has been, you know, a great, great advocate, a coach here of the e-911 caucus. We have been working on these issues for more years than we want to count, and so there has to be alignment with that operation. The call centers around the country are upgrading to NG–911, and they are becoming capable of receiving photos, and videos, and text messages, so it only makes sense that this information can be seamlessly transmitted to first responders headed to an emergency situation. So the—your operations have to be absolutely aligned.

So as we work toward advancing the next generation of public safety communications, I want to thank you for the work that you have already done, for what you are going to do, and for being here today to testify and give us a good deep dive on where things are, and how you see the future. Thank you, and I yield back, Mr. Chairman.

[The prepared statement of Ms. Eshoo follows:]

PREPARED STATEMENT OF HON. ANNA G. ESHOO

In the year and a half since our subcommittee last held a FirstNet oversight hearing, significant progress has been made. Among the biggest milestones include the release of a strategic roadmap, ongoing consultation with States, and most recently, a draft request for proposals intended to provide FirstNet with extensive stakeholder input.

Thanks to the success of the recently completed AWS–-3 auction, FirstNet will soon have the funds it needs to deliver on the first-ever, nationwide interoperable public safety communications network, and with this, Congress making good on the last major recommendation of the 9/11 Commission.

This is a big deal.

Going forward, there are three key areas which FirstNet's leadership should give special consideration:

First, it's critical that wireless carriers of all sizes have an opportunity to partner with FirstNet. In particular, regional and/or rural providers will have an important role to play, both in building the network as well as being able to provide consumers with enhanced wireless broadband service when the network is not needed by emergency personnel.

Second, device competition is critical to the success of FirstNet. Five-thousand-dollar public-safety radios are out. What's in? Highly innovative, broadband-enabled devices that can transmit live video from a robot sent to assess a suspicious package, view floor plans of a burning building, access medical history of a patient in distress as well as a wide range of other mobile applications. These devices must

be truly interoperable and capable of withstanding the physical challenges that first responders face every day.

Finally, FirstNet should ensure its core operations align with the standards and technologies related to Next Generation 911. As call centers around the country upgrade to NG911 and become capable of receiving photos, videos, and text messages, it only makes senses that this information can be seamlessly transmitted to first responders headed to an emergency situation.

As we work toward advancing the next generation of public safety communications, I thank our witnesses for being here today, and I look forward to your important testimony.

Mr. WALDEN. I thank the gentlelady and would like to insert in the record a letter from the Rural Broadband Association, without objection.

[The information appears at the conclusion of the hearing.]

Mr. WALDEN. Turn now to the vice chair of the full committee, the gentlelady from Tennessee, Mrs. Blackburn.

OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mrs. BLACKBURN. Thank you, Mr. Chairman, and I want to thank you all for being here to give us an update. As the Chairman said in his comments, this is something we have followed, will continue to follow, and do appropriate oversight with you. We are so focused on your funding mechanism, how you moved to self-funding after that initial tranche of money is exhausted, and then how you are going to see that business model developing.

Also, the issue of interoperability, those of us that have worked through the issues of some of our natural disasters want to make certain that that is being addressed, and that the stakeholders, with all of the first responders across the country, are going to understand, participate, and that we are going to realize this objective of having something that is interoperable.

The other thing I want to touch on, and I will get to this in my questions a bit more, the aspects of a secure network. We are realizing more and more the importance of having a secure network, and, of course, we realize, closed systems, we are going to deal with those one way, enterprise systems another way. When you look at something that meets the interoperability component that you are going to have, the security of the system is just so important to us.

We are living in an age where we face cyberattacks not just on a monthly basis, a weekly basis, but an hourly basis. So please talk with us about this issue of security. It is a heightened concern for us as we move into the age of the Internet of everything, and look at 50 billion devices being attached by the time we get to the end of this decade. So that secure wireless network that is the goal, we want to be certain that indeed it is secure, and hear from you as much as you can divulge to us that—how you are achieving that.

With that, I will yield the balance of my time to anyone who is seeking time. No takers? Time goes back——

Mr. WALDEN. No takers?

Mrs. BLACKBURN [continuing]. To Mr. Chairman. I yield back.

Mr. WALDEN. And the gentlelady yields back, and I am told the ranking member of the full committee has asked Ms. Matsui to take his time, so I now recognize the gentlelady from California.

OPENING STATEMENT OF HON. DORIS O. MATSUI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. MATSUI. Thank you, Mr. Chairman, for yielding Mr. Pallone's time to me. First of all, let me say FirstNet is a startup, let us not forget that. Like every startup, it has had its growing pains. For so long there were questions on how FirstNet would be funded, but now we know that it was fully funded, and will be operational, due to this subcommittee's diligent work on AWS–3's record setting spectrum auction. Last year FirstNet laid out a road map, and I am pleased that they are hitting their milestones so far.

From the beginning I remained focused on the need for a strong governance structure at FirstNet to responsibly govern any nationwide public safety interoperability network. Despite some initial concerns about the role of States taking a back seat, I am pleased that the FirstNet board took this issue head on and developed a strong coordinated relationship with the States. It is my hope that we can work together in a bipartisan manner to achieve success for America's first responders. And I yield to anyone on my side who would like to take the rest of the time. No? I yield back the balance of my time.

Mr. WALDEN. Gentlelady yields back the balance of her time. We go to our witnesses now, and start with Mr. T.J. Kennedy, Acting Executive Director, First Responder Network Authority. We want to thank you for your leadership, and appreciate the progress that you have been making. And please go ahead with your comments.

STATEMENTS OF T.J. KENNEDY, ACTING EXECUTIVE DIRECTOR, FIRST RESPONDER NETWORK AUTHORITY; AND STU DAVIS, STATE CHIEF INFORMATION OFFICER AND ASSISTANT DIRECTOR, OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

STATEMENT OF T.J. KENNEDY

Mr. KENNEDY. Thank you, Chairman Walden, Ranking Member Eshoo, members of the subcommittee. I really appreciate being here on behalf of the First Respondent Network Authority. I welcome the opportunity to brief you on FirstNet's progress, and the development of deploying an interoperable nationwide public safety broadband network. It is also a pleasure to appear here today with the CIO of the State of Ohio, Stu Davis. We just recently conducted the Ohio consultation last week in Ohio, and his team has been very active not just in Ohio itself, but even within the region, in setting a great example for our country in how to make this network possible.

I would like to welcome several members of the public safety community who join us here today. This network is all about them. When we put reliable, resilient broadband technology in the hands of police officers, firefighters, emergency medical services personnel across this country, we will enhance public safety like never before. We will create new ways that first responders can save lives, and improve first responders' own safety. As this committee is aware, we are experiencing growing pains in our early days of existence, but we have worked very hard to shore up areas of weakness, and

to take on as much responsibility as we can. And I am very confident that today you will find our processes and procedures in line with your expectations.

I am leading a dedicated team of professionals, who are working tirelessly to achieve both the goals that you have created for us, and the internal goals that we strive to achieve every day. Each day we work on recruiting and building the most talented team possible in order to make this program successful. Under the direction of the Chairwoman of the Board, Mrs. Sue Swinson, we have implemented a culture measured by results, while always remembering who we are working for. The network that we will deploy is public safety's network, and this is the key principle that guides our work each day.

The pace at which we are working is very high, and this leads to a demanding, but rewarding, work environment. FirstNet resembles a startup, and we have a team that has rolled up its sleeves, and is focused on consultation and/or acquisition that will result in the successful deployment of a nationwide public safety broadband network. Having a wireless startup inside of Government is a challenge that we are overcoming, and you are able to see the progress that we have made. Since the release of our strategic road map in March of 2014, we have been doing something unusual. We are actually doing what we told you we would do. We released a plan, and we are sticking to it, and we are meeting the goals that we set out to achieve.

Since we last testified before this subcommittee in November of '13, we have accomplished the following. We released 13 RFIs, which examined numerous aspects of the network. We published a statement of objectives with a comprehensive network RFI. This brought together all of the information that we had received into a single document. We conducted three public notices addressing various aspects of our enabling statute, and in April we released a special notice with draft RFP documents. We have been consulting with States and territories, and conducting an enormous amount of outreach to our stakeholders.

While we have taken great strides in the right direction, significant work remains, and we at FirstNet are committed to completing the mission that Congress has given us. One area that I believe we have improved on is engaging with our Public Safety Advisory Committee, known as the PSAC. A lot of the credit for this improvement must go to Chairwoman Swinson and the PSAC Chairman, Chief Harlin McEwan. The PSAC is actively engaged in task teams that are working on critical topics, such as priority and preemption, public safety grade, and end user devices. The 40 members of the PSAC are public safety's voice with FirstNet, and by leveraging it, we will ensure that we integrate public safety into the fabric of the network at every stage of planning and deployment.

Our consultation and outreach efforts have been impressive, but more work remains to be done. We have held consultations with 35 States to date, with a further 15 scheduled. In fact, Mr. Chairman, your home State of Oregon was one of our early consultations, and we have seen an impressive outreach in organizational structure in Oregon, and many other States. FirstNet is collaborating with

States in public safety to conduct outreach and consultation, and are leveraging the State and local implementation grant program that has helped fund these important efforts throughout the country.

As we work towards the end of the year, and the planned release of the comprehensive network RFP, the consultation process continues to inform the composition of the RFP, and so it is very important that States are involved at every stage in development of the network. States have many avenues for consultation beyond our in person meetings and regular conference calls. States can have significant consultation feedback through the responses to our public notices and our draft statement of objectives. I have directed the organization to focus on these very two topics in 2015, consultation, and our acquisition of the network. These are our top priorities to meet the requirements of the act.

FirstNet currently has a number of draft RFP documents open for public comment, and we have been very encouraged by the feedback that we received up to this point from both industry, from public safety, and from States. Mr. Chairman, it is the mission, that of deploying a much needed nationwide public safety broadband system that our first responders deserve, that has me excited to come to work every morning. This is not an easy task, but it is extremely rewarding to the hard working team members of FirstNet, and we all understand the critical importance to our country of getting this right for public safety.

[The prepared statement of Mr. Kennedy follows:]

Written Testimony of
TJ Kennedy
Acting Executive Director
First Responder Network Authority

Before the
Committee on Energy and Commerce
Subcommittee on Communications and Technology
United States House of Representatives

Hearing on

"Progress Toward a Nationwide Public Broadband Network"

June 16, 2015

Introduction

Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee, on behalf of the First Responder Network Authority (FirstNet), I would like to thank you for the opportunity to appear before you to discuss the progress that we have made since our last testimony before this panel in November 2013. Congressional oversight is a vital component to the success of FirstNet, and I look forward to sharing with this panel the progress that we have made in planning for the deployment and operation of a network that will meet the needs of our nation's first responders.

Background

Signed into law on February 22, 2012, the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) (Act) created FirstNet. The law gives FirstNet the mission to ensure the deployment and operation of a Nationwide Public Safety Broadband Network (Network). The Network will provide a single interoperable platform for emergency and daily public safety communications. We expect the Network to provide cutting-edge, prioritized, and preemptive wireless broadband communications to millions of public safety personnel that respond to emergencies at the local, state, tribal, and Federal levels.

The Act has been a compass for FirstNet, guiding the organization through its creation, planning, and execution phases. The Act establishes FirstNet as an independent authority within the National Telecommunications and Information Administration (NTIA), provides our mission, emphasizes the key role that consultation plays in the development of the network architecture and operational parameters, and outlines key requirements that FirstNet must follow in planning and deploying the Network.

Public safety, and thus the American people, will benefit from: (1) the availability of an interoperable, dedicated, hardened, resilient, and secure wireless broadband network for public safety personnel; (2) the economies of scale afforded by a nationwide, standards-based network;

and (3) the force of innovation in applications that to date has only been enjoyed by commercial consumers. This vision of developing a recapitalization model that will lead to the deployment of a fully self-sustaining network is what we are working towards at FirstNet.

Timeline of Events

In March 2014, the FirstNet Board (Board) released our Strategic Program Roadmap Executive Summary (Strategic Roadmap).[1] Much of our planning is embodied in this document, which set out goals to achieve over 12 months, including to:

- Initiate formal state consultations;
- Initiate a public notice and comment process on initial statutory interpretations;
- Release Requests for Information (RFI) for certain network and equipment services; and
- Release a Special Notice containing draft portions of a Request for Proposals (RFP) for the comprehensive network solution for comment.

I am pleased to report that FirstNet has met all of these goals. We began formal state consultations in July 2014 to understand public safety's unique needs within each state and territory. We have published three public notices that seek input on key legal interpretations of the Act. FirstNet released a comprehensive draft Statement of Objectives (SOO) and our thirteenth Request for Information in September 2014. Finally, the FirstNet Board approved and authorized the proposed acquisition approach, which in turn allowed FirstNet to release a Special Notice with draft RFP documents for comment in April 2015. In the following discussion, I will address each of these milestones in detail as well as FirstNet's organizational structure and internal compliance measures.

Consultation and Outreach

FirstNet has placed a priority on public safety input at every stage of our consultation and outreach efforts, so that future end-users will have as much input into the design of the Network as reasonably possible. Our efforts to interact with local, state, tribal, and Federal stakeholders are a centerpiece of the FirstNet mission. In FY 2014, FirstNet addressed over 20,000 stakeholders at conferences, meetings, and speaking events throughout the country. In FY 2015, we have already connected with over 25,000 public safety and private sector stakeholders at nearly 200 outreach and consultation engagements. It is important to note that outreach is far broader than consultation and while we have very specific topics that we must consult on, we are aiming to go above and beyond what is required by law, so that we conduct outreach with as wide a reach as possible.

FirstNet continues to collaborate closely with the states. We distributed the consultation package to all 56 states and territories, and since then, we have received 51 completed checklists, met with 34 states and territories, and have scheduled an additional 15 state consultations through September. We aim to complete initial state consultation meetings with all 56 states and

[1] The FirstNet Strategic Program Roadmap Executive Summary can be accessed at: http://firstnet.gov/content/march-board-directors-meeting.

territories by the end of 2015, with ongoing outreach and consultation continuing well into the deployment phases of the project.

The objective of this consultation process is to develop detailed State plans that address the unique communications needs of each state's public safety entities. As prescribed in the Act, these individual plans will inform and empower each state's choice to have FirstNet deploy the radio access network (RAN) within the state's borders or to assume the financial and operational responsibility to build, operate, and maintain its own RAN that integrates with the remainder of the FirstNet network.

In order to execute this requirement, FirstNet has built a consultation strategy that focuses on several key objectives, ensuring that the consultation process is:

- Iterative, giving states and other stakeholders opportunities to provide feedback and input in multiple ways and on an ongoing basis;
- Collaborative, so that FirstNet is working with the localities, states, territories, tribes, and other stakeholders to collect information and data that will be useful for Network deployment;
- Focused on the critical, priority elements for deployment within each state; and
- Informative to the development of FirstNet RFPs, the delivery of the state plans, and the design, construction, and operation of the Network.

In addition to individual state consultations, FirstNet has encouraged and facilitated several regional and nationwide collaborative efforts to assist Governor-designated single points of contact (SPOCs) in their efforts. Per the Act, SPOCs are the designated points of contact for consultation between FirstNet and regional, state, tribal and local jurisdictions, and they serve as a liaison between the public safety entities within those jurisdictions and FirstNet during the consultation process. In April 2015, for example, FirstNet held a highly successful SPOC meeting with 134 participants from 52 states and territories. States were invited to bring a number of representatives to this meeting to ensure a wide variety of attendees.

We also understand how important local outreach is in shaping the FirstNet network to meet the unique needs and requirements of local communities. To that end, FirstNet is in the process of hiring ten regional team leads to help support our ongoing outreach and state consultation efforts. These FirstNet regions are aligned with the ten Federal Emergency Management Agency regions. The regional teams will span the nation to participate in state consultation meetings, join various regional and state governing body meetings and association conferences, and meet one-on-one with the SPOCs and public safety agencies representing potential FirstNet network users. Over the past several months, we have hired leads for Region II, Region V, Region IX, and region X and we expect to complete regional team lead hiring in 2015.

We are also working closely with Federal agencies to drive collaboration and potential use of the Network. After working with the Emergency Communications Preparedness Center (ECPC) to increase outreach with Federal stakeholders through much of 2014, FirstNet's Federal Outreach team held an initial formal consultation meeting with Federal agencies in January 2015. Subsequently, FirstNet released an initial consultation package to the 14 federal agencies that sit

on the ECPC. FirstNet staff engaged in discussions about coverage needs and objectives, as well as security requirements for the Network. FirstNet is also leveraging the Department of Homeland Security's Office of Cybersecurity and Communications in the area of cybersecurity for our planning efforts, and FirstNet has recently hired a cyber lead within the Chief Technology Office focusing exclusively on cyber and network security.

Additionally, FirstNet's Public Safety Advisory Committee (PSAC), the congressionally mandated FirstNet advisory group composed of key public safety stakeholders and currently chaired by Chief Harlin McEwen, will continue to be an important resource as we pursue our mission. To date, the PSAC has collaboratively developed and advised FirstNet on the following:

- Human Factors Report (November 2013): Analyzes the long-range impacts of the Network on the way law enforcement, fire, and EMS operate and considers the impact the Network will have on their duties once it is built and operating.
- Potential Users – Nationwide Public Safety Broadband Network (July 2014): Identifies and categorizes lists of potential Network users.
- Use Cases for Interfaces, Applications, and Capabilities for the Nationwide Public Safety Broadband Network (July 2014): Documents envisioned use cases for interfaces, applications, and capabilities for the Network.

The PSAC members' public safety experience has helped to inform key capabilities and functions of the FirstNet network, and will continue to be critical in our planning. At FirstNet's request, task teams from the PSAC are currently working on:

- The development of a proposed priority and preemption framework,
- Defining and prioritizing public safety grade hardening requirements, and
- Informing Band 14 device design to meet operational needs of first responders.

Priority and preemption are two crucial features of the FirstNet Network that distinguish it from standard commercial networks and ensure that public safety users will have dedicated access to the FirstNet network at all times regardless of any cover leasing agreements that may be in place to utilize the excess capacity.

Finally, over the past year, FirstNet has conducted focused outreach with individual tribes, tribal associations, and Federal tribal government liaisons, and has worked with the PSAC to establish a Tribal Working Group. These discussions have resulted in positive dialogue and a better understanding of tribal needs and engagement with the SPCO's from each of the states. FirstNet hired a tribal outreach lead to assist with focused tribal outreach efforts, as well as staff to address compliance with the National Historic Preservation Act ("NHPA") and the National Environmental Policy Act ("NEPA").[2]

Deployment and Operation of the Network

[2] In addition to formal consultation with the tribes through the Governor-appointed SPOC under the Act, FirstNet is conducting formal government to government consultation with federally recognized tribes under Section 106 of NHPA and is also conducting outreach with native Hawaiian organizations.

FirstNet is actively conducting research to gain insight into the capabilities, opportunities, risks, and innovative business arrangements in the market today to support the construction of the FirstNet network. In addition, FirstNet has utilized a public notice process to solicit comments from stakeholders, industry, and the general public on legal interpretations regarding the planning, deployment, and operation of the Network. To date, we have:

- Released a First Public Notice in September 2014 seeking comment on several key program policies and statutory interpretations and received 63 responses;
- Released a Second Public Notice in March 2015 seeking comments on key interpretations of the Act that impact operational and economic issues regarding the planning, deployment, operation, and sustainability of the Network and received 70 responses;
- Released a Third Public Notice in April 2015 regarding the Act's definition of a "public safety entity" and received 54 responses;
- Published a Request for Information with a draft Statement of Objectives in September 2014 and received 122 comments; and
- In April 2015, released a Special Notice and draft RFP documents. The comment period closes July 27, 2015, but as of June, 2015, we have received more than 670 questions, to which we are in the process of preparing responses which will be posted, in phases, on the Federal Business Opportunity website.

A. Requests for Information (RFI) and Draft Statement of Objectives (SOO)[3]

From April 2013 through April 2014, FirstNet released 12 RFIs that focused on individual components of the Network, including network partnering and RAN provisioning, antenna systems, microwave backhaul equipment, deployables, satellite service, enhanced packet core, transmission/transport, data centers, network management centers, network service platforms, devices, and applications. The results of these 12 RFIs, and the findings from numerous market research vendor meetings conducted by FirstNet, were compiled and ultimately led to the development and release of the thirteenth RFI for a comprehensive network solution in September 2014.

This RFI focused on soliciting feedback for a comprehensive network solution as opposed to individual network components. It also included a draft SOO, which has helped industry better understand FirstNet's key program objectives to deploy, operate, and maintain the Network. This objectives-based approach to the procurement, rather than a requirements-driven approach, promotes flexibility and innovation in achieving our goals while helping us reduce the complexity we face in managing and integrating the diverse set of components needed to meet our mission.

FirstNet received 122 responses to this RFI, and we are very encouraged by the interest it generated. It is important to note that the responses came not only from the vendor community, but also from several state, local, and public safety entities. We take this as another positive sign that the public safety community is highly engaged and supportive of our mission.

[3] The SOO is available at: https://www.fbo.gov/utils/view?id=8adcc535f882f19d58f365134134093d.

B. Special Notice and Draft RFP Documents[4]

The Act requires FirstNet to issue a request for proposals (RFP) for the deployment, maintenance, and operation of the Network. The Board held a special meeting in April 2015 to approve the acquisition framework and authorize FirstNet management to take steps to execute that approach. As a result of that meeting, FirstNet released a Special Notice requesting feedback on draft RFP documents in accordance with the Strategic Roadmap. The draft RFP documents are formulated based on the market research and comments received from the public notices and RFIs over the past 18 months.

FirstNet decided to release the draft RFP documents to maximize input from all interested parties on critical tenets of our proposed acquisition strategy. It must be noted that FirstNet was under no obligation to release any draft RFP documents. We felt, however, that we needed to engage with industry and our public safety stakeholders as transparently as possible consistent with our open and transparent statutory goals.

The Special Notice is broken down into sections, including an overview of the draft RFP documents, a request for feedback on the various approaches that FirstNet is looking to adopt, and the rules and processes through which interested parties can submit comments, questions, and statements of their capability to meet FirstNet's objectives.

FirstNet has also included several appendices to the Special Notice that cover a variety of topics such as pricing concepts and a proposed SOO. This comprehensive approach allows offerors to be innovative in proposing solutions to provide nationwide interoperability and fosters as much competition between potential offerors as possible.

In addition, "Industry Day" events, such as the one held on May 14, 2015, at which we had over 400 in-person and online participants from 250 organizations, are designed to encourage stakeholder participation and feedback early in the acquisition process. This allows potential offerors and FirstNet to have a dialogue prior to the RFP's release, which is targeted for the end of this calendar year.

C. Additional Technical Development and Public Safety Communications Research (PSCR) Collaboration

The Office of the CTO has been, and will continue to be, a key component that guides the FirstNet team through deployment of the FirstNet network. The Office of the CTO has grown significantly over the last year and has hired key leaders for the following technical positions:

- Radio Access Network
- Security
- Technology Planning and Development
- Network Operations
- Labs
- Applications
- Devices

[4] The full Special Notice and draft RFP documents can be found at: https://www.fbo.gov/index?s=opportunity&mode=form&tab=core&id=55fa4d3227d5ac0173e4613e04368c86.

We continue to build our technical team at FirstNet, which will support the critical components of the FirstNet network. The technology office has recently hired a Senior Security Architect and given that this will be an IP-based system, cybersecurity is a key concern and area of focus for us at FirstNet. We recognize the importance Congress placed on this issue in the Act. Building in cyber defenses from the planning stage is a fundamental step towards incorporating security throughout the Network.

Finally, we have been working very closely with the Department of Commerce's team at the PSCR labs to share ideas and data and to eliminate information silos. PSCR-funded efforts continue to provide key insights for RFP development related to Quality of Service, Priority, and Preemption on LTE (Long-Term Evolution). Working directly with PSCR has allowed FirstNet to make significant technical contributions to the Third Generation Partnership Project (3GPP) development of LTE to meet public safety's unique needs. Several 3GPP features are in the final stages for development to support mission critical voice capabilities in future releases of LTE.

Organization and Leadership

FirstNet's senior management is comprised of experienced, C-level individuals. As Acting Executive Director, I am responsible for day-to-day operations of the FirstNet organization. My leadership team is comprised of five offices: Technology, Legal, Finance, Administration, Information Technology. As we continue to focus our efforts on consultation and procurement in 2015, I will be adding to each of these offices to ensure that we have the resources necessary to meet our goals for 2015 and to have direct control over function that affect the success of FirstNet.

FirstNet is governed by a 15-member Board consisting of a designee each from the Attorney General of the United States, the Secretary of Homeland Security, and the Director of the Office of Management and Budget, and 12 rotating members appointed by the Secretary of Commerce. The current Board is comprised of the following individuals:

Board Member	Experience	Term Expires
Barry Boniface	*Private equity investor and telecommunications executive*	August 2016
Tim Bryan	*CEO, National Rural Telecommunications Cooperative*	August 2015
Chris Burbank	*Chief, Salt Lake City Police Department*	August 2017
Ron Davis	*Department of Justice*	Permanent
James Douglas	*Former Governor, Vermont*	August 2017
Jeff Johnson, Vice Chair	*Fire Chief, retired; CEO Western Fire Chiefs Association*	August 2016
Kevin McGinnis	*Chief/CEO, North East Mobile Health Services*	August 2015
Annise Parker	*Mayor, City of Houston*	August 2015

Board Member	Experience	Term Expires
Frank Plastina	*Technology executive*	August 2015
Ed Reynolds	*Telecommunications executive (retired)*	August 2017
Suzanne Spaulding	*Department of Homeland Security*	Permanent
Richard Stanek	*Sheriff, Hennepin County, Minnesota*	August 2017
Sue Swenson, Chairwoman	*Telecommunications/technology executive*	August 2016
Teri Takai	*Government information technology expert; former CIO, states of Michigan and California*	August 2016
Geovette Washington	*Office of Management and Budget*	Permanent

NTIA recently published a notice in the Federal Register requesting candidates who were interested in serving on the Board to submit their applications for consideration. This application period has now closed, and the Secretary of Commerce will be making her selection in due course. As required by law, the members must have specialized knowledge, experience, and expertise from a variety of public safety, telecommunications, and financial backgrounds needed to develop the FirstNet network.

Culture of Compliance

Over the past year, FirstNet has grown significantly in our organizational structure, and this growth has provided greater resources, rigor, and oversight in the management of our operations. By hiring senior managers and staff during FY 2014, FirstNet has implemented policies and procedures that provide clear direction and structure for the organization.

Our FY 2014 Annual Report to Congress details the steps that we have taken to strengthen our compliance processes, including the creation of a formal FirstNet compliance program that is overseen by a cross-functional committee of senior executives and ultimately by the Finance Committee of the Board. This compliance committee, which includes all of the senior management team, is responsible for the day-to-day oversight and implementation of FirstNet's compliance program that leverages both commercial best practices and existing Department of Commerce and NTIA requirements.

FirstNet has also incorporated recommendations from the Department of Commerce Office of the Inspector General (OIG) audit examining early FirstNet processes as well as a Government Accountability Office (GAO) report regarding FirstNet's organizational structure, Network planning, and consultation requirements. FirstNet has a positive working relationship with the OIG and GAO, and we look forward to continuing our open and constructive coordination with these offices.

Conclusion

In summary, FirstNet remains committed to achieving our objectives, and we can only do so with the support of Congress, the public safety community, the private sector, and local, state, tribal, and Federal leaders. FirstNet continues its efforts to meet statutory responsibilities in an effective, efficient, and timely fashion, and to make our organization stronger. This is a network that is urgently needed to increase the safety and capabilities of all public safety personnel, and ultimately the well-being of our citizens, and we are dedicated to delivering a network that meets those needs.

I would like to take a moment to recognize our Board members and staff, as well as the public safety personnel who will use and benefit from the FirstNet network. Their dedication to supporting FirstNet will have an enduring impact on the safety and security of the American people. This is no easy task, but we are taking all necessary steps to develop a business model that will provide an innovative and technologically evolving broadband network to public safety personnel across the nation.

Mr. WALDEN. Mr. Kennedy, thank you for your leadership, and that of your team's, and the progress that you are making, and your forthright commitment to do what you told us you would do. That is novel. We were just suggesting bringing you back more often.

Now we go to Mr. Stu Davis—we have got a few other agencies we can assign you to—State Chief Information Officer, Assistant Director, Ohio Department of Administrative Services. Mr. Davis, we are delighted to have you back before the subcommittee. Please go ahead.

STATEMENT OF STU DAVIS

Mr. DAVIS. It is good to be here. Good afternoon, Chairman Walden, Ranking Member Eshoo, and members of the subcommittee. Thank you for the opportunity to testify on FirstNet and the National Public Safety Broadband Network. As State CIO, I also chair the Multi-Agency Radio Communication System, or MARCS, and the Steering Committee, Ohio's land mobile radio system that supports voice and data communications for statewide public safety and emergency response. And I also chair Ohio's Next Generation 911 steering committee as well.

I first testified before you in November 2013 and expressed concerns that the Ohio General Assembly had about FirstNet. It called for this subcommittee to continue these meetings, and we commend you for doing so. I also expressed concerns relative to some key components that are necessary for success. FirstNet has been—has made significant progress in further defining and communicating the mitigation of these concerns. Regarding the State's relationship with FirstNet, it is important that FirstNet views this as a partnership. FirstNet has come a long way in this regard, and, over the past year and a half, many States have had the opportunity to meet with representatives from FirstNet and discuss issues and concerns. FirstNet's message has been clear. They are listening, reacting to our concerns. Ohio's FirstNet consultation was held last week, and by all accounts was a positive interaction.

From a planning and development perspective, States, including Ohio, have received planning grants to support stakeholder outreach, governance, and data collection activities in support of FirstNet. Ohio has been pursuing a regional, or a multi-State approach. The FEMA region, five States of Michigan, Minnesota, Indiana, Illinois, Wisconsin, and Ohio, have long been partners in the pursuit of obtaining the best possible public safety communication networks for the region. Region 5 States met often on FirstNet, and we have found the same issues emerge for all of us, local control issues, leveraging existing systems, next generation 911 integration, and, of course, business models.

At our request, FirstNet participated in these meetings, and provided additional communication, and a consistency in their message regarding interactions with the State. Their outreach efforts are appreciated. Region 5 has taken steps to identify assets that support emergency responder communication to tower to other technical infrastructure. Of course, there are necessary legal, financial, and jurisdictional considerations when leveraging public infrastructure. Due to the complexity of these considerations, recent

FirstNet discussions have been around foregoing leveraging State assets, which is understandable. These considerations, multiplied by 50 States, will take an enormous amount of time and effort. However, leveraging MARCS towers in Ohio could greatly assist in achieving NPSBN coverage necessary.

There are some continued concerns. The FirstNet business model is still somewhat undefined, and, based on recent discussions at our State consultation, it will be defined by the successful bidder through the RFP process. A sustainable business model is critical to know and understand, and building the cost recovery and usage rates will be instrumental in the adoption of this effort. The FirstNet Chief Financial Officer recently discussed a potential user fee of $30 a month, based on four to 13 million users. This sets an expected bar for fees, and is close to what some current service providers are charging, but FirstNet should provide as good or better service at an equal or lower cost. As Vice Chairman Latta knows, we have MARCS users today that indicate that they cannot afford the $20 a month fee we charge.

Additionally, further clarity around user community access and secondary use is required. Utilities are asking questions and making a strong case regarding priority access and spectrum for the critical data systems they support. Their inclusion as partners on the NPSBN could also provide sustainability for that future business model.

There continue to be concerns regarding coverage. Recent discussions have focused on the urban areas, with a phased approach to address rural and remote areas. Currently Ohio's marked service coverage is 97.5 percent of the State. We would expect at least the same from FirstNet in Ohio. I understand the reason for this current focus, but I am concerned in the long run the rural remote areas of the State will be underrepresented. I will continue to press for a FirstNet coverage plan and schedule that clearly extends to these areas in Ohio.

It is important to note that we are supportive of FirstNet and the Nationwide Public Safety broadband network. Ohio is uniquely positioned to take advantage of the significant opportunity to coordinate and converge multiple efforts. These efforts include the upgrade to our LMRS, MARCS, and Ohio's next generation 911 system. I look forward to our continued partnership with FirstNet, and ensure impacts to current initiatives are in alignment with Ohio's direction. Thank you for your time, and I will respond to any questions.

[The prepared statement of Mr. Davis follows:]

1 page summary of major points

- Outreach has improved and strategic partnership with the States is imperative
- Business model for sustainable operations
- Ensure the state collaboration keeps pace with the technical outreach to ensure technical solutions fit with state needs

Testimony

Good morning Chairman Walden, Ranking Member Eshoo and members of the Subcommittee. Thank you for the opportunity to testify on FirstNet and the Nationwide Public Safety Broadband Network (NPSBN) initiative.

My name is Stu Davis and I currently serve as Ohio's State Chief Information Officer (CIO) and the Assistant Director for the Ohio Department of Administrative Services (DAS).

As the State Chief Information Officer, I lead, oversee and direct state agency activities related to information technology development and use. As Assistant Director of DAS, I oversee the Office of Information Technology (OIT) which delivers statewide information technology and telecommunication services to state government agencies, boards and commissions.

The State CIO is also the Chair of the Multi-Agency Radio Communications System (MARCS) Steering Committee - Ohio's Land Mobile Radio system - that supports voice

and data communications for statewide public safety and emergency management. I also chair Ohio's Emergency Services IP Network (ESINet) Steering Committee focused on Ohio's Next Generation 911 solution.

I first testified before you in November of 2013 and expressed the concerns that the Ohio General Assembly had about FirstNet and expressed in Senate Concurrent Resolution 15 of that year. Specific concerns were around,

- The business plan,
- Costs the State will bear – mandated or obligated
- The ability to Opt out with no net costs if not appropriate for Ohio
- To have written assurances that it will meet and exceed current level of service in the areas of reliability, redundancy, and state based system control, and
- Fair market compensation for access and utilization of state-owned assets in support of network deployment.

It called for this subcommittee to continue these meetings and we commend you for doing so.

I also expressed concerns relative to some key components that are necessary for success. FirstNet has made significant progress in further defining and communicating to us on these concerns and key components for this effort.

Partnership versus Customer: It is important that FirstNet views relationships with the state as a partnership. FirstNet has come a long way in this regard. Over the past year

and a half many states have had the opportunity to meet with representatives from FirstNet and discuss issues and concerns. FirstNet's message has been clear and they are listening and reacting to our concerns. Ohio's FirstNet consultation was held last week and by all accounts, was a positive interaction.

Planning and Development: States, including Ohio, have received planning grants to support stakeholder outreach, governance and data collection activities in support of FirstNet. Ohio has been pursuing a regional approach. The FEMA "Region V" states of Michigan, Minnesota, Indiana, Illinois, Wisconsin and Ohio, have long been partners in the pursuit of obtaining the best possible public safety communication networks for the region. Region V states have monthly phone conferences; meet face to face at conferences and periodically as a large group. We have found the same issues emerge for all of us – from local control issues to how to leverage our robust LMR systems, to NG911 integration and business models. At our request, FirstNet participated in one of these meetings and provided additional communication and consistency in their message regarding interactions with the States. Their outreach efforts are appreciated. Region V states created profiles of their current Land Mobile Radio System (LMRS). This data collection effort included key infrastructure elements such as tower assets, connectivity/networking as well as operational elements such as staff resources, customer base and funding. Gathering this information was helpful in the State's preparation for FirstNet's consultations.

Leveraging State Assets: As previously mentioned, Region V has taken steps to identify assets that support emergency responder communication - from towers to other technical infrastructure. Of course there are necessary legal, financial and jurisdictional considerations when leveraging public infrastructure. Due to the complexity of these considerations, recent discussions have been around foregoing leveraging state assets - which is understandable. These considerations multiplied by 50 states will take enormous time and effort. However, leveraging MARCS towers will greatly assist in achieving the NPSBN coverage necessary across Ohio.

Continued Concerns: The FirstNet business model is still undefined. Based on recent discussion at our State consultation meeting it appears that it will be defined by the successful bidder through the RFP process. The business model is critical to know and understand for the sustainability of the effort. Building the cost recovery and usage rates will be instrumental in the adoption of this effort. The FirstNet Chief Financial Officer recently discussed a potential user fee of $30/month/device based on 13 million users or subscribers. This sets an expected bar for fees and is close to what some current service providers are charging but FirstNet should provide as good or better service at an equal or lower cost. We have users of our LMRS today that indicate that they cannot afford the $20/month/device fee we charge.

Additionally, further clarity around user community access and secondary use is required. Utilities are asking good questions and making a strong case regarding priority

access and spectrum for the critical data systems they support. Their inclusion as partners on the NPSBN could also provide sustainability of a future business model.

There continue to be concerns regarding coverage. Recent discussions have focused on the urban areas with a phased approach to address the rural and remote areas. Currently Ohio's MARCS service coverage is 97.5 percent of the state. We would expect at least the same for FirstNet in Ohio. I understand the reasons for this current focus, but I am concerned that in the long run, the rural and remote areas of the state will be under represented. I will continue to press for a FirstNet coverage plan and scheduled that clearly extends to these areas of Ohio.

It is important to note that we are supportive of FirstNet and the concept of the Nationwide Public Safety Broadband Network. Ohio is uniquely positioned to take advantage of the significant opportunity to coordinate and converge multiple efforts. These efforts include the upgrade to our LMRS – MARCS - and Ohio's Next Generation 911 system. I look forward to our continued partnership with FirstNet and ensure impacts to current initiatives are in alignment with Ohio's direction.

I appreciate the opportunity to be here today. Thank you for your time and I will respond to any questions you may have.

Mr. WALDEN. Mr. Davis, thank you for your testimony, and that of Mr. Kennedy's as well.

So, Mr. Kennedy, it appears there may be some conflicting information regarding the release of the final RFP, and I just would love to get some clarification. I understand FirstNet Chair Swinson estimated early 2016 when she testified before the Senate. Is that a pretty good estimate, early 2016?

Mr. KENNEDY. It is. I mean, we are shooting for the end of this year, but early 2016 is a very accurate estimate.

Mr. WALDEN. All right. You state in your testimony that FirstNet has received more than 670 questions to the draft RFP you just released, and the comment period doesn't close until July 27. Sounds like a lot of stakeholders have a lot of questions. Given that level of inquiry, do you think you will be able to hold on to the early 2016 release of the RFP?

Mr. KENNEDY. Currently we are still holding on to that date, and we have been responding to the questions that have been coming in. We actually released the first responses last week, and we are going to continue to respond to the questions on an ongoing basis so that those questions can be acted upon by the teams, and the States, and the public safety stakeholders, who have been submitting questions.

One of the things that we have done with the draft RFP is we have asked for feedback, and so both the questions and the responses that we hope to get by July 27, we are expecting a lot of interaction not just from vendors in industry, but also from States, and so we are excited to see the feedback that we are getting.

Mr. WALDEN. And I assume that has been a pretty helpful process?

Mr. KENNEDY. It has.

Mr. WALDEN. All right. What do you see as—I was just reading through this document that we entered in the record for the Rural Broadband Association, and some of their concerns about special issues, the rural areas, and being able to be a partner, and maybe partnering, or, conversely, if you end up commercializing some of the surplus spectrum, the effect that might have on the marketplace. Are those the sort of issues you are going to be addressing?

Mr. KENNEDY. We are, and we have asked for, in the draft RFP documents, ways to address not just the urban and suburban areas, but rural areas, as we look at rollout. One of the things with the capacity on the network, certainly there will be more excess capacity in the more rural areas.

Mr. WALDEN. Right.

Mr. KENNEDY. We have also been working with groups like the Rural Broadband Association, and many others, to go out and reach out to the rural carriers and rural telecom providers and make sure that they are getting involved. We have been encouraging them to respond——

Mr. WALDEN. Good.

Mr. KENNEDY [continuing]. To the draft RFP——

Mr. WALDEN. Good.

Mr. KENNEDY [continuing]. And respond with solutions. And whether that is individually, or that is as teams, or working to-

gether in regions or different parts of the country, we are absolutely encouraging them to participate.

Mr. WALDEN. Because it just seems to me the more you can minimize overbuild, or prevent it altogether, the better, because you have got to leverage the money that you have in the most effective way. So what are the next steps once the final RFP is released?

Mr. KENNEDY. Once the RFP is released, there will be certainly questions to come in on the final RFP. We will respond to those. We expect proposals to be returned after that. There is an evaluation period of those different proposals, and the ranking and rating that would normally happen with an——

Mr. WALDEN. Um-hum.

Mr. KENNEDY [continuing]. Evaluation, and then any kind of orals, or other parts that could take part of the evaluation process. These do take some time. As you know, with large Federal procurements, we expect that this will take a significant amount of 2016 to occur, but we want to move with as much urgency for public safety as we can because we know they need this network, and we want to move into deployment.

Mr. WALDEN. Our antennae always go up when we hear the IG is looking at an organization. I understand, while they are done with their first audit, they are back looking at some of the Federal issues. Can you elaborate a little bit about what they are looking at?

Mr. KENNEDY. Sure. The most recent request was to take a look at Federal outreach. Nothing out of the ordinary. We have been working closely with any requests that come from either the IG, or the Government Accountability Office, and we have been definitely following up with them. And we expected this to be a normal, routine cause of business as we go through deploying this network.

Mr. WALDEN. And how soon before we would see some form of deployment of the network after you get through the RFP and all?

Mr. KENNEDY. We would expect that, once the RFP is awarded, that we will move into that first phase of deployment. We currently have about 5 years of deployment that is in the plan, the way the draft RFP is scripted today, so we are expecting about a 5-year buildout, post award of the contract for the initial buildout.

Mr. WALDEN. All right, see if I have anything else. Yes, in your testimony you speak of a vision of developing a recapitalization model that will lead to the deployment of a fully self-sustained network. Could you describe this model, and what it means from the perspective public safety user States, and States that opt out of the network?

Mr. KENNEDY. Sure. The recapitalize model, from an opt-in and an opt-out perspective, is trying to make sure that the nationwide network, the core network itself, and the overall network will not be like a lot of past public safety projects, where we invest a large amount of Government grants and other funding into a system that cannot be maintained or upgraded——

Mr. WALDEN. Um-hum.

Mr. KENNEDY [continuing]. Into the future. As all of you know, you are currently using phones that are leveraging 3G technology, leveraging 4G and LTE, and we are going to be leveraging advanced LTE, 5G, 6G, into the future. And so as we build this net-

work, the goal is to make sure that we plan those costs, and that recapitalization, into the network cost, whether that is core fees related to an opt-out State, or whether that is actual user fees, and the covered leasing agreements related to opt-in States, and making sure that we have the ability to maintain and upgrade the network.

Mr. WALDEN. All right. My time has expired. Thank you again for your testimony, and the answers to my questions. Turn now to the gentlelady from California, Ms. Eshoo.

Ms. ESHOO. Thank you, Mr. Chairman. Before I begin my questions, I would just like to acknowledge the uniformed first responders that are in the audience with us here today. We salute you, we thank you for your service, and I will never forget how you were really the backbone of the effort moving the legislation through, so thank you for being here, and for everything that you do for our whole country. Thank you.

Mr. Kennedy, circling back to the GAO, what prompted the review? Is this something that is——

Mr. WALDEN. You mean the IG's——

Ms. ESHOO. The IG review, yes.

Mr. KENNEDY. We are not aware of anything in particular that prompted the review itself. We believe it is a routine course of business——

Ms. ESHOO. It is a routine—um-hum.

Mr. KENNEDY [continuing]. And this was the next area that they wanted to audit, which was Federal outreach.

Ms. ESHOO. Good. OK. Well, we will have to make—avail ourselves to the report, and become familiar with it. We have had enormous struggles with interoperability in the radio space, and I want to make sure that the same thing doesn't happen again between FirstNet and NG–911. So can you tell us what FirstNet is doing to ensure that we don't have a standards mismatch between the LTE network built by FirstNet and our NG–911 systems built by States and localities?

Mr. KENNEDY. Our statute clearly calls out and requires us to promote integration of the network——

Ms. ESHOO. It does. Uh-huh, yes, the law does.

Mr. KENNEDY [continuing]. And we have absolutely built that into our draft RFP documents. We have leveraged it in our outreach, and we have worked very closely with the 911 community.

Ms. ESHOO. Good.

Mr. KENNEDY. Today in the audience some of the team from APCO was here. APCO has been very much a supporter of FirstNet in making sure that we maintain this integration focus that needs to occur between next gen 911——

Ms. ESHOO. Um-hum.

Mr. KENNEDY [continuing]. And existing 911 and public safety answering point services. We are also bringing on a 911 subject matter expert onto the FirstNet team to make sure that we are very focused in reaching out to all of the dispatch centers, and all of the communicators across the country, so that their needs are included. And they are often at our consultations and our different discussions as we go across the country. So we believe that we are

working very closely with the 911 community, and that that integration will occur.

Ms. ESHOO. Good. That is excellent. Mr. Davis, thank you for the work that you are doing. You gave quite an extensive report in your testimony. Thank you very much. I mean, it represents a ton of work, as my kids would say. How, in your view, do you think the whole issue of interoperability between FirstNet, the States, the NG–911 systems, is working?

Mr. DAVIS. I think it is too early to tell, from a State perspective. Right now we are working through the technical requirements on how we would do that from a State perspective. Historically, that has come from local government, and we are trying to put guidance out to local government to make sure that they are following the standards and the——

Ms. ESHOO. Um-hum.

Mr. DAVIS [continuing]. Approach that we would take. I am excited to hear you have a 911 expert on your team, because I am sure we will be reaching out and trying to leverage the technology and the standards that you guys will be implementing.

Ms. ESHOO. Um-hum. Beyond what you just shared, do you think that the atmospherics have become—I don't know what other word to use. I mean, there were tensions in the beginning, and the—on the part of some, a reluctance to be a part of this effort. Can you tell us anything about how that has improved, in your view? Do you think that it has?

Mr. DAVIS. Significantly improved.

Ms. ESHOO. Good.

Mr. DAVIS. I think——

Ms. ESHOO. That is wonderful.

Mr. DAVIS [continuing]. In the last year——

Ms. ESHOO. That is so important.

Mr. DAVIS [continuing]. And a half, in terms of the outreach, the collaboration, the communication, these 35 States—I mean, that says a lot, when you are going out and talking to the States.

Ms. ESHOO. Um-hum.

Mr. DAVIS. And we do get together from—regional perspective. We get together from—even a national perspective, and we talk. And so that—and you know that, right? So the consistency of the message is very concerning for us to hear that, you know, somebody said something in a different State. And that message is clear. It—the collaboration, I think, is there. The integration and the communication has been consistent, and I think things are moving in the appropriate direction.

Ms. ESHOO. And is there a comfort level to advise the Board as to how—if there are ways to improve that, do you feel comfortable saying so, or others?

Mr. DAVIS. I think there is always room for more communication——

Ms. ESHOO. Um-hum.

Mr. DAVIS [continuing]. And transparency. I think it will be interesting to see the responses that come back from the RFI——

Ms. ESHOO. Um-hm.

Mr. DAVIS [continuing]. And the sharing of the information, and the——

Ms. ESHOO. Um-hum.

Mr. DAVIS [continuing]. Comments that come back from that. I think that will be a significant assistance and help.

Ms. ESHOO. Great. Thank you very much. Yield back, Mr. Chairman.

Mr. WALDEN. The gentlelady yields back. The Chair recognizes the vice chair of the subcommittee, Mr. Latta, for 5 minutes.

Mr. LATTA. Well, thank you, Mr. Chairman. And again, Mr. Kennedy, Mr. Davis, thanks for being here today with us. We really appreciate it, for the update. And, Mr. Davis, if I could ask you, I noted in your testimony that you advocate a regional approach to planning and development, capitalizing in part on the partnership between the States in FEMA regions, and the history of that kind of collective work with regard to the land mobile radio communications. Would you be able to expand on that for us, please?

Mr. DAVIS. Sure. There is a long history of communication between the States in the FEMA 5 Region. They all have land mobile radio systems that we share and share alike, and lessons that were learned in Minnesota are things that we, you know, don't have to break our teeth on, if you will, in another State, in Ohio, for example.

So that communication came out, and it was really more about making sure that we could be heard through the process. In the early days, in 2013, there were concerns that, as a State, our voice might be minimized, and we felt it as—moving into a regional approach like that, we could not be dismissed, when you start to talk about the population that is served, the towers and the infrastructure that is there, and the way that those land mobile radio systems are working today. So there have been very, very strong communication between all of those coordinators in those States.

Mr. LATTA. Just not between the States, do you think FirstNet's doing enough to take advantage of that regional approach, then, that you have already been working on?

Mr. DAVIS. I think it is starting to take some root, if you will. I think originally there were some——

Mr. LATTA. Yes. Would you want to elaborate on that?

Mr. DAVIS. I think originally—I think FirstNet was a little concerned, and this is my own perspective, I probably shouldn't say that, but I will. And then I think, as they began to see the opportunity, that that really brought it to the table, and we had FirstNet come to one of those region five meetings. And it is a great opportunity for us to hear the same things, and to get everything out on the table, and have that constructive debate on how this thing is going to come together. And so I think that regional approach has been helpful, and I think—I would hope that T.J. would say the same thing.

Mr. LATTA. Would you like to comment, Mr. Kennedy?

Mr. KENNEDY. Sure. As somebody who did go out to that Region 5 meeting, and I brought with me my Director of Consultation, as well as Director of State Plans, the interaction was terrific. It was a nice snowy day in Chicago. We got together with all the States in Region 5. And I think what was very beneficial was the pros and cons from different States, with different geographies, and different

issues, and common problems and issues as well. And I think it made for a great dialogue and discussion.

We have also been staffing up our consultation and outreach teams by region now, and we actually are leveraging the FirstNet regions, which are the same as the FEMA region. So we are leveraging that kind of regional cooperation, much like Region 5 set as a good example. So we are taking that example and leveraging it in other parts of the country.

We also did something this year that I think is even taking that to the next step, in that we held a nationwide single point of contact meeting. So—both Stu Davis, and all of the other single points of contacts from all the 50 States, and the territories, and the District of Columbia we invited to a nationwide—meeting where we all came together. Over—I think 52 of the States actually brought different team members to that meeting, and we were able to share the differences in the issues, and talk very openly in 2 full days of discussion.

I think you could kind of rate the discussion by—at 5 o'clock on the second day, everyone was still in the room, having a very fruitful discussion. We had breakout sessions where we could dive deep into elements around the RFP, or the public notices. And that kind of dialogue has been extremely helpful, I think, both for FirstNet, but also for the States, and I think that we both gained from it.

Mr. LATTA. Let me ask Mr. Davis, if I could, just on a follow up, if you are going to look into the crystal ball and look into the future, where do we need to be with the States and FirstNet right now? You know, where do we want to be in the next year? What do we need to be doing? What else?

Mr. DAVIS. Well, I think right now, I think, with all the planning that is going on from each individual State, and that coalescing of all that information across the—at least the FEMA five regions, I think that is really on us to sort of get some of that together and make sure that we are getting it to FirstNet.

I think that the next steps are really the schedule, and how this thing comes out, and how it gets rolled out at some point in time. Because, again, like I said, I am concerned about the rural and remote areas of the State, to make sure that we have the appropriate coverages. I certainly understand the logic behind the approach that they are taking, but some of this can be done on parallel. We just need to make sure we are doing it.

Mr. LATTA. If I could just touch real briefly—and my time is about up—because, especially when you are talking about the rural parts of the State—because, you know, when I look at my district, in northwest/west-central Ohio, I go from urban, suburban, to very, very, very rural areas—and especially when I am out talking to my first responders out in the rural areas, there is always that question about coverage. And when you have talked to folks in the rural parts of Ohio, I don't care if it is in the northwest, or the southwest, or northeast, or southeast, what are they telling you right now?

Mr. DAVIS. Well, they are all interested to know what kind of coverage they are going to have to——

Mr. LATTA. Right, and—but do they think that they will get that coverage?

Mr. DAVIS. I think that they do assume that that is—I think the original message that was coming out of FirstNet in the very early days was consistent coverage across the entire country. And, you know, my—obviously our fervent hope is that that actually happens. But the question is the timing for those rural and remote areas is going to be critical, because—and that goes back to the business model as well, because how much are you willing to spend for what you are going to get form that out of the gate.

Mr. LATTA. Well, thank you very much. Mr. Chairman, my time has expired, and I yield back.

Mr. WALDEN. The gentleman yields back. The Chair recognizes the ranking member of the full committee, Mr. Pallone, for 5 minutes.

Mr. PALLONE. Thank you, Mr. Chairman. I wanted to ask Mr. Kennedy first about Jersey Net, and then I wanted to ask a question about tribal lands, so I am trying to get this all in.

Nearly 3 years ago Hurricane Sandy devastated New Jersey. The natural disaster was compounded by communication failures across the State, and that is why I have been such a supporter of making New Jersey's one of FirstNet's early builder projects. I know that early on, however, critics pointed to the struggles Governor Christie had getting this project off the ground as an example of why FirstNet couldn't work, and I believe that we have been able to turn this project around since then.

I had hoped to ask one of the architects of the success in New Jersey about how he did it, because I thought his experience would help make other jurisdictions successful, but, unfortunately, the Governor prevented him from being here today, so I have to ask you, Mr. Kennedy, what do you think of the progress Jersey Net has made, and can you elaborate on the lessons that FirstNet hopes to learn from New Jersey's early deployment of its public safety broadband network?

Mr. KENNEDY. New Jersey and Jersey Net are currently deploying and testing their first sites this week, so the program is making terrific progress, and Fred Scalera, and the team in New Jersey, are very eager to get this project completed by September of this year. They are on track to do that. They have been working very closely with the FirstNet team as well, and sharing lessons learned as they move forward.

The project is helping drive a strong ecosystem to lessons learned across devices, looking at early devices, and ways to leverage the network, and also looking at ways to use deployables so that in events like Hurricane Sandy in the future, those deployables could be moved into an area that has been affected by a natural disaster or other event, and actually really leverage both capacity and coverage needs that may change due to those kinds of planned and unplanned events that occur.

So I do believe that the Jersey Net system is a great platform for FirstNet to learn from. I do think the team is on track to complete the project by September of this year, and that we will be getting lessons of an operational flavor as early as fall of this year, and we look forward today.

Mr. PALLONE. All right. FirstNet was created to be part of NTIA, which is part of the Department of Commerce. It seems to me,

though, that you might be able to deploy the network faster if FirstNet was spun out of the agency. So do you think FirstNet has reached the point where it can stand on its own as an independent corporation, and if we are not there yet, what needs to happen first?

Mr. KENNEDY. I think FirstNet has grown a lot from the early days. I believe that, when we started, we relied very heavily on NTIA and the Department of Commerce for a lot of key functions. As we have been able to build up our staff, we have been able to take on some of those key corporate and governance functions of the organization. We have moved things like finance entirely into the FirstNet organization, and now we are looking at key elements, like human resources, and procurement, and how that can be taken on by FirstNet in the future.

So I do believe that we are maturing, and I do think that that kind of responsibility and accountability for FirstNet is something that we are growing into, very much so.

Mr. PALLONE. OK. I want to ask you about tribal lands. I try to bring up American Indian issues when I can. Nowhere is our Nation's digital divide more apparent than on tribal lands. The lack of communications on tribal lands has not just had an economic impact, it is also led to real difficulties with public safety communications. And I think one of the overlooked virtues is this potential importance to improve deployment of broadband infrastructure to tribal lands.

So how is FirstNet coordinating with tribal public safety entities, and how will FirstNet address areas like tribal lands, which may have very little existing communications infrastructure?

Mr. KENNEDY. FirstNet understands the special importance of reaching out to the tribal communities, many of which have an acute need for broadband deployment. We have a tribal outreach lead that is full time on FirstNet, and does nothing but interact on a regular basis with the public safety community on different tribal lands, as well as the telecommunications, and different elements of communications on the tribal lands, and what they can do to help as FirstNet deploys. We have actually created a tribal working group on the Public Safety Advisory Committee. I personally have spent time meeting with them all day, talking about the issues that are different in tribal communities that need to be supported by FirstNet as we develop the network and deploy the network.

I see a lot of desire for FirstNet to succeed on—with supporting tribal public safety. They have been very eager to work with us and help us understand their needs and desires. And I do think that our recent consultations in States like New Mexico, just recently last week, and we are looking at specific tribal needs as we go through State-by-State consultations, really is a great opportunity for us to make sure that we get it right.

Mr. PALLONE. All right. Thanks a lot. Thank you, Mr. Chairman.

Mr. WALDEN. The gentleman yields back. The Chair recognizes the other gentleman from New Jersey, Mr. Lance, for 5 minutes.

Mr. LANCE. Thank you, Mr. Chairman, and good afternoon to the panel. New Jersey's project is notable for its use of deployable long term evolution communications technology for its first responder network, called Jersey Net. This mobile network system can be in-

corporated on towable trailers, SUVs, vans, and other platforms to be deployed quickly in emergency situations or natural disasters, like Hurricane Sandy, or to places where communications are limited or non-existent. It is my understanding that rural areas, which comprise about 90 percent of the country, in geography, are particularly vulnerable, since there is no built-out fixed infrastructure.

In this regard, and I go to you, Mr. Kennedy, could you provide guidance on how you plan to incorporate deployables into your buildout plans?

Mr. KENNEDY. We have been looking at deployables not just for rural deployments, where it may not be cost-effective to have terrestrial elements, we want to have as much terrestrial in rural areas as well, but also from the capacity and the reconstitution of a network. There are special events that occur, large gatherings, you, you know, Super Bowls, large sporting events, other things that would require an additional capacity in certain areas where deployables can be effectively——

Mr. LANCE. All Super Bowls should be in New Jersey, Mr. Kennedy.

Mr. KENNEDY. Absolutely. The——

Mr. LANCE. It is on the record.

Mr. KENNEDY. The temperature of Super Bowls in New Jersey in that time of year can be a little cold at some times——

Mr. LANCE. No.

Mr. KENNEDY [continuing]. Just wanted to throw that out. The need for reconstituting a network after a natural disaster, though, is an excellent opportunity for deployables, where we can have deployables that are moved out of the way of a particular disaster, if we have warning, and can move them back in to make sure that public safety can communicate immediately after a major event. It also is supportive of terrorist events, or other events that may take out existing infrastructure, critical infrastructure.

Lastly, there are many parts, as you mentioned, of the United States that are very rural, and it may make more sense to have deployable assets leveraging satellite backhaul, and other elements, to get to parts of the United States that are very difficult to get to. When I was a first responder, I was a police officer and a firefighter in very rural parts of Utah. I went to places that were not covered by cellular networks or land mobile radio networks, in many cases. So, having that ability to get communications much deeper into our rural communities for public safety is absolutely critical.

Mr. LANCE. Thank you. And, on another topic, FirstNet has sought comments on the definition of public safety entity on two occasions, and, as I understand it, based on press reports, there seems to be some debate among stakeholders. Mr. Kennedy, could you describe this debate, and the implications of the definition of that term for FirstNet's deployment?

Mr. KENNEDY. We have actually had a terrific, I think, conversation with both public safety, the States, and industry on the definition of public safety entity. It was in both our first public notice, and our follow-up third public notice. We saw overwhelming support from the States. Many States, including Ohio, mentioned the elements related to leveraging a broad user base to support the

network that public safety needs to have access to. But, most importantly, that user base is somebody that needs to be contacted by the incident commander during big incidents.

And if we look at emergencies that occur, everyone understands that police, fire, and emergency medical services are part of our everyday public safety response. But also there are others, whether it is a utility worker, or whether it is to access some key transportation support on a major accident scene on an interstate highway. You may have other users that are in contact with public safety every day, supporting public safety operations, and, most importantly, needing to be prioritized by an incident commander to be spoken to during those large emergencies, when networks get congested.

And so we have tried to be very clear on making sure that we get input from States on who should be on the network, and we have received a lot of input on that issue. We have not issued our final recommendation for the outer guardrails of that public safety entity definition, but I think with the tremendous amount of input that we have received, it has helped us build a broad definition that will cover what needs to occur, and also be prudent in acting with the act.

Mr. LANCE. In the press there has been some discussion as to the difference between six million to 13 million users, estimates. Could you give your best advice to the committee on that?

Mr. KENNEDY. Sure. In general, our market research has shown that there are about four million public safety traditional users that would want to engage on the network, if they were given that opportunity, and so we look at that as an addressable market. It is about four million police, fire, and emergency medical services personnel. The nine million, or up to 13 million, number comes from those other types of users we just described, so Department of Transportation officials that may be supporting that. They may be buses or transportation that moves folks during an evacuation. That is commonly needed when you have a hurricane coming into an area, or you are evacuating a hospital, or a nursing home, or other large facilities that you might need to evacuate during an actual emergency. Having that kind of broader public safety first responder community that can support that is important, and so that is where that other nine million comes from.

Mr. LANCE. Thank you. My time is done. Thank you, Mr. Chairman.

Mr. WALDEN. Thank you, Mr. Lance. We turn now to the gentlelady from New York, Ms. Clarke. Do you have any questions?

Ms. CLARKE. Mr. Kennedy, Mr. Davis, thank you for testifying here today. Coming out of the New York experience in 9/11, and understanding that there have been a host of iterations of I guess ways of becoming interoperable, I want to know whether we are looking at how we maximize on the infrastructures that have already—that are already in existence, whether FirstNet will be an underlay of those systems, or are we talking about essentially putting those systems aside, and deploying FirstNet as the main vein, if you will, of communications not only in the New York region, but I guess across the Nation.

And I say that because I look at the major investments that have been made in a city like New York. A whole new 911 infrastructure has been put in place. There are a lot of taxpayer dollars there. Is there a way that you have looked at the assets of various regions around the Nation and looked at what could be amenable to the new deployment from a broadband perspective, or whether you see those being phased out, basically, over time so that this becomes sort of the primary tool for communication and coordination?

Mr. KENNEDY. So to your 911 public safety answering point—question specifically, I absolutely believe that the integration both with the existing public safety answering points, and those that are upgrading to next gen 911, is a key part of what we are doing, and that integration will leverage those investments that have already been made.

When it comes to using voice capability with land mobile radio, and using voice, video, and data related to LTE and broadband technology, I believe they are complimentary, and I believe that the land mobile radio systems that agencies have today should be—continue to be maintained, and those systems are very valuable to public safety. It is what I have used in my career. It is a very valuable tool to public safety. I do think that broadband will bring a richness of applications, and the ability to have not just interoperable voice communications, but interoperable data communications. I am able to share more information across police, fire, and emergency medical services.

So I believe that they are complimentary to each other, and that the richness that you can get in a broadband environment will add to saving lives in different ways than we do today by being able to share video, and sharing data much quicker, and in ways that, in some cases, we haven't even thought of the amazing applications that will be supporting our police officers, our firefighters, and our paramedics.

Ms. CLARKE. That was a good answer. My next question to you is, for those parts of the country where you have sort of a voluntary first responder infrastructure, have you thought about how the usage of FirstNet will be communicated, and are they already integrated into I guess networks of conversation around the deployment of FirstNet, and how they will interact with it? Because, of course, their—primarily stand up their operations on a volunteer basis, and—but they play a very crucial role in responding in remote areas, where there isn't necessarily a municipality that does so. Could you give us some insights into that as well? And any feedback you may have gotten from those communities.

Mr. KENNEDY. Volunteers are absolutely critical in public safety. You can go to almost any State in this country, and volunteers are a backbone of what occurs in public safety. There are volunteer firefighters and EMTs across this country who serve big communities and small communities. There are communities in New York that are quite large that are served by volunteers every single day, and so they are a part of this network. They are a key component that are going to leverage this network. When we go out and do consultations, we are consulting with paid professional services, we are consulting with volunteer professional services, and we are

making sure that they are at the table, and invited, and part of those conversations.

One of the biggest things we hear is they want to make sure that they are able to buy service, and we have made sure in our definitions that volunteers are clearly called out as being able to buy service, and be a part of that. And so we think they are a critical component, and will greatly benefit from having costed—affordable devices that they can get their hands on, not just for voice communications, but also for applications and other uses as well.

Ms. CLARKE. And in the protocols that are I guess being established, is there a component of that that looks at the security of the system, and how is that being baked in, and also how are you containing sort of access to that? Everyone in the Nation is just concerned about cyber, and I just wanted to get your feedback.

Mr. KENNEDY. Cyber is an absolutely critical element for us in—at FirstNet, and—with public safety. And we are trying to, and we have the unique opportunity, as we develop a network that is going to be deployed, that we can start from the beginning and bake in security from day one. We brought on a security architect, who is now part of our team, who is focused on this. He has been leveraging the Department of Homeland Security and other key agencies that have a number of cyber efforts that are already underway.

We are not reinventing the wheel. We are leveraging a lot of the best practices that are in place, both in the private sector and in Government today. But we want to make sure that the unique environment of a number of networks that have typically been stovepiped are separate, that when you bring them together it is going to be absolutely critical that, when we have all these different agencies that are leveraging this network, that—not just cyber security, but also identity and access management will be a critical component of what we do. And it is going to be unique, because we have folks at the local level, we have folks at the State level, and folks at the Federal level who will be leveraging the network.

Ms. CLARKE. I thank you very much for your response. I yield back. Thank you, Mr. Chair.

Mr. WALDEN. The gentlelady yields back. The Chair recognizes the gentleman from Ohio, Mr. Johnson.

Mr. JOHNSON. Thank you very much, Mr. Chairman. Mr. Kennedy, as you know, the law governing FirstNet included a provision that would allow the States to opt out of the FirstNet network and deploy their own network, then connect to FirstNet. So I have got a few questions about how this opt out process will work, particularly given that the region of the Nation, the region of the State that I represent is very rural. So I have some questions.

Given the projected release of the FirstNet request for proposal at the end of 2015, or the beginning of 2016, what is the likely timeline for Governors to make their decisions as to whether their States will opt out, or in, to FirstNet?

Mr. KENNEDY. The anticipated timeline would be late in 2016 to early in 2017 timeframe, when they would be presented with a State plan. It is at the presentation of a State plan when a State Governor then would have the opportunity to opt in to the network,

or to take on that responsibility for themselves to deploy the radio access network in their State.

Mr. JOHNSON. OK, all right. Will the Governors have all of the data points, such as specific cost per user, available to them in time for them to make an informed decision to opt in or opt out, and what are your plans to communicate the kind of information that the Governors will need to make that decision?

Mr. KENNEDY. Our plan is to do a very a detailed RFP process that will produce the kinds of information that outlay the costs and the expected offsetting revenues that can support the network, and to drive all that information, in addition to things such as coverage objectives, into a State plan. It is that State plan that is that document that provides the information that will give them the ability to make that as an informed decision.

And, as part of the consultation efforts that are now started and ongoing, we expect ongoing conversations over the next 18 months on exactly these topics——

Mr. JOHNSON. Um-hum.

Mr. KENNEDY [continuing]. And to discuss them, and to share information in a two-way dialogue, so that when that State planning gets to the desk of a Governor, it should not be the first time that they are hearing about it.

Mr. JOHNSON. Um-hum.

Mr. KENNEDY. Many folks, just like Mr. Davis here, as a CIO, have been very actively involved for exactly this reason, in addition to wanting to see the importance of this network, but they have a job to inform their Governors. They have a job to make sure that they are watching this closely, and they are participating.

One of the things that I have seen is the more that folks are participating, the more informed they are, and the more that we can share and have that kind of informed dialogue, and I think that is absolutely critical. Having CIOs, State public safety commissioners, and also local police, fire, and EMS leadership, in addition to the Governors themselves, you know, learning and getting involved with FirstNet is one of the best ways to understand that key decision to opt into the FirstNet deployment of the network, or to take on that responsibility to deploy it themselves in the State for the radio access network.

Mr. JOHNSON. Well, let us say a State opts out. Are there revenues, and if so, what type of revenues might be available to them to help support their end of the network?

Mr. KENNEDY. This is a complex topic, in that there are revenues that could come from spectrum management lease agreements, both to FirstNet, but also for supporting that kind of deployment. But one of the things that we have explored in our second notice is exactly how this mechanism will work, and we are still digesting the comments that we have recently received on that, so there is more to come on that in the future.

Mr. JOHNSON. OK, great. Mr. Davis, you state that FirstNet has made significant progress in communicating with you on concerns that are being raised. So, as we get closer and closer to the endgame here, to the expected final RFP, do you have any specific recommendations on how we can improve this communicating process?

Mr. DAVIS. Actually, you know, the—Executive Director Kennedy has been pretty transparent. I think the more transparent they are, the more that we have—that conversation is going on, so that there isn't surprises in the end. And even if we know it may not be perfect, it is still better to know——

Mr. JOHNSON. Um-hum.

Mr. DAVIS [continuing]. Early so that maybe we can assist in that process. But I think—right now I think everything seems to be rolling along fairly well. The proof will be in the pudding, as we get all of our planning documents together. There has been a lot of communication in Ohio with the—all different levels of first responders, the volunteer firemen, I mean, everybody. We have those meetings on a regional basis just within Ohio to communicate what is coming, and what they should be expecting, and what information we need from them so that we can be able to articulate that——

Mr. JOHNSON. In 10 seconds let me ask you one final question. So who are the current users of the Ohio land mobile radio system, and once deployed, do you envision the public safety broadband network in Ohio to have a similar user base? And if so, why or why not?

Mr. DAVIS. There are quite a few folks. I think there—right now, today, I think there is about 50,000 users on our system. The majority of those are coming out of public safety and State agencies, as well as the sheriff's office, and others, and local law enforcement and emergency response.

I think that right now our network doesn't handle the data requirements that you will see from FirstNet. I mean, that is the key, is getting access to the applications in a quick fashion. That push-to-talk component is a pretty critical thing. It is a closed system. We have other entities on there besides State and local government folks. I think the Federal Government has some process in there. But I think we have three towable towers that we pull in too when there are emergency situations.

But, for the most part, that is focused on really that push-to-talk communication piece, and nothing is more important than somebody outside, by himself, being able to press a button and get a response.

Mr. JOHNSON. OK. Thank you. Mr. Chairman, I yield back.

Mr. WALDEN. The gentleman yields back. The Chair recognizes the gentleman from Missouri for 5 minutes. I am sorry. I am sorry, Mr. Doyle. Sorry, I got ahead of myself.

Mr. DOYLE. Thanks, Mr. Chairman, and thank you to the witnesses for your testimony today.

Mr. Davis and Mr. Kennedy, I have heard some concerns from some of the public safety community in Pennsylvania about who will qualify to use FirstNet, who will make the final decisions about eligibility. Beyond police, firefighters, and other first responders, there are other individuals and organizations that play an important role in emergency response. Shouldn't States ultimately decide who has both permanent and temporary access to the first responder broadband network? For instance, if a building is on fire, and police or firefighters, they might find it very valuable to be able to communicate with the building security, or those in

charge with managing the evacuation. Shouldn't the incident commander in these cases be able to make the final decision about who has access to the network?

Mr. KENNEDY. From our perspective, we have overwhelmingly heard that from States as well, and our current definition would allow them to do that. Our current definition would allow the incident commander to have access to all those type of entities that would allow them to communicate and handle that scene, no matter how large or small that it is. Our third notice was very much focused on that, and our third notice just closed last week. As we digest those comments that came in from States and from others, we will come out with a final determination, but our goal was to be very responsive to those requests that have come in from the States.

Mr. DOYLE. Great, thank you. Mr. Kennedy, first responders in Pittsburgh, and many other cities across the country, use the T band for communications, and, as part of the Spectrum Act, the FCC will reclaim that spectrum. Do you see the deadlines that are set for that process as being problematic for first responders that depend on that spectrum to communicate, or do you believe FirstNet will be online in the effective localities in time to mitigate this shift?

Mr. KENNEDY. There are a couple elements to this. We are aware of the concerns of those public safety jurisdictions using T band spectrum today, and the T band relocations provisions that are part of the act. It is the FCC, however, that is in charge of that T band relocation, and it would be better for them to answer specific questions about timing and so forth related to that effort.

FirstNet, we have been very focused on working with the international standards community, the 3GPP community, Third Generation Partnership Project, that is focused on making sure that we have a standards-based approach that goes to putting mission critical voice in the future on our network. At deployment of the network, we are looking at having non-mission critical voice, or what you would look at as cellular-type communications, or over the top communications, on broadband, and plan to offer that as part of the initial deployment.

But when it comes to mission critical voice communications, we are really looking at leveraging those international standards to make sure that we only go to those key seven functions that are part of the mission critical voice standards that are being done right now, and that they are implemented not just in the standards bodies, but that they are being utilized, and that public safety builds a trust up that those standards are ready for them. And public safety will decide when they are comfortable with mission critical voice on broadband in the future.

So that is happening. The standards bodies are working to have that initial standard done by mid-2016. It will take some time for that technology to get into the actual technology ecosystem. And there are some other countries around the world that are actually looking at moving to mission critical voice sooner than the United States that will be doing some testing. But, for us, we want to make sure that public safety is confident in both the technology,

and in the standards, and that they have been rolled out, and that they are using the network for other purposes first.

Mr. DOYLE. Great. Gentlemen, thank you. Mr. Chairman, I will yield back.

Mr. WALDEN. Thank you very much. The gentleman yields back. Now the gentleman from Missouri is recognized for 5 minutes.

Mr. LONG. Thank you, Mr. Chairman. Mr. Kennedy, it appears that, in many rural areas, first responders will have to rely on roaming with existing rural wireless providers for network coverage, instead of using the national public safety broadband network. How and when are you planning to address roaming coverage?

Mr. KENNEDY. Roaming is certainly something that was envisioned in the act, and we are allowed to enter into roaming agreements, but we are also looking at leveraging rural buildout milestones, and making sure that we have rural buildout at every phase of deployment of the network. So we are looking at both the deployment that needs to occur, but also looking at, when we get to a final RFP, what kind of efforts can be leveraged for roaming that is cost-effective that can be added to the network as part of that solution as we go forward.

Mr. LONG. Any speculation on how long that building would take, the——

Mr. KENNEDY. As far as building the network right now, we proposed in the draft RFP that 20 percent of the rural buildout milestones would be covered in each phase, which would be a year. So 20 percent in year 1, 40 percent in year 2, 60 percent in year 3, and so on. And so we believe that that will allow for ongoing rural buildout at each phase, rather than saying it is all just waiting to the end, which is one of the concerns that we have heard.

So we have tried to be very clear to proposers who are looking at bidding on the network that rural buildout is very important to us. We are also trying to encourage rural telecommunication to—telecommunication firms to be a part of those solutions, and to bid on the network, and be a part of bringing solutions to the table that will allow that rural deployment to occur.

Mr. LONG. OK. FirstNet's partners are allowed to use the excess capacity on the FirstNet network to offer wireless services to commercial subscribers. How will FirstNet ensure its partners do not compete against existing commercial networks, particularly in the high cost rural areas where there population density often will not sustain more than one network to begin with?

Mr. KENNEDY. One of the things in the act is that it requires us to look at the economic desirability of anyone proposing to bid on the network, and look at the different approaches to both, you know, leveraging different types of infrastructure, rural telecommunications infrastructure, existing Government infrastructure, commercial infrastructure. And so we are going to look at what is most cost effective to deploy the network, and also to have sustainability on the network.

As part of those offers, they actually have to bring to the table what kinds of revenues would they bring to the table to offset the costs of public safety in both deploying, maintaining, and operating the network. And so it is important for us to look at the greater

good of public safety, and how they would be served by those covered leasing agreements, or those agreements by potential partners or offers to leverage the network, whether that is in rural areas or in urban areas.

Mr. LONG. That is my next question. In terms of location, where will the service first and most likely be available, urban areas, or urban and rural, or what can we expect?

Mr. KENNEDY. It is urban and rural. And—so just like I mentioned earlier, we want to have those rural buildout milestones at each phase, so certainly urban areas will get built out. Your largest number of population and public safety providers, public safety entities, are actually in the more populated areas. But we also see that going to the rural area, so we want to make sure that those rural buildout milestones help drive that as an incentive to make sure that rural was built out at each phase.

Mr. LONG. And 3 years behind us, when do you thank that FirstNet will actually start providing service?

Mr. KENNEDY. I believe that FirstNet will start providing service as soon as we start to deploy the network, and States and areas are actually built out, and up and tested, and on the network. Currently we see the network starting to be awarded, as far as deployment, in 2017, and so you will see it probably—in the year after that that you will start seeing deployment of the network, and actually being up and operating in different areas.

Mr. LONG. So you think the—it will be up in 2018?

Mr. KENNEDY. I think parts of the network will be up in 2018, and it will continue to deploy on a regular basis. One thing with wireless networks is they are ongoing deployments, and so we have the initial deployment, which we are talking about a 5-year buildout of that deployment, from 2017 through 2022, but we also believe that the overall network will continue to grow after that, but there will be additional coverage that is added. There is additional capacity that is added. It is not a static network. So every part of the country that even has initial deployment will continue add to that deployment as time goes on.

Mr. LONG. OK. Thank you. Mr. Chairman, I yield back.

Mr. WALDEN. The gentleman yields back. The Chair now recognizes the gentlelady from Colorado for 5 minutes.

Ms. DEGETTE. Thank you, Mr. Chairman. I just wanted to ask—Mr. Kennedy, I wanted to ask you about some of the efforts in Colorado. As part of the successful AWS–3 auction, NIST, which as—has labs in Colorado, received $300 million for research on standards, technologies, and applications to advance wireless public safety communications. Now, my understanding is that this research is in consultation with FirstNet, so even though NIST only recently received the funding, I am wondering if you can give us the status of those consultations?

Mr. KENNEDY. I can. We actually met with NIST last week. One of the things that we have right now—every June is a public safety communications research conference, and that conference is done with NIST and the public safety communications research lab at NIST. And it was held just last week, and literally over 500 key stakeholders came together to talk about the technical aspects, and

the different research and development aspects of not just the public safety network, but public safety communications in general.

We actually sat down with the NIST team and started to consult and discuss on that grant program regular ongoing communications with both the NIST director and Dereck Orr, who was the Program Director of the PSCR labs. I believe we worked hand in glove with them, and that the team at NIST is very focused on bringing solutions to——

Ms. DEGETTE. Yes.

Mr. KENNEDY [continuing]. Public safety on the LTE——

Ms. DEGETTE. Great. OK, good. Now, you told some of the other members that FirstNet has worked hard to improve its outreach efforts to all stakeholders, including States, and—as well as NIST, I understand you have had an official consultation with the State of Colorado. Can you tell me what is next for FirstNet in Colorado?

Mr. KENNEDY. Right now in Colorado we are asking them to start performing data collection, and I know that they are doing that. Brian Shepherd, who is the single point of contact on the Colorado team, has been sending out communication to the public safety community in Colorado, and currently their data collection is due September 30, and so they are working to gather that data on different public safety users, where are they located throughout the State, what kinds of 911 calls do they have, where do they need to respond to? And so that is the current activity that they are working on.

Once that data is received, we plan to go back out and meet with States to validate that data and discuss what that data is telling us to become part of the State plan. And so that is what is going to——

Ms. DEGETTE. So that will be sometime in the fall, you think, maybe? Didn't you say September——

Mr. KENNEDY. In the fall would probably be the follow-up to that, after September——

Ms. DEGETTE. Yes.

Mr. KENNEDY [continuing]. 30.

Ms. DEGETTE. Right. OK. And, lastly, Adams County, Colorado, has one of the five early builder public safety projects. What lessons do you think you could learn from that project in Adams County?

Mr. KENNEDY. Well, the good news is we have already been learning lessons from that project, and we look forward to the ongoing lessons now that the network is operations. They are one of two networks that are already operational.

Ms. DEGETTE. Right.

Mr. KENNEDY. There are users who are on the network today, and they are looking to add a lot more users to the network. As those users come on board, we are going to be looking at network management of that particular network, how those users interact, and really look for key use cases for the benefits of broadband for public safety, and how we can leverage that across the country with a nationwide public safety network.

Ms. DEGETTE. Thanks. Thank you very much. I yield back, Mr. Chairman. Thank you.

Mr. WALDEN. The gentlelady yields back, and the Chair now recognizes for 5 minutes the gentlelady from North Carolina.

Mrs. ELLMERS. Thank you, Mr. Chairman, and thank you to our panel. Mr. Kennedy, I have a couple question—or, actually, I have one question. Mr. Long asked my other question. My colleague from Missouri was hitting on some of the rural issues, and I would like to follow up on a couple of those as well. Since FirstNet is proposing a nationwide and State and regional approach as potential paths for network acquisition, I am concerned with how this affects the rural carriers in limiting their abilities to grow as well. They have smaller service territories, and I am afraid that they are going to get cut out of the process.

In addition, there is no clear incentive for large carriers to partner with the small providers to serve the rural communities. Large carriers lack presence in the—and experience in these rural areas, and the smaller carriers are there. How can—how is this process going to move forward, and, you know, how is FirstNet going to ensure that the effective and efficient creation of the network in rural areas is provided?

Mr. KENNEDY. We have been really trying to outreach to the rural carriers themselves. We have been working with the different associations, whether it is the rural broadband association, whether it s NRTC, many of the other different groups that support rural telecommunications across the country. We have been engaging them early on. We have been encouraging them to participate in our draft RFP that is out right now, as well as our public notices, so that they can share with FirstNet what their needs and desires are.

Part of releasing a draft RFP, which is not required——

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY [continuing]. Was to get that kind of feedback, both from States, but also from industry, and industry includes the rural telecommunications——

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY [continuing]. Providers.

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY. And we want them to come forward with solutions that will help make it cost-effective to build out further into rural areas that will make the operation to sustainability of FirstNet a success, because that is a requirement of the act, and to make sure that, as we look at things like rural buildout milestones. That is one of the things that we are looking for comments on, and we expect to receive comments on that. We think it is really important. We have asked for a definition of rural, set of——

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY [continuing]. Comments in a public notice. Lots of communication from the rural community on that as well. So I think that we have heavily engaged both public safety entities that are in rural——

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY [continuing]. Areas, as well as the rural telecommunication entities, to be a part of making this network a success. We think that, whether it is teaming, whether it is bringing folks together, whether it is coming up with unique and innovative

business models that will support that, that we have looked at different ways that we can, and are——

Mrs. ELLMERS. Um-hum.

Mr. KENNEDY [continuing]. Continuing to get input on that. We actually have, as part of our RFP, have laid out ways that people can put themselves forward to team with others so that different parts can get together and make sure that they can be a viable entity to bid on different parts of the network, and be a part of the solution.

Mrs. ELLMERS. Great. Thank you, Mr. Kennedy. I yield back the remainder of my time, or if anybody wants it, you know, I have got about 2 minutes left.

Mr. WALDEN. The gentlelady yields back. The Chair now recognizes the gentleman from New Mexico for 5 minutes.

Mr. LUJÁN. Mr. Chairman, thank you so very much, and to Mr. Davis and Mr. Kennedy, thank you both for being here.

Mr. Kennedy, as you know, before the establishment of FirstNet, my home State of New Mexico was the recipient of a BTOP grant to support the development of a public safety wireless system, and it is my understanding the FirstNet and New Mexico have reached a spectrum licensing agreement in this space. Can you give us an idea if this is indeed going to be completed by September 30?

Mr. KENNEDY. To my knowledge right now, from CIO Darryl Ackley, who is leading the New Mexico team, and his staff, Jackie Miller and others, who are working on that BTOP project, they are on track to meeting their September 30 deadline. I know there is a lot of work to be done, and they are working hard to make that happen.

We know that they have been collaborating to get those sites on board, and they have also had a significant part of that project that was already deployed for microwave backhaul, and other elements that are the backbone of that system. So we are really looking forward to additional lessons learned coming out of the State of New Mexico. You have some unique issues with the border that we are also learning to get some key learnings out of, and so really excited, and looking forward to that project coming online.

Mr. LUJÁN. Well, since you went there, Mr. Kennedy, I will jump right to that question that I had for you is—New Mexico is one of the many States that has a complexity of jurisdictions with local, State, Federal Government, as you named, and—namely being a border State, with Border and Customs as well. Has the dynamic presented any unique challenges that you have seen, or that you anticipated?

Mr. KENNEDY. I think there are two things. One, certainly challenges related to spectrum on the border. Mexico is looking at different ways to deploy broadband for their Government needs, including public safety, than the United States, as far as their band plan. There have been some very positive announcements on the northern border that Canada is actually matched up with our same exact spectrum that we are utilizing for the FirstNet network for their public safety first responders, so we are in much better shape there, as far as dealing with those issues. So that is an issue that is ongoing when you get on the border.

I will say that there has been collaboration and cooperation on sites near the border with the Federal Government, and Federal law enforcement agencies that work on the border with the State of New Mexico. And I think, working through some of that, that key early engagement and discussions has been very positive both for those Federal law enforcement agencies, and for the State of New Mexico, and the lessons learned from that engagement hopefully can be applied to other parts of the border in New Mexico, as well as other parts of the southern border in the country. So that kind of relationship building, and discussions, and working through the details to get sites online I think will be very beneficial to this project.

Mr. LUJÁN. And you have heard a lot of questions from those of us that represent rural States as well. What lessons learned in a State with geography like we have in New Mexico, where it is large and land based, as well—we have amazing mountains ski areas as well, so sometimes that gets in the way of transmission of some of the communications services, where you can drop service here and there, because it is so—such a big State. So what have we learned that we will be able to deploy in other States?

Mr. KENNEDY. Sure. I mean, as somebody who has been a State trooper in Utah, and understands some of the rural geography that you have in New Mexico, and has traveled to New Mexico, I think it is really important that we understand that there are many areas that are very difficult to communicate with today, and the needs are critical for public safety to have additional communication avenues, both in land mobile radio, and in cellular and LTE communications.

I think that the kinds of things we are looking at in different communities in New Mexico today with the initial buildout will be helpful, but because your geography and terrain is so varied, I think that, you know, all the different things that we need to bring forward for options and solutions to serve very rural areas are going to be critical for New Mexico, and all the rural States.

And I think as we move forward, finding unique solutions that can leverage very long ways of dealing in rural areas, we are looking at boomer sites as one of the unique elements that we have that can cover large areas with a stronger cell site that can do that. We are looking at high powered mobile devices. We are looking at satellite backhaul in some areas, and deployable units. So many different ways to try to serve rural communities, all of which I think will be important for New Mexico, and many States that have the same kind of terrain.

Mr. LUJÁN. And in your testimony, Mr. Kennedy, you also outlined the establishment of a tribal working group, and hiring a tribal liaison as well. Can you provide more detail on FirstNet's efforts to ensure robust tribal consultation? And, in addition to that, I understand that you recently had a session in Santa Fe, New Mexico. If you could let us know what the next steps are?

Mr. KENNEDY. Sure. I think the establishment of that tribal working group has been very successful. Early in in FirstNet's existence, Chairman Ginn appointed Kevin McGuinness, one of our Board members, to be the tribal liaison from the Board. Kevin has been actively involved in making sure that tribal communities are

involved every step of the way with FirstNet. We have gone so far as even making sure that we reach out—we recently had some public notices, and actually sent notices to all of the recognized tribes to make sure that they give us input, and we have received input from tribal communities as part of that. And so we are looking forward to continuing to try to have that involvement.

When I talked earlier about the 56 State SPOC meeting, where we got all the single points of contact together, we actually invited the tribal working group to that meeting as well, and we had sessions where the tribal working group met with States. These breakout sessions had 15 or 20 States in there, and talked about issues that affect tribal communities related to public safety broadband, and shared their concerns, and how to get each side to be more involved with each other. So I think we have done a great job of trying to bring them together, but there is a lot more to do as we continue to develop and deploy the network.

Mr. WALDEN. Thank you very much. The gentleman yields back. The gentleman from Texas is recognized for 5 minutes.

Mr. OLSON. I thank the chairman and welcome Mr. Kennedy and Mr. Davis. One of the early buildout projects is in the eastern end of my district, Harris County, Texas, population four million people, the third most populous county in America, number one in Texas. The last 2 weeks back home have been pretty rough. We had a 100-year flood on Memorial Day, with homes being lost, businesses being lost. Tragically, a few lives were lost, including one woman in my district. And now Tropical Storm Bill has rolled ashore, a little bit south of Harris County. Made landfall about 150 miles south, meaning the worst side of the hurricane, the northeast quadrant, is hitting my hometown directly. We are managing, but we can always use more weapons in this battle. Bill came ashore between Palacios, Texas, a population of 4,661, and Port O'Connor, Texas, booming with 1,253. Those two towns can't respond like Harris County, Houston can to a crisis, and that is why I am so excited about what FirstNet promises. But FirstNet starts with these early builder programs, like in Harris County.

So my question is, Mr. Kennedy, the recently released GAO report recommended that FirstNet develop a plan to better evaluate their early builder projects and capitalize on the experience gleaned from them. What is the status of those recommendations, sir?

Mr. KENNEDY. So, first of all, we put together that—an evaluation plan to incorporate those lessons learned. We have received many lessons learned from each of these projects, including Harris County. We most recently even had the Harris County team up to our Reston headquarters here in Northern Virginia, meeting with both our technical team and our RFP team, and sharing those lessons that they have learned so far to make sure that they are incorporated both into our acquisition, and into our overall plans and procedures, and development of the network.

Mayor Parker, who is the Mayor of Houston, is on our Board. Our Board is made up of an amazing group of talented individuals both from the wireless and telecommunications industry, also from State and local government, and from public safety, police, fire, emergency medical services, and sheriff's departments. That Board,

including Mayor Parker, are giving us advice on the deployment of this network, and how critical this is. And we know she has been quite busy, as well as all the officials in Texas that have been dealing with your recent flooding, and the ongoing issues that are affecting you there.

We think that is an absolutely perfect reason why we need to deploy this network and move very quickly, and with focus, to have consultation so that we can take in these lessons learned to work through the acquisition as the act requires us to so that we can deploy this network as quickly as possible for public safety.

Mr. OLSON. Have there been real surprises, something that came out of nowhere, whoa, what happened here? I mean, any big surprises, or are things marching along? Challenges, gotten through them, over them? Anything we should be concerned about? Some challenges that came out of nowhere, like—I mean, real world example, right now back home, we have real big problems. FirstNet could be a big part to solving those problems, and so—any idea, if we had some big problems, that—might want to help out us here in Congress, or are you guys doing all right right now?

Mr. KENNEDY. As far as big problems, I don't think there has necessarily been unforeseen major issues, but there have been things that we were worried about that have come true. So, as a good example, the intricacies in working through memorandums of agreement, and understanding to get sites, and access to sites that are Government sites to help build the network, very time consuming, can be political at times, and take a lot of time and effort to put some of those in place. And so that is just one example of more than 60 lessons learned that we have from these early builder projects so far. We continue to incorporate those in our development. I think the time that it takes to consult and work through acquisition takes time, but we are working through that as quickly as we can.

Mr. OLSON. As you build FirstNet through early builders, are there any insights to use actual real world situations, like what we had in Harris County, Texas the past month as a real world example of how this thing can save some lives, get this thing up and running? Any effort to try to include real world examples in your—going forward with the early builder's program, and then FirstNet?

Mr. KENNEDY. There are. We have asked for actual use cases and lessons learned that are real world use cases that are coming out of these projects. Many of them are not live and on the air yet today. Harris County and AdCom are two that are, but they have a small number of users, in some cases, that are on the network today. And as they continue to add users, I suspect we will have more lifesaving examples that we can bring forward.

These projects were funded through the Broadband Technology Opportunities Program pre-FirstNet, but because they are leveraging the FirstNet spectrum, it is something that we are going to be able to get those kind of use cases, and be able to share them with public safety across the country.

Mr. OLSON. And that is important, because most of these homes that were lost and lives lost were lost in small towns. Even—I mean, suburban towns, but small police force, not capable like the big Houston police force, or my police force in Sugarland, Texas,

where I live. And so please, please, please, get going, get going, get going, we need this. I yield back.

Mr. WALDEN. The gentleman yields back. The Chair now recognizes the gentleman from New York for 5 minutes.

Mr. COLLINS. Thank you, Mr. Chairman. In a—excuse me. In a prior life I was the County Executive of Erie County, the largest upstate county in New York, 44 cities, towns, and villages, and 100 separate volunteer fire companies. I went through, 7, 8 years ago, the whole issue of low band, 400 megahertz, 800 megahertz. I was the one that killed the 800 megahertz plan in New York State when they came to our county, where it had to work, as the largest upstate county. In my talking to the volunteer fire folks, first of all, we knew it probably wouldn't work, and secondly, we had no money to implement it anyway. So I pulled the county out, it cratered the whole thing across New York State.

So talk to me as though I am this local volunteer fire guy. I just went from low band to 400 megahertz, and it works. It works really, really well. I knew 800 megahertz was a disaster. Now, tell me what my life is going to look like 5 years from now. Do I have to throw all my radios away? Am I going to go to 700 megahertz? Am I going to go to a 4G LTE? Who is going to buy me my equipment?

Our emergency services, central police, you know, I was county exec when Flight 3407 went down. I have had floods, I had blizzards. It was critical that we all talked to each other. Rural areas, some of our areas, believe it or not, do not today have cell coverage. So tell me what my life is going to look like. Make it really simple. I am a volunteer fire chief. What is my life going to look like 5 years from now? Tell me what it is going to be.

Mr. KENNEDY. When we have been out talking to a lot of volunteer firefighters and EMS personnel, most of them carry a personal smartphone today, or cell phone today, if they have coverage. To your point, there are still some areas without coverage, but let us assume they are in an area that has coverage.

Mr. COLLINS. No, I don't know, I—mine in particular doesn't.

Mr. KENNEDY. OK. So, as part of the——

Mr. COLLINS. That is my excuse when someone reaches me. I tell them I am out in Wyoming County, and—sorry, I just lost coverage. And they go, I understand.

Mr. KENNEDY. And the really——

Mr. COLLINS. Talk to me as—both ways. Sorry.

Mr. KENNEDY. If you are in a rural county, we want you to participate in the New York State consultation process. We want you to be a part of that consultation process, get your needs on the table for the New York State plan. As we talked about a little bit earlier in the hearing today, our goal is to work with New York State to bring forward a plan for New York State that has coverage objectives, that has data coming back from our request for proposal process on cost, and deployment, and coverage, and those kind of key elements that will come to the table.

And every State has a different set of issues. We heard from New Mexico and border issues. You have border issues in New York State as well, but different issues on the northern border and the southern border. So we want all those to be captured as part of that plan. And then coming forward to them is they will have the

opportunity to buy service, if it meets their needs. So, for the average volunteer fire chief in your communities, if we provide the coverage at the cost that they are willing to pay for, they can do that. And if we don't——

Mr. COLLINS. Yes, but I think——

Mr. KENNEDY [continuing]. Then we have——

Mr. COLLINS. Here is——

Mr. KENNEDY [continuing]. Not met their needs.

Mr. COLLINS. You know, excuse me, here is the big issue. There are separate budgets, in some cases no budgets. As I said, we have 100 separate volunteer fire companies. We have 44 separate cities, towns, and villages. This is one county. You know, this all sounds good, but, you know, the tail wags the dog. I have got this small community, who is going to buy me my new stuff? I have no budget for anything, and yet, I can tell you, as County Executive, I needed every one of them to be listening to the same channel. I needed every one of them to be able to respond, which is why we went 400 megahertz across the board, no ifs, ands, or buts. The county paid for the equipment. We put every—took them off of low band, killed the 800. It works perfectly.

So now it is like, are we turning this all upside down? And if I have got to start over, one thing I can assure you, New York State doesn't exactly talk to the localities. They may talk to New York City. They don't talk to the other localities. That is what happened on the 800 megahertz, which was a debacle. I just—I mean, should I be worried? If I am a County Executive, if I am Commissioner, Central Police Services, if I am the Commissioner of Emergency Services, I just kind of see, in a perfect world, this is great, but, boy, we don't live in a perfect world.

Mr. KENNEDY. I think you should look at it as an opportunity that FirstNet will have to provide the kinds of services at a cost that can be afforded in those rural counties, and that we can expand coverage that will give them coverage that they don't have today, and try to meet those needs that they would want to partake in the service. We will be judged on whether or not we provide that kind of service and meet their needs.

One of the things I think that is very important, and you mentioned this, is we will be building an operable system that will be interoperable between all those different agencies from the very beginning. Doesn't matter at what level they are, doesn't matter if it is police, fire, emergency medical services, emergency management, transportation, and that will be—the opportunity will be to partake in a system that has those abilities.

Mr. COLLINS. I have got 4 seconds, but what do you envision? I—now, I am not talking about just the beginning. Are we going to be there in 5 years, is it 10 years, is it 20 years? What——

Mr. KENNEDY. I think right now we are planning a 5-year deployment that will start when the RFP is awarded in early——

Mr. COLLINS. Well, deployment is different than—it is working—it is just like 400 megahertz. Don't even think about it, take out my radio, everyone is listening.

Mr. KENNEDY. You have two different types of systems, land mobile radio and LTE. They are not exactly the same, and so it would not necessarily a replace. It is maintain the existing radio networks

that you have now, and leverage broadband as it comes forward. As public safety builds trust in that network, they will leverage and——

Mr. COLLINS. That is——

Mr. KENNEDY [continuing]. Utilize——

Mr. COLLINS [continuing]. Part of the key, so—my time has expired. Thank you, Mr. Chairman.

Mr. WALDEN. Thank you very much. The gentleman's time has expired. The Chair now recognizes for 5 minutes the gentleman from Illinois.

Mr. SHIMKUS. Thank you, and thanks for staying. Usually I get done earlier, but it is kind of good that I was kind of last, because—going to follow up on a little bit of what my colleague from New York mentioned, and some other concerns. Thanks for being here. Testimony has been great. Mr. Davis, thank you, because you give me a little more comfort, having someone more local to the State. Because, you know, the basic debate the last couple years was to make sure our first line responders had a dedicated system by which we could communicate, and then bring on hopefully new technologies and devices, with how the world changes so quick.

Mr. Kennedy, you have been very articulate, and I think that has been helpful, but I get—always get concerned when we have—we use the terms Government business model, independent corporation. I am not sure I have seen the Federal Government be able to operate that without challenges. So, I don't want to be a fly in the ointment, but the—it really follows up on some of Mr. Collins' comments too, because it is not just—he is trying to get a picture of where we are going to be, but he also said, you know, for the local devices, we have got the—obviously the radio communications, but, of course, we are talking about broadband, and the issue of how do you get—eventually get to hardened commercial devices, which I don't know we talked much about. He did mention who is going to pay for this?

And so when we have a network with seven billion in capital to deploy, and be able to match the coverage, capacity, apps and functionality of the commercial network—commercial networks spend about $20 billion or more a year in upgrades. How are we going to do this? If we—if you only have seven, and the commercial side spends 20 yearly to keep up to date, aren't you a little concerned?

Mr. KENNEDY. This is a complex funding mechanism to make this work, but I do believe Congress has come up with a very unique model that is doable. We have three major funding sources, the $7 billion in construction funding that you discussed, leveraging the excess capacity on the 700 megahertz spectrum that is part of the network, which is absolutely critical. One of the elements in the act was called covered leasing agreements, which allows us to lease that excess capacity to be able to leverage that funding both in deployment and maintenance and operations of the network.

Mr. SHIMKUS. And that will be leased to other users?

Mr. KENNEDY. As part of the RFP process, that is allowed to be leased to commercial users, who can go ahead and then resale that network to consumers, which we are not allowed to do as part of

the network. That resale, or that covered leasing agreement, the way it works in there is a much larger portion of the funding than the $7 billion portion. Those two elements, along with fees, user fees, for the most part, core network fees, those are the three elements that will come together to make this a successful network.

Also, we are going to have to provide a network to public safety that meets their needs. We are going to have to meet the key objectives of public safety for reliability, for resilience, and providing devices, both commercial devices and hardened devices, that will meet their needs. One of the things we have seen in the commercial networks today is that they have a larger variety of devices that can met the needs for both voice, video, and data, and we believe that that rich ecosystem, on a nationwide scale, with millions of users that can come forward and create devices that are cost effective, will be able to bring down those prices that the Ranking Member mentioned earlier to very affordable prices for devices both for vehicles and for individuals.

Mr. SHIMKUS. Can you give me some comfort that in 10 years we don't have a—well, we will have a—maybe a somewhat vibrant LTE system, and the rest of the world has moved on?

Mr. KENNEDY. I think very similar to my earlier comments, that we are planning on building a recapitalized network that can be upgraded and maintained into the future. Part of the reason we have been so focused on the 3GPP standards, and sticking with international commercial standards for building this network is that we will continue to upgrade and maintain the network for those new standards as we move to 5G and 6G in the future.

Mr. SHIMKUS. Well, we want you to be successful. We wish you good luck, and we look forward to following this. Mr. Chairman—and I yield back.

Mr. LATTA [presiding]. Thank you very much. The gentleman yields back, and I believe we have exhausted all of our members here to ask you all questions, but I know on—I want to thank you for your time today. I want to also, from Chairman Walden and also the ranking member, the gentlelady from California, for your time, your answers today. It was very, very informative. And, judging from the folks that were in the audience today, that they had to fight for a seat. But really want to thank you for your time and your effort for being here. Mr. Davis, thanks very much for coming in from Ohio on pretty short notice. Mr. Kennedy, again, thank you for your testimony today. And if there is no further business to come before the committee, we stand adjourned.

[Whereupon, at 3:59 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. FRED UPTON

Today's hearing will examine the progress FirstNet has made in delivering on its mandate to establish a truly nationwide public safety broadband network for our Nation's first responders, with an eye toward what's next.

I am pleased that FirstNet appears to have put the distractions of early controversies and missteps behind it and has started making the decisions necessary to achieve the goal of a nationwide network. With the FCC's recent spectrum auctions successfully producing the funding for FirstNet, a significant component of this effort is in place. The Board's plan to release a Request For Proposal in early 2016

demonstrates that FirstNet is on the cusp of taking a major step forward in the realization of the network.

Today's discussion provides an opportunity for FirstNet to highlight the process employed to get this far, and what lies ahead. Mr. Davis, Chief Information Officer of the State of Ohio with a long history in emergency communications, offers an especially important perspective on the process as we work to determine what more, if anything, FirstNet can do to ensure that State, local, and tribal input is fully reflected in its plans.

Local participation is essential to the successful deployment and sustainability of the network. We all share the goal of seeing FirstNet implemented and operated in a timely and effective way. Today's hearing, another in our ongoing oversight of FirstNet, reflects the committee's commitment to that success.

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

Thank you, Chairman Walden and Ranking Member Eshoo, for holding this hearing today. And thanks to our witnesses for being here.

Many of us have been talking about the importance of public safety communications for a while, so we tend to forget that FirstNet is barely 3 years old. It was just a few years ago when a broad bipartisan coalition came together in this committee with a vision for a nationwide wireless broadband network for first responders.

But we lose track of just how young FirstNet is because it has already accomplished so much. It started with literally nothing but a bold mission-no board, no employees, no money. Very few technology startups make it past this stage. That is not the case for FirstNet.

And now, FirstNet's board is comprised of seasoned communications veterans and public safety officials. It's a group that would make any company proud. And while the ranks of its employees are still growing, the staff more closely resembles a group from a technology power house rather than one from a Government office. This hard-charging staff has been crisscrossing the country making sure everyone with an opinion has their voice heard.

Most encouraging, we are actually about to see the first deployments. FirstNet's five Early Builder Projects—including one in New Jersey—are already providing important lessons. They are the proofs of concept necessary to show first responders that this will indeed work. I'm disappointed that Governor Christie refused to permit JerseyNet to testify today. The project is a one of the Governor's few successes and this committee would have benefitted from hearing firsthand about their deployment.

Of course, as with any new venture, FirstNet has faced some hard times. But it has not shied away from these challenges .For example, GAO recently issued a report concluding that FirstNet could use more extensive internal controls and clearer metrics of success for early deployments. FirstNet's Chair, Sue Swenson, agreed and quickly acted to implement these recommendations.

Similarly, the Department of Commerce's Office of Inspector found that in its very early days, FirstNet should have been more open. But now most observers describe FirstNet as a model of transparency.

I am confident that FirstNet's board will continue in this tradition, maintain these improvements and continue its good work moving forward. The importance of this task requires no less.

So I look forward to hearing from our witnesses and hearing more about the progress they are making.

June 12, 2015

The Honorable Greg Walden
Chairman
Committee on Energy and Commerce
Subcommittee on Communications and Technology
U.S. House of Representatives

The Honorable Anna Eshoo
Ranking Member
Committee on Energy and Commerce
Subcommittee on Communications and Technology
U.S. House of Representatives

Dear Chairman Walden and Ranking Member Eshoo:

We respectfully request that this letter be included in the "Progress Toward a Nationwide Public Safety Broadband Network" hearing record.

NTCA–The Rural Broadband Association (NTCA) represents nearly 900 small rural network service providers that use valuable wired and wireless networks, and other technical and operational assets, to serve the most sparsely populated and remotely located areas of our country. As community-based organizations, NTCA's members have an established history of working collaboratively with public safety, and an ongoing commitment to supporting their communications needs.

Rural service providers understand first-hand the immense financial, technical and logistical challenges related to operating advanced telecommunications networks in rural and remote areas. As such, they applaud the effort that has been devoted to the FirstNet project. However, NTCA's members have significant concerns related to FirstNet's current direction, as outlined in the Special Notice and Draft Request for Proposals (RFP) released on April 27, 2015[1], and the resultant implications for the ability of rural first responders to access the Nationwide Public Safety Broadband Network (NPSBN).

Given the ambiguity in the Special Notice and Draft RFP, overbuilding existing rural

[1] *See* FirstNet's Nationwide Public Safety Broadband Network (NPSBN), Special Notice and Draft RFP, Solicitation Number: D15PS00295B, released April 27, 2015, available online at https://www.fbo.gov/?s=opportunity&mode=form&id=fa93b913eb397ddb5aafc2506be60a50&tab=core&_cview=1 (last accessed on June 12, 2015.)

assets remains a potential threat. Overbuilding could quickly deplete FirstNet's limited construction budget. In addition, rural service providers remain concerned about the sale of excess capacity on the FirstNet network. Although this provides an important opportunity for FirstNet to fully utilize and monetize its spectrum assets, the commercial use of excess capacity also may have grave, unintended consequences in skewing the commercial marketplace – which would be particularly harmful for existing rural service providers who operate as carriers of last resort (COLR) in rural and remote areas of the country. Further, given FirstNet's proposed acquisition process, there is no path forward for rural service providers who wish to partner with FirstNet and make their existing assets available for a more efficient network deployment by FirstNet. Without the assistance and assets of rural service providers, FirstNet may encounter challenges with ensuring efficient and effective network coverage in rural and remote areas. In addition, based upon an ambiguous definition of "rural" and inferior rural coverage milestones and coverage maps, rural first responders may be left behind, without access to the NPSBN.

Overbuilding Existing Rural Assets

Given the lack of detail in the Special Notice and Draft RFP on FirstNet's plans to inventory and integrate existing assets into the NPSBN, the overbuilding of existing networks and assets looks to be a serious threat if not managed thoughtfully. Overbuilding areas already served by rural providers would be wasteful and unnecessary, as it would quickly deplete the entire $7 billion network construction budget and thereby jeopardize FirstNet's ability to create a ubiquitous wireless network for first responders. Congress had the foresight to address this concern within the very authorizing legislation, directing FirstNet as a matter of law to utilize existing commercial infrastructure and assets.[2] This will allow FirstNet to concentrate its limited financial resources on expanding network coverage, and upgrading network reliability and resiliency to meet public safety grade standards.

Indeed, within the Special Notice and Draft RFP, FirstNet touts the synergies derived from existing infrastructure and assets as an important component to its financial sustainability. NTCA's members are encouraged to see FirstNet recognize that their networks can contribute to FirstNet's rural mission. At the same time, NTCA remains concerned that FirstNet has not addressed the mechanics of how it plans to inventory and subsequently integrate existing assets into its network.

To fulfill its statutory obligation and remain fiscally prudent, FirstNet should create a clear, transparent, and comprehensive mechanism for inventorying existing assets—including, but not limited to, the commercial assets owned and operated by small, rural independent service providers—and further clarify now, at the outset of the acquisition process, how it plans to incorporate those existing assets that it identifies into its final network design and implementation plan(s).

Use and Sale of Excess Network Capacity

[2] Middle Class Tax Relief and Job Creation Act of 2012, Public Law 112-96, 126 Stat. 156, Sections 6206(b)(3), (b)(1)(c) (2012).

In a related issue, rural service providers remain concerned about how FirstNet plans to monetize excess capacity on the NPSBN. The statute is unambiguous in its intent to prohibit FirstNet from selling commercial services to anchor institutions or other end users, including last-mile connectivity and middle-mile capacity.[3] However, FirstNet is authorized to enter into a covered leasing agreement (CLA), and the authorized CLA provider can utilize the FirstNet spectrum to provide a commercial, secondary wireless service.

In its Special Notice and Draft RFP, FirstNet has tied CLAs to its network partnership agreements, noting that the final selected contractor(s) will assist FirstNet with constructing the NPSBN and also gain access to FirstNet's spectrum on a secondary basis. Unfortunately, this opens the door to a new competitive wireless provider, which has the ability to undermine the financial health and sustainability of existing commercial networks in high-cost areas of the country, thereby jeopardizing the ability of consumers to continue to access affordable mobile broadband service.

To fully understand the repercussions that stem from monetizing excess capacity on the FirstNet network, it is useful to discuss the central financial tenants of rural telecom deployment. Rural service providers operate in high-cost, low-density areas of the country through a combination of private capital, U.S. Department of Agriculture financing, and federal Universal Service Fund resources. A second commercial network in these areas could entice and thereby remove anchor tenants and other profitable customers from rural carriers' customer bases. "Cherry-picking" the most attractive, high-volume, lucrative customers consequently leaves the most costly-to-serve remnants of the serving area to the carrier of last resort, and thus threatens continued infrastructure investment and *increases* the existing service provider's reliance upon and the burdens on high-cost universal service support. In the worst-case scenario, the existing service provider may be unable to continue to support its network investments and infrastructure loans—reminiscent of the unfortunate consequences that resulted from EAGLE-Net, a broadband stimulus-funded project that overbuilt existing networks in rural portions of Colorado[4]—and, as a consequence, unable to continue to provide commercial mobile broadband service, leaving rural citizens without access to service.

FirstNet should ensure that its CLA partners do not compete against existing commercial networks, particularly in high-cost rural areas where more than one network is not sustainable. At a minimum, any secondary network provider that is allowed to utilize FirstNet's excess capacity should not be given unduly favorable lease terms or rates which enable the operator to compete in the commercial wireless marketplace by offering artificially low subscriber rates. In other words, FirstNet should ensure that, at a minimum, it establishes secondary lease rates and terms that are in line with the prevailing wholesale market rates for spectrum/leasing.

Ability of Rural Carriers to Compete in Network Acquisition Process

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[3] *See* Section 6212(a) of the Act. *Also see* Comments of NTCA–The Rural Broadband Association, In the Matter of First Responder Network Authority Proposed Interpretations of Parts of the Middle Class Tax Relief and Job Creation Act of 2012, Docket No. 140821696-4696-01, 79 Fed. Reg. 57058 (rel. Sept. 24, 2014).

[4] For more on EAGLE-Net, see this June 20, 2013, press release from the House Energy & Commerce Committee, https://energycommerce.house.gov/press-release/energy-and-commerce-committee-leaders-continue-inquiry-100m-colorado-broadband-stimulus-grant.

Given the two acquisition approaches proposed in the draft RFP, smaller operators, including NTCA's members, will be unable to participate in the network partnership process; at best, their chance at participation will be indirect to the extent that the national or regional partner chosen happens to undertake to work with smaller providers. A lack of participation from rural service providers may have a negative affect on FirstNet's ability to effectively and efficiently deploy, maintain, and evolve the NPSBN in rural areas of the country.

FirstNet has proposed two potential network acquisition approaches: a nationwide and a state/regional approach. In terms of the nationwide approach, small and rural carriers do not have the scope or scale necessary to construct the NPSBN in its entirety. Further, in terms of the state or regional approach, the FirstNet service area would still extend beyond the established territory of most small business operator(s). As such, given their size and limited resources, it will be difficult if not impossible for small rural carriers to compete for a FirstNet contract(s) without partnering with a large nationwide service provider. For their part, large carries have no incentive to partner with small rural providers.

Although it may be tempting for FirstNet to partner with only one or two of the large mobile network operators (MNOs) or a significant systems integrator, they do not have the same operational experience in rural and remote areas. Despite their extensive networks, for example, large wireless providers focus their activities around more populated areas, ensuring that they are less likely to have extensive rural technical assets to contribute to the network. They also lack local presence, meaning that mean time to restore and repair can be more difficult in the remote and rural areas that smaller providers call home.

For example, the top 250 Cellular Market Areas contain approximately 74% of the total U.S. population but encompass just 14% of the total U.S. land area. This is a stark contrast to the 40% of the U.S. landmass served by the nation's independent telecommunications companies, and the 5% of the U.S. population served by those same entities. Further, 73% of respondents to the *NTCA 2011 Broadband/Internet Availability Survey Report* indicated that their fixed service competitors were only serving the cities and towns in their service areas. To the extent that national providers do operate in rural areas, MNOs tend to focus their coverage around highway systems, ignoring the surrounding residential areas and rural parts of the country (including state highways and local roads over which many first responders must travel to reach emergency sites). This isolated coverage is not conducive to FirstNet's mission or the needs of rural first responders. In addition, in areas where they do operate, the "national" MNOs often do not own their vertical assets; instead these assets are owned by companies that lease the infrastructure to the MNOs. In rural areas, the MNO backhaul facilities and wired infrastructure often are supplied by rural providers.

That means in many rural areas, a smaller rural-focused operator is the best and perhaps only resource with whom FirstNet might partner with on the construction of the NPSBN. As independent, community-based operators serving the needs of rural America, NTCA's members have significant wireline and wireless assets, as well as human resources, rights-of-way, and technical resources. In addition, rural service providers continually re-invest in their networks, and can upgrade their infrastructure more cost effectively and efficiently than a new entrant into

the service area. Rural service providers also hold licensed spectrum and established customer bases, ensuring that these companies are well positioned to sell a commercial wireless service and thereby enter into a CLA partnership agreement with FirstNet that is financially beneficially for FirstNet.

Rural providers are experts in the terrain and geographic challenges within their service territories; they understand where local public safety coverage is needed most, and how to effectively set wireless assets to meet the end users' communications requirements. Further, when the NPSBN is subject to critical outages via man-made or natural disasters, given their physical presence in rural areas, these providers are "first responders" themselves—they are better positioned than any other carrier or operator to provide on-the-ground network operational and technical support to ensure the FirstNet network is repaired and restored to service as soon as possible.

To maximize reach, leverage expertise, and improve the economies of network deployment, FirstNet should ensure that it seeks out, on a case-by-case basis, the best partners and resources in each area. FirstNet should ensure that in any given area where it decides to enter into a network partnership agreement, it selects the best service provider, with the most reliable network, the highest quality of service, the most advanced network technology, and localized experience and pre-existing relationships with public safety entities.

Given these partnership tenants, FirstNet should revise its network acquisition strategy to ensure that rural service providers can participate in the contract process. FirstNet should create smaller service territories which enable rural service providers to adequately address network coverage requirements.

In a related issue, in regard to the Federal acquisition process, small businesses with limited scope and scale often will have trouble competing against large, international, for-profit companies. As such, a "small business" is quantitatively defined and then set apart to ensure that its bid is given appropriate consideration by Federal decision-makers. Yet the generic definition of "small business" selected by FirstNet in its draft RFP disregards the industry-specific guidance of the U.S. Small Business Administration and will serve to disadvantage small wired and wireless telecommunications providers as they compete for FirstNet network partnerships.

As part of the Department of Commerce, the U.S. Small Business Administration is considered the Federal expert on small business issues. The agency has spent considerable time and effort to research and define various categories of "small business" based upon the services the company provides and the industry it operates within. FirstNet should rely on this intelligence as it looks to define "small business." As such, within its acquisition documents, FirstNet should use the established definitions of Wired Telecommunications Carriers and Wireless Telecommunications Carriers[5] which correspond to the services the company provides on a commercial basis, and also the services the company is offering to contribute to the NPSBN.

[5] In regard to the definition of "small business", the U.S. Small Business Administration has created a Table of Small Business Size Standards Matched to North American Industry Classification System Codes. See https://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf.

Network Coverage in Rural Areas

FirstNet has a statutory obligation to address rural coverage, and first responders are in need of network communications connectivity in all areas of the country. However, FirstNet's proposed acquisition approach sets up an urban-rural divide, potentially leaving rural first responders without access to the NPSBN.

Rural consumers have significant emergency and public safety needs just as their urban counterparts do, even as rural areas may face different challenges in the event of emergencies. Rural areas are often the sites of devastating forest fires, floods, and tornadoes, while the presence of military facilities in rural areas raises distinct public safety challenges as well. Oftentimes, rural citizens reside many, many miles from the closest first responder, firehouse, police station, or health care institution. A next-generation broadband-capable network can help to overcome the unique challenges presented by this remoteness, enabling first responders to communicate with one another and with their headquarters' locations. Just as in urban areas, rural first responders need to access criminal databases, transmit a patient's medical data, and send information back to headquarters concerning the specifics of an incident scene. However, today, public safety officials in rural communities experience the same communication challenges as their urban counterparts, struggling to converse with other first responder entities and exchange data in real-time.

To overcome these challenges, the Act requires FirstNet, in carrying out its duties, to devise "deployment phases with substantial rural coverage milestones" that are "consistent with the license granted by the Commission."[6] The spirit of the legislation was to ensure that rural areas of the country gain access to the NPSBN, and are not left behind their urban counterparts without access to this vital communications and public safety resource.

Unfortunately, the definition of "rural" has not been formalized. Likewise, "rural coverage milestones" remain ambiguous, but FirstNet has tentatively confined rural deployment to only 20% of the urban and suburban areas, which is a low threshold given the need and statutory mandate for rural coverage. In addition, FirstNet has released initial statewide network coverage maps which detail its plans for sparse network availability and throughput in rural areas. Given these initial documents, it is possible that rural first responders will be left without network access.

It is clear from the discrepancy between FirstNet's rural coverage requirements and initial proposals (as defined in the Special Notice and draft RFP) that FirstNet is encountering significant challenges in regard to meeting the needs of rural first responders. This all leads back to the need for FirstNet to partner with existing rural service providers, incorporating their technical assets and strategic experience. In areas where FirstNet deems it too difficult or costly to upgrade existing terrestrial assets for a NPSBN deployment, FirstNet should create roaming agreements with existing commercial networks, ensuring that rural service providers gain access to the best network connectivity available.

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[6] *See* Section 6206(b)(3) of the Act.

FirstNet Should Revise its Final RFP to Address the Concerns of Small Businesses and Rural Areas

In closing, an integrated NPSBN is the most efficient and effective solution, enabling FirstNet to speed time-to-deployment, decrease implementation costs, and create synergies with existing Federal programs, which provide loans and grants for the construction of broadband infrastructure. It also is consistent with FirstNet's statutory obligations to utilize existing assets, and to adequately address rural coverage.

Unfortunately, given the initial acquisition process as outlined in the Special Notice and draft RFP, rural service providers remain concerned about FirstNet's approach to rural and remote areas of the country. Rural first responders have important communications needs, and they cannot be left behind their urban counterparts. At the same time, FirstNet should not undermine existing rural networks as it looks to develop the parameters which will guide its network partnerships. To assist with meeting coverage objectives in an efficient and effective manner, NTCA's members stand ready to partner with FirstNet.

Sincerely,

David Hoover
Vice President of Legislative Affairs
NTCA–The Rural Broadband Association