

STATUS OF THE 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

SECOND SESSION

FEBRUARY 2, 2016

Serial No. 114-112



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

U.S. GOVERNMENT PUBLISHING OFFICE

99-943

WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

COMMITTEE ON ENERGY AND COMMERCE

FRED UPTON, Michigan
Chairman

JOE BARTON, Texas
Chairman Emeritus
ED WHITFIELD, Kentucky
JOHN SHIMKUS, Illinois
JOSEPH R. PITTS, Pennsylvania
GREG WALDEN, Oregon
TIM MURPHY, Pennsylvania
MICHAEL C. BURGESS, Texas
MARSHA BLACKBURN, Tennessee

Vice Chairman
STEVE SCALISE, Louisiana
ROBERT E. LATTA, Ohio
CATHY McMORRIS RODGERS, Washington
GREGG HARPER, Mississippi
LEONARD LANCE, New Jersey
BRETT GUTHRIE, Kentucky
PETE OLSON, Texas
DAVID B. MCKINLEY, West Virginia
MIKE POMPEO, Kansas
ADAM KINZINGER, Illinois
H. MORGAN GRIFFITH, Virginia
GUS M. BILIRAKIS, Florida
BILL JOHNSON, Missouri
BILLY LONG, Missouri
RENEE L. ELLMERS, North Carolina
LARRY BUCSHON, Indiana
BILL FLORES, Texas
SUSAN W. BROOKS, Indiana
MARKWAYNE MULLIN, Oklahoma
RICHARD HUDSON, North Carolina
CHRIS COLLINS, New York
KEVIN CRAMER, North Dakota

FRANK PALLONE, JR., New Jersey
Ranking Member
BOBBY L. RUSH, Illinois
ANNA G. ESHOO, California
ELIOT L. ENGEL, New York
GENE GREEN, Texas
DIANA DeGETTE, Colorado
LOIS CAPPs, California
MICHAEL F. DOYLE, Pennsylvania
JANICE D. SCHAKOWSKY, Illinois
G.K. BUTTERFIELD, North Carolina
DORIS O. MATSUI, California
KATHY CASTOR, Florida
JOHN P. SARBANES, Maryland
JERRY McNERNEY, California
PETER WELCH, Vermont
BEN RAY LUJAN, New Mexico
PAUL TONKO, New York
JOHN A. YARMUTH, Kentucky
YVETTE D. CLARKE, New York
DAVID LOEBSACK, Iowa
KURT SCHRADER, Oregon
JOSEPH P. KENNEDY, III, Massachusetts
TONY CARDENAS, California

SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY

GREG WALDEN, Oregon
Chairman

ROBERT E. LATTA, Ohio
Vice Chairman
JOHN SHIMKUS, Illinois
MARSHA BLACKBURN, Tennessee
STEVE SCALISE, Louisiana
LEONARD LANCE, New Jersey
BRETT GUTHRIE, Kentucky
PETE OLSON, Texas
MIKE POMPEO, Kansas
ADAM KINZINGER, Illinois
GUS M. BILIRAKIS, Florida
BILL JOHNSON, Missouri
BILLY LONG, Missouri
RENEE L. ELLMERS, North Carolina
CHRIS COLLINS, New York
KEVIN CRAMER, North Dakota
JOE BARTON, Texas
FRED UPTON, Michigan (*ex officio*)

ANNA G. ESHOO, California
Ranking Member
MICHAEL F. DOYLE, Pennsylvania
PETER WELCH, Vermont
JOHN A. YARMUTH, Kentucky
YVETTE D. CLARKE, New York
DAVID LOEBSACK, Iowa
BOBBY L. RUSH, Illinois
DIANA DEGETTE, Colorado
G.K. BUTTERFIELD, North Carolina
DORIS O. MATSUI, California
JERRY McNERNEY, California
BEN RAY LUJAN, New Mexico
FRANK PALLONE, JR., New Jersey (*ex officio*)

CONTENTS

	Page
Hon. Greg Walden, a Representative in Congress from the State of Oregon, opening statement	1
Prepared statement	3
Hon. Anna G. Eshoo, a Representative in Congress from the State of Cali- fornia, opening statement	4
Hon. Marsha Blackburn, a Representative in Congress from the State of Tennessee, opening statement	6
Hon. Frank Pallone, Jr., a Representative in Congress from the State of New Jersey, opening statement	6
Prepared statement	7
WITNESSES	
T.J. Kennedy, President, First Responder Network Authority	8
Prepared statement	11
Answers to submitted questions	57
David Furth, Deputy Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission	22
Prepared statement	24
Answers to submitted questions	61

STATUS OF THE PUBLIC SAFETY BROADBAND NETWORK

TUESDAY, FEBRUARY 2, 2016

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

The subcommittee met, pursuant to call, at 10:15 a.m., in room 2322 Rayburn House Office Building, Hon. Greg Walden (chairman of the subcommittee) presiding.

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

Staff present: Ray Baum, Senior Policy Advisor for Communications and Technology; Rebecca Card, Assistant Press Secretary; Andy Duberstein, Deputy Press Secretary; Gene Fullano, Detailee, Telecom; David Redl, Counsel, Telecom; Charlotte Savercool, Professional Staff, Communications and Technology; Gregory Watson, Legislative Clerk, Communications and Technology; Christine Brennan, Minority Press Secretary; Jeff Carroll, Minority Staff Director; David Goldman, Minority Chief Counsel, Communications and Technology; Jerry Leverich, Minority Counsel; Lori Maarbjerg, Minority FCC Detailee; and Ryan Skukowski, Minority Policy Analyst.

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

Mr. WALDEN. We will call to order the subcommittee on Communications and Technology for our hearing on Status of the Public Safety Broadband Network.

This morning we convene to examine the progress in the deployment of the nationwide Public Safety Broadband Network, a mandate given to FirstNet by the Congress in the Middle Class Tax Relief and Job Creation Act of 2012 and for which FirstNet was created.

With the January 13th release of the request for proposal to award a contract for the deployment and operation of the network, FirstNet has achieved its most crucial milestone to date and within the time frame promised by Chairman Sue Swenson. I commend Ms. Swenson, the FirstNet board, and the staff of FirstNet for reaching this milestone, especially given the time lost in FirstNet's early days when controversy hobbled its efforts.

If FirstNet is able to stay the course to the timeline it has established for the RFP process, proposals will be due just one year after the United States Government Accountability Office released its report on FirstNet's progress in establishing the network. In that GAO report they observed that FirstNet faces a multitude of risks, significant challenges and difficult decisions in meeting its statutory responsibilities, including how to become a self-funding entity.

Today's discussion with FirstNet will give us the chance to gain a better understanding of the RFP, what it means for our nation's first responders, and FirstNet's thoughts on how it envisions its future. To that end, we have begun to hear concerns from parties that are candidates to build FirstNet's network.

Some have expressed concern with FirstNet's attempts to establish a private-public partnership for the deployment and operation of the network through a single contract that covers all the states and territories rather than a "network of networks" approach. FirstNet is asking one company to take on the obligations nationwide. This approach could make it tougher for small and regional companies to participate in FirstNet without partnering with one of the nationwide carriers.

Others are concerned that FirstNet's RFP asks the winning bidder to take on the obligation to serve the needs of public safety, but does not provide an economic incentive to do so. In broad strokes, the RFP takes the approach that rather than FirstNet paying for the contractor's services, wireless providers will come to play in exchange for access to FirstNet's spectrum and the ability to charge public safety users subscription fees.

The RFP also envisions grants of up to \$6.5 billion in funding to support the build-out and operation of the network, but requires repayment of nearly 85 percent of that money in the form of sustainability payments to FirstNet. In short, it appears FirstNet is asking a wireless provider to take on the obligation of building a network to public safety specifications in exchange for a monopoly on public safety users and a zero interest loan.

Others still have expressed concerns that this seems to be a rehash of the failed approach of the FCC's 2007 700 megahertz D block auction. Then, the FCC asked the wireless industry to pay \$2 billion for a nationwide license that would come with an obligation to negotiate with, and serve the needs of, public safety. Even with the prospect of holding the D block license going forward as enticement, the wireless industry was not willing to put up the capital needed or build the network public safety was demanding.

Nine years later, FirstNet is asking wireless providers to take similar terms without the enticement of a license. I hope that these concerns are misplaced, but there is a small but growing chorus asking why FirstNet believes that this time it will be different.

The legislation that created FirstNet was not my preferred approach. I favored construction from the bottom up, not the top down. And while I take some comfort that FirstNet has chosen a public-private partnership as the vehicle to deploy the network, the concerns we are hearing are valid. But for better or worse, the RFP is in the field. The die is cast. Whether a business case can be made for what FirstNet is asking will be better understood in April when responses are due and proposals are submitted.

So today is an opportunity for FirstNet to answer some of these questions, maybe assuage some of the fears, and to inform the committee of what the RFP means for the deployment of a public safety broadband network that reaches all corners of the United States, urban and rural.

Finally, we will also hear from the FCC. The FCC plays a critical role in the state “opt out” provisions of the statute as it is charged with reviewing and approving a state’s plan to deploy its own radio network. With the RFP issued and an award in the fourth quarter of 2016 anticipated, states will need to understand the process in order to make an informed decision on whether to accept FirstNet’s plan or deploy on their own.

As delay from the commission could frustrate deliberations of states deciding whether to opt out, I hope that when we gavel out today we will do so with an understanding of when the FCC will satisfy this statutory duty. I now recognize the vice chair of the subcommittee.

[The prepared statement of Mr. Walden follows:]

PREPARED STATEMENT OF HON. GREG WALDEN

This morning we convene to examine the progress in the deployment of the nationwide public safety broadband network. A mandate given to FirstNet by Congress in the Middle Class Tax Relief and Job Creation Act of 2012 and for which FirstNet was created.

With the January 13th release of the Request For Proposal to award a contract for the deployment and operation of the network, FirstNet has achieved its most crucial milestone to date, and within the timeframe promised by Chairman Sue Swenson. I commend Ms. Swenson, the FirstNet Board and the staff of FirstNet for reaching this milestone—especially given the time lost in FirstNet’s early days when controversy hobbled its efforts.

If FirstNet is able to stay the course to the timeline it has established for the RFP process, proposals will be due just one year after the United States Government Accountability Office released its report on FirstNet’s progress in establishing the network. In that report GAO observed that “FirstNet faces a multitude of risks, significant challenges, and difficult decisions in meeting its statutory responsibilities, including how to become a self-funding entity.”

Today’s discussion with FirstNet will give us the chance to gain a better understanding of the RFP, what it means for our nations’ first responders, and FirstNet’s thoughts on how it envisions its future. To that end, we have begun to hear concerns from parties that are candidates to build FirstNet’s network.

Some have expressed concern with FirstNet’s attempt to establish a private-public partnership for the deployment and operation of the network through a single contract that covers all the states and territories. Rather than a “network of networks” approach, FirstNet is asking one company to take on the obligations nationwide. This approach could make it tougher for small and regional companies to participate in FirstNet without partnering with one of the nationwide carriers.

Others are concerned that FirstNet’s RFP asks the winning bidder to take on the obligation to serve the needs of public safety, but doesn’t provide an economic incentive to do so. In broad strokes, the RFP take the approach that rather than FirstNet paying for the contractor’s services, wireless providers will come to play in exchange for access to FirstNet’s spectrum and the ability to charge public safety users subscription fees. The RFP also envisions grants of up to \$6.5 billion in funding to support the build-out and operation of the network, but requires repayment of nearly 85 percent of that money in the form of “sustainability payments” to FirstNet. In short, it appears FirstNet is asking a wireless provider to take on the obligation of building a network to public safety specifications in exchange for a monopoly on public safety users and a zero interest loan.

Others still have expressed concerns that this seems to be a rehash of the failed approach of the FCC’s 2007 700 MHz D block auction. Then, the FCC asked the wireless industry to pay \$2 billion for a nationwide license that would come with an obligation to negotiate with, and serve the needs of, public safety. Even with the prospect of holding the D block license going forward as enticement, the wireless

industry was not willing to put up the capital needed or build the network public safety was demanding. Nine years later, FirstNet is asking wireless providers to take similar terms without the enticement of the license. I hope that these concerns are misplaced, but there is a small but growing chorus asking why FirstNet believes that this time will be different.

The legislation that created FirstNet was not my preferred approach. I favored construction from the bottom up, not the top down. And while I take some comfort that FirstNet has chosen a public-private partnership as the vehicle to deploy the network, the concerns we are hearing are valid.

But for better or worse, the RFP is in the field. The die is cast. Whether a business case can be made for what FirstNet is asking will be better understood in April when responses are due and proposals submitted. Today is an opportunity for FirstNet to answer some questions, maybe assuage some fears, and to inform the committee of what the RFP means for the deployment of a public safety broadband network that reaches all corners of the United States, urban and rural.

Finally, we will also hear from the FCC. The FCC plays a critical role in the state "opt out" provisions of the statute as it is charged with reviewing and approving a state's plan to deploy its own radio network. With the RFP issued, and an award in the fourth quarter of 2016 anticipated, states will need to understand that process in order to make an informed decision on whether to accept FirstNet's plan or deploy on their own. As delay from the commission could frustrate deliberations of states deciding whether to opt out, I hope that when we gavel out today we will do so with an understanding of when the FCC will satisfy this statutory duty.

Mr. LATTI. Well, thank you, Mr. Chairman, and thank you for our witnesses for being here. Good to see you again.

In 2012, Congress recognized the importance of public safety and emergency communications and established a nationwide public safety network to meet the needs of all Americans and our first responders. Since that time, this committee has long agreed that a reliable network is essential for first responders to facilitate their communication needs and support their everyday missions.

Developing a nationwide interoperable network is a significant task, but if properly established would be vital to protecting the lives of the American people. Therefore, it is imperative that the implementation of FirstNet is successful. I am encouraged by the progress FirstNet has made since its creation, however, there are still many unanswered questions about the future of this network ranging from the inclusion of rural providers to the FCC's review process of the states' plan to build their own radio access networks.

I hope today's hearing will be an opportunity to learn more about current developments and the next steps for FirstNet. I look forward to the witnesses' testimony today, Mr. Chairman, and I yield back.

Mr. WALDEN. The gentleman yields back. The chair recognizes the gentlelady from California, the ranking member of the subcommittee, Ms. Eshoo.

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

Ms. ESHOO. Thank you, Mr. Chairman. Thank you for convening this important hearing. It is an important time in the life of FirstNet and we welcome the witnesses and eager to hear from you.

A few weeks ago I joined with the sheriff of Santa Cruz County at home to unveil the 21st Century Policing initiative which is designed to improve the public trust and safety in the communities that they serve. It is the first law enforcement agency in California

to adopt the White House initiative, which I think really makes it a stand-out agency. It was a forward-looking announcement of renewed commitment to stronger police-community relations.

And essential to the effort, the reason I raise it, is providing law enforcement and public safety officials with the tools and the resources they need to do their job. And of course this includes the deployment of the nationwide interoperable communications network for first responders, or FirstNet. So I know that the entire sheriff's department was eager to know where we are on our work, and they want to see it fully implemented and operational.

So where do we stand? And I think that that is what we want to examine today. In California, there are more than 2,000 public safety agencies and over 200,000 first responders. It is no wonder we are called the nation state. While FirstNet is a nationwide effort, its success really depends on local consultation with communities and, I think, the states, and I want to examine that in my questioning.

And so I think the success really is going to depend on the consultation that takes place with both, and I know that over the course of nearly three years that FirstNet has traveled the country, met with public safety leaders, tribes, federal agencies and the industry, last month was really was the culmination of the investment in that time where the RFP established a framework and was put out.

Now ultimately we all want to see the creation of a robust and reliable network that is going to eliminate the tragic communication failures on 9/11, but I think that success is also going to be measured by whether we integrate the network with NG911 where we ensure device competition and utilize strong security measures.

In 2013, California received 15.3 million calls to 911, 15.3 million calls, and 9.5 million were wireless. These calls were answered obviously by dedicated professionals located in 450 public safety answering points, the PSAPs across the state. So as we move to an NG911 environment where call takers can receive text messages, photos and videos, it makes sense that this information can be seamlessly transmitted to the first responders headed to an emergency situation. That is all part of this network. It has to be.

I have been a long time advocate for greater device competition. Now late last year I wrote to the FBI urging the agency to ensure that they engage in a forward-looking procurement of land mobile radios that does not restrict competition to brand name, proprietary features and standards that can only be met by one vendor. This is all in the interest of the taxpayer.

And we need to ensure that first responders are equipped with state-of-the-art radios, and I think that FirstNet can learn from the FBI's failed acquisition of the LMR which was eventually struck down by the GAO last October, so there is a lot of there there to this.

Finally, in order to prevent the breach of sensitive FirstNet data cybersecurity has to be a core focus, so I hope that you will address that issue in your testimony. The continuation of the unraveling of the OPM and the IRS and other agencies that have the massive security breaches should be instructive to FirstNet, because you

are going to have to utilize the most innovative security technologies available.

And I think that in doing so it will not only lessen the chance of a widespread breach and prevent disruption, but there is a word that is so operational in this and that is "confidence," confidence in the system by all the users.

So I thank Mr. Kennedy and Mr. Furth for being here today. We look forward to asking you questions and look forward to hearing your testimony, and I yield back, Mr. Chairman.

Mr. WALDEN. The gentlelady yields back. The chair recognizes the gentlelady from Tennessee for opening comments.

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

Mrs. BLACKBURN. Thank you, Mr. Chairman. And I appreciate each of you for taking your time for preparing for being here and to work with us through this. As you know, it is not the first hearing that we have had and I am certain it will not be the last one that we are having. We all agree that we do need a national public safety network and we know that it is something that we still have some outstanding questions, some issues and some lack of agreement on.

First of all, as I mentioned last June, and I am going to come back to this issue, looking at the redundancies and the ability for you to protect yourself from breaches and hackings. And we know that that exists. I think the possible hacking of the NASA network and what we have learned from that is of tremendous concern to us, and thereby it is of concern for what you are doing.

When you talk about an enterprise system you have one set of expectations. When you talk about a closed system you are going to have an additional set of expectations and encryptions, and so let us delve into that a little bit as we approach this issue. Second thing, and the chairman has mentioned this, the opt-out process and the ability for states to control some of that. I think we have got to go in and look at that just a little bit.

So we will discuss those further, and Mr. Chairman, I will yield the balance of my time back to you so we can move forward to their testimony.

Mr. WALDEN. OK. The gentlelady yields back the balance of her time. We recognize the ranking member of the full committee now, the gentleman from New Jersey, Mr. Pallone.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Mr. Chairman and our ranking member, for holding this hearing, and thanks to Mr. Furth for being here, and welcome back, Mr. Kennedy.

It was not many months ago that FirstNet was here to testify, but at the pace that FirstNet is moving a few months can be a lifetime. Since our last hearing in June, FirstNet has released its much anticipated request for proposal, and while government procurements do not usually keep people sitting on the edge of their

seats this one is a big deal because it contains a road map to the future of communications for first responders.

Back in New Jersey we know from experience how important it is that we complete this road map quickly. After we were struck by Hurricane Sandy, I heard from first responders about their difficulty communicating. I heard time and again how their radios were not interoperable, public safety officials from different communities could not coordinate because their radios could not talk to each other, and first responders could not call for help when they needed it. So this past September I hosted a forum in my congressional district with local officials and industry leaders to see the progress that has been made, and Mr. Kennedy joined us and provided valuable feedback. Thank you, T.J.

Together we took a critical look at what worked and what did not work during the storm. We learned a lot. I incorporated many of these lessons into the Sandy Act that I recently introduced, and we also heard once again that interoperability was a big challenge.

But this is why FirstNet is so important. FirstNet will help ensure that first responders across the country have the best, the most rugged communications equipment, and it will also make sure first responders can hear each other when they call for help.

In New Jersey we are already seeing the fruits of this labor. We are the home to one of FirstNet's five early builder projects, ours is called JerseyNet, and these projects are already showing how this network can benefit first responders. I had the opportunity to see this equipment for myself at the forum and it is impressive and it will save lives.

I am happy to say that JerseyNet was up and running when we were hit by the recent snowstorm that crippled the east coast last month. As large and devastating storms become more frequent because of climate change, we need FirstNet at full force across the country as soon as possible.

So thanks again to our witnesses, and I yield the balance of my time to Mr. Doyle.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

Thank you Chairman Walden and Ranking Member Eshoo for holding this hearing today. And thanks to Mr. Furth for being here. I'd also like to welcome back Mr. Kennedy.

It was not many months ago that FirstNet was here to testify. But at the pace that FirstNet is moving, a few months can be a lifetime. Since our last hearing in June, FirstNet has released its much anticipated Request for Proposal. And while government procurements do not usually keep people sitting on the edge of their seats, this one is a big deal. Because it contains the roadmap to the future of communications for first responders.

Back in New Jersey, we know from experience how important it is that we complete this roadmap quickly. After we were struck by Hurricane Sandy, I heard from first responders about their difficulty communicating. I heard time and again how their radios were not interoperable—public safety officials from different communities could not coordinate because their radios could not talk to each other. First responders could not call for help when they needed it.

So this past September I hosted a forum with local officials and industry leaders to see the progress that has been made. Mr. Kennedy also joined us and provided valuable feedback—thank you T.J. Together, we took a critical look at what worked and what did not work during the storm. We learned a lot. I incorporated many of those lessons into the SANDY Act that I recently introduced. We also heard once again that interoperability was a big challenge.

But this is why FirstNet is so important. FirstNet will help ensure that first responders across the country have the best, most rugged, communications equipment. And it will also make sure first responders can hear each other when they call for help.

In New Jersey we are already seeing the fruits of this labor. We are the home to one of FirstNet's five Early Builder Projects—ours is called JerseyNet. These projects are already showing how this network can benefit first responders. I had the opportunity to see this equipment for myself at the forum. It is impressive and it will save lives.

I am happy to say that JerseyNet was up and running when we were hit by the recent snowstorm that crippled the East Coast last month. As large and devastating storms become more frequent because of climate change, we need FirstNet at full force across the country as soon as possible.

So thank you once again to our witnesses. And with that, I yield the balance of my time.

Mr. DOYLE. I want to thank Mr. Pallone for yielding to me, and thank you, Mr. Chairman, for holding this important hearing. I am glad that we are continuing our oversight of FirstNet. This year marks the 15th anniversary of the attacks on 9/11, and that terrible day is a constant reminder of why we need to make sure that FirstNet is successful.

I am very disappointed that it has taken this long for us to address our first responders' pressing need for upgraded and interoperable communications system. FirstNet will play an integral role in bringing our first responders into the twenty-first century, giving them access to high speed data, apps and a competitive market for devices.

Everywhere in our economy we see how these advances have been leveraged for unprecedented improvements in coordination and communication. From Uber and Lyft to Waze and Twitter, smartphones are enabling unparalleled innovation at an unparalleled pace. My hope is that FirstNet will bring these same benefits to first responders and that the results will be a safer country for both our citizens and first responders alike. Thank you, and I yield back.

Mr. WALDEN. The gentlemen yields back the balance of his time, and now we will go to our distinguished panel of witnesses. We appreciate you both being here today and the good work that you are doing out there for our first responders and trying to make all this work.

So we will start with Mr. T.J. Kennedy who is the president of First Responder Network Authority. Good morning. Welcome back and we are glad to have you here.

STATEMENTS OF T.J. KENNEDY, PRESIDENT, FIRST RESPONDER NETWORK AUTHORITY; AND, DAVID FURTH, DEPUTY CHIEF, PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, FEDERAL COMMUNICATIONS COMMISSION

STATEMENT OF T.J. KENNEDY

Mr. KENNEDY. Good morning. Thank you. Chairman Walden, Ranking Member Eshoo, and members of the subcommittee, thank you for inviting me to testify on behalf of the First Responder Network Authority. I welcome the opportunity to brief you on FirstNet's ongoing progress in facilitating the deployment of the first interoperable nationwide public safety broadband network that will serve our nation's first responders. It is also a pleasure

to appear here today with Deputy Director of the FCC's Public Safety and Homeland Security Bureau, Mr. David Furth.

FirstNet continues to take the responsibility of creating the nationwide public safety broadband network very seriously. The FirstNet board and executive management team are proud to be leading such an experienced, diverse and hardworking team that understands that when it comes to public safety failure is not an option. They are dedicated to delivering a network that our first responders will depend on into the future.

We have learned as we have grown, and akin to every start-up organization we have developed structure and procedures to improve the way that we do business. As mentioned the last time I was before this committee, we continue to do what we said we would do and remain on track in meeting our timelines. The most tangible example of this is the recent release of our objectives based RFP that ultimately will result in the selection of a partner or partners which will actually deploy and operate the nationwide public safety broadband network.

The release of this RFP is the culmination of years of hard work comprising tens of thousands of working hours and more than a few all-nighters. It is the result of numerous RFIs, public notices on 64 different topics, a special notice in draft RFP documents, responding to over 650 questions from industry related to those documents, two different industry days, 55 state and territorial consultations, hundreds and hundreds of outreach events, conferences, meetings and public safety data input that came in from more than 15,700 public safety entities representing around 1.7 million public safety individuals.

Nowhere else in government has there been the level of interaction and coordination between and among local, state, tribal, federal, and industry stakeholders to deploy such a network. This network has not yet been deployed not because of any lack of desire or need, but because it is extremely complex.

Well, today I sit before you feeling optimistic that we are on the cusp of a successful public-private partnership to deploy a truly interoperable broadband communications network for public safety, informed by public safety and our other state, local, tribal, and federal stakeholders.

This input from public safety across the country is an incredibly important effort and we have been able to draw from it and ultimately use it to develop performance based public safety-centric RFP. After all, this is public safety's network. Throughout the RFP process, we will select a private sector partner and together establish the nationwide network. Additionally, we will develop an open and competitive marketplace where public safety objectives will drive competition for industry to deliver equipment that public safety needs to fully utilize and leverage all the great innovation that the network will provide.

FirstNet is dedicated to open standards for the network for applications and even the devices that run on it. Application of open standards policies ensures the widest opportunity for companies of all sizes to bring innovation and to bring new solutions and products to the market for use on the nationwide public safety broadband network.

Through teaming and partnership opportunities, we believe that industry will be able to truly develop an innovative network that will not only be deployed in urban areas, but also available in rural America which is critical as it makes up the majority of land mass in the United States. We believe that rural telecommunications and infrastructure providers will be a key component of the network in rural America, which is why we made teaming with such providers an evaluation factor in the RFP.

FirstNet understands the critical importance of rural coverage, and we believe the significant effort that FirstNet has undertaken to engage and encourage teaming and foster inclusion of these important entities can ensure the widest possible geographic coverage for the network overall.

We expect our efforts in the RFP to achieve a win-win-win for public safety for states and for industry, and will create a viable public-private partnership that will provide all of us with the best opportunity to move forward quickly and do something that many people have felt was just too hard and complicated to achieve.

The release of this RFP along with the substantial consultation efforts across the nation are significant accomplishments, but we have an enormous amount of work ahead of us in both of our core areas of focus. The first being to execute and complete the procurement process, the second being our ongoing important consultation with public safety across the country.

Mr. Chairman, while this is not an easy task, I and our team are truly dedicated to the mission that Congress has given FirstNet on behalf of public safety, and I am honestly excited to come to work every morning to work on this amazing mission. I am confident reporting to you that our board of directors and the rest of the FirstNet staff are equally passionate about deploying this network for public safety.

FirstNet is very fortunate to have attracted a talented group, and I am honored to be a part of this organization as we work towards that successful deployment of the FirstNet network. I applaud the leadership and guidance of the FirstNet board. Sue Swenson, our board chair, and the entire board have worked tirelessly to make sure that we ensure that public safety is the key focus of everything we do each day. Thank you very much.

[The statement of Mr. Kennedy follows:]

Written Testimony of
TJ Kennedy
President
First Responder Network Authority
Before the
Committee on Energy and Commerce
Subcommittee on Communications and Technology
United States House of Representatives
Hearing on
“Status of the Public Safety Broadband Network”
February 2, 2016

Introduction

Chairman Walden, Ranking Member Eshoo, and Members of the House Subcommittee on Communications and Technology, on behalf of the First Responder Network Authority (FirstNet), I appreciate the opportunity to testify on the progress that FirstNet has made since last June.

When FirstNet last testified, we discussed FirstNet’s accomplishments up to that point. We had issued 13 Requests for Information (RFIs), we had released a Special Notice along with a series of draft Request for Proposal (RFP) documents and answered more than 650 questions relating to those documents, we were in the planning stages of an industry day that was held in August 2015, and we were executing our 2015 consultation efforts with what ultimately turned out to be 49 States, 5 territories, and the District of Columbia. The organization felt confident that we were “doing what we said we would do,” and as we sit once again before you today, I can assure this subcommittee that we are honoring our commitments and obligations. We have issued the RFP, and we are moving forward both with speed and with confidence that FirstNet will accomplish what Congress created for us to achieve.

Background

With the passage of the Middle Class Tax Relief and Job Creation Act of 2012 (Act), Congress directed FirstNet to ensure the deployment, maintenance, and operation of the only nationwide public safety broadband network (NPSBN) on 20 MHz of prime 700MHz spectrum, in a unique public-private partnership. To successfully accomplish this task, FirstNet has operated in an iterative, cooperative manner, consistent with the intent of the Act, consulting with public safety, the states and territories, tribal nations, federal authorities, and industry. Collaboration amongst these various stakeholders is a critical component to the successful deployment of the NPSBN with the long term sustainability of the network that Congress mandated.

While the NPSBN will be deployed through a public/private partnership, the most important stakeholder is public safety. This network is intended to meet the needs of public safety, 24 hours a day, 7 days a week, and 365 days a year. Each first responder who dedicates his or her life to this mission does so not only to protect everyone in this room, but every community across the United States. This is why it is so critical to ensure that public safety is able to

provide key inputs into the planning and deployment of this network. Indeed the public safety community asked Congress for this network and the public safety community will continue to play a critical role in the development of this network.

Since June 2015, FirstNet has accomplished much with the aforementioned consultation efforts leading to robust public safety input into our RFP. We received data from over 11,600 public safety entities representing 1.6 million public safety personnel from 54 states and territories and seven federal agencies. We provided baseline data to each state and territory, and the public safety submissions informed our comprehensive RFP in areas such as coverage, capacity, and public safety incident locations. FirstNet wants to give a tremendous amount of credit to the states, territories, tribes, and federal agencies for all their hard work in participating in outreach and collecting and submitting all of this data, as well as the local and tribal agencies that responded to the request.

The first round of consultation and outreach was very successful, and resulted in the accumulation of key state data that has ultimately informed the RFP documents released last month. As noted earlier, FirstNet held initial consultation meetings with 55 of the states and territories. FirstNet intends to build upon this success in 2016. FirstNet has sent all states and territories their 2016 consultation packets and the FirstNet team is working closely with states, territories, and the public safety community to organize our next round of meetings throughout the nation.

The partnering and teaming aspects of the network are key components of consultation that we have reiterated in all of our meetings and outreach. FirstNet believes that in order to expand our coverage into the most rural parts of the nation, rural infrastructure providers and vendors and smaller operators need to be part of the solution. Leveraging existing infrastructure will be a key part of the solution especially in rural America. Stakeholders consistently raised this point throughout the consultation meetings, and FirstNet responded by making rural partnerships an evaluation factor in our RFP.

On January 13 of this year, we released our RFP for the nationwide network. This is a significant step for the network because it is the formal structured process that will select our partner who will deploy the NPSBN. The release of the RFP is the result of three years of hard work beginning with the creation of the Board back in August 2012, establishing the start-up organization of FirstNet, and staffing it with some of the most talented individuals from across the country that are committed to supporting public safety's communication needs. This RFP incorporates a performance based approach to contracting by establishing 16 key objectives each offeror must meet, so as to achieve the best possible solution – one that allows offerors to be innovative, while ensuring that public safety gets the network, features, functions, and reliability that they deserve. I am proud of the hard work by public safety, states, territories, tribes, industry, the FirstNet team, and others to make this RFP a reality.

FirstNet has created an environment where we expect competitive and innovative responses to the RFP. Establishing a platform for industry to be able to respond in a manner with their own dynamic solutions based on a set of objectives is the foundation of the FirstNet network. From the very beginning, FirstNet has been dedicated to competition that provides a fair playing field

for all interested players. This RFP establishes the mechanism to provide that vigorous competition, allowing industry and the market-place to help establish the solution that can most closely meet the objectives of building, operating, and maintaining a self-sustaining NPSBN.

Release of the Request for Proposal

FirstNet's RFP follows more than a year of dialogue with the public safety community and industry on the objectives and scope of the RFP to find a network solution. Throughout this process, FirstNet has remained committed to its mission mandated by Congress, ensuring the successful deployment and operation of the NPSBN.

The RFP that we issued is intentionally different in many ways from the traditional requirements-based RFPs that are commonly issued by the federal government. We applied lessons learned from other RFPs and issued an objectives-based RFP to let industry do what they do best and propose innovative solutions, driving competition and bringing creativity to provide the best solution for public safety. FirstNet has developed an RFP that we believe will foster a competitive environment that attracts multiple offerors that propose a variety of solutions allowing FirstNet to fulfill its mission to ensure the development, deployment, and operation of the country's first nationwide, broadband network dedicated to public safety.

Public safety's goals and needs are the foundation of the RFP. With this approach in mind, FirstNet envisions a 25-year public-private partnership, suggesting that solutions may include various partnerships and business arrangements that monetize new public safety market offerings via devices, applications, and other value-added benefits and services. FirstNet believes that the eventual awardee can lead the market in these new opportunities and be at the forefront of developing new solutions that enable public safety to do their jobs more effectively.

It is worth noting that the development of the RFP has incorporated all of the steps that we previously described to this subcommittee over the past two years. We have maintained an open, iterative, and transparent dialogue with public safety, states and territories, tribes, industry, and other stakeholders that will hopefully allow public safety to reap the benefits when FirstNet awards the contract and the FirstNet network is ultimately deployed.

The Solution: An Objectives-Based Approach

The network solution sought by FirstNet would guarantee seamless interoperability for public safety across each of the 56 states and territories. FirstNet expects the solution to meet 16 objectives identified in the RFP Statement of Objectives (SOO):

- Building, deployment, operation, and maintenance of the NPSBN
- Financial sustainability
- First responder user adoption
- Device ecosystem
- Applications ecosystem
- Accelerated speed to market
- User service availability

- Service capacity
- Cybersecurity
- Priority services
- Integration of state-deployed Radio Access Networks (RANs)
- Integration of existing commercial/federal/state/tribal/local infrastructure to support NPSBN services
- Life-cycle innovation
- Program and business management
- Customer care and marketing
- Facilitation of FirstNet's compliance with the Act and other laws

The solution will provide for:

- The deployment and provisioning of a commercial nationwide Core Network (Core) and RAN services;
- Backhaul, aggregation, and the use of nationwide transport networks and operation centers;
- A device ecosystem and application ecosystem;
- Use of existing network infrastructure;
- Deployable capabilities;
- Use of operational and business support systems; and
- The integration and operations and maintenance, to allow for ongoing evolution of these systems to ensure a fully functioning operational wireless 3rd Generation Partnership Project (3GPP) standards-based Long Term Evolution (LTE) NPSBN throughout its lifecycle.

By adopting an objectives-based model, rather than a traditional requirements-driven model and socializing this model with industry for approximately 18 months, FirstNet expects that offerors will achieve these broad objectives through innovative solutions that are not limited by any particular type of solution or entity. The RFP highlights the desire for maximum opportunity and flexibility in the development of innovative solutions for the NPSBN. In other words, FirstNet does not want to be overly prescriptive in how industry provides solutions, and instead seeks service and solutions that will work best for public safety and encourage innovation and teaming partnerships.

Teaming is a key aspect of the overall network. As FirstNet looks to fulfill our rural deployment milestones at each phase of construction, the integration of rural infrastructure partners into the FirstNet network is an important component of our evaluation factors.

FirstNet believes that the RFP encourages all entities, whether traditional wireless incumbents or those new to the public safety marketplace, to submit their proposed competitive solutions. The RFP is structured to acquire a solution that gives public safety the ability to take advantage of the marketplace and the competitive pricing that comes with it.

Paying for the Network

FirstNet was able to creatively develop a business model that will allow for our partner(s) to pay for the services to deploy, operate, maintain, and recapitalize the network while achieving financial sustainability. Industry experts, public safety personnel, and hearing witnesses alike, have testified that the \$7 billion that Congress allocated to FirstNet in the Act will not be sufficient to deploy and maintain the network nationwide. Through our modeling and analysis, we determined that a combination of the revenue generated by the excess network capacity, along with user fees and fees to access the FirstNet core network, will allow the NPSBN to become self-sustaining while still creating an economic environment that would attract offerors and encourage a win-win partnership to succeed in meeting public safety's objectives.

Therefore, FirstNet created a model that allows the awardee to receive up to \$6.5 billion in funding from FirstNet with the awardee making regular minimum payments back to FirstNet over the life of the contract. An offeror must propose payments at least at these levels as part of its solution to promote FirstNet's financial sustainability.¹ These levels establish a minimum level of support based on an assumed level of effort by a private entity and FirstNet in the NPSBN partnership. Importantly, the payments may be higher if driven by competition or if the partner wants FirstNet to take on more responsibility for key functions.

All revenue generated in excess of FirstNet's operating costs will be reinvested in the NPSBN, as required by the Act.

Content, Process, and Timeline

The RFP, which follows the Federal Acquisition Regulation (FAR), is comprised of 13 sections, and is currently 508 pages, 342 of which are attachments to the main RFP. FirstNet has offered all interested parties an opportunity to submit RFP clarification questions no later than February 12, 2016. Following the release of our answers to the RFP clarification questions, FirstNet will hold a pre-proposal conference on March 10, 2016, with the format similar to the industry day events that were previously held.

Section M of the solicitation identifies a multiphase approach. Phase I is submission of capability statements. This phase allows offerors to demonstrate they are capable of performing the work and allows the government to advise the offerors about their potential to be viable competitors or not. However, notwithstanding any advice provided by the government that they are not considered viable competitors, they may still participate in the acquisition by following the instructions provided in Section L and submitting a proposal.

Capability statements are due no later than March 17, 2016. This process allows the government to continue the iterative process and provide feedback as to whether the company is considered a viable competitor before their proposal submissions are due no later than April 29, 2016.

¹ These levels refer to the minimum payment levels that must be paid to FirstNet on an annual basis beginning with \$80 million from years 1-5 and concluding with \$430 million from years 20-25. See section M of the RFP for further detail.

Following the proposal deadline, FirstNet will evaluate the proposals, with an expected contract award in the fourth quarter of 2016. Please be mindful that the dates discussed in this testimony are estimates based upon what we know today. Many factors could impact the timing of each RFP milestone.

State Plans

Upon award of a contract, the delivery of a plan to each state and territory's governor is the next key milestone. This "State Plan" will be used to guide and inform the governor of each state and territory on FirstNet's intended build-out of the RAN in each state or territory. The Act requires the governor to decide whether the state or territory will assume responsibility for deploying and operating an interoperable RAN that connects to FirstNet's core network, or have FirstNet deploy the RAN. FirstNet anticipates that state plans will be delivered to the states and territories in 2017. . It is important to note that much like the RFP timeline, this too is subject to change since the outcome of the RFP will inform each individual state plan. Until FirstNet has a partner(s) on board, no state plan can be completed.

Consultation

Consultation is critical to establishing lasting partnerships with the states, territories, tribal nations, and public safety users. Moreover, consultation helps ensure that FirstNet staff have captured the requested inputs of FirstNet's future customers. Ultimately, FirstNet believes its consultation efforts will lead to the provision of better planned public safety services and products, and increase adoption of the NPSBN.

2015 State Consultation and Outreach

As described earlier, FirstNet's consultation meeting with the states and territories provided valuable feedback that was used by FirstNet to develop the RFP. FirstNet began each such consultation meeting by announcing four goals:

- (1) **Strengthen the relationship with the state/territory.** From the process of planning the meeting through the event itself, the initial consultations allowed FirstNet to strengthen existing relationships and establish new ones.
- (2) **Provide FirstNet updates.** By working with the states and territories, the initial consultation meetings included nearly 4,000 attendees from a wide range of public safety disciplines and across all levels of government. The meetings provided an effective way for FirstNet to share information and increase discussion and awareness among stakeholders nationwide. Topics included FirstNet's mission and vision, evolving acquisition approach, and data collection efforts.
- (3) **Learn about the unique needs of each state/territory.** The consultations allowed each state and territory to share its unique inputs, needs, and desires. For example, FirstNet heard details about each state and territory's governance structure, demographics, and geography. In addition, states and territories shared valuable information concerning the types of events (*e.g.*, natural disasters, special events, and unplanned events) that can affect public safety operations within the state/territory. In many cases, FirstNet also

captured how states and territories could have benefited from using FirstNet's network during past events.

- (4) **Discuss next steps.** FirstNet reiterated the importance of collaboration with the states and territories, and continuing consultation efforts. In addition, FirstNet asked states and territories to begin collecting user and operations data as well as coverage objectives to identify priorities.

FirstNet worked with states and territories to facilitate a forum where public safety officials could discuss real-life examples and use-cases to illustrate how the FirstNet network could be used once deployed. The use-cases provided several unique state or territory specific scenarios concerning:

- large planned events,
- natural disasters,
- emergency incidents, and
- day-to-day operations.

In each scenario, the existence of the NPSBN would have improved public safety personnel's ability to effectively respond, communicate information, and maintain their own safety and the safety of those whom they protect and serve.

The findings from the consultation meetings reinforced to FirstNet in several areas the unique challenges facing the NPSBN deployment. They showed us just how diverse and locally focused the network will need to be. While there are a number of similar themes that ran through the majority of the use cases, it was clear that local problems required unique solutions. FirstNet expects that the NPSBN will allow for improved communication and coordination between all agencies. It was also clear in some of the use-cases that agencies from other states and territories would assist in the recovery efforts, thereby further complicating the same issues. A single, nationwide network that all public safety agencies can utilize is imperative to providing an opportunity to solve many of the voice, video, and data interoperability issues currently experienced by public safety. This is one of the key benefits of the network that was expressed by stakeholders over and over at the 2015 consultation meetings.

2016 Consultation and Outreach

In 2016 FirstNet will build on our work in the states and territories through the next stage of consultation. Taking many of the lessons learned from our ongoing dialogues throughout the country, FirstNet will continue to engage with the states and territories through an open, transparent, and coordinated effort to enhance the discussions with the states and territories and their public safety representatives across all levels of government – local, state, tribal and federal. FirstNet plans to expand its outreach and focus its consultation engagements in the next stage of consultation. We will seek to reach an even larger audience with our outreach team to further educate the public safety community on our goals, while we focus our consultation with the states and territories to ensure that decision-makers in the states and territories have the best information that FirstNet can provide.

As such, FirstNet has developed three goals to guide our consultation activities. These goals include:

- (1) expanding outreach and education with state, territory, tribal, local, and public safety entities,
- (2) obtaining additional state and territory input to inform state plans and network deployment policies, processes, and procedures, and
- (3) preparing key decision-makers for state plan delivery and network deployment.

To achieve these goals, FirstNet will work towards completing four major milestones with every state and territory:

- (1) **FirstNet/State Single Point of Contact (SPOC) Follow on Meetings:** In this engagement, FirstNet staff will meet with the SPOC to discuss the 2016 consultation approach and plan for the ongoing outreach engagements throughout the 2016 calendar year.
- (2) **Coordinate Participation in Governance Body Meetings:** FirstNet staff will attend and participate in state and territory communications governance body meetings in 2016. The purpose of these engagements will be to follow up on initial consultation meetings, bring new information about FirstNet to the state or territory, continue to build relationships, and learn more about activities in each state and territory.
- (3) **Establish Consultation Task Teams (CTT):** FirstNet will continue to consult with states and territories on critical policies and procedures for the nationwide network, such as issues like quality of service, priority and preemption (QPP). The Public Safety Advisory Committee (PSAC) assembled task teams of subject matter experts to provide initial advice and recommendations on these issues. FirstNet would like to explore further task teams with the states and territories to discuss and engage on the critical factors that need to be considered at the local and state level.
- (4) **Schedule Executive Consultation Meetings:** FirstNet will work with states and territories to schedule a consultation meeting with the key executives, public safety officials, and tribal leaders in each state and territory that are important to the state plan decision and network deployment. The goals for this meeting are to provide states and territories with the most up-to-date information on state plans, network deployment, FirstNet's value to public safety and business model, and our process to create a public/private partnership to achieve our mission. The timing and make-up of these meetings will vary from state-to-state.

We understand that not all states and territories have the same needs and recognize that some states and territories may choose not to schedule all four of these meetings this year due to timing and other constraints. FirstNet aims to provide to states and territories the information and preparation that they require and we will continue to prioritize a close working relationship with stakeholders across the country to plan for the deployment of the NPSBN.

Federal Consultation and Outreach

The intended end users of the FirstNet network do not stop at the local, state and tribal levels however. Since our last appearance before this subcommittee, FirstNet staff has conducted numerous engagements with a variety of federal organizations across the country. FirstNet also worked closely with federal agency points of contact to complete an initial data collection effort that we intentionally aligned with the data collection effort conducted with the states. The data we received allowed FirstNet to gain a more detailed understanding of the public safety presence at all levels of government and allowed the agencies to describe their unique mission and needs to FirstNet.

For 2016, FirstNet will continue its consultation with federal agencies to gain a more complete understanding of agency needs and operations. FirstNet has increased its federal outreach staff and will expand the engagement process and focus on key regions of the country of particular interest to federal public safety organizations, as well as those areas where the interaction between multiple jurisdictions results in a strong desire for information sharing and common data access.

The Public Safety Advisory Committee (PSAC)

FirstNet's PSAC continues to be a compelling and driving force behind much of the success FirstNet has experienced over the past year. Chaired by Chief Harlin McEwen, the PSAC released in November a report to the Board on the findings of their most recent task teams: Priority and Preemption (P&P), Public Safety Grade (PSG) and User Equipment (UE). The respective task teams:

- Created incident usage scenarios, use cases and a comprehensive framework for access and applications prioritization.
- Identified critical infrastructure layers that require increased hardening, along with a methodology to filter these asset layers.
- Provided clear and unified feedback on the several subtopics within user equipment including vehicular network systems, bring your own device policies, mobile security and voice assistants.

These task teams met throughout 2015 to provide recommendations in support of the NPSBN. With the strong leadership of Chief McEwen and the PSAC Executive Committee, and support from our technology team, the PSAC was able to leave its mark on the RFP and ensure the voice of public safety was heard.

The PSAC also continues to engage the Early Builders Working Group (EBWG) and the Tribal Working Group (TWG), to leverage their input for the FirstNet team. The five early builders that comprise the EBWG continue to provide FirstNet with critical formal and informal lessons learned from their efforts, while the TWG diligently works to effectively message to tribal nations and first responders who serve tribal communities.

Thus far in 2016, the PSAC has convened two new task teams on the subjects of Local Control and Identity, Credentials and Access Management (ICAM). Similar in structure to the previous groups, these teams will be supported by our technical staff to craft effective and operational objectives. FirstNet anticipates equal success and valuable insights for public safety and the NPSBN from these latest PSAC endeavors.

Tribal Outreach

FirstNet's commitment to continuing its active engagement with sovereign tribal nations remains steadfast. Tribal nations have a tremendous need for the NPSBN. FirstNet's tribal outreach team continues to speak at tribal gatherings, meet with tribal nations, and supporting the SPOC efforts to engage tribal communities.

In 2015, FirstNet's tribal outreach team participated in the primary national and regional tribal organizations' conferences and meetings and state-hosted tribal engagements in an effort to educate tribal nations about FirstNet and to encourage their participation in the State consultation and data collection processes.

In addition, through the PSAC TWG, FirstNet has continued a regular dialogue with delegates from numerous tribal representatives and organizations. The TWG, comprised of representatives from a broad cross section of multi-tribal associations, was established to provide FirstNet advice on tribal outreach, education, and inclusive consultation strategies to ensure participation by tribal jurisdictions in planning for the NPSBN. The TWG provided and supported implementation of recommendations to: expand TWG membership to include a large, land based tribe whose land crosses state geographical borders; target tribal public events at which to offer presentations; undertake a culturally aligned multimedia outreach campaign; and engage with SPOCs during the semi-annual meetings. The TWG will continue its activities throughout 2016.

Conclusion

The Chairwoman of FirstNet's Board, Sue Swenson, often talks about the collective 'we' when discussing the FirstNet project. Those responsible for the successful deployment of the FirstNet network are not simply those of us who work at FirstNet. This is a national effort that includes those individuals who attended consultation meetings and outreach engagements, those groups who responded to the public notices, the vendors that have attended meetings and are part of the teaming lists, the states and territories who are all working to advise their respective governors on their important decisions, FirstNet's eventual partner(s), FirstNet's federal partners, support organizations and stakeholders, tribes, and myriad other people, groups, associations, and entities.

What has been abundantly clear to FirstNet is the absolute need for the NPSBN. We hear about it everywhere we go and in every meeting or conference that we attend. Unfortunately, we are reminded all too frequently – often on the nightly news – of the compelling need to get this network deployed so that we can increase the safety and capabilities of all public safety personnel, and ultimately the safety and wellbeing of our citizens. We are dedicated to delivering a public safety network that meets those needs.

Public safety will judge all of us on our ability to conduct a successful RFP, to select a partner that will be able to meet the obligations of the Act, and to deploy a NPSBN that satisfies the needs of public safety personnel throughout the country. Anything less will be a failure, and failure is not an option when it comes to public safety.

Finally, I would like to thank the FirstNet Board for all of their leadership and hard work that has guided the organization and the FirstNet staff without whom we could not fulfill the many important duties and responsibilities required of us by Congress. A lot of hard work has taken us this far, but now is not the time to sit back and reflect on our accomplishments. Now is the time to double our efforts and to execute for public safety. Deploying this network is a monumental task, but providing the communication tools to all first responders that they deserve is imperative to allow public safety to continue to meet the critical needs of the American people every single day.

Mr. WALDEN. Thank you, Mr. Kennedy. We appreciate your good work and your testimony this morning.

We now go to Mr. David Furth, the deputy chief, Public Safety and Homeland Security Bureau, Federal Communications Commission.

Good morning and welcome. We look forward to your comments, sir. Is that on? Yes. It is push-to-talk technology.

STATEMENT OF DAVID FURTH

Mr. FURTH. Oh, yes. We are going to move past that sometime. Good morning, Chairman Walden, Ranking Member Eshoo and members of the subcommittee. Thank you for the opportunity to appear before you today to discuss the FCC's role in supporting FirstNet.

Let me emphasize at the outset that the FCC is fully committed to the success of FirstNet's mission. My testimony today will focus on our actions to support FirstNet and to implement the tasks that the act has assigned to the Commission. Since the act's passage, we have taken significant and timely steps in this regard and have met each of the act's deadlines to date.

For example, one of the FCC's first tasks was to establish the Technical Advisory Board for First Responder Interoperability, or Interoperability Board. The Commission established the board as directed, reviewed and approved the board's recommendations and provided those recommendations to FirstNet in 2012. The Commission also took prompt action in 2012 as directed by the act to designate 22 megahertz of spectrum in the 700 megahertz band for FirstNet's use and issued FirstNet's spectrum license.

Beyond these tasks, the Commission has worked to meet its statutory obligation to take all actions necessary to facilitate FirstNet's spectrum use. In 2013, the Commission adopted a Report and Order establishing basic technical rules for the FirstNet spectrum, providing regulatory certainty, and enabling prompt certification of equipment for the band.

A current example of our work to facilitate FirstNet's spectrum use concerns the need to relocate a limited number of public safety narrowband incumbents that have been operating in FirstNet's portion of the band since before the Commission reorganized the spectrum in 2007. In October 2015, FirstNet informed the Commission that it intends to provide funding later this year to relocate these incumbents and requested that we condition the incumbent licenses to require their relocation from the FirstNet spectrum by mid-2017.

We have sought public comment on this proposal and are currently considering those comments. We recognize that a prompt resolution of this issue will promote certainty for all interested parties.

Another important responsibility that the Act assigns to the Commission is the initial review of state opt-out requests. Section 6302(e) of the act—and let me pause here. My written testimony inadvertently had a typo. It should read 6302(e) not 6502(e). Section 6302(e) of the act provides that upon completion by FirstNet of the RFP process, FirstNet shall provide each state governor with a proposed plan for build-out of the radio access network, or RAN,

in that state. Within 90 days of receiving FirstNet's proposed state plan, each governor must elect whether to accept the FirstNet proposal or to opt out.

A state that opts out will then have 180 days to develop an alternative plan and submit it to the Commission. For any opt-out state, the act directs the Commission to apply a two-prong test in determining whether to approve or disapprove the alternative state plan. The act specifies that an alternative state plan must demonstrate, one, compliance with the minimum technical interoperability requirements developed by the Interoperability Board, and two, interoperability with the FirstNet network.

We recognize the need to provide states and FirstNet with clear and timely guidance on the process that the Commission will use to receive, review and approve or disapprove alternative state plans as required by the act. Our goal is to have the details of this process finalized and in place in advance of the date that FirstNet delivers its proposed state plans to each of the state governors, which FirstNet estimates will occur in the second quarter of 2017.

To that end and consistent with FirstNet's anticipated timeline, we intend to seek public comment in the near term on how to structure the process to ensure that the Commission fully carries out its statutory obligation. Beyond these specific examples we have been and will continue to be in regular contact with our FirstNet counterparts to consult and coordinate on issues as needed.

We have also been working with a number of stakeholders including FirstNet to help transition the nation's 911 call center to Next Generation 911, so that NG911 and FirstNet can complement one another as integrated components of an end-to-end public safety broadband ecosystem. While this transition is still in its early stages, planning from the start is critical to achieving these synergies and benefits.

In conclusion, we are committed to working with FirstNet as well as with our other federal, state, local and tribal partners to achieve Congress's vision for a nationwide public safety broadband network. Thank you for your consideration and I look forward to any questions you may have.

[The statement of Mr. Furth follows:]

Statement of

David L. Furth
Deputy Chief, Public Safety and Homeland Security Bureau
Federal Communications Commission

Before the
Subcommittee on Communications and Technology
Committee on Energy and Commerce
U.S. House of Representatives

Hearing on
“Status of the Public Safety Broadband Network”
Tuesday, February 2, 2016

Good morning, Chairman Walden, Ranking Member Eshoo, and Members of the Subcommittee. Thank you for the opportunity to appear before you to discuss the Federal Communications Commission's efforts to implement the Middle Class Tax Relief and Job Creation Act of 2012 (Act), and to support the mission of the First Responder Network Authority (FirstNet) as envisioned by Congress.

Let me emphasize at the outset that the FCC is fully committed to the success of FirstNet's mission. My testimony today will focus on our actions to support FirstNet and to implement the tasks that the Act has assigned to the Commission. Since the Act's passage, the Commission has taken significant and timely steps in this regard, and has met each of the Act's deadlines to date.

For example, one of the first tasks the Act directed the FCC to accomplish was to establish the Technical Advisory Board for First Responder Interoperability (Interoperability Board) and to approve and transmit the Board's technical recommendations to FirstNet. The Commission established the Board as directed, reviewed and approved the Board's technical recommendations, and provided those recommendations to FirstNet in 2012. These recommendations are incorporated as foundational elements in the RFP that FirstNet released on January 13. The Commission also took prompt action in 2012, as directed by the Act, to designate 22 MHz of spectrum in the 700 MHz band for FirstNet's use, and issued FirstNet's spectrum license.

Beyond these specific and important tasks, the Commission has worked to fulfill its statutory obligation to "take all actions necessary to facilitate the transition" of the 700 MHz public safety broadband spectrum to FirstNet. In 2013, the Commission adopted a Report and

Order establishing basic technical rules for the FirstNet spectrum, providing regulatory certainty and enabling prompt certification of equipment to be used in the band.

A current example of the Commission working to facilitate FirstNet's use of spectrum concerns the need to relocate a limited number of 700 MHz public safety narrowband incumbents that have been operating in FirstNet's portion of the band since before the Commission reorganized the spectrum in 2007. In an October 2015 *ex parte* filing, FirstNet informed the Commission that it intends to provide funding later this year to relocate these incumbents, and requested that the Commission condition the incumbent licenses to require their relocation from the FirstNet spectrum by mid-2017. The Commission sought public comment on this proposal in November 2015. We are currently considering those comments and recognize that a prompt resolution of this issue will promote certainty for all parties with an interest in the spectrum.

Another important responsibility that the Act assigns to the Commission is the initial review of state "opt out" requests. Section 6502(e) of the Act provides that upon completion by FirstNet of the RFP process, FirstNet shall provide the governor of each state with a proposed plan for buildout of the radio access network (RAN) in that state. Within 90 days of receiving FirstNet's proposed state plan, each governor must elect whether to accept the FirstNet proposal or to "opt out." A state that elects to opt out will then have 180 days to develop an alternative plan for buildout of the state RAN and submit that alternative plan to the Commission.

For any state that elects to opt out, the Act directs the Commission to apply a two-prong test in determining whether to approve or disapprove the alternative plan submitted by the state. To obtain Commission approval, the Act specifies that an alternative state plan must

demonstrate: (1) compliance with the minimum technical interoperability requirements developed by the Interoperability Board; and (2) interoperability with the nationwide public safety broadband network.

We recognize that it is important to provide states and FirstNet with clear and timely guidance on the process that the Commission will use to receive, review, and approve or disapprove alternative state plans as required by the Act. In this respect, it is our goal to have the details of this process finalized and in place in advance of the date that FirstNet delivers its proposed state plans to each of the state governors, which FirstNet estimates will occur in the second quarter of 2017. To that end, and consistent with FirstNet's anticipated timeline, we intend to seek public comment in the near term on how to structure the process to ensure that the Commission fully carries out its statutory obligations.

Beyond these specific examples, Commission staff have maintained and will continue to maintain regular contact with their FirstNet counterparts to consult and coordinate on issues as needed. We are also mindful that for FirstNet to achieve its full potential, it is important to press for concurrent transformational change in related public safety communications systems, such as the nation's 911 system. In this regard, we have been working with a number of stakeholders, including FirstNet, to facilitate the transition of the nation's 911 call centers to Next Generation 911, so that NG911 and FirstNet can complement one another as integrated components of an end-to-end public safety broadband ecosystem. While this transition is still in its early stages, it is critical to plan from the start for the synergies and benefits these related systems will have.

In conclusion, we are committed to continuing to work with FirstNet, as well as with our other federal, state, local and Tribal partners, to achieve Congress's vision for a nationwide

public safety broadband network.

Thank you for your consideration, and I look forward to any questions you may have.

Mr. WALDEN. Thank you very much, Mr. Furth. We appreciate the FCC's role in all of this as well.

Mr. Kennedy, I will start off with the questions. The states are permitted to opt out and build their own radio access networks. Could you just very briefly explain how the statute treats revenue generated by an opt-out state on the state opt-out network?

Mr. KENNEDY. When it comes to state opt-out networks, they have the ability to leverage the spectrum as part of the covered leasing agreement that was laid out in the act itself. And for each state, what they have the ability to do is to make sure that they can cover the cost of the radio access network as per the state plan.

As part of our legal interpretations leading up to the RFP itself, we tried to make sure we added clarity to this. And one of the things that we have laid out is that there is additional revenue above and beyond what it costs to deploy the state plan in that state that will have to come back into the network. It will not be able to be kept in the state beyond what is required to deploy the radio access network.

Mr. WALDEN. All right. One of the most critical requirements of FirstNet is that it is nationwide in scope. My district is extremely rural. How does the RFP address the statutory requirement that the network cover rural America, and how do you envision the service being provided in the rural areas?

Mr. KENNEDY. So a couple of things that we did on rural is we wanted to ensure that rural is part of each phase of build-out for the network. One of the things we heard during consultation is that in rural areas a lot of times they are left until the very end.

Mr. WALDEN. Right.

Mr. KENNEDY. So as part of that we have put out in our draft RFP and in our final RFP that we expect rural milestones to be met at each phase of build-out. Because of the great feedback we received we actually increased that, and so actually by the end of phase 3 we are looking for 80 percent of those milestones to actually be met in rural America. So we believe we have taken that input from states and really tried to leverage the fact that we want that rural build-out during the entire build-out of the network.

Mr. WALDEN. All right. And central to the value proposition underlying your proposal is the ability of the contractor to monetize excess network capacity. I recall during the debate in the subcommittee over reallocation of the D Block that public safety's position at that time was that it needed all 20 megahertz for public safety services.

Despite the growth of the use of high bandwidth services by public safety, how do you conclude that there is so much excess capacity available now that it will generate sufficient revenue to entice wireless providers to build your network?

Mr. KENNEDY. Twenty megahertz of a 700 megahertz spectrum is an extremely large swath and as you well know is quite valuable in the wireless industry here today. Just like Congressman Doyle mentioned during his opening statement, during big emergencies like 9/11, certainly leveraging all 20 megahertz of that spectrum to be able to handle all the police officers, firefighters, paramedics and the EMTs that are responding to a massive incident could certainly leverage every single bit of that.

But in most areas we really want to make sure that also we have a network that is built to the coverage and capacity to handle those huge emergencies and to do that that network has to be built to a significant size. As part of that the ongoing costs of operating that larger network are going to be more expensive, but we do believe that there will be a large swath of that spectrum available in the excess capacity on that radiating network to actually generate significant cash to both deploy and operate the network for public safety in a cost effective manner.

Mr. WALDEN. Now the licenses have to be reauthorized every ten years or you have to come back, but your RFP calls for the contractors to put out a 25-year plan. Can you tell me how those two interact?

Mr. KENNEDY. Sure. As you well know in understanding the way the FCC works, every ten years those licenses have a certain number of rules to really be reallocated and re-upped every 10 years. We believe that a successful offerer who deploys on the schedule that we laid forward will certainly be meeting those particular requirements of the FCC for future renewals.

Also on the 25-year time frame, we really wanted to make sure that we had a return on investment and certainty for the offerer. If we look at the wireless industry over the last 25 years, it has gone from 1G to 4G LTE where we are today and it is really the overall history of wireless in America. So the next 25 years will bring a lot of innovation and a lot of changes, but we also wanted to ensure that public safety has this network for the long haul.

Mr. WALDEN. In one of our first oversight hearings, a witness from the Commonwealth of Virginia discussed the budgetary challenges faced by state public safety entities across the U.S. He pointed out that because of these constraints only a subset of first responders currently enjoy cell service, and noted that if FirstNet's vision was premised on all first responders in the state having service there simply isn't enough funding to achieve this level of penetration. I would think this fiscal challenge is especially problematic with volunteer firefighting services which are particularly prevalent in rural areas.

Is FirstNet envisioning volunteer firefighters nationwide using FirstNet, and what level of penetration do you anticipate and how does that factor into your economic analysis?

Mr. KENNEDY. We absolutely believe that volunteer firefighters, and for that matter volunteer EMS and other public safety professionals, will be on the network. We believe that they are excited to be able to leverage it going forward. Many of them today carry personal cell phones and other devices, but don't have the ability to communicate with other public safety professionals. We have ensured every step of the way that FirstNet has built into our network policies and procedures so far that volunteers will always have access and have the same kind of access as their professional brother in the public safety.

Mr. WALDEN. Yes, I think their issue is just affordability of what that will be, and it is an unknown right now, right?

Mr. KENNEDY. It is an unknown, but we also think it will be very competitive with the commercial services that are out there today and that we think that public safety having the volunteer ability

to get lower priced devices will also be something that will allow them to get access to it.

Mr. WALDEN. Thank you. I turn now to the gentlelady from California.

Ms. ESHOO. Thank you, Mr. Chairman, and thank you to both Mr. Kennedy and Mr. Furth for your testimony. I like hearing, Mr. Kennedy, that you can't wait to get to work in the morning. That is a pretty good sign to be excited about what you are doing.

I want to go back to some of the issues that I raised in my opening statement. Of course the 911 centers are a central part of FirstNet's ecosystem and they are the nerve centers. And so I have four questions. I would like you to tell the subcommittee what steps you are taking to ensure that there will be full integration with the 911 centers and the benefits that come from that.

To Mr. Furth, I would like you to address the issue of cybersecurity, because there is, I think it is part of the task force's responsibility—I think I am correct on that—and how you are addressing that. My third question, and I think it would go back to Mr. Kennedy, is the whole issue of competition and how that is actually going to be addressed. And I think that is three. I can't remember the fourth.

Well, I think the security of the data that FirstNet is going to handle, it is not only public safety's information but it is also citizen information at the same time, and the other issue I want to raise is the role of the states. I am getting some feedback that it is kind of all or nothing at all; that FirstNet controls all of the dollars. Where is the incentive with the states?

This is delicate. I am a believer in you have a relationship that isn't all that it should be in the beginning and then there is another layer that is added to it and another layer that is added to it and that can have an effect on the overall system. We are the United States. We have 50 states, and each state has different needs. And the chairman raised it, some issues about it.

I think you need to unpack for the committee members exactly how it is going to work with the states. You control all the money. Are there any incentives that you offered to the states as you built this out with each one? And the whole issue of rural and urban is really very, very important, because the RFP has gone out to all of the major outfits and yet in broadband and in their own services they have trouble getting services to rural areas in our country.

So is it all of a sudden because it is FirstNet that all of that goes away and all is going to be well? So if you could, between the two of you, comment on those four issues. Most of them are yours, Mr. Kennedy.

Mr. KENNEDY. Sure.

Ms. ESHOO. Yes, thank you.

Mr. KENNEDY. I will take the first one and then I will defer to David on the second. So on integration with Next Generation 911, we have an amazing relationship and have been reaching out to all of the 911 associations such as APCO who is here in the room today, NENA, and other key associations that support the need of our dispatch communities around the country.

Currently, what they do in 911 today and the ones who are already progressing to Next Gen 911 are very eager to make sure

that they have the ability to take videos, texts and other things that will be coming in from citizens and to share that across FirstNet with public safety.

What is great about FirstNet being a data network is we will have the ability to take a video, to take a photo and make sure that that is put in the hands of police officers and firefighters in the field, and also from the field that we will have the ability to share with dispatch, to share with other public safety officials key data coming out of the field.

Ms. ESHOO. But let me just interrupt. That is a wonderful description of exactly what many do right now, but we want to make sure everyone does that and that they have the equipment and the standards. What, FirstNet sets those standards, and where is the competition with the devices? I think there are many things that are woven into each one of these portions of the overall net.

Mr. KENNEDY. There are. There is a number of elements. I am going to take the last element you mentioned on competition of devices. This is something squarely in FirstNet's camp. We have really been driving the open standards. We have been driving it at an international level, making sure that we follow 3GPP and the open international standards.

We have also been driving in different committees all of the things that need to be done to make sure that we have competition and that we have multiple devices that will be available from multiple sources that will have band 14 and spectrum available in those devices to be able to operate and to give low cost in different options across the board of both commercial devices and hardened public safety devices. So we have very much been only trying to drive that going forward.

When it comes to your first question of the different standards on Next Gen 911, there is still more work to be done there. At the same point, we are working very closely with our 911 partners to make sure that all of the intersections of where 911 is going to intersect with FirstNet that that integration is built into what we do with the FirstNet network. And we are also leveraging our labs at PSCR in Boulder, our Public Safety Communication Research Labs, to make sure that we are looking at the different elements of 911 and where the intersections with FirstNet will occur.

Ms. ESHOO. What about the states?

Mr. KENNEDY. When it comes to the states, one of the things that we have done and we have learned to your point that multilayered approach, is we have gone out and met on consultations. We have realized that there are multiple layers of how we need to interact with states and interact with locals, through the state and along with the state, to make sure that they have lots of opportunity to your point local control.

We have actually brought in our Public Safety Advisory Committee, the PSAC, which makes up 42 different state and local and public safety associations, to take on this exact issue of local control and to work with different associations across the country and come back with advice for FirstNet on how best to address the local control issue and meet the needs of each state.

I want to defer to David on the cyber question.

Mr. FURTH. If we have time. I know I can answer it, but I will defer to you.

Mr. WALDEN. Why don't you go very quickly because I know it is a concern of other members on the committee.

Mr. FURTH. If I could just very briefly address the cybersecurity question that you asked. You mentioned the task force that the FCC convened. We convened a task force about a year ago on PSAP optimization in the NG911 environment, and one of the working groups in that task force was specifically assigned to look at cybersecurity for PSAPs. We recognize that this a critical issue and we are concerned that many PSAPs particularly smaller ones around the country are not adequately prepared.

That task force has just come back to us as of last week with a series of very detailed recommendations on how to move forward with cybersecurity for PSAPs in the NG world, and we are going to be working with FirstNet to make sure that those recommendations sync up with what FirstNet is doing so that both ends of the communications chain are secure from cyber attack.

Mr. WALDEN. All right, thank you. We will now turn to the gentlelady from Tennessee, Ms. Blackburn.

Mrs. BLACKBURN. Thank you, Mr. Chairman. And I appreciate Ms. Eshoo bringing up the cyber issue. She has focused on this repeatedly, and I want to pick up right there and kind of go to the next part of this question on cyber.

We will start there, Mr. Kennedy, with you, and look at FirstNet's system design and talk a little bit about where you are in that system design, just not the recommendations that you have just said you all now have a set of recommendations, but I want to know where you are and then kind of what you see as a timeline on this.

Mr. KENNEDY. So, a couple of things. We actually have put out a public notice in some key RFI documents related to cyber. We received comments back from industry and from states and public safety this past fall. We have incorporated those into our final section in the RFP on cybersecurity. As part of that we have always envisioned that we are building in security from day one. We are not just tacking it on at the end. We also want to leverage the best practices from the private sector as well as within government to make sure that we are taking more——

Mrs. BLACKBURN. OK, let us stop right there——

Mr. KENNEDY. Sure.

Mrs. BLACKBURN [continuing]. Because government networks, obviously, OPM breach, NASA, they are not secure. And whether it is an encryption issue, whatever, we know that there are some gaping holes, if you will, that are there. So I don't think that is the standard that we want to hold up, so I will yield my time back to you to continue.

Mr. KENNEDY. So on that front we are really looking for industry as part of the responses to this RFP to bring forward private sector best practices as part of their solution that will be judged against our standards that we have put forward in Section J of the RFP to be able to make sure that they meet the highest standards that public safety will need to meet, and make sure that we ensure the security of all the data related to emergency medical services, law

enforcement, and the fact that we are going to have all this data operating across the FirstNet network.

Mrs. BLACKBURN. OK. We are going to be watching that very closely. We fully understand and appreciate the need for the data security. We also understand that you have data transfer that needs to be considered. All of these things are going to have to be taken one at a time. We appreciate that and we just work forward to working with you on it.

Mr. Furth, I want to come back to you on this opt-out process. You talked about that in your testimony a little bit. In 2013, in response to a question for the record, the Public Safety Bureau stated, and I am going to quote, "the Commission will coordinate closely with FirstNet to ensure that the review process by the FCC of state alternative plans is conducted in a timely manner, consistent with FirstNet's deployment plans and associated time frames."

OK, so here we are in 2016 and it sounds like you are going to do a rulemaking to establish a process; is that correct?

Mr. FURTH. That is correct.

Mrs. BLACKBURN. OK. Now looking at timelines again, how long do these rulemakings generally take with the FCC, and do you think there is any validity to the concerns that many people have that the FCC is slow-walking, intentionally slow-walking this process in order to frustrate some of the state opt-outs?

Mr. FURTH. Thank you for the question. We certainly have no intention to slow-walk this process. We think it is very important that the states, at the point where they are going to have to make that decision about whether to opt out, understand what the process will be that the Commission will use to review those requests.

And we have, in fact, as we indicated in 2013, been working with FirstNet and consulting with them on their timeline. The critical point in their timeline is that they are saying at this point once the RFP process is completed that the state plans will be delivered to the states in the second quarter of 2017.

So that is our target. We have to have our rules in place before then, and therefore we are not going to delay. We want to initiate a rulemaking in the near term to make sure that we have the flexibility that we need to get those rules done in a timely manner.

And you asked about the speed with which the Commission conducts rulemakings. The Commission is capable of conducting rulemaking very quickly, and particularly on an issue like this we are really focused on one piece of the statute and the two-prong test that the statute gave us for how we are going to administer this review process of the opt-out requests.

So our focus is going to be on that statute and how we implement it, and that is why we intend in the near term to get public comment so that we can reach a timely conclusion on that in time for the process that FirstNet will undertake in 2017.

Mrs. BLACKBURN. OK. Just bear in mind, to us it seems like it is taking you a mighty long time to get around to doing it.

Mr. FURTH. Well, I would actually suggest that this is the right time to do it because now we have the RFP. It would have been difficult, I think, to initiate this rulemaking before the RFP had been released by FirstNet, because that is one of the things that those who look at our proposals are going to need to make ref-

erence to, and we think it will actually build a better record to put this rulemaking out now that the RFP has been released by FirstNet. So we think the timing for starting this is right. Thank you.

Mrs. BLACKBURN. OK, yield back.

Mr. WALDEN. The gentlelady yields back. The chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

Mr. DOYLE. Thank you, Mr. Chairman. Mr. Kennedy, Mr. Furth, welcome. We appreciate you both being here.

In my district, the city of Pittsburgh, as well as Philadelphia and 11 other major cities around the country, first responders will need to give back spectrum located in the T-band that they currently use for communications. What assurances can you both provide me that the first responders in these affected cities that are losing access to this band that will not affect their ability to accomplish their mission? Do either of you see any potential problems with this transition?

Mr. FURTH. Let me take that since that provision in the statute is really the Commission's responsibility to implement. And the statute specifically gives us a long timeline to deal with the T-band issue, the initial deadline to reallocate spectrum and begin the auction process, which is not the relocation process but simply the beginning of the process for setting up an auction. That deadline is 2021, so that is still 5 years away.

Nonetheless, we are very cognizant of the situation that T-band licensees are in, and at the point where we look at how to implement the statute we want to make very sure that there is no loss of service, no loss of continuity in whatever transition mechanism there is to ensure that the citizens of those 11 markets, those 11 communities, are not left without public safety services as a result of that transition.

Mr. DOYLE. Thank you. Mr. Kennedy, in creating a sustainable funding stream for FirstNet, the private partner you choose will need to monetize your 20 megahertz of spectrum in band 14. First, how soon will the spectrum be available once FirstNet chooses a private partner; second, what steps has FirstNet taken toward ensuring that consumer devices will include band 14 chipsets; and finally, based on the previous examples of this type of spectrum becoming available, how long do you think it would take for devices and services using this band to become available?

Mr. KENNEDY. One of the things we have laid out is an aggressive plan to work with the incumbents that are on band 14 today to make sure that they are moved to other narrow band public safety spectrum. And we have been talking to all of them. A few of them have already moved off proactively. All of them have been under notice for a number of years that this was going to happen, and so they are very much prepared to go there.

We are working with them to have all that spectrum cleared before we actually get through to the state plan process, and we are trying to move very quickly to make sure that that happens by the middle of 2017. This would allow a partner to be able to have encumbered spectrum shortly after contract award and be able to deploy the network knowing that that spectrum was immediately available, which we think is a very important piece.

When it comes to having devices, one of the things that we have written into the RFP is we are asking proposers to come forward with an entire ecosystem of band 14 devices that they are going to proffer as part of their solution. And because industry itself has the greatest amount of size and scope that will be able to drive device manufacturers to include band 14 in their devices, they can actually drive a bigger ecosystem than public safety can alone.

Mr. DOYLE. Thank you. Mr. Kennedy, some of the critics of FirstNet have repeatedly said that only the largest wireless telecommunication companies would be capable of taking on a project of this size. When you were crafting the RFP what steps did you take to broaden the group of entities capable of partnering with FirstNet, and do you believe that there are entities out there other than the large telcos interested and able to fulfill the terms of the RFP?

Mr. KENNEDY. That is a great question. One of the things we did through all of the different RFIs and our consultation with states and with industry was try to come up with a way that was driven by objectives, the objective for public safety in a performance-based acquisition. This is different than the typical 10,000 lines of specific requirements that we often see in government procurements. The reasons we did that was to drive more competition and not less. We wanted to have an objective-based procurement that allowed everybody to address the procurement in a different way as long as they were meeting all of the objectives of public safety. We believe that this will actually drive greater competition and not less competition at the end of the day.

We also did a number of notices on different sizes and scopes, whether we should look at this regionally or nationally and what was the best approach to that. After that we went forward with a nationwide objective-driven RFP that we believe through teaming will make sure that it brings the greatest amount of opportunity to the table for the different offerers that come together.

We also believe that there are other folks outside of the major telco providers that could bid and win this opportunity and we believe there is interest out there. We believe that there are multiple ways that folks could come forward with the different assets that have been put forward in this partnership that could actually make this work in a way that will be very beneficial to public safety.

Mr. DOYLE. Thank you. I see I just have one second. With regards to the opt-out issue do you have any thoughts on how many states you think will opt out?

Mr. FURTH. No. We will be prepared for any contingency in terms of the number of states that opt out.

Mr. DOYLE. OK. Mr. Chairman, thank you.

Mr. WALDEN. You are welcome. We will now go to the former chairman of the committee, Mr. Barton.

Mr. BARTON. Thank you, Chairman. Mr. Kennedy, have you ever heard of a radio talk show host in Texas named John Grady Wells?

Mr. KENNEDY. I have not.

Mr. BARTON. You sound exactly like him.

Mr. KENNEDY. I will be Googling him right after this.

Mr. BARTON. If you close your eyes it sounds like I am on the John Grady Wells Show or I am listening to the John Grady Wells Show. That was not a trick question.

Mr. WALDEN. It is how we are helping pay for FirstNet, moonlighting.

Mr. BARTON. He is very, very conservative. Anyway, my first question to you Mr. Kennedy would be, and it was just asked in a different way. How many states have indicated that they want to opt out and create their own network?

Mr. KENNEDY. So on this question, the timing of when the opt-in/opt-out decision actually occurs is post our acquisition and the contract award and post a state getting a state plan.

The reality is having the ability to compare how good that state plan meets the needs of the state is one of the key considerations that will need to be looked by each and every state when they look at this consideration for opt-in and opt-out. We also believe that it is going to be incumbent on those offerers who are coming forward to bring a very compelling offering, because they will want to bring in as many states as possible to make this a very successful solution for public safety and to make it so that there is less integration or risk in the overall project.

As part of that they are going to have to have a very compelling offering that goes into each of these state plans, and with that we will then have a feeling for who would consider opt-in, who would consider opt-out. We do believe though that it is important that we have been continuing to build through our consultation, open dialogue, open relationships, open discussions about the benefits of opt-in, about the benefits of the FirstNet network overall, and at the same point preserving the rights for states to go through that process and to work forward.

Mr. BARTON. Well, my guess is, and it is purely a guess, is that there will be a number of states. Some of them are pretty obvious—Alaska, Hawaii—because they are almost self-contained by geography and conditions. And then there are some that have a history of independence. Just out of the blue, Texas, we have our own electric grid.

So I would assume that there will be a number and that is something that I would hope that there is some planning, because even if you opt out to have your own state network it certainly has to be interoperable within the state with everyone, and it has to be interoperable with the other networks and the national network. Has there been any interaction with Texas so far about that? I know that Harris County has a local network that we tried to make sure was acceptable.

Mr. KENNEDY. We actually just held our most recent board meeting down in Houston. And the FirstNet team and the board visited the Harris County project again and had great interaction with the team and the significant progress that they have made on that early builder project and the lessons learned, both key lessons learned that were in the spectrum lease agreement, but also the unofficial lessons learned from deploying that network so far and the growing pains as they work through continuing to grow that network.

On a lot of discussions with the State of Texas who are involved from the SMLA perspective but also with the consultations throughout Texas, as you know the thousands of public safety agencies in Texas, a huge amount of key constituents for Texas to visit with. Todd Early and his team, and Skylor Hearn from the Texas Department of Public Safety have been crisscrossing the State. They have a tremendous team. They have actually built an online web portal and key training for public safety responders throughout the state to make sure they are informing them about the network.

We have been working very closely with them and even met with key officials in Austin to make sure that they understand both opt-in and opt-out and all the opportunities that will become available with having a public safety network for first responders in Texas.

Mr. BARTON. OK, thank you. I guess my last question and kind of the \$64 question which is hard to answer: what is your gut reaction when we will actually have FirstNet up and running? Not just talking about it and making significant progress and moving forward and all this, but actually have a network that is functional and that is usable?

Mr. KENNEDY. It is going to occur after the opt-in and opt-out decision. And after a key opt-out and opt-in decisions we will have the ability to move forward with deployments in states. Right now we are anticipating that those state plans, much of what was mentioned by David earlier today, will be occurring in mid-2017 and that they will be coming out after this contract award. We then have that 90-day period for opt-in and opt-out.

So as early as late 2017, the network would start being deployed. Operations will depend on the size of a state, even the size of the region and so forth for how that will be deployed. In some cases that will take a number of years, but trying to make sure that we get the network up and running as quick as possible.

Mr. BARTON. So in the reasonable future. We are not talking 10 years, we are talking—

Mr. KENNEDY. No, no, very reasonable future.

Mr. BARTON. OK, thank you. Thank you, Mr. Chairman.

Mr. WALDEN. Gentlemen, I appreciate your comments. We will now go to the gentlelady from Colorado, Ms. DeGette, for questions.

Ms. DEGETTE. Thank you, Mr. Chairman. Well, I know that some of my questions have been asked but they haven't been asked by everybody, but I am still not going to ask them. There was one topic I wanted to talk to you about though, and that is the topic, Mr. Kennedy, we talked about last year when you were here when we discussed NIST, which of course has facilities in Colorado.

At that time you told the subcommittee that FirstNet had just started to work with NIST on a number of technical questions. I was wondering if you could give me an update on that work and let me know how that has helped inform the recent RFP.

Mr. KENNEDY. The work being done by the Public Safety Communications Research Lab at NIST has been invaluable to FirstNet. We have a very close relationship, and actually our technical team is also headquartered in Boulder so that they can have close proximity to the NIST team. This team is working on key issues like priority and preemption. They have been literally test-

ing and loading networks to make sure that the priority features and these preemptive features that are going to be critical to this public safety network to always have the on-demand resources they need for big emergencies has come because of the tremendous work by PSCR.

Another key element is looking at standards work. PSCR is part of all the third generation partnership project standards meetings. These are critical, because we need to not only build to a nationwide standard, but also to international standards to make sure that we keep open networks and open standards and also have a variety in ecosystem of devices and equipment that will be cost effective. That work is very much being driven by NIST.

A third element really goes into cybersecurity and making sure that we look at the best practices and that they are also doing key testing. And so, tremendous amount of work being done by NIST and PSCR.

Lastly, they are actually setting up right now task teams with our Public Safety Advisory Committee, who is going to be working on advising PSCR and NIST on leveraging the R&D money that is in our act to make sure that we look at key interfacing of LTE going forward and what we are doing in LMR systems and also making sure that we meet all the mission-critical needs for public safety. So it is a tremendous ongoing relationship and we couldn't be more pleased with the work by the PSCR team.

Ms. DEGETTE. Thanks. I guess I will yield back. Thank you.

Mr. WALDEN. We now turn to Mr. Latta, the vice chair of the subcommittee for questions.

Mr. LATTA. Well, thanks, Mr. Chairman, and thanks again for having today's hearing. And gentlemen, thanks very much for being with us today. We have had multiple hearings on this issue and it is very, very important. And I know that I was contacted early on in the process, and there is a question out there about making sure that the states were being heard.

And so I think that what we are hearing today and also from your testimony, Mr. Kennedy, I see you stated that you received data from over 1,160 public safety entities representing 1.6 million public safety personnel from 54 states and territories and seven federal agencies. And that is important, because again, that is one of the things that the folks out there wanted to make sure that they were being heard as this was being put together, since it is vital not only to the folks back home for making sure that all their security needs are being taken care of, or when there is an emergency or ambulances are being called, but that is across the entire nation. And also it is important that as we go forward that we keep that up.

And if I could, I would like to start, Mr. Kennedy, with a question. I appreciate again FirstNet's inclusion of the partnerships with the rural telecom providers within the proposal evaluation criteria, thereby attempting to ensure small rural carriers are not left out of the FirstNet solution. And that is important to a lot of us because my district is very—like a lot of the people here, I have very, very, very rural areas in my district and a few go to urban. And so we want to make sure that everyone that is out there has that ability for those small FirstNet tests for that solution.

Can you tell me how FirstNet will define the rural telecom provider?

Mr. KENNEDY. Sure. The rural telecom providers actually includes all of those that are providing telecommunication services in rural areas. And we know that some of them do and don't provide wireless service, for instance, today, others are providing key backhaul, and we want to make sure that they are all included as part of this infrastructure that has to be leveraged.

We also believe it is important that we put some minimums in the RFP to help ensure that there is a good conversation that is going on between rural providers and others who are aggregating a team to bid on the nationwide network.

Lastly, as I mentioned a little bit earlier in response to a question, we are also continuing to look at the minimums that are happening at each phase of deployment. And we have actually upped some of those from our initial draft RFP in the final RFP to ensure that rural deployment is first and foremost on folks' minds and to be able to deploy quickly in the way that we have put forward in the RFP. The way that we think that that can best happen is leveraging the infrastructure that is out there today.

Mr. LATTI. OK. You touched on it a little bit earlier, but I am also interested in hearing what FirstNet has to say regarding how you are going to manage the security on mobile devices so that other adjacent systems aren't breached. Are you looking at technology solutions to ensure that mobile devices are authorized and that the access will be restricted?

Mr. KENNEDY. We are. And we are also looking at really driving industry to be very innovative in their responses that are part of this. We know that identity and credentialing and access management and that human factors are often one of the weakest links when it comes to a network. And so understanding which device is tied to which first responder and also who is using it at that particular time is very critical.

We actually set up an advisory committee within the Public Safety Advisory Committee for FirstNet to look specifically at this ICAM, the Identity Credentialing and Access Management. It is such a huge issue across major agencies today. And also making sure that we do it in an innovative way for public safety to still make sure that accessing these devices is very usable and that they can use it in the environment in which they operate.

One of the unique things about public safety, firefighters, for instance, operate with heavy leather gloves and other things on, EMS personnel have latex gloves. And being able to interoperate and use devices in the harsh environment that public safety uses is critical. So it has to be very usable but it also has to be very secure, and we are looking at that all the way down to the device level.

Mr. LATTI. When you are talking about that let us just follow up on the security end of it. What are you finding as you are going through all these meetings and with your group there? What are you finding? Because this is something that we talk about all the time, across the board here.

When you are talking about cybersecurity how are we going to do that and make sure that we don't have some kind of a massive

emergency and all of a sudden find that they are getting hacked or that there is a cyber attack at the exact same time?

Mr. KENNEDY. I think we are all finding that cyber is a very active process. It is not a one and done solution. We know that we have to build it in from the very beginning, but we also know that we have to have an ongoing process to deal to the evolving threat. And to do that we are maintaining a number of key issues as we talked about earlier, leveraging what is being done with NIST and PSCR, but also from industry. And I think it is critical that we really leverage what is coming out of industry, and there is more to be done. There is no one silver bullet.

Mr. LATTA. OK. Thank you very much, Mr. Chairman. My time is expired and I yield back.

Mr. WALDEN. The gentleman yields back. The chair recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. Thank you, Chair, for holding this hearing. I just want to say my district includes Contra Costa County, part of the San Francisco Bay area, and back when we had earmarks I got involved with interoperability efforts in that county and they were successful. But I have to say I was pretty surprised at how difficult it was, how expensive it was to get this done, so I am glad you have done all the work that you have been able to do. Are you able to learn much from those early attempts at interoperability?

Mr. KENNEDY. Yes, we have been. We have been very much trying to take the lessons learned on both the land mobile radio side of interoperability and now on the LTE side looking at both voice and data interoperability. Voice interoperability has been a long-standing issue. I personally have had a lot of experience in leveraging how do we get these disparate systems to work together. Our country has spent a lot of money trying to make sure that that occurs.

One of the unique things about FirstNet and something that Congress did as part of this act is making sure that we will all be operating on the same spectrum and on the same key standards, international standards related to LTE, and I think that is really a huge part of making this a success.

Mr. MCNERNEY. Well, it is clear that consultations with the states is an important part of the process. Are you done with that phase or are you still in the consultation process?

Mr. KENNEDY. So we have gone out as part of the consultation process and met with 55 states and territories so far. Many of these states we have had more than one engagement with and we are going to continue to engage in 2016 and beyond. We don't believe that consultation just has a magic end to it. We believe that we will need to continue to consult up until state plans and then even during the deployment of the network.

That consultation is going to get much more specific this year in that we are actually going to have consultation task teams, and we are also looking to have key executive meetings with each state to make sure that key decision makers are informed before we get to the state plan process.

Mr. MCNERNEY. So were the states pretty engaged and enthusiastic about this?

Mr. KENNEDY. They were very engaged. And every state has a different way of how they approach their different key public safety stakeholders, but we were amazed at the amazing turnout. Some states had well over 100 and 150-plus people who were engaged in an all day consultation session. Many of the states even involved neighboring states to make sure that they had good cross-communication across states. So a terrific turnout.

And one of the great things about these state consultation efforts was that we learned so much about the unique differences that occur in each state. We learned what is very important to them. And they also presented use cases, and each and every state actually came out and presented use cases on major disasters that have either occurred in their state—take the state of Minnesota, talked about the I35 bridge collapse—and what kind of communications could have happened and occur if they would have had a broadband public safety network that they could have utilized during that kind of a disaster.

That kind of real-world thought process and discussion that was an ongoing discussion throughout that consultation just shows you briefly what we had at each and every state, and really being able to understand how they operate to make sure that the state plan that we can bring forward for that state understands their unique needs.

Mr. MCNERNEY. So how much interest did you see from small businesses and carriers in this outreach process?

Mr. KENNEDY. We have seen a lot of interest from both small business and carriers. Many of them showed up at different consultations in different states. More importantly, huge turnouts for our industry days.

When we released the RFP recently, we actually held a call with over 600 participants from industry, both big and small, who actually came to that call for a briefing on the RFP release. As a part of that process we have actually set up on our Web site and on the FedBizOpps Web site, which actually has the opportunity for the FirstNet RFP, a teaming portal so that small businesses can put themselves out there and their key capabilities so that they can help join with teams and make sure that they are being seen for what kinds of things they could bring to the table.

Mr. MCNERNEY. Well, thank you.

Mr. Furth, clearly one of the controversial issues is state opt-out. What information would be helpful for the FCC to have in order to do the best job in producing opt-out rules?

Mr. FURTH. Well, primarily it will be information that relates to the test that is set forth in the statute. But that is one of the reasons that we feel it is important to do a rulemaking on this process, because that way we can seek comment from all interested parties to determine what is the information that we will require states to provide us.

The two-prong test in the statute is simply phrased, but we need to make sure that we have a full understanding of what is behind those phrases so that states know, if they are making the choice whether to opt out or not, what the choices are both in terms of what FirstNet has presented them and what they would need to present to the Commission if they were to elect opt-out.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. WALDEN. Thank you, sir. We will now turn to the gentleman from Illinois, Mr. Shimkus, for questions.

Mr. SHIMKUS. Thank you, Mr. Chairman. I want to just follow up a little bit with Chairman Walden on the 25-year RFP issue. It was 8 years ago that the first iPhone rolled out. And I remember, other than Courtney and Darrell Issa, they were like the first adopters, now we have not just Apple, but Nexus, Samsung, LG, Motorola, HTC. Who does not have one? And I think that is the concern of a 25-year RFP locking folks in when the tech community can go crazy in a short amount of time. So I just wanted to weigh in on that.

And staying on the RFP questions, we also are concerned about we had challenges in 2007 with the D block because—the argument was it was encumbered by other issues that cause it not to be valued by people who would bid. Some people are raising that concern with the RFP. Have you looked at that, Mr. Kennedy?

Mr. KENNEDY. We have. We have looked at encumbrance and we have also looked at how this compares to other auctions both past and present that are occurring. The encumbrance of many of the recent auctions, even the AWS-3 auction and others, many of them have some encumbrance related to either military personnel or other agencies that are still on some of that spectrum. We also know that with the broadcast incentive option a certain amount of time, 39 months, to be able to be moved off of that and some of those key considerations.

In the public safety case we are talking about 5 million to 10 million to 13 million first responders and key personnel that will be leveraging the network depending on really trying to make sure that we meet all the needs of public safety. And we know today that the major networks that already exist have a huge number of customers. We are talking about hundreds of millions of folks out there today. And if we look at similar spectrum, similar spectrum that is being leveraged by commercial carriers today, 20 megahertz of 700 megahertz spectrum is going to be leveraged for capacity, we believe, in ways that are still quite valuable and are not over encumbered to be able to get great value out of that.

We have also done a lot of market research and a lot of discussions with industry leading up to this and we have seen great interest in that spectrum and that they think there is value there.

Mr. SHIMKUS. Thank you. Let me talk about the penalty mechanism real quick. There is a penalty for failing to hit these targets. It is our understanding that the targets are set by the contractor. If that is the case, do you think that they kind of lowball the targets to make sure they meet their contractual obligations?

Mr. KENNEDY. There is always the chance that that can occur. One of the things that we have tried to do is to balance the needs of public safety in making sure that we can ensure great adoption by public safety. We put public safety first and foremost in both these penalties and also in the objectives that are driving the RFP. At the same point we want to make sure that they are achievable, and we believe through competition and in competition in the RFP that different offerers will provide and have to step up to the plate

with good adoption targets that we are going to compare against each other, and I think that is important.

Mr. SHIMKUS. And I missed the discussion a little bit on PSAPs. I was walking in from another hearing. But we know that one of the board members opined about the changing role for PSAPs. Does that mean that there is actually discussions by you all about functionalities provided by PSAPs or you all providing guidance to PSAPs?

Mr. KENNEDY. I certainly think that the enhanced functionality of FirstNet is going to provide new and different ways of communicating for PSAPs to and from the field to police officers, firefighters and EMTs. I do believe that that is an opportunity for 911 centers to continue to grow and leverage that new technology.

I will defer some time to David to answer this though from the PSAP perspective in the FCC.

Mr. SHIMKUS. That would be great. Thank you.

Mr. FURTH. And in fact we have encouraged 911 authorities and PSAPs to get involved with the FirstNet state consultation process for precisely that reason that both these elements are very interconnected. And we are also very focused on our efforts with our PSAP task force and with some of our efforts at the Commission to advance Next Generation 911 in making sure that the PSAPs evolve in parallel with the intended deployment of the FirstNet network so that there will be, in fact, true interoperability all across.

Mr. SHIMKUS. Well, thank you. Because as you know, Ranking Member Eshoo and I, we have been really focused on the PSAPs' evolution over the time and I am sure we will be looking at it closely to make sure that we are not stumbling over each other but were very helpful in providing the network that we are all looking for.

Mr. FURTH. And if I might add, we have also—I don't know if T.J. mentioned it—but they have actually hired a Next Generation 911, a 911 specialist that will be working with us. We were going to have a meeting, but I think it was postponed by the snowstorm. But we are looking forward to starting that relationship very shortly.

Mr. SHIMKUS. Thank you.

Mr. WALDEN. OK. We will turn now to the gentlelady from New York, Ms. Clarke, for five minutes.

Ms. CLARKE. Thank you very much, Mr. Chairman, and I thank our ranking member. Good to see you again, Mr. Kennedy. I have a couple of questions and it has to do with the whole opt-out piece, because you mentioned that this construct is geared towards a state opting out.

Have you taken into consideration perhaps a part of a jurisdiction of a state, and have you also taken into consideration maybe a grouping of states so that there is a tri-state opt-out? And what would be the tipping point for a national system network if the opt-out provision is utilized by 50 percent of the jurisdictions in the nation, right. How have you envisioned managing cybersecurity given the variability of systems that can be established, and what would be the sort of management maintenance standards that could be

put in place to make sure that we have a standard across the board for robust and impenetrable network, if you will?

Mr. KENNEDY. A number of very good questions. First off, I think on the opt-out question the act is fairly prescriptive on what it says on the opt-in/opt-out decision related to the radio access network portion of the network. The good news is the core network and the nationwide backbone of this network are nationwide, and they are something that everyone will need to connect into and leverage both the integration, the network policies that we put forward, and in an opt-out scenario they would work both through the FCC and the NITA process and FirstNet to make sure that they will be interoperable. And I think that that is absolutely critical to make sure that we have a successful network.

As far as different sizes and scopes, the act did not anticipate either a substate or multi-state way of doing that. And so the process we have to go through is very much state driven by each governor having that opportunity to make that decision about that radio access network.

Ms. CLARKE. So where you may have a tri-state authority that has the infrastructure already in place for whatever they do in terms of deployment of emergency, they may see it necessary to make sure that their interoperability is at a certain standard. Couldn't they come in with an opt-out plan from a tri-state perspective?

Mr. KENNEDY. Right now the plans are very much driven at a state-by-state level based upon that governor decision. We have seen states certainly being very open in talking to each other and sharing best practices and talking about future solutions. The good news, because we will be operating all under the same network policies, not only will those three states be interoperable, but all 50 states, five territories and the District of Columbia have to be interoperable. So we all will be operating on the same standards. We will all be operating off the same core network for public safety users. This is a critical baseline to make sure that we maintain that interoperability.

Ms. CLARKE. So it may be just a matter of utility then what type of instruments are being used, and that is where the vulnerabilities could ultimately lie when you are talking about cybersecurity. So what, are we looking at a standard in terms of—you are not going to govern what companies they decide to go with if they opt out, but not all companies are equal either. So how do we get to that floor where—because anyone who is vulnerable in the system, whether it is an instrument or something else, makes the entire system vulnerable, right?

Mr. KENNEDY. Absolutely. And your point is valid that the weakest link is always the issue, and often we see that as even a human link. To your point about being impenetrable, I think most impenetrable networks are also not very useable, and so we also have to have both pieces of that to make sure that we are having great security and also good use for public safety needs.

One of the things we have done is set forward a number of key elements within our cybersecurity part of the RFP to make sure that we are driving those cyber best practices. And we are really leveraging industry to respond to that RFP and anything that

would come in from an opt-out perspective would have to meet or exceed those same standards. So we believe that this is going to ensure that we have ongoing cybersecurity, and also that we have as part of our partner a key security operations center. Security is dynamic. It is not something that is static and doesn't change.

Ms. CLARKE. Absolutely. And any company that has a weak link within them, so, right, could be human, could make the infrastructure vulnerable. So I just want to try to look at maintenance as well and how we build that standard out. I yield back, Mr. Chairman.

Mr. LATTI. Well, thank you very much. The gentlelady yields it back. And the gentleman from Kentucky is recognized for 5 minutes.

Mr. GUTHRIE. Thank you, Mr. Chairman. Thank you for the witnesses for being here. And Mr. Furth, in your testimony you mentioned that the public notice regarding relocation of current users of FirstNet spectrum. When can the committee expect to see a resolution?

Mr. FURTH. We released that public notice in November. We obtained comments from interested parties in December. FirstNet submitted an ex parte to us a couple of weeks ago, so we are working very actively on that again cognizant of FirstNet's timeline because they are setting up a funding program and they have given us a requested date for when they would like to see the spectrum cleared. So with all of those elements in place I think that we can move forward quite quickly to reach a resolution on that.

Mr. GUTHRIE. That sort of answered my second question. I was going to ask Mr. Kennedy if your timeline is, if FirstNet is able to move forward with the timeline that you offer. But I guess you all have agreed upon a date, and you are going to meet the date they have agreed upon? I guess that is the question.

Mr. FURTH. I wouldn't say we have agreed upon a date. They have given us a date. Their request is that the licenses be modified so that any incumbent could not stay on the band past July of 2017 without FirstNet's consent. But they have also set up a funding program and a relocation program consistent with that timeline. And as T.J. said, I think their intent is to try to move as many of those incumbents as they can off the band well in advance of that date.

So what they are asking us to do is simply to make the necessary licensing changes that would commemorate the fact, licensees are no longer entitled to operate on the FirstNet spectrum. There is other spectrum in the 700 megahertz band that is available for them in the narrow band spectrum and so that is where they would be reassigned to.

Mr. GUTHRIE. OK. So my question was how will this timeline impact your ability to move forward, but since you are working that out so—

Mr. KENNEDY. Yes, our suggestions and requests that have been made to the FCC are still working through the final NPRM process, but so far we believe that we are in sync in what we have discussed with them and look forward to that happening.

Mr. GUTHRIE. Are there any other FCC proceedings or FCC actions that FirstNet needs to be resolved before you can move forward?

Mr. KENNEDY. Not related to spectrum relocation in the 700 megahertz band.

Mr. GUTHRIE. OK, thanks. And also Mr. Kennedy, this is a different topic. The crux of the RFP is the ability of the winner to monetize the spectrum. Can you elaborate on the quality of service, priority and preemptive parameters for public safety traffic on the network and how this is factored into your valuation of the spectrum?

Mr. KENNEDY. For us the key quality of service parameters that are required by public safety to be able to operate are something that both our technical team in Boulder as well as the Public Safety Communications Research Lab have been testing of equipment for years. It is something that we consider to be table stakes for what must occur to be able to have public safety and commercial users operating on the same spectrum.

And so having that ability to have preemption and to have priority and provide that mission critical quality of service that we are looking for public safety is something we are requiring of all offerers. Our technical team will be greatly involved in the evaluation of those proposals. It is a key thing that we have to have to make sure that this network will provide that priority and preemption whenever it is needed.

Mr. GUTHRIE. So you have to make sure the winner is financially successful. That is what its base stability to move forward is. But also, so how does FirstNet plan to ensure that the winning bidder only gains access to the market at competitive rates? I know part of the previous question was the winning bidder and they have to be financially viable to monetize the system. What about FirstNet's ability to make sure they maximize financial ability?

Mr. KENNEDY. Yes, as far as maximizing the bids that come in and that we receive, we believe by having an objectives based procurement that allows innovative solutions and industry to come together with the best solutions. And through competition we believe that we will make sure that public safety gets the ultimate best deal that can come forward. Competition is by far the best thing that we can have to ensure that there is not value being left on the table that is not being leveraged by public safety to get the best network possible.

Mr. GUTHRIE. Thank you. And I am meeting with some of my public safety people today. So I know it is important in Kentucky, it is important everywhere, and I appreciate the work you guys are doing.

Mr. KENNEDY. Thank you.

Mr. GUTHRIE. And I yield back.

Mr. LATTA [presiding]. Thank you. The gentleman yields back, and the chair now recognizes the gentleman from Texas for 5 minutes.

Mr. OLSON. I thank the chair, and welcome Mr. Kennedy and Mr. Furth. I am from the greater Houston area. We have seen our fair share of natural disasters, the worst disasters in American history. For example, the worst hurricane. Galveston 1900, over 6,000

people, the low end, maybe 8,000 were killed in 24 hours. The worst industrial accident, Texas City 1947. A ship exploded, almost 600 people were killed. Every firefighter except for one died trying to put out that fire.

A mere tropical storm, Claudette, set the American record for rainfall in a 24-hour period in 1979 in the city of Alvin, Texas. Forty three inches of rain fell within one day. I was living 10 miles away from Alvin, Texas when that happened, staying up all night with my dad preparing for our first floor becoming the wading pool we never dreamed of having down below.

But those problems we face in Texas are much different than problems they face in California, North Dakota, and Pennsylvania, for example. FirstNet must be able to adapt to those challenges, different challenges. It can't fail, especially in a time of crisis. In Houston we say failure is not an option.

My first question to Mr. Kennedy is, in the worst case scenario how should we measure failure with regard to the RFP? What is failure? When does it fail? How do you measure that?

Mr. KENNEDY. As far as the network or the RFP itself?

Mr. OLSON. RFP itself and the network. Throw them all in there.

Mr. KENNEDY. OK. From the network perspective, and I am just going to go off of your explanation on being mission critical and public safety grade. I think it is very important that everything we do is trying to focus on making sure that we can meet that public safety grade capability. What we have done with the objectives you will see that public safety grade and that reliability and resiliency are key objectives that are part of the RFP and we will be measuring what is coming in in those RFP responses.

Also, it is absolutely critical as we go forward that we know that just terrestrial networks and just hardening won't solve every problem, so the network design is going to be looked at for what kind of reliability and redundancy by having capacity that will allow us to have ongoing network capability after a disaster hits.

Also, we have leveraged our Public Safety Advisory Committee to look at public safety grade and make recommendations. Your point about different parts of the country, the kinds of hardening that they need in Florida are sometimes different than what they need in Texas versus Alaska, different kinds of issues. Some parts of the country have issues with earthquakes, other parts have issues with hurricanes and flooding. And so those kind of issues really demand a different type of network infrastructure in different parts of the country.

Also, it requires other ways to reconstitute a network. There are some things when we look at a tornado and a direct hit that there is no building of a cell tower that necessarily will——

Mr. OLSON. Joplin, like Mr. Long's district. Joplin, Missouri, direct hit. Yes.

Mr. KENNEDY. Joplin is a great example of that. And so you have to have other things that can reconstitute a network during that kind of very focused disaster, and that comes down to leveraging deployables. Deployable networks have been something that we have looked at both for major events, but also for response during that kind of reconstitution of a network.

There are aerial platforms and other things that are now having the ability to bring networks to where networks have been decimated very quickly, and also having the ability like we have seen with the New Jersey project to be able to look at how do we have deployable networks after a storm like a Hurricane Sandy, and how can that go ahead and reconstitute a network where a network has been wiped out.

So it is not just the permanent physical infrastructure, it is also having a network and a network operations center and that design built in, so that we are able to prepare for and respond to those emergencies in every state and have assets that could actually move between states when needed to make sure that they are responding to those big events.

Mr. OLSON. You get all these RFPs, you look at them and you go, man, these don't hit these targets. They are short, they are falling short, doesn't handle the needs, it is a failure. What is Plan B? How do you move forward from that? Like Apollo 13, how did you bring those guys home? What is Plan B if there is a failure, proposed or viable, any plan for that or you just going to wing it after that happens?

Mr. KENNEDY. No, no. We certainly have considered that there can always be issues with RFPs. There could be amendments that are issued to deal with a deficiency or something that will not work. Part of the thing we are doing right now is we are waiting for questions to come in from potential offerers. Questions will often drive to make sure whether we have hit the right targets or whether there are things or issues that would require changes.

We are very open to knowing that we need to be agile and be able to respond to what comes back, and so we have left those options open. At the same point, we are trying to move with urgency to make sure that this network gets built and gets in the hands of public safety.

Mr. OLSON. Thank you, I yield back.

Mr. LATTA. Thank you. The gentleman yields back, and the chair recognizes the gentleman from southeast Ohio for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. And I also want to thank the panel for being with us today. I serve an area of the nation that struggles with network access and availability, rural Appalachia, so these are topics that are very much a concern to me.

Mr. Kennedy, this subcommittee is working on a bill to help streamline access to rights of way so that communities will see both better broadband services and more competitors. We know the more competition the lower the cost, the quality goes up, we know how that works. Is it safe to say that the winner of the contract is likely to need to deploy new infrastructure to satisfy the objectives of the RFP?

Mr. KENNEDY. First off, I encourage the efforts that you are doing because I think that will help both FirstNet and wireless providers nationwide to provide better broadband service to the entire country. I think specifically we believe that the majority of this network will be initially deployed on existing infrastructure, but there will be a need to fill in some holes which could mean some additional sites that have to be made. So it is a mixture, but a lot of it will be leveraging existing infrastructure where it already takes

place with only building when there is no existing infrastructure that can serve that need.

Mr. JOHNSON. OK. So do you believe that streamlining access to rights of way could facilitate the deployment of the network especially in rural areas either directly or indirectly? Do you think that will help?

Mr. KENNEDY. Yes, I do.

Mr. JOHNSON. OK, great. Great. Also, Mr. Kennedy, FirstNet has established 16 key objectives which the offerers must meet in its RFP. Among the set of 16 what are some of the most important objectives FirstNet will be considering when reviewing the submitted proposals, and can you give us any idea as to how the winning bidder will be decided? In other words, pull back the cover and give us the secret formula.

Mr. KENNEDY. As you know, with all open and competitive procurements there are rules and regulations in the evaluation thereof. And so from that I think it is really important that every offerer look at all 16 objectives.

As you have mentioned, there are some objectives that we have talked a lot about here today, cybersecurity, looking at the public safety grade, looking at coverage, all those kinds of things that are so obvious, looking at applications and devices, but they are all important. We really want to see how each and every offerer can provide the best solution competitively across that entire gamut of the 16 objectives.

Mr. JOHNSON. Yes.

Mr. KENNEDY. One of the things that we think we have done very well is those same 16 objectives have remained the same since April of 2015, and have remained virtually unchanged since September of 2014 when we put out the first 15 objectives. And it has given industry a lot of time to ask questions. It has given public safety and states a lot of time to discuss are those the right objectives and will they help meet the network that they really want to see?

So we believe that we have the right 16 objectives. We believe that industry understands what those objectives really mean. And at the same point we are not telling them how to respond individually. We are telling them to do the best that they can to meet those objectives in a cost effective and sustainable way.

Mr. JOHNSON. Have you communicated to the offerers any idea of the weighting? I mean, are any of the objectives weighted more than others? For example, accelerated speed to market versus financial stability, or device ecosystem versus life cycle innovation? Have you got any weights in there and do they know what they are?

Mr. KENNEDY. Yes. There is a specific writeup in Section M of the RFP under the evaluation factors, and we really drive any offerer to read that very carefully. It is specifically written and approved by our contracting officer which tells which elements are more important than other elements.

Mr. JOHNSON. OK. All right, based on the input that you have received from all of the various stakeholders, have any of the objectives emerged as the main target? Is there one objective that you

are focused on more than any of the others? You have probably pretty much answered that. They are all 16 pretty important.

Mr. KENNEDY. All 16 are very, very important to public safety.

Mr. JOHNSON. OK. All right. Well, thank you. And with that I yield back, Mr. Chairman.

Mr. LATTA. Thank you. The gentleman yields back, and the chair now recognizes the gentleman from New York for 5 minutes.

Mr. COLLINS. Thank you, Mr. Chairman. I find this interesting, a couple things, and I am going to look for a little input here only because it seems like the train has already left the station here.

But I was the county executive of Erie County back from 2008 through 2011. The first thing I found when I came to office in New York State, in my county, Erie County, the largest upstate county, we had 22 PSAPs, 22 PSAPs in one county. Pretty much all our first responders are volunteer fire and the like. They were on using radio's low band. We pretty much had standardized on 400 megahertz.

And the first thing I walked into was SWN, the state wireless network in New York. What a debacle. I was the one that killed it, because they were going to move everyone from 400 to 800 megahertz. And I met with all the first responders and they said we don't have any money. Hey, we are still on low band. We are hanging our radios out the door as we are driving up and down hills. And we had moved to 400. They said, hey, show me the dollars. Where are the dollars to go from 400 to 800 if it would even work?

They weren't there so I pulled our county out, the largest upstate county in New York, and a month later SWN was dead in New York, because if Erie County at the far western part wouldn't participate it wasn't going to go. And I felt very good about that.

So now here we are. It is 5, 6, 7 years later talking about FirstNet, and I can't disagree with the thought process. But I would say again, maybe thank God we pulled out of the 800 megahertz they gave in New York because that would be obsolete. And, but the billions, and I do use that, weren't there. Because again, New York, especially who are all volunteer fire people, 22 PSAPs in one county. That is the way New York is. In fact, the crazy thing is the land lines go to the PSAPs and the cell phones go to a centralized one. It is insanity but that is what it is.

So I guess I just kind of ask the question. Dollars and cents matter a lot. Property taxes in New York actually pay for the volunteer fire companies. We have a tax cap because we are the highest taxed and most regulated, least business-friendly state in the nation and we keep losing people, and we are now the fourth largest state, no longer the first, second, or third.

Tell me about the dollars and cents. If I am bidding on this I don't know that I am going to have any customers in New York because no one has got any money. The state doesn't have any money. The counties don't have any money, so is that a concern? Is it a worry? Are we just charging down the road? But talk to me a little bit about if I am a bidder aren't I worried about am I going to have any customers?

Mr. KENNEDY. So I will answer that and then I will defer the PSAP question to David to follow up on that. Specifically, I do be-

lieve based upon our consultation across 55 states and territories over the past year that volunteer fire and volunteer emergency medical services are eager to leverage the FirstNet network. A couple of things in the model that we have laid forward is there is not capital expenditure. There is not the hundreds of millions of dollars to lay out for infrastructure in an opt-in scenario where that is being provided. The network would be provided.

They would make an individual decision by each agency, and even by a volunteer firefighter as an individual, if they would like to buy that particular cellular service at a competitive rate that would allow them and enable them to have inoperable voice, video and data communications across their own fire department and also with neighboring and other agencies, both police, fire and EMS, and even across state lines. And having that interoperability is something that we have heard even from volunteers is a critical issue in having the ability to be able to communicate with others.

One of the things when we go out to rural parts of the country we often ask: how many of you carry a cell phone today, either personal or for work? How many of you would leverage a FirstNet device if you had the ability to leverage that either paid for by your agency or not? And we have received a very favorable response.

We also believe that the lower cost commercial like devices or hardened commercial devices that have the right case or other things around them will provide some very cost effective opportunities for volunteer firefighters and others to leverage in addition to the radio systems that they already have. We know that there has been a lot of investment in maintaining systems. We are a true believer that you should maintain your land mobile radio systems. They are key components of the public safety ecosystem. But at the same point we think this brings a different and new opportunity.

And with time running out, I want to turn it over to David on the PSAP part of the question.

Mr. FURTH. Well, I was struck by what you said about 22 PSAPs in the county, and that is something that we see around the country. There are many different arrangements in terms of how PSAPs are structured from state to state and county to county, and that is a state and a county decision.

What we are trying to do as we all face the challenge of moving to Next Generation 911 is to provide a set of tools and options for Erie County and for every other state and county in the country for how to configure those PSAPs with Next Generation technology and with protection for cybersecurity. It makes no sense to try to individually defend each of those 22 PSAPs.

Mr. COLLINS. You can't defend them. You can't.

Mr. FURTH. Not only can you not afford it, even if you could, it wouldn't be the most effective way to do it. So in fact, the recommendations that our task force has come up—

Mr. COLLINS. My time has run out, but just remember there are people who work in each of those 22 PSAPs. Hence, you understand the pressure of not eliminating those 22 PSAPs which I tried to do as county executive.

I am going to watch this with a lot of interest. I thank you for your testimony, and you have also given me a reason to sit down with my first responders in Erie County and get some input from

them, which I have not done prior to today's hearing. So thank you for bringing this up. I yield back.

Mr. LATTI. The gentleman's time has expired, and the chair now recognizes for five minutes the gentleman from Missouri.

Mr. LONG. Thank you, Mr. Chairman. Mr. Kennedy, when explaining the payment of funds by FirstNet, or to FirstNet by the contractor, you state the minimum payments reflected in the request for proposal may be higher if driven by competition, or if the partner wants FirstNet to take on more responsibility for key functions. Could you explain that statement? And does that mean that after the contract is awarded the contractor could change the terms of its performance, do less by paying FirstNet more?

Mr. KENNEDY. That particular element is geared to make sure that competition could drive payments that are above the minimum, first of all, all by itself. Number two, we have laid out in the objectives what are the roles of FirstNet and what are the roles of the proposers that are offering the service.

If as part of that they would like to make assumptions that FirstNet take on additional roles, they should calculate into the fact that their payment would need to be higher to cover the cost of that role. So at the end of the day it is sustainability of the overall network. There is not additional funding mechanisms from Congress that would pay for that in a change-order process, and there is also not a way to shift those responsibilities from the contractor to FirstNet without taking that into account when they look at their overall economic offering.

Mr. LONG. So that has all been done up front before the contract is awarded.

Mr. KENNEDY. Correct.

Mr. LONG. They can't change later.

Mr. KENNEDY. No, the goal is to have that all as part of that process before award.

Mr. SHIMKUS. OK. How did FirstNet arrive at the 15 percent target for partnerships with rural telecommunications companies, and does the 15 percent refer to geographic or population coverage?

Mr. KENNEDY. Sure. There are actually two elements with the coverage versus the 15 percent of rural infrastructure providers. So I will go through currently in the RFP at IOC2 there would be 20 percent of rural coverage, IOC3 60 percent, IOC4 80 percent, IOC5 95 percent. That particular percentage is of the rural build-out milestones. So it is not necessarily just geographic, it is what milestones will actually be in that state plan to be very state specific to each part of that.

The other element is we added, based upon consultation and the responses we received to the draft RFP, an additional requirement. There was no requirement in the draft RFP for a minimum percentage to be from rural telecom or rural infrastructure as part of that build-out. We added a 15 percent minimum, to your 15 percent question, to ensure that—

Mr. LONG. Fifteen percent of what though? I am still a little confused on what—

Mr. KENNEDY. Yes. The 15 percent is that they are leveraging rural infrastructure for that rural build-out versus, for instance, other infrastructure or commercially available infrastructure. They

are leveraging that from rural telecoms or rural infrastructure providers.

Mr. LONG. OK. And I understand FirstNet's excess capacity is a key to the financial sustainability of the network. How does FirstNet plan to ensure that the winning bidder only gains access to the spectrum at a competitive rate? FirstNet shouldn't accept a lowball offering for its spectrum under any circumstances even if the proposals of other elements are strong, I wouldn't think. In other words, for the sake of FirstNet's financial stability and solvency, how do you plan to ensure that FirstNet fully monetizes its spectrum?

Mr. KENNEDY. The absolute best way is through competition. And in part of having that objectives based procurement is we expect to have more competition than if it was overly specific. One of the other things is that we think by driving industry to be able to leverage how they would best deploy and leverage partners and bring together the best assets to deploy this overall network that they will have the most synergy to give public safety more of what they deserve in a broader network that will really give public safety the best deal.

We believe that competition is absolutely critical to make that happen, and we also believe that going down a best value approach just looking at what is being provided as the network in addition to the financial side of the equation.

Mr. LONG. So how do you plan to ensure that the winning bidder only gains access to the spectrum at a competitive rate, coming back to my original question.

Mr. KENNEDY. So part of that is really trying to drive that we have multiple bidders, and we believe that the approach that we have taken should drive multiple bidders that will come to the table to compete with each other.

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

Mr. LATTI. Thank you. The gentleman yields back, and the chair now recognizes the gentleman from Florida for 5 minutes.

Mr. BILIRAKIS. Thank you, Mr. Chairman, I appreciate it very much. And I want to thank both Mr. Kennedy and Mr. Furth for their testimony.

As a former chairman of the Emergency Preparedness, Response, and Communications Subcommittee under Homeland Security, this issue I follow very closely. I have reached out to our friends at Florida Highway Safety and Motor Vehicles, or the state point of contact for FirstNet, termed FloridaNet, in our state. They are excited with the current direction of the working relationship between the state and the federal entities.

Mr. Kennedy, first question. It seems that with the deployment of FirstNet and the ever-growing dependency of public safety on wireless broadband, the need for interference protection and remediation will increase in importance. Chairman Wheeler recently reduced the size of the FCC's Enforcement Bureau's field presence, the function of the FCC that handles interference to public safety communications. Did the FCC or its consultants approach FirstNet to discuss the threat, if any, of downsized FCC field operations to FirstNet's operation today as well as going forward as the network expands? Again, for Mr. Kennedy.

Mr. KENNEDY. We have not had recent discussions that I am aware of about specific changes in the size of the workforce that is focused on that. I will be more than happy to have—I don't know if David has any follow-up.

Mr. FURTH. I am not aware of whether there were contacts with FirstNet. I can certainly find out. We can check with the Enforcement Bureau.

Mr. BILIRAKIS. Please do so, yes. We would like to see if there were any notes or many meetings, what have you, with regard to that. I think it is so very important.

Mr. Kennedy, how would you ensure that the spectrum is used primarily for public safety and not at the expense of public safety? Again, please clear this up, again the unique RFP. Clear that up for me. Are there safeguards or mechanisms in place to guide the use of the spectrum? How can we ensure that the spectrum we have set aside is used to its fullest capability, of course, knowing that this 25-year relationship will evolve over time with technology and advancements?

Mr. KENNEDY. We believe the incentives are aligned both for public safety and the offerer to build a network that is very robust in both coverage and in capacity. We believe that these networks are not static, that they will continue to add capacity over time. It is something we are seeing very common today with networks, is they want to leverage that very valuable spectrum as much as possible to continue to add capacity, sometimes in rural areas, certainly in highly populated areas. So we believe that the capacity needs for public safety will be met.

We do believe that having the ability to have priority and preemption across the entire network is one way to ensure during not just every day operations, but during major disasters like we discussed earlier in the hearing that those things will certainly be able to be addressed in those big emergencies due to that capacity to have priority and preemption across the entire spectrum of the network.

Mr. BILIRAKIS. Very good. Very good. Third question for Mr. Kennedy. As you know, Florida is a large, flat state with major ports and unique public safety challenges. Can you describe how my rural constituents will benefit to the same extent as my constituents that live in the Tampa Bay area, metropolitan areas, from this public safety broadband network?

Mr. KENNEDY. I think rural constituents in public safety will benefit from that enhanced coverage in having the capability to have coverage where they need it and where they respond on a regular basis. One of the things we very much focused on during our data collection process and during our state consultation efforts is trying to make sure we understand where 911 responses are, where the calls are coming in from, where the public safety stations are and how they respond to those calls.

So if we are looking at everywhere from where public safety sits before a call, where they respond on highways, freeways, county roads and other locations and also where the incidents are, every state responded to that differently based upon different data that they could present and put forward.

But we have actually placed all of that data into a reading room that you can access through the FirstNet Web site to make sure that all potential offerers understand the needs of rural constituents and understand where those calls are so that they have the ability to really plan for those needs. We also believe that having a very competitive option to be able to provide service and have that known capability for priority and preemption will ensure that public safety will want to leverage this in rural areas as well. But that additional coverage is really a huge part of that in having the public safety application ecosystem.

Many rural departments are very small. If we go to very large departments that have 30- or 40,000 members, they certainly have access to unique public safety applications and tools and wireless tools today. But one of the great things about having a nationwide ecosystem is those same tools can be made available to very small rural departments and allowing them to leverage that application innovation that is occurring.

Mr. BILIRAKIS. Very good. Sir, do you have anything else to add? Mr. Furth?

Mr. FURTH. No, thank you.

Mr. BILIRAKIS. OK, very good. Thank you very much. I yield back, Mr. Chairman.

Mr. LATTI. Thank you. The gentleman yields back. And seeing no other members to ask questions, I would just like to say on behalf of the chairman of the subcommittee the gentleman from Oregon, and the ranking member the gentlelady from California, and myself, we appreciate your testimony today and for the answers you provided the subcommittee. And if there is no other business to come before the subcommittee today, we will stand adjourned.

[Whereupon, at 12:07 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115
Majority (202) 225-2927
Minority (202) 225-3641

March 3, 2016

TJ Kennedy
President
First Responder Network Authority
12201 Sunrise Valley Drive
Reston, VA 20192

Dear Mr. Kennedy:

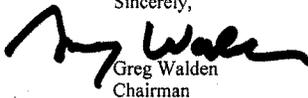
Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, February 2, 2016, to testify at the hearing entitled "Status of the Public Safety Broadband Network."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Thursday, March 17, 2016. Your responses should be mailed to Greg Watson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to Greg.Watson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Greg Walden
Chairman

Subcommittee on Communications and Technology

cc: Anna G. Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachment

Questions for the Record Responses for hearing entitled: "Status of the Public Safety Broadband Network," held on February 2, 2016 before the Subcommittee on Communications and Technology.

Question from Mr. Pallone:

The inclusion of our nation's tribes in the deployment of FirstNet will be critical to its overall success. Tribal communities have unique ability public safety needs and we should ensure that reliable coverage to these areas is fully realized. As noted in the attached testimony by the National Congress of American Indians, many tribal leaders are concerned that FirstNet does not have a formal tribal consultation policy or guidance document that ensures tribal governments consult directly with FirstNet instead of state points of contact.

1. To what extent are tribal governments currently involved in FirstNet funding, planning and deployment?

The First Responder Network Authority (FirstNet) appreciates the opportunity to discuss our national and tribal engagement activities and strategy. As you noted, Native American public safety entities and communities are potential future beneficiaries of the nationwide public safety broadband network (NPSBN, Network), and accounting for such stakeholder needs is essential to Network planning and implementation. FirstNet encourages tribal participation in our outreach and planning processes that will shape the establishment and maintenance of the future Network.

In our enabling legislation¹ (Act), FirstNet was established as an independent authority whose mission is to ensure the building, operation, and maintenance of the first high-speed, nationwide wireless broadband network dedicated to public safety. FirstNet will provide a single interoperable platform for emergency and daily public safety communications. In recognition that FirstNet needs to move as quickly as possible toward deployment throughout the 56 states and territories the NPSBN is to serve, the Act directs FirstNet to take all actions necessary to facilitate the building, deployment, and operation of the NPSBN,² and requires certain interactions for Network planning purposes to occur through a state's or territory's designated single point of contact (SPOC).³

Regarding funding for engaging with the tribes, the Act specifies that only States are eligible grant recipients. The Act states, "The Assistant Secretary [of the National Telecommunications and Information Administration (NTIA)], in consultation with the First Responder Network Authority, shall take such action as is necessary to establish a grant program to make grants to States to assist State, regional, tribal, and local jurisdictions to identify, plan, and implement the most efficient and effective

¹ Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96.

² Act, Section 6206(b)(1).

³ Act, Section 6206(c)(2)(B). Specifically, the Act requires that consultation with state, tribal, and local jurisdictions on topics such as core and radio access network buildout, tower placement, Network coverage, hardening/security/reliability/resiliency requirements, selection of Network users, assignment of priority to Network users, and user training needs shall occur between FirstNet and the SPOCs. Act, Section 6206(c)(2).

way for such jurisdictions to utilize and integrate the infrastructure, equipment....”⁴ Accordingly, NTIA established the State and Local Implementation Grant Program (SLIGP) in 2013 and awarded grants to 55 states, territories, and the District of Columbia to facilitate coordination and planning among all stakeholders, including tribes.

Regarding planning and deployment of the future Network, our interaction with tribal governments is multilayered. As cited in the National Congress of American Indians (NCAI) testimony, the Act supersedes Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, with respect to consultation related to “State and local planning” of the Network.⁵ That said, FirstNet is in full compliance with Section 106 of the National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA), and will directly consult—on a government-to-government basis—with any federally recognized tribe or Native Hawaiian Organization making such a request. In FY15, FirstNet sent letters to all 567 federally-recognized Indian Tribes and Alaska Natives. This was followed up with telephone calls and emails to dozens of tribes that responded and asked to be consulted on the project.

To date, there are approximately 40 tribes that have requested direct consultation with FirstNet. In March 2016, the Federal Register published the initial set of public comment meetings in Alaska, Hawaii and the Pacific and Caribbean territories to review the Programmatic Environmental Impact Statement (PEIS) findings. FirstNet will undertake similar PEIS activities in every jurisdiction that will be served by the NPSBN over the course of this calendar year.

We understand how tribal communities may feel that the SPOC Network planning consultation mandated under the Act is not the manner in which tribes are accustomed to consulting with the federal government. For that reason, FirstNet has created several functions to engage with the tribes directly from the highest levels on our Board and Public Safety Advisory Committee (PSAC), to the working level with the addition of an expanded tribal outreach team.

Unlike other independent authorities or government agencies, FirstNet is governed by an independent Board. One of the Board members has taken on the responsibility to represent the Board and speak with tribes on a nationwide basis to ensure that they are aware of FirstNet and the potential benefits of the Network to their communities, as well as to encourage tribal participation in the Network planning process. In addition, pursuant to the Act, FirstNet established the PSAC – whose members represent organizations from all disciplines of public safety as well as local, state, territorial, and tribal, governments – to assist FirstNet in accomplishing its mission.⁶ Under the PSAC, FirstNet created a Tribal Working Group (TWG), which is comprised of 13 international, national, regional, or state organizations with interests in tribal public safety. The TWG meets on a regular basis to provide formal commentary on and informal advice about tribal engagement and consultation, as well as assist with and support these efforts.

To work at the grassroots level, FirstNet recently hired two Native American staff who are responsible for engaging tribal communities across the nation in coordination with the SPOCs. FirstNet

⁴ Act, Section 6302(a).

⁵ Act, Section 6206(c)(2).

⁶ Act, Section 6205.

recognizes that engagement with the Native American public safety entities and communities is important to achieving its overall mission and to improving emergency response on tribal lands, and that there are real constraints on effectively capturing tribal input. For example, some tribes have not felt comfortable sharing data on public safety incident responses. However, this data is important to the planning and the deployment of the future NPSBN, to ensure that the Network will cover areas where public safety needs service.

We hope that through expanded, more personalized outreach efforts, the FirstNet tribal team and SPOCs will provide education about our processes and the value of the Network to tribal communities to ease tribal concerns. For example, with additional staff, FirstNet been able to work with the SPOCs to support direct site visits to tribes on their lands to provide customized listening sessions, and are participating in regional tribal meetings to discuss the value of being involved with the FirstNet process. Additionally, FirstNet is considering the development of a tribal consultation policy, consistent with the mandates of the Act.

FirstNet is mindful that public safety advocates have been persistently asking for the Network since the 9/11 Commission report recommendations were released in July 2004.⁷ In this regard, we are moving as expeditiously and responsibly as we can, while ensuring necessary involvement with public safety and complying with the Act and other applicable laws. Tribal concerns are a priority for FirstNet, and the above actions are intended to ease tribal concerns while increasing participation in planning and subsequent adoption.

We appreciate your continued interest in FirstNet. If there are any further questions, please contact FirstNet's Director of Government Affairs, Edward Parkinson, at [REDACTED]

⁷ "9/11 Commission Report", available at <http://govinfo.library.unt.edu/911/report/index.htm> (last accessed on March 5, 2016).

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115
Majority (202) 225-2927
Minority (202) 225-3841

March 3, 2016

Mr. David Furth
Deputy Chief
Public Safety and Homeland Security Bureau
445 12th Street, S.W.
Washington, DC 20554

Dear Mr. Furth:

Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, February 2, 2016, to testify at the hearing entitled "Status of the Public Safety Broadband Network."

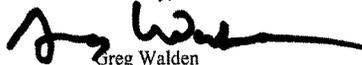
Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the same format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on Thursday, March 17, 2016. Your responses should be mailed to Greg Watson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to Greg.Watson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Greg Walden
Chairman
Subcommittee on Communications and Technology

cc: Anna G. Eshoo, Ranking Member, Subcommittee on Communications and Technology

Attachments

March 17, 2016

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Walden:

Enclosed please find responses to Questions for the Record and Member requests submitted for David Furth regarding his appearance before the Subcommittee on Communications and Technology on February 2, 2016, at the hearing entitled "Status of the Public Safety Broadband Network."

If you have further questions, please contact me at [REDACTED].

Sincerely,

Sean Conway
Deputy Director

cc: Anna Eshoo, Ranking Member, Subcommittee on Communications and Technology

Enclosures

House E& C FirstNet Hearing – February 2, 2016The Honorable Frank Pallone

Mr. Furth, in your written testimony you noted the importance of improving 911 systems concurrently with the rollout of FirstNet. Indeed, without improvements to network resiliency, during a disaster a consumer may not be able to call 911, as his or her carrier's network may be down. I have introduced the SANDy Act to make these networks stronger so that our phone service does not go down just when we need it the most.

1. In your view, would passage of the SANDy Act make communications networks more resilient and thus allow more consumers to reach 911 call centers during times of emergency or disaster?

Response to Question 1:

We have followed with interest your proposals in the SANDy Act. We agree that it is vitally important to focus on the resiliency of our wireless communications networks, particularly during times of disaster, because Americans increasingly rely on wireless service as their primary or sole means of communication. We have been actively working with the wireless carrier community to develop solutions that improve resiliency, help ensure that consumers can reach 911 call centers during disasters, and improve disaster preparation coordination. We expect to have more details to announce on this front in the near future, with many of the developments tracking closely with the spirit of the SANDy Act. We look forward to updating you once these commitments are finalized.

2. Are there any actions the Commission could take without additional legislation that could help improve 911 or speed up the arrival of next generation 911 systems?

Response to Question 2:

The Commission has been active on numerous fronts to improve 911 and accelerate the transition to Next Generation 911. Key recent actions include the adoption of text-to-911 requirements; strengthening our wireless 911 location accuracy rules to improve location of wireless calls from indoor environments; requiring that essential 911 facilities meet standards for reliability, redundancy, and remote monitoring; and requiring voice service providers to offer back-up power options to residential consumers. We are also considering further action in several ongoing rulemaking proceedings: in November 2014, we proposed a 911 governance regime to make 911 call completion more reliable and to eliminate gaps in local, state, and federal authority; in March 2015, we proposed updates to our Network Outage Reporting System (NORS) to reflect changes in technology and consumer usage. We are also promoting the transition to NG911 through the Task Force on Optimal Public Safety Answering Point Architecture (TFOPA), which just completed its comprehensive report on how PSAPs can integrate NG911 functionality into their operations. In short, the Commission has placed the highest priority on acting within the scope of its authority to modernize and improve the 911 system, and it intends to continue to pursue these initiatives vigorously. However, as Chairman Wheeler has pointed out, completing the transition to NG911 will require the commitment and work of many stakeholders from all levels of government and the private sector.

The Honorable Gus Bilirakis

1. Please provide a list of all meetings between FCC staff or any of the consultants retained to advise the FCC on the restructuring of the FCC Enforcement Bureau field offices and FirstNet regarding the FCC's plan to downsize its field office operations.
2. Please provide copies of any memorandum, notes, analysis, and emails regarding any meetings with FirstNet produced by FCC staff or any of the consultants retained to advise the FCC on the restructuring of the FCC Enforcement Bureau field offices.

Response to Questions 1 & 2:

The FCC's Field Office Modernization initiative is not an issue within my portfolio as Deputy Chief in the FCC's Public Safety and Homeland Security Bureau. Based on conversations with my colleagues in the Enforcement Bureau, I understand that during the preparation of the Field Modernization report that recommended these changes, EB and the FCC's consultants met with dozens of parties with an interest in the field modernization effort. It is my understanding that on public safety matters, the EB staff and consultants met with independent experts, EB field agents, and the National Telecommunications and Information Administration (NTIA), as well as public safety organizations such as the Association of Public Safety Communications Officials (APCO) and the National Public Safety Telecommunications Council (NPSTC). PSHSB staff participated in some of these meetings at which public safety issues were discussed. However, neither I nor other PSHSB staff participated in any meeting held with FirstNet as part of the field modernization effort, nor am I aware of any such meeting occurring.

I can tell you that the Commission is fully committed to supporting FirstNet and working with the first responder community to resolve issues in the field. For example, it is my understanding that EB, in close coordination with PSHSB, has reached out to FirstNet to establish lines of communication and ensure that EB is prepared to address any potential interference issues when FirstNet becomes operational. I also understand that our field offices have already engaged in targeted outreach to FirstNet pilot projects in Denver and LA, advising the points of contact about our interference resolution capabilities. In addition, I understand that our field staff is prepared to share the results of preliminary surveys of potential harmful emitters that may impact the FirstNet spectrum in key markets. According to my colleagues in EB, our field offices responded to virtually all public safety interference complaints last year within 24 hours. My colleagues in EB are confident that the new field structure will continue to provide the same level of exemplary service.