

# OVERSIGHT OF FIRSTNET: STATE PERSPECTIVES

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HEARING  
BEFORE THE  
SUBCOMMITTEE ON COMMUNICATIONS AND  
TECHNOLOGY  
OF THE  
COMMITTEE ON ENERGY AND  
COMMERCE  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED FIFTEENTH CONGRESS  
FIRST SESSION

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## **OVERSIGHT OF FIRSTNET: STATE PERSPECTIVES**

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**WEDNESDAY, NOVEMBER 1, 2017**

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

The subcommittee met, pursuant to call, at 10:40 a.m., in room 2322 Rayburn House Office Building, Hon. Marsha Blackburn (chairman of the subcommittee) presiding.

Members present: Representatives Blackburn, Lance, Shimkus, Guthrie, Kinzinger, Bilirakis, Johnson, Long, Flores, Brooks, Collins, Cramer, Walters, Costello, Doyle, Clarke, Loeb sack, Eshoo, Engel, Matsui, McNerney, and Pallone (ex officio).

Staff present: Ray Baum, Staff Director; Kelly Collins, Staff Assistant; Zachary Dareshori, Staff Assistant; Sean Farrell, Professional Staff Member, Communications and Technology; Chuck Flint, Policy Coordinator, Communications and Technology; Adam Fromm, Director of Outreach and Coalitions; Elena Hernandez, Press Secretary; Tim Kurth, Senior Professional Staff, Communications and Technology; Lauren McCarty, Counsel, Communications and Technology; Alex Miller, Video Production Aide and Press Assistant; Evan Viau, Legislative Clerk, Communications and Technology; David Goldman, Minority Chief Counsel, Communications and Technology; Jerry Leverich, Minority Counsel; Jourdan Lewis, Minority Staff Assistant; Lori Maarbjerg, Minority FCC Detailee; Jessica Martinez, Minority Outreach and Member Services Coordinator; and Dan Miller, Minority Policy Analyst.

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

Mrs. BLACKBURN [presiding]. The Subcommittee on Communications and Technology will now come to order.

I recognize myself for 5 minutes for an opening statement.

I want to welcome everyone to this, as we continue our committee's oversight of FirstNet, the authority charged with deploying a nationwide interoperable broadband public safety network. The First Responder Network Authority was an important fixture of the Middle Class Tax Relief and Job Creation Act of 2012.

There is a lot of work that has been done by this committee and others, and it has gone into reviewing the recommendations from the 9/11 Commission on how to better prepare our first responders in times of crisis. Interoperability has long been a challenge for our

state and local authorities. In the wake of the recent natural disasters and, of course, the terror attack that took place in New York City just yesterday, we have realized how incredibly important that it is that not only we do this, but that we get this right. There is no room for error when you are facing a disaster and need these communications.

I thank the witnesses for appearing today.

Mike Poth is the CEO of FirstNet. He now has both the privilege and the pressure of this huge undertaking. We know that it is going to be successful, and we look forward to making certain that the implementation is smooth and that the continuation is one of success.

Chris Sambar is a Senior VP at AT&T, and his company is the winner of FirstNet's RFP to gain access to 20 megahertz of the 700-megahertz spectrum.

Our friends from the states include John Stevens, who is the New Hampshire Statewide Interoperability Coordinator, and Brian Moran, who is the Virginia Secretary of Public Safety and Homeland Security. Their unique perspective of what states are thinking will illuminate how to avoid a top-down approach that could lead to failure.

Rob LeGrande consults now, but was the CTO for Washington, D.C., in building out a public safety broadband network. I am sure that he is going to be able to help us sort out issues that the states and localities face, and perhaps can even give us a little bit of a more granular view on how to address challenges that are in our rural and tribal areas, and how we work to calculate their decisions.

As you all know, this past September, FirstNet delivered its network plans to the combined states and territories. Part of what brings us here today is the December 28th deadline from that notice for those states and territories to elect whether they will accept the plan. Under the statute, states are permitted to opt into their respective state plan or opt out of the FirstNet network and build and maintain radio access networks, or RANs, from other providers, but still meet interoperability requirements set by the FCC.

I think it is also worth pointing out that, while AT&T will build the FirstNet RAN in opt-in states or territories at no cost to each jurisdiction, public safety entities will still be responsible for paying subscription cost and end-user device expenses. And they are not required to subscribe to the FirstNet service. We must ensure that choice remains a paramount principle as the states and territories proceed with their decisionmaking and their implementation.

While there has been some debate on schedules and fees, subscriber levels, device availability, and whether the network will be able to deliver mission-critical-level services, I know the panel today can help us sort through all of these issues to further reaching this goal.

At this time, I would yield the balance of my time to Mr. Lance.  
[The prepared statement of Mrs. Blackburn follows:]

#### PREPARED STATEMENT OF HON. MARSHA BLACKBURN

Welcome to the committee's continuing oversight of FirstNet, the authority charged with deploying a nationwide, interoperable broadband public safety net-

work. The First Responder Network Authority was an important fixture of the Middle-Class Tax Relief and Job Creation Act of 2012. A lot of work at this committee went into reviewing the recommendations from the 9/11 commission on how to better prepare our first responders in times of crisis. Interoperability has long been a challenge for our state and local authorities, and in the wake of the recent natural disasters they have faced, its importance is as clear as ever.

I thank the witnesses for appearing today. Mike Poth is the CEO of FirstNet. He now has both the privilege and the pressure on this huge undertaking being a success, but I can assure folks in this room we intend to be part of its successful implementation. Chris Sambar is a senior vice president at AT&T, and his company is the winner of FirstNet's RFP to gain access to 20 MHz of the 700 MHz spectrum. Our friends from the states include—John Stevens, who is the New Hampshire Statewide Interoperability Coordinator, and Brian Moran, who is the Virginia Secretary of Public Safety and Homeland Security. Their unique perspective of what states are thinking will illuminate how to avoid a top down approach that could lead to failure. Rob LeGrande consults now, but was the CTO for Washington, DC in building out a public safety broadband network. I'm sure he can help us sort out issues states and localities face, and perhaps can even be a bit more granular to address challenges those in rural and tribal areas have to calculate in their decisions.

As you all know, this past September, FirstNet delivered its network plans to 53 states and territories. Part of what brings us here today is the December 28th deadline from that notice for those states and territories to elect whether they will accept the plan. Under the statute, States are permitted to opt-in to their respective State Plan, or opt-out of the FirstNet network and build and maintain radio access networks, also referred to as RAN, from other providers but still meet interoperability requirements set by the FCC. I think it's also worth pointing out that while AT&T will build the FirstNet RAN in "opt-in" states or territories at no cost to each jurisdiction, public safety entities will still be responsible for paying subscription costs and end-user device expenses, and they are not required to subscribe to the FirstNet service. We must ensure that choice remains a paramount principle as the states and territories proceed with their decision-making and implementation.

While there has been some debate on schedules of fees, subscriber levels, device availability, and whether the network will be able to deliver mission critical level services, I know the panel today can help us sort through all the issues to further everyone's goal of making this a transparent and successful process.

Mr. LANCE. Thank you very much, Madam Chair.

Before I begin, let me say that our prayers are with the victims of the terrorist attack in New York yesterday, the worst loss of life in such an attack since 9/11.

Our 9/11 first responders from all over the tri-state area responded to the unprecedented attack on the World Trade Center. Several issues with their communications system, including interoperability and resiliency, hindered the coordination of these fine public agencies. The equipment and networks used by the various departments that responded from all over the area, including New Jersey, were in many cases incompatible. These issues were recognized by the 9/11 Commission.

As New Jersey was one of the first states to opt into FirstNet, I am interested in learning how our state and others can work with AT&T and the providers to prevent future challenges with interoperability and public safety agencies, as well as improving the resiliency and security of our public safety networks.

Thank you for being here today to discuss this important topic. I yield back.

Mrs. BLACKBURN. The gentleman yields back.

At this time, Mr. Doyle, you are recognized for 5 minutes.

**OPENING STATEMENT OF HON. MICHAEL F. DOYLE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA**

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

FirstNet and the National Public Safety Broadband Network have come a long way and made great progress in the 5 years since the program was established. FirstNet has designated its partner in AT&T. States have received their buildout plans, and 25 states and two territories have already opted to accept FirstNet's plans. By the end of the year, all states will have to decide whether to opt in or opt out of the FirstNet plans.

I am pleased with the progress that FirstNet and AT&T have made, and I hope this program continues to perform well as more states opt in and the buildout of FirstNet begins in earnest.

Now I know a lot of hay has been made recently about the opt-out process and the costs for states to choose that route. States looking into opting out seem overwhelmed by the potential punitive cost and the risk they take on in building and managing their own network. Companies seeking to get states to opt out see this as a barrier to their entry into this market and a stumbling block to meaningfully engaging with states.

To my mind, the cost and risks placed on the states for opting out are steep because building and maintaining these networks is a hard and risky endeavor. Without access to tens of billions of dollars necessary to build out a dedicated network of their own, states that opt out need to gamble on a private partner's ability to leverage private capital, utilize a relatively small amount of shared spectrum, and undertake the buildup of a hardened multibillion dollar communication network. And they need to do all of this in a timeframe that is competitive with FirstNet, using technologies and systems that are fully interoperable.

To my mind, the monetary risk is so great because this is a hard problem and the likelihood of failure is high. More to the point, the risk to the public at large and first responders is high if a state fails to meet its obligations. If building this network wasn't hard, Congress wouldn't have needed to create FirstNet; first responders wouldn't have died on 9/11 because of communication failures, and the 9/11 Commission would not have recommended the creation of a national interoperable public safety communications system.

Building this network and deploying the service is a serious challenge and we need serious solutions. States are free to make their own choices, but they need to understand and accept the risks. It is something I would encourage governors contemplating an opt-out to strongly consider.

I have also seen reports of competitors seeking to sign up individual first responders complaining about the requirements of creating interoperable services with FirstNet. Let me say, I am strong believer in the value of competition, but I also believe that, if other providers want to offer services to first responders, they need to be fully interoperable. Lower-cost services and devices can't fix the problem first responders face if they are not interoperable. We are still seeing this issue today in Texas, Florida, Puerto Rico, the Vir-



gin Islands, and the wildfires that affected the areas of the West Coast.

Americans are lucky and grateful that so many people volunteer to help when disaster strikes, and first responders come from far and wide to help. What we need to do is ensure that they have access to the best available interoperable technologies. If a competitor can provide that, great. If they can't and they are putting equipment in people's hands that isn't interoperable, that is liable to create a problem rather than solve one.

I look forward to the testimony of our witnesses and the discussion here today.

With that, Madam Chair, if there is no one on my side that would like my time, I will yield what I have left to Mr. McNerney.

Mr. McNERNEY. Well, I thank the ranking member for yielding.

The recent wildfires in my home State of California shed light on the critical role of our nation's first responders and the need for first responders to be effectively communicating and receiving information during these emergencies. It is essential that we have a resilient and redundant interoperable broadband network, so that our first responders are equipped to carry out their duties during natural disasters.

But it is also important that this network be secure and able to withstand attacks from the various actors. We cannot afford for cybersecurity to be an afterthought in these scenarios because the consequences could be fatal.

I look forward to the hearing and learning about FirstNet, what FirstNet is doing and the progress that it has made so far.

And I yield back.

Mr. DOYLE. Thank you.

Madam Chair, I would like to introduce for the record an op-ed by Montgomery County's chief of police entitled, "For police, first responder communications network is much needed good news".

And also, I would like to introduce the written testimony submitted by Verizon.

Mrs. BLACKBURN. Without objection, so ordered.

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

Mrs. BLACKBURN. And as we permit this, I would just like to say I noticed that there are several first responders in the audience today, and we recognize your presence and we thank you ever so much for your service. You are, indeed, on the frontlines.

Chairman Walden is not here. Does anyone on the Republican side seek his time?

[No response.]

No one is seeking that time. Ranking Member Pallone is not here. Anyone else seeking time?

[No response.]

No one else is seeking time. Everybody has got a sugar coma going on, I know. Yes, too much of that candy.

[Laughter.]

And we do thank all of our witnesses for being here today. We are grateful for your preparation, for your opening statements that were submitted in a timely manner, for your insights into what is before us.

As you can see, this is something where there is bipartisan agreement. Doing our due diligence in conducting oversight is important. So, we welcome each of you.

I previously recognized you. Michael Poth, who is the CEO of FirstNet; Chris Sambar, who is the Senior VP at AT&T for FirstNet Business Solutions, Global Public Sector; Rick Kaplan, who is the General Counsel and Executive VP of the National Association of Broadcasters. John Stevens is the Statewide Interoperability Coordinator for the state of New Hampshire, and Robert LeGrande, who is the former CTO of Washington, D.C., now a consultant.

Again, we appreciate that you are here. We will begin our panel. Mr. Poth, you are recognized for 5 minutes.

**STATEMENTS OF MICHAEL POTH, CEO, FIRST RESPONDER NETWORK AUTHORITY; CHRISTOPHER SAMBAR, SENIOR VICE PRESIDENT, AT&T; JOHN T. STEVENS, STATEWIDE INTEROPERABILITY COORDINATOR, STATE OF NEW HAMPSHIRE; BRIAN J. MORAN, SECRETARY OF PUBLIC SAFETY AND HOMELAND SECURITY, STATE OF VIRGINIA; AND ROBERT LEGRANDE, II, FOUNDER, THE DIGITAL DECISION**

**STATEMENT OF MICHAEL POTH**

Mr. POTH. Great. Thank you, Chairman Blackburn, Ranking Member Doyle, and members of the subcommittee. Thank you for inviting me to testify today.

I am Mike Poth, the Chief Executive Officer of FirstNet, and I am pleased to be here to provide an update and progress on this important initiative for our nation's first responders.

FirstNet is committed and accountable to this committee and Congress, but, first and foremost, to public safety. And it is the mission of serving public safety that drives my team toward exceeding the goals that you set out for us when you established FirstNet.

I, too, would also like to thank the members of public safety who are in attendance today. We really appreciate their focus and commitment.

We have faced an enormous task in developing this system over the past few years. Nothing like this has ever been done before, but thanks to the support of Chairman Walden, Ranking Member Pallone, and all of you here today, we are closer than ever to providing public safety what they have long asked for, a dedicated network that will save lives.

We have spent the better part of 3 years consulting with our partners in the states and territories and tribal nations to ensure that we have gathered the needs of local first responders. This is a very complex technical, operational, and logistical effort to meet the needs and expectations of public safety.

Since our contract signing that Chairman Blackburn attended a little over 7 months ago, significant progress has been made. I am happy to report that AT&T has met or exceeded all of its required deliverables. There is a clear line of sight and plan for a successful implementation in the coming years, depending on the final deter-

minations of the remaining states completing their due diligence on their options.

We have now established a binding contractual mechanism to ensure the successful buildout in the 56 states and territories of a nationwide public safety broadband network and the financial sustainability to support this effort for the next 25 years.

It is important to note that we are holding AT&T accountable while ensuring that we support their efforts. Their success is critical in order for this to work. If they fail, then we have to go back to the drawing board.

It is important to remember and give context that, through this contract, AT&T is already contractually obligated to build out the system in the 56 states and territories to the plan that has been submitted to each of those states. This includes spectrum lease payments, adoption targets, disincentive and termination fees, if they fail to meet the terms of the contract. Only in those states that decide to pursue building their own radio access network is that obligation lifted from AT&T. FirstNet, along with our board of directors, the Departments of Commerce, Justice, Homeland Security, and the Office of Management and Budget continue to work alongside AT&T to ensure that they meet all the contractual requirements.

Over the last 3 years, FirstNet has gone to great measures to make sure that all the states and governors fully understand the opportunities, risks, and challenges to opting out. It is important to note, however, that FirstNet will do everything possible to make sure that an opt-out is successful. This process is involved, as failure, as has been previously mentioned, at the national, state, or local levels is not an option for our first responders.

We have delivered the final plans to the states and territories. Twenty-eight governors have approved and opted in, and another state will actually be announcing its opt-in choice this afternoon. This is truly an exciting time while the remaining 27 governors have 58 days left to make their final determination to either accept the FirstNet/AT&T's solution or assume the risks associated with opt-out.

It is, again, important to note that FirstNet has been open and transparent in every step, ensuring that everyone who is involved in this process has as much information as possible. We built in new steps as needed that allowed the states and the business communities to step up and become true partners. Ultimately, each state and governor have all the information possible to make an informed decision.

The public and first responders need us to be successful. Lives will depend on this network. This is the standard against which we will be measured. When you look at the recent storms that brought devastation to Texas, Florida, and Puerto Rico, and the inconceivable tragedies that took place in Las Vegas and now New York, communications are a vital part of any response and recovery.

We are proud of what we have achieved thus far, but we also know that we have a long way to go to deliver to public safety what it truly needs and deserves. This has never been done before. And FirstNet will continue to work with each state and territory to get it right for them and for public safety.

Thank you again, and I look forward to answering your questions.  
[The prepared statement of Mr. Poth follows:]

Written Testimony of Michael Poth  
Chief Executive Officer, First Responder Network Authority (FirstNet)  
Before the  
Subcommittee on Communications and Technology  
Energy and Commerce Committee  
United States House of Representatives  
A hearing entitled:  
“Oversight of FirstNet: State Perspectives”  
November 1, 2017

Introduction

Chairman Blackburn, Ranking Member Doyle, and all Members of the Subcommittee, I would like to thank you for the opportunity to appear today to provide an update on the progress we are making at FirstNet toward the deployment of an interoperable, nationwide public safety broadband network (NPSBN or Network).

Progress towards a Network

FirstNet intends to provide a cutting-edge wireless broadband communications system, with priority and pre-emption, to millions of first responders at the local, state, tribal, and federal levels across all states, territories, and the District of Columbia, consistent with the vision laid out in the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) (Act). By enabling the Network’s deployment, FirstNet will provide a dedicated, ubiquitous solution that helps solve public safety’s decades-long interoperability and communications challenges, which includes advanced communications services, devices, and applications to help first responders and other public safety personnel make communities safer.

FirstNet’s goal of deploying the Network, and thereby meeting the needs of first responders, is a matter of critical importance for public safety, and today we are closer than ever before to accomplishing this goal. Since its inception, FirstNet has taken the necessary steps to build an organization, execute a vigorous consultation and outreach strategy, develop and release a comprehensive request for proposals (RFP), select an experienced and proven wireless industry leader for a first-of-its-kind public-private partnership, and lay the groundwork for a successful deployment of the NPSBN. Much has been accomplished.

However, as it is with any unprecedented undertaking, every step forward presents new challenges and requires identification of innovative solutions. The past three years have involved hundreds of thousands of working hours to solve the various challenges FirstNet has faced. I am proud to say that today we have an organization of people who have approached these challenges head on and advanced the mission with a clear and unwavering dedication to public safety. The organization is dedicated to fulfilling FirstNet’s responsibilities to the public safety community; creating a culture of hard work, openness, and transparency; developing a successful public-private partnership; and continuing to educate, inform, and obtain input from FirstNet’s partners in the states and public safety stakeholders.

The Selection of AT&T

At a signing ceremony on March 30, 2017, Secretary of Commerce Wilbur Ross announced FirstNet’s award of the nationwide NPSBN contract to AT&T. The attendees included AT&T CEO Randall

Stephenson, Federal Communications Commission (FCC) Chairman Ajit Pai, Chairman Blackburn and other Members of Congress and staff, FirstNet Board members, FirstNet leadership, and, most importantly, public safety representatives.

Prior to the ceremony, the FirstNet Board voted unanimously to authorize the award. With the Board's authorization, FirstNet and the Department of the Interior, which assisted FirstNet with the Network procurement, made the 25-year award to AT&T based on a careful evaluation of the proposals against the evaluation criteria articulated in our comprehensive RFP. Based on this rigorous review the determination was made that AT&T's proposal presented the overall best value solution for FirstNet and public safety.<sup>1</sup>

#### The Benefits of a Public-Private Partnership

Before listing the details of the solution FirstNet and AT&T are delivering to public safety, it is important to understand the benefits of the public-private partnership. By leveraging private sector resources, infrastructure, and cost-saving synergies to deploy, operate, and maintain the Network, as directed by the Act, the NPSBN can be deployed quickly, efficiently, and far more cost-effectively than any other model.

Congress foresaw the benefits such a partnership could offer and gave FirstNet the tools necessary to engage the private sector, thereby allowing the private sector to do what it does best – i.e., leverage the market to determine the best deal at the best price, while ensuring that a dedicated, interoperable Network is built to public safety's requirements. The fact remains that neither party – FirstNet nor AT&T – on its own could build a network like the FirstNet Network. It would be too expensive and too burdensome. A public-private partnership ultimately will provide a Network that benefits public safety in a manner that would have been impracticable to achieve if left solely to the private sector or federal government.

FirstNet is confident that the Network will also provide many specialized features. In addition to priority, preemption, and robust rural coverage, public safety will have access to FirstNet-dedicated deployable equipment for use during disasters and pre-planned events, as well as in-building solutions – because FirstNet recognizes that first responders' communications do not stop at the curb.

The solution also includes a customer service center dedicated specifically to public safety – available 24/7, 365 days a year; a dedicated FirstNet core with built-in redundancy to provide end-to-end FISMA compliant cybersecurity; and an entire eco-system of devices, apps, and tools for public safety, including a FirstNet app store. Each of these features will be a first for public safety as they are not currently available on any network today.

#### How the Network Will Help Public Safety

The ability to communicate seamlessly across jurisdictions is critical for law enforcement, fire, and emergency medical services (EMS) during day-to-day operations, when securing large events, or responding to emergencies and disasters. In those instances, networks can become overloaded and

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<sup>1</sup> We were able to move forward with an award to AT&T after a March 17, 2017, decision by the U.S. Court of Federal Claims to deny a protest filed by one of the unsuccessful bidders.

inaccessible, limiting responders' use of vital communication technologies, such as smartphones and applications dedicated to public safety services.

By providing unfettered, uninterrupted access to wireless spectrum, the NPSBN will help improve response times and situational awareness for public safety from coast-to-coast, every state, territory, and across tribal and federal land, in both rural and urban areas, leading to safer and more secure communities, and first responder safety.

The market certainty the Network will provide through a long-term commitment, scale, and capacity will enable private sector investment and innovation for advanced life-saving technologies, tools, and services, such as:

- Applications that allow first responders to reliably share videos, text messages, photos, and other information during incidents in near real-time;
- Advanced capabilities, like camera-equipped connected drones and robots, to deliver images of wildfires, floods, or other events;
- Improved location services to help with mapping capabilities during rescue and recovery operations; and
- Wearables that could relay biometric data of a patient to the hospital or an alert when a fire fighter, police officer, or paramedic is in distress.

Network technology will also be tested and validated through the FirstNet Innovation and Test Lab, located in Boulder, Colorado, to ensure first responders have the public safety grade, proven tools they need and can trust day-to-day and during disasters and emergencies.

#### State Plans

On June 19, FirstNet and AT&T delivered initial State Plans to the states and territories for review and comment three months ahead of schedule.<sup>2</sup> This marked a major milestone in the deployment of FirstNet.

Since 2013, FirstNet has worked hand-in-hand with the states, territories, localities, federal authorities, tribes, and the public safety community to make sure the Network is specifically built for their needs. FirstNet's consultation efforts included more than 140,000 engagements with public safety stakeholders nationwide, and the collection of data from states and territories that accounted for more than 12,000 public safety agencies representing more than 2 million public safety personnel.

Developed with this input, the customized State Plans outline the coverage, features, and mission-critical capabilities FirstNet and AT&T will bring to first responders and other public safety personnel. States have had the opportunity to identify priorities and concerns related to Network coverage

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<sup>2</sup> The initial State Plans for three territories (Guam, Northern Mariana Islands, and American Samoa) were delayed. These plans have now been uploaded to their respective portals, and FirstNet met with representatives from each of the territories in Honolulu, Hawaii on October 24 and 25. At that meeting FirstNet discussed the unique characteristics of the territorial and geographic regional response goals. Governance models, and operational needs, along with future collaboration between the territories and FirstNet were also discussed.

(including in rural areas) and services. Consistent with the Act, FirstNet has also encouraged state-designated single points of contact (SPOCs) to include tribal stakeholders in FirstNet engagements and solicit feedback and collect data from the tribes in their states to ensure those priorities and concerns were incorporated in the State Plans. Based on this feedback, FirstNet and AT&T determined a path forward, where possible, to address these requirements.

Tribes sought a more formal consultation process where there was less reliance on States to convey Tribal priorities and concerns to FirstNet. Subsequently, FirstNet determined that once governors made their “opt-in/opt-out” decisions, FirstNet will conduct a formal Tribal consultation process. On October 23, 2017, FirstNet released its Tribal consultation policy.<sup>3</sup>

FirstNet and AT&T have created a public website: FirstNet.com. This website provides information about the FirstNet solution, the unique value of the FirstNet Network to public safety, and how public safety entities may subscribe to FirstNet once a state or territory opts in. The site will host information on quality of service, priority and preemption; local control features; the applications store; devices and accessories for FirstNet; and coverage and rate plans.

#### Official Notice

We are now in a critical decision-making time for the FirstNet project. On September 29, 2017, FirstNet provided official notice to governors, as required by the Act, which included notification of the completion of the RFP process for the state, the delivery of the State Plan, and the funding level for the state as determined by the National Telecommunications and Information Administration (NTIA).<sup>4</sup> The official notice initiated the 90-day clock that the Act provides for each state or territory governor to make an “opt in/opt out” decision on its State Plan.<sup>5</sup> The deadline for governors to make this decision is December 28, 2017.

FirstNet and AT&T will continue to actively engage with the states and territories to support their review of their respective State Plans and answer questions.

#### The Governors’ Decision

The decision that a governor faces is one that will have profound consequences on the ability of public safety in his or her state or territory to gain access to mission critical broadband.

<sup>3</sup> <https://www.firstnet.gov/consultation/tribes>

<sup>4</sup> See “NTIA Release of Funding Level Determination for Each State” (Sept. 29, 2017), available at: <https://www.ntia.doc.gov/other-publication/2017/ntia-release-funding-level-determination-each-state>.

<sup>5</sup> As noted above, FirstNet is still working with Guam, the Northern Mariana Islands, and American Samoa on their State Plans, and thus did not provide official notice to the Governors of these territories on September 29, 2017. The 90-day decision period has not yet begun for these territories. With respect to Puerto Rico, due to the unique circumstances related to Hurricane Maria and the difficulty related to basic services operating in the wake of the storm, FirstNet has been unable to confirm the receipt by the Governor of the official notice, and therefore, the 90-day decision period for Puerto Rico has also not yet begun. The Governor, however, has previously pledged his support for the deployment of the FirstNet Network in Puerto Rico.



#### Opt in:

A governor's decision to opt in will enable FirstNet and AT&T to begin the process of delivering services to that state or territory's public safety community. It is a decision that will also drive infrastructure investments and job creation.

If a state affirmatively opts in or takes no action on the State Plan within 90 days of receiving notice, which under the Act is also a decision to opt in, FirstNet will be able to start the process of deploying the Radio Access Network (RAN) portion of the FirstNet Network in the state at no cost to the state. States do not have to wait the full 90 days to make an opt-in decision, and several states have already provided notice of their intention to opt in. The opt-in path is a low-risk option that will support faster delivery of services to the state's public safety community.

We anticipate a significant number of opt-in announcements over the weeks and months ahead now that the 90-day clock has started.

#### Opt out:

If the state elects not to participate in the FirstNet RAN deployment, pursuant to the Act, it must provide notice to FirstNet, the FCC, and NTIA within 90 days after receiving official notice from FirstNet, and within 180 days of such notice to FirstNet, the state must develop and complete an RFP for the state RAN. Subsequently, it must submit an alternative plan to the FCC for the construction, maintenance, operation, and improvement of the RAN in the state within 60 days of RFP completion. The state RAN must be interoperable with the Network and comply with FirstNet's requirements and standards for the Network. Before the state's RAN deployment can begin, the FCC must approve the alternative plan, and, if approved, the state must then apply to NTIA for the right to enter into a spectrum capacity lease with FirstNet, and ultimately agree to the terms of such a lease with FirstNet through a Spectrum Manager Lease Agreement. The state may also apply to NTIA for a state RAN construction grant under the State Alternative Plan Program.<sup>6</sup>

Opt out states will assume all technical, operational, and financial risks and responsibilities related to building, operating, maintaining, and improving their own RAN for the next 25 years. Given the statutorily mandated processes, it is possible a state pursuing opt out will be at least two years behind states that opt in.

It is important to note that if a state or territory wishes to opt out, FirstNet will do everything we can to make that opt-out process a success. Public safety cannot afford to have areas of no service throughout the country. We are encouraging states and territories to look at all the information in the State Plans to ensure that they fully understand the risks and requirements associated with opting out. We are confident that each State Plan will deliver the coverage, services, value, and experience states and territories expect for their first responders, bringing us closer to making the cutting-edge Network and technologies that public safety has been asking for a reality.

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<sup>6</sup> Additional information regarding the grant program will be available from NTIA in a forthcoming SAPP Notice of Funding Opportunity.

#### Spectrum Manager Lease Agreement

Congress created FirstNet to ensure the establishment of the NPSBN and made FirstNet the sole licensee of the Band 14 public safety spectrum. As mentioned previously, under the Act, a state that chooses the opt-out option and successfully completes the congressionally mandated approval process must enter into a Spectrum Manager Lease Agreement (SMLA) with FirstNet in order to use FirstNet's licensed spectrum. The SMLA is a binding agreement between the opt-out state and FirstNet establishing the terms and conditions for the state's use of the Band 14 public safety spectrum. The agreement reflects the requirements of the Act, standard telecommunications industry regulations, the NPSBN's critical role in supporting public safety communications, and the significant responsibilities involved with deploying a wireless broadband network for public safety.

In short, the SMLA sets forth requirements associated with the state building, operating, maintaining, and improving its own RAN, including the state's financial obligations to the federal government. These requirements are intended to ensure the ongoing operation of an interoperable, secure, and sustainable network that meets the needs of public safety across the nation, and they are similar to the requirements that FirstNet will deliver to opt-in states.

#### Conclusion

For more than three years, FirstNet has worked hand-in-hand with our partners in the states and territories to develop a Network that meets the needs and objectives of our nation's first responders and other public safety personnel. After thousands of meetings and countless discussions with the public safety community, we feel confident about the overall Network solution and individual plans that we have proposed for each state and territory because they have been driven by and reflect public safety stakeholders' input throughout the nation.

FirstNet has made a great deal of progress over the past year. We successfully completed a comprehensive nationwide RFP process; awarded a 25-year contract to AT&T - an innovative private sector technology partner who has nearly 140 years of experience serving the public safety community; and worked effectively and efficiently with AT&T to deliver State Plans three months ahead of schedule and update those plans based on stakeholder input. We are now focused on preparing for the deployment of the Network in opt-in states and territories and the next crucial phase of the project - public safety user adoption.

While there has been much success, we still have work to do. As the recent Government Accountability Office report highlighted, there are areas for improvement, and FirstNet is dedicated to continuing to strive for excellence in every area.<sup>7</sup>

Through cooperation with the Department of Commerce, NTIA, the FCC, the federal members of the FirstNet Board—the Secretary of Homeland Security, the Attorney General, and the Director of the Office of Management and Budget—and other federal partners, FirstNet has continued to meet our commitment to the States and public safety community. We have been able to achieve a great deal over the past year. Moving forward, we plan to continue to leverage these partnerships. Ultimately, the most important action that FirstNet must take is to continue to listen to public safety community. We at

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<sup>7</sup> U.S. Government Accountability Office, *Public Safety Broadband Network: FirstNet Has Made Progress Establishing the Network, but Should Address Stakeholder Concerns and Workforce Planning* (2017).

FirstNet have been entrusted by the public safety community to deliver what they need in order to keep us safe. It is this belief that drives us at FirstNet and will ensure that we accomplish what public safety community deserves – excellence in service, reliability, and performance.

Mrs. BLACKBURN. The gentleman yields back.  
Mr. Sambar, you are recognized for 5 minutes.

**STATEMENT OF CHRISTOPHER SAMBAR**

Mr. SAMBAR. Thank you.

Chairman Blackburn, Ranking Member Doyle, members of the committee, I am Chris Sambar, AT&T Senior Vice President. I am responsible for AT&T's fulfillment of the FirstNet project, a special opportunity for AT&T and its dedicated employees to demonstrate their continued commitment spanning two centuries to public service and public safety.

I am proud to affirm to this committee that AT&T is on track to deliver on its commitments and has, in fact, met the first set of milestones identified in the FirstNet contract, as Mr. Poth mentioned. We have also launched the FirstNet application ecosystem, including an application store for America's first responders, as well as the first ever developer program geared specifically for first responders.

And now, again, as Mr. Poth mentioned, we have over half of the states and territories having made the decision to opt into FirstNet. AT&T is delivering on the promise of a dedicated interoperable network that will give first responders in those states and territories the technology they need to effectively communicate and collaborate across agencies and jurisdictions.

Before FirstNet, first responders frequently lacked the ability to communicate with each other and to coordinate incident response activities across agencies and jurisdictions. Relying on over 10,000 radio networks as well as the same commercial networks that Americans used today, first responders have been hampered by a lack of interoperability and network congestion during times of significant emergency.

The recent unprecedented sequence of natural disasters and public safety incidents over the past couple of months have reinforced the wisdom of the widespread bipartisan consensus of Congress in 2012 to establish the First Responder Network Authority, FirstNet, as an independent authority within NTIA, to provide emergency responders with the first nationwide high-speed broadband network dedicated to public safety.

AT&T is honored to have been chosen to build and manage the FirstNet network. We committed to spend about \$40 billion over the life of the FirstNet contract to build, operate, and maintain the network. AT&T also committed to connect the first responder network to our best-in-class telecommunications network, valued at over \$180 billion, with a wireless network reaching 99.6 percent of the U.S. population.

Moreover, AT&T submitted a plan that ensures that local commanders in opt-in states can adjust the access in times of emergencies to the services, featuring priority and preemption, allowing others such as bus drivers during pre-storm evacuation or medical personnel after the storm has passed to have access to the same services in time of need. Priority access means just that. In times of network congestion, our first responders will have communications precedent for primary users, be able to preempt other users off of the AT&T and FirstNet network.

In earning the FirstNet contract, AT&T demonstrated its particular competencies with respect to world-class national disaster recovery. The national disaster recovery team at AT&T recently demonstrated its value in preparation for and during the aftermath of the devastating hurricanes that recently hit Texas, Florida, Puerto Rico, the U.S. Virgin Islands, and, most recently, the California wildfires.

We helped, and are continuing to help, restore communications in these areas by deploying an array of equipment, including portable cell sites, cell on light trucks—we call those COLTs—generators, charging stations, evacuee centers, and emergency communications vehicles. We used ships and chartered cargo flights to deliver this equipment to our NDR personnel in Puerto Rico. In northern California we were able to move mobile restoration assets in quickly and place them in areas where fire had destroyed our communications equipment and where first responders needed them most.

In the meantime, there are significant and immediate benefits to states that opt into the FirstNet network. Opting in eliminates long-term risks associated with funding, building, and for the next 25 years maintaining a network that interoperates with the FirstNet network. Public safety entities in states or territories that opt in can purchase, at competitive rates, service with key features such as quality of service, priority access, and preemption. Notably, preemption over the AT&T LTE network for primary users is expected by this year's end.

In conclusion, I would like to reiterate that Congress intended for FirstNet to provide the public safety community with what it demanded for years, a single interoperable public safety network. That network that AT&T is building for opt-in states and territories brings security, priority, and preemption.

And I look forward to answering any questions you have today.  
[The prepared statement of Mr. Sambar follows:]

**STATEMENT OF CHRIS SAMBAR**

**AT&T Senior Vice President, FirstNet**

**AT&T Inc.**

**Hearing: "Oversight of FirstNet: State Perspectives."**

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

**November 1, 2017**

Thank you, Chairman Blackburn, Ranking Member Doyle, and Members of the Committee.

I am Chris Sambar, AT&T Senior Vice President – FirstNet. AT&T is a company with a 140-year heritage of innovation that includes 8 Nobel Prizes and more than 15,000 patents and pending patents worldwide. We employ more than 200,000 people in the United States, and over the past five years, we've invested more in the U.S. than any other public company — nearly \$135 billion.

I appreciate the opportunity to update the Committee on the progress FirstNet and AT&T are making to provide a nationwide broadband network for public safety. I head a group at AT&T dedicated to building and operating that network for decades to come. And I can assure you that AT&T is fully committed to delivering a dedicated, interoperable network that will give first responders the technology they need to communicate and collaborate across agencies and jurisdictions during emergencies. This opportunity aligns with our centuries-old history of serving the U.S. federal government and the public safety community. I am also pleased to report that AT&T is on track to deliver on its commitments and has, in fact, met the first set of

milestones identified in the FirstNet contract. We have also launched the FirstNet application ecosystem, including an app store for America's first responders, as well as the first app developer program geared toward our first responders. And now, with half of the states and two territories having "opted in" to FirstNet, AT&T is beginning to deliver on the promise of FirstNet to first responders in those states.

Supporting public safety is part of our company's DNA. As a retired Naval officer and Navy SEAL, public service has been a calling throughout my adult life. I view FirstNet as a special opportunity to do it again for a company that shares a commitment to public service and public safety.

#### **FirstNet Background and Purpose**

First responders frequently lack the ability to communicate with each other during emergencies. In fact, first responders rely on over 10,000 radio networks for voice communications to do their job and they use the same commercial wireless networks that we all do. Those networks can quickly become congested during a significant emergency. We have unfortunately witnessed how these issues hamper first responders, such as in responding to the 9/11 attacks and in other emergencies since. The recent devastating hurricanes and wild fires remind us how important communication is during such events.

In response, Congress recognized that we can and should do better to support our first responders and their critical mission – to save lives. And in 2012 Congress passed legislation that created the First Responder Network Authority (FirstNet) as an independent authority within NTIA to

provide emergency responders with the first, nationwide, high-speed, broadband network dedicated to public safety. Congress established FirstNet to deliver a robust, highly secure, and efficient communications network that will help responses to emergencies as they unfold. And that is exactly what FirstNet and AT&T intend to deliver.

**AT&T's Commitment to FirstNet**

As I said, AT&T is honored to have been chosen to build and manage the FirstNet network, and we are committed to bringing to bear all the necessary resources to ensure its success, just as Congress envisioned. What will that mean?

First, as part of its commitment, AT&T will spend about \$40 billion over the life of the FirstNet contract to build, operate and maintain the network. AT&T will connect FirstNet to its world-class telecommunications network valued at over \$180 billion, with a wireless network reaching 99.6% of the U.S. population.

Second, I am also proud that AT&T will support FirstNet with its world-class Network Disaster Recovery (NDR) Team. This team, which we established over 25 years ago, has a single mission: to recover AT&T voice and data service in areas affected by a disaster. The NDR solution combines network infrastructure and support trailers, recovery engineering software applications and a response team with both full-time and volunteer members from AT&T. Team members have spent more than 130,000 working hours on field exercises and deployments over the last two decades.



The NDR team demonstrated its worth after the devastating hurricanes that recently hit Texas, Florida, Puerto Rico and the U.S. Virgin Islands. We helped and are continuing to help restore communications in these areas by deploying an array of equipment, including portable cell sites, cells on light trucks (called COLTs), generators, charging stations in evacuee centers, and emergency communication vehicles. We used ships and chartered cargo flights to deliver this equipment and our NDR personnel to Puerto Rico. In addition, in response to the fires in Northern California, we were able to move mobile restoration assets quickly into place in areas where the fire destroyed either towers or the fiber backhaul network necessary for connectivity, and we worked hard to keep California first responders and our customers connected.

These vast capabilities and our dedicated network team (the most important asset of all) will all be available to support communities and first responders affected by emergencies. And we will increase our fleet with 72 new deployables exclusively to support FirstNet in states that opt in.

Third, as I noted above, we have put together an internal group, which I lead, dedicated solely to FirstNet. This group is growing and will reach several hundred employees by year's end. As we ramp up our buildout of the FirstNet network, we are hiring people across the country who have a passion for public safety and for first responders.

With these resources, AT&T is creating a nationwide IP-based high-speed mobile network that provides First Responders priority. "Priority" means just that -- in times of emergencies and network congestion, our network will give first responder communications precedence and, for "primary users," preempt all other communications. And, if an area is hit with an emergency (e.g., hurricane, wild fire), a local

commander can temporarily provide priority or preemptive access to individuals for a limited duration during a specific incident in a particular geographic area. For example, in a hurricane, the commander could designate evacuation vehicles as having priority prior to the storm hitting as people leave the area, then shifting priority to medical personnel and utility workers after the storm passes through.

In sum, the FirstNet network will meet the needs of public safety like never before, providing:

- A unique, differentiated, and highly secure network, encrypted at its core.
- Dedicated IP core with capabilities of priority and, for primary users, pre-emption.
- Interoperability across public safety agencies and jurisdictions.
- Customized customer service with dedicated 24/7/365 AT&T security and helpdesk operations support centers.
- A highly secure app ecosystem.
- Network Disaster Recovery resources.
- Highly competitive, flexible pricing.

Together, these capabilities will better connect first responders to the critical information they need in an emergency, keeping them out of harm's way.

In addition, FirstNet and AT&T will innovate and evolve the network to benefit public safety.

In many cases, and often due to budgetary constraints, the public safety community has not been able to keep up with advances in communications technology. But these advances can make a real difference in crisis situations. For example, providing emergency personnel timely

information on traffic conditions to help determine the best route to an emergency can help save critical minutes for first responders to get to an emergency. Other enhanced capabilities, such as wearable sensors and cameras for police and firefighters, can deliver near real-time images of events, such as fires, floods or crimes. Imagine camera equipped drones and robots delivering these images. In fact, we utilized drones to inspect cell towers in flooded and unreachable areas affected by Hurricane Harvey. AT&T is at the forefront of IoT advances and a leader in Smart Cities technology that can monitor a city's critical infrastructure, traffic and even listen for gun shots. Solutions like these could one day enhance the capabilities AT&T can bring to first responders.

And we are already taking steps to bring 21<sup>st</sup> Century innovation to first responders. Last month, we launched the first app store and developer program dedicated to America's first responders. This program will encourage the developer community to design applications with solutions built for the unique needs of first responders. The developer program will feed the FirstNet app store, providing public safety a one-stop-shop for reliable, highly secure solutions optimized for the FirstNet network.

FirstNet will also create jobs and drive investments across states and territories. This significant public-private infrastructure investment, and the buildout supporting it, is expected to create 10,000 U.S. jobs over the next two years. These new jobs will include positions in technology development, network deployment and operations.

AT&T could not be more excited about delivering on the promises of the FirstNet network, to the benefit of first responders and the communities they serve.

#### **Benefits to States Opting In**

Since FirstNet announced (on March 30<sup>th</sup>) that it had selected AT&T, we have been working closely with states and territories to provide them all the information they need to make an informed decision to opt in to the FirstNet network. As part of this public/private partnership, FirstNet and AT&T have had countless meetings with state decision makers and public safety stakeholders to answer any questions they might have. In fact, even before AT&T was selected, the FirstNet team spent more than 3 years meeting with public safety experts in the states to solicit their feedback on what they wanted in this network. That is why FirstNet is a solution designed by public safety exclusively for public safety. FirstNet and AT&T are committed to continual engagement and consultation with the states and territories to help explain what FirstNet means to their stakeholders and to help ensure that it delivers what the public safety community in each state and territory needs.

On June 19<sup>th</sup>, three months ahead of schedule, FirstNet and AT&T began providing states and territories individual state plans. We released the plans ahead of schedule not only to give states the ability to opt in early (and receive the benefits of FirstNet as soon as possible), but also to provide them extra time to exchange feedback with FirstNet before the official 90-day clock started on September 29<sup>th</sup>. States and territories that have not already opted in now have until December 28<sup>th</sup> to accept the FirstNet/AT&T plan, or assume the responsibility for deploying,

and, for the next twenty-five years, operating and maintaining its own network that must be interoperable with the FirstNet network.<sup>1</sup>

As of October 31<sup>st</sup>, half of the states and two territories have opted in to FirstNet. Many cited low-risk, expanded coverage, increased network capacity, and/or immediate access to mission-critical capabilities as key reasons for their early opt-in decision. In fact, three of these states (Michigan, Arizona and Alabama) decided to opt in **after** evaluating proposals from competing vendors. Even with that additional information and due diligence, states still opt in, confirming that the FirstNet AT&T State Plans deliver the best network and services public safety needs and deserves.

There are significant and immediate benefits for states that opt in to the FirstNet network.

- Opting in eliminates long-term risks associated with funding, building and, for the next twenty five years, maintaining a network that interoperates with the FirstNet network.
- Once a state or territory opts in, public safety entities in that state or territory can purchase, at competitive rates, services with key network features, such as quality of service and priority access to voice and data across AT&T's LTE network. First responders in the opt-in states and territories are already receiving service. To be clear, as I explained above, local commanders in opt-in states will have local control. They can

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<sup>1</sup> It is our understanding that FirstNet is still working with the Pacific Territories and did not provide official notice to the Governors of these territories on September 29<sup>th</sup>. In addition, it is also our understanding that FirstNet has not confirmed official receipt of the state plan from the Governor of Puerto Rico, although the Governor has previously supported the deployment of FirstNet in Puerto Rico.

utilize priority access in times of emergency and grant such access to others (e.g., evacuation trucks and then medical personnel) as an emergency unfolds.

- Preemption over the AT&T LTE network for primary users is expected by year's end. This means fire, police and EMS with FirstNet service will have dedicated access to the network when they need it.
- As states and territories join, investment in infrastructure and job creation will follow.

#### **AT&T's Commitment to Diversity**

Finally, I would also like to take this opportunity to stress AT&T's commitment to meeting or exceeding all requirements to subcontract work to veterans, minority-owned, and woman-owned businesses. AT&T has a long history of supporting diverse businesses and communities. AT&T is among the leading companies in identifying and doing business with diverse suppliers. Last year, we spent \$14.2 billion with diverse suppliers, representing nearly 19% of our total supplier expenditures. It is not surprising that AT&T has been ranked No. 1 for three consecutive years in DiversityInc.'s "Supplier Diversity Survey." We employ more than 11,000 veterans. In 2013, AT&T announced it would hire 10,000 veterans within the next 5 years, which was met at the end of 2015, well ahead of schedule. AT&T is doubling that commitment and pledged to hire an additional 10,000 veterans by 2020. In 2016, AT&T's U.S. workforce was 32% women and 43% people of color. In 2016, nearly 31.5% of our new hires were women, and 56% people of color. We recognize that this diversity benefits our company, our customers, and our employees.

**Conclusion**

Congress designed FirstNet to be a solution for public safety that provides much more than the ability to make and receive phone calls. Congress intended for FirstNet to provide the public safety community what it demanded for years: a single “nationwide public safety interoperable broadband network.” Only such a network can bring the security, priority and preemption, and seamless interoperability that Congress envisioned. And only AT&T and FirstNet are prepared to deliver on Congress’s vision.

I look forward to continuing this important dialogue as FirstNet moves forward. I welcome your questions.

Thank you again Chairman Blackburn for this opportunity.

Mrs. BLACKBURN. The gentleman yields back.  
Mr. Stevens, you are recognized, 5 minutes.

#### STATEMENT OF JOHN T. STEVENS

Mr. STEVENS. Madam Chair, good morning. Members of the committee, good morning. I certainly appreciate the opportunity to speak here today.

Let me preface my remarks by saying that there is no greater advocate for FirstNet than the State of New Hampshire. As a former state police commanding officer, what often would keep me up at night was knowing that troopers, police officers, firefighters, and EMS personnel were in the field in some areas with little or no communications. So, when I came back to state service approximately 10 years later, many of the interoperability communications issues still existed. In my first conversations with FirstNet, approximately about 3 1A½ years ago, New Hampshire was going to receive a significantly small footprint. As one of the last recommendations of the 9/11 Commission, FirstNet was created and Congress appropriated \$6.5 billion to build a nationwide network, a nationwide, dedicated first responder network, not a national network.

Even though FirstNet was under an edict to develop in rural areas, we recognized early on that there would be many areas of the country that would be underserved. Having the opportunity to see FirstNet maps that illustrated limited coverage, and looking at New Hampshire maps, that certainly the northern part of the state was not being addressed, we looked at possible other opportunities.

Knowing the information and being familiar with FirstNet advertised timelines of 90 days for a governor to make a decision, and 180 days to develop an RFP, award an RFP, and create an alternative plan that would need to be submitted for approval, the timeline that was provided was unrealistic and unattainable for New Hampshire and probably many other states.

With that in mind, the State of New Hampshire, through the Statewide Interoperability Executive Committee and its Data Communications Working Group, began to develop an RFP in July of 2015. That, in and of itself, turned the industry upside down. Industry people were taking every opportunity to dismiss New Hampshire and its intentions for putting the RFP on the street in December of 2015.

On September 7th, 2016, the governor and council awarded a no-cost, no-obligation contract to Rivada Networks. Why? Because the proposal that was submitted was so intriguing that it could not be ignored. From September 2016 to September 2017, the State of New Hampshire along with Rivada Networks developed an alternative state plan that was delivered to Governor Sununu on or about the same date as the FirstNet/AT&T state plan was delivered. Today we are the only state in the country that has an alternative plan in place.

I mentioned early in my testimony that there was no greater advocate than New Hampshire because it is an officer safety issue and it means increased capability to provide services to our citizens and visitors. So, it is unclear to us why FirstNet, NTIA, and now



AT&T, would wish to make the reality of an opt-out decision so onerous and difficult.

At the beginning of last month, October 2017, New Hampshire SEIC made a unanimous recommendation to opt out. Why? Because the alternative plan was far superior to the FirstNet/AT&T plan that was delivered in regards to coverage and price. We are operating in good faith and we understand that there are regulatory permissions that need to be reached. However, based on what we know and what we have been dealing with, we feel threatened by policy and procedure, not by law. We will not allow this opportunity to fail, and we have every confidence in the proposed network that is being proposed.

Was that the intent of the law that created FirstNet or was the intent to provide to the first responder an unprecedented opportunity to communicate in the most difficult of situations? It is unfortunate, from our perspective, that in some ways FirstNet seems to have lost its intended mission.

When we first looked at this, we looked at this as a win/win situation. New Hampshire would secure an investor to build the infrastructure at no cost to FirstNet, where FirstNet could invest the \$6.5 billion elsewhere, and then, New Hampshire would enter a fair and reasonable leasing agreement with FirstNet for the utilization of 20 megahertz of 700 spectrum.

We have done our due diligence. In regards to due diligence, I would be remiss in my responsibilities if, in fact, we did not go down this road to try to create an alternative plan.

FirstNet demands our transparency, but fails to be transparent themselves. AT&T says it wants to work with the state, but says it will only negotiate pricing when the state opts in. NTIA says that it may take up to 2 years to approve an alternative plan.

I applaud Governor Sununu and all the work that has been accomplished in New Hampshire, which has also provided direction for many states who are weighing in on their options. When the scales seem to be tipped, when pressure is enhanced, and when there are unprecedented obstacles, which can all be seen as threatening states to opt in, we believe it is worthy of review.

In conclusion, New Hampshire has done its due diligence, and our only mission is to make FirstNet successful in New Hampshire.

Thank you.

[The prepared statement of Mr. Stevens follows:]

**Written Testimony of John T. Stevens**

**United States House of Representatives  
Subcommittee on Communications and Technology  
Oversight of FirstNet: State Perspectives – November 1, 2017**

Over the course of the last month, New Hampshire Governor Chris Sununu was presented with two FirstNet Plans - the FirstNet/AT&T State Plan and the New Hampshire FirstNet Alternative Plan. We remain the only State in the country to have completed an alternative plan. Eighteen states currently have Request for Proposals (RFP's) in various stages of development, but are now under a time constraint to actually develop a complete alternative plan. New Hampshire recognized early in the process that the 180 day time period offered by FirstNet would not give New Hampshire sufficient time to give this opportunity the care and due diligence that it requires.

Because New Hampshire has been out in front of this process for the past two years and has already created an alternative plan, New Hampshire is well positioned to assist other states who are considering an opt-out decision. That is why Governor Sununu created a FirstNet Opt-out Review Committee to further investigate regulatory and financial issues that would be associated with that decision. Our emphasis is primarily the following: 1) to ascertain from FirstNet and NTIA the necessary procedural requirements and achieve a full understanding of the regulatory agreements that must be in place for a state to construct its own network; 2) to understand the justification for what appear to be arbitrary and capricious fees and penalties provided for in the draft SMLA; and 3) to fully understand the feasibility, sustainability, and the financial obligations necessary to fully operate, empower, and enhance the FirstNet network in New Hampshire for the next twenty-five (25) years.

We are confident that, as a result of the process we have engaged in for the last two years, New Hampshire is now in receipt of an alternative FirstNet Plan that will address coverage on a statewide basis and will also deliver to our first responders a network that will be at little or no cost to the subscriber. Isn't that the very reason why the law was established and FirstNet was created, to provide the tools that will allow first responders to communicate in times of emergency? Unfortunately, states are now being threatened with outrageous and indefensible penalties that deter states from even considering an opt-out decision. It honestly makes one believe that the SMLA is fraught with fictitious and erroneous figures only to apply pressure on states to opt-in.

New Hampshire has been advised, through the SMLA, of a termination penalty, ranging from \$10,609,059-\$608,568,423, that will be imposed if for some reason the designed network should fail. Other states have been advised that their termination penalty payments will be in the billions and billions of dollars. Can we honestly expect that states could assume such risk, when all they are trying to do is represent their first responders by providing the best possible coverage? And if the penalty was to be assessed, where does that money go? To AT&T? These figures are absurd, and they are accompanied by spectrum payments in the tens of millions of

dollars, adoption disincentive payments, adoption payment levels at 5 years, and adoption payment levels at 20 years. What are we promoting here, public safety and the ability to provide better service to our citizens, or lining the pockets of corporate America?

We have a FirstNet alternative plan that we have great confidence in. If the plan passes the hurdles presented by the FCC, NTIA, and FirstNet, why then should we be subject to any penalty and why would FirstNet not want to work with the State to make the opt-out plan successful? We seem to have lost the meaning of why FirstNet was created in the first place. Corporate America (i.e. the AT&Ts, the Verizons, and major cell phone companies) were approached years ago and asked to provide public safety with priority preemption in cases of extreme emergencies. They declined. Now that FirstNet has been created, AT&T and Verizon (who only recently has jumped in to vie for the same business) say that their interest is in serving public safety. There is no better determiner of States needs then the States themselves, and who can better represent public safety than public safety?

Out of concern for all who will be adversely affected by the manner in which FirstNet has approached this issue, I ask this committee to consider the original intent of the law that created FirstNet – to allow states to build a dedicated wireless broadband network for first responders in a manner that is best each state's citizens. This is what New Hampshire is attempting to accomplish, and why we have spent the past two years working to put our state in a position of having two viable options. We therefore implore this Committee to hold FirstNet accountable and take steps to ensure that FirstNet provides a full explanation of the numbers it has released, complies with the intent of the law, and provides a fair pathway for each state to make its opt-in/opt-out decision free of undue duress.

Mrs. BLACKBURN. Thank you.  
Mr. Moran, 5 minutes.

#### STATEMENT OF BRIAN J. MORAN

Mr. MORAN. Well, good morning, Madam Chairman Blackburn, Ranking Member Doyle, members of the subcommittee. On behalf of Governor Terry McAuliffe, I would like to thank you for this opportunity to discuss FirstNet and our mutual desire to equip our first responders with the interoperable communication capabilities necessary to respond to all hazards.

Governor McAuliffe is proud that Virginia was the first state in the nation to opt into FirstNet. Virginia decided to opt in in July after a thorough review in order to provide public safety subscribers with the benefits of priority service at no cost to the Commonwealth and to proceed with the buildout of Virginia's portion of the National Public Safety Broadband Network. We also viewed the decision to opt in as a way to promote competition within the public safety communications marketplace in order to reduce costs and drive innovation for public safety agencies.

The option to opt out was thoroughly reviewed through in-depth engagement with our public safety stakeholders across the Commonwealth. But the unknown costs of network construction, maintenance, and operation were neither feasible nor determined to be in the best interest of Virginia.

Virginia has long been a leader in the field of public safety interoperable emergency communications. Our success is based on a belief that first responders and emergency communications experts should lead the effort to identify solutions, as they are the ones who best understand the unique threats we face and the resources needed to respond.

I am joined here today by local public safety professionals from Virginia who have been instrumental in promoting interoperability and guiding our decision to opt in. Fire Chief Richard Bowers from Fairfax County is leading the effort to leverage the benefits from our decision to opt in, and I know Loudoun Chief Brower and others from Arlington County are here as well.

Fairfax Fire now has interoperability between their public safety radio system and broadband with a push-to-talk application. When Fairfax Fire deployed to Houston to support Hurricane Harvey response efforts, they were able to utilize priority service.

Terry Hall from York County serves as the Chair of the State-wide Interoperability Executive Committee. Through the SIEC, they have facilitated a collaborative multidiscipline process to engage our local governments.

Virginia's unique geography, critical infrastructure, and emerging threats require the Commonwealth's public safety community to be prepared for a wide range of threats. Since the attacks at the Pentagon on 9/11, the goal has been, and still is today, to ensure continued interoperable communication among our first responders.

We saw the importance of this this past June when Representative Scalise and his colleagues were victims of a horrible violent attack in an Alexandria ballpark. Again, in August, our Commonwealth was attacked when a large demonstration of white supremacists and neo-Nazis and counterprotesters descended on the

city of Charlottesville for a rally that resulted in the death of Heather Heyer and two state police troopers.

It is tragic situations like these that highlight the importance of equipping our first responders with the tools they need to save lives. We believe that our decision to opt in creates the opportunity to realize the ultimate goal of creating a dedicated, safe, secure, and reliable network for public safety in the least risky manner.

Moving forward, we will continue to work collaboratively with FirstNet and AT&T to maximize the benefits of the network for the Commonwealth's public safety community. Essential to this collaborative effort is ensuring adequate coverage and reliability, especially in rural areas. We must ensure FirstNet and AT&T prioritize mission-critical voice and enhanced location capabilities in order to protect our men and women in uniform.

As more states determine their best way forward, I know that the public safety community will continue to provide feedback to Congress, FirstNet, and AT&T. Virginia's decision to opt in marked another significant step forward as we advance interoperable emergency communications and public safety, and we look forward to the work ahead.

Thank you again, and I look forward to answering your questions.

[The prepared statement of Mr. Moran follows:]

**STATEMENT FOR THE RECORD**

**Brian J. Moran**

**Secretary of Public Safety and Homeland Security  
Commonwealth of Virginia**

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

***“Oversight of FirstNet: State Perspectives”***

**November 1, 2017**

## Summary

Virginia conducted a coordinated and thorough review process involving local government public safety representatives to ensure that the decision to opt-in to FirstNet was informed by those who are the subject matter experts for public safety communications.

**Opting in was the best decision for public safety in Virginia.** Opting-in ensured, as quickly as possible, that our first responders have the right tools and resources to do their jobs, and are able to leverage the benefits of priority and preemption. Public safety agencies in Virginia who are current AT&T subscribers have already taken advantage of FirstNet: Fairfax County Fire and Rescue Department's wireless devices were moved over to FirstNet, which gave them priority service when they deployed to Houston after the flooding caused by Hurricane Harvey. There is no requirement for state agencies or localities to use the network or switch carriers, rather, opting-in has provided the option. Opting-in cost the Commonwealth nothing and does not commit the Commonwealth to any role in the FirstNet buildout.

**Opting out was not a viable option for Virginia.** Virginia would have had to oversee the buildout of a highly technical broadband wireless network and assume all responsibility, liability, and fiscal accountability, maintenance, and management of users and customer care. Opting out would have required accepting the unknown, associated costs and risks for the ongoing deployment, operation, maintenance, and improvement of the network within the Commonwealth, which must be maintained in accordance with FirstNet's policies. As a one term administration, in the midst of transitioning to a new administration in January 2018, attempting to oversee and execute a project of this magnitude and ambiguity would have put the state on unsolid ground.

**Moving forward, Virginia will remain engaged with FirstNet/AT&T and stakeholders to ensure capabilities crucial to the success of the network come to fruition.** AT&T does not have sufficient rural and small market network *coverage* in Virginia to warrant many agencies switching to FirstNet. The network must be hardened to ensure public safety-grade *reliability*. Stakeholders have expressed a desire that the Nationwide Public Safety Broadband Network be compatible with other networks to ensure *interoperability*—the motivation behind the creation of the network—is achieved. *Mission-critical voice* and *mission-critical, enhanced location with z-axis, vertical capabilities* are critical functions of the network and should be prioritized.

## **Introduction**

Madam Chairman, Ranking Member Doyle, and distinguished members of the Subcommittee, thank you for the invitation to appear before you today to discuss furthering the effort to enhance emergency communications for public safety.

Virginia is proud to have been the first state in the nation to opt-in to FirstNet's Nationwide Public Safety Broadband Network. This decision was critical to our ability to provide public safety with the tools they need to carry out their mission and protect lives. Virginia did not arrive at the decision to opt-in haphazardly. Since the tragic events of 9/11, Virginia public safety professionals have been actively engaged in the efforts to improve emergency communications and fully leverage the technological advancements of mission-critical broadband. A coordinated and collaborative approach with local government public safety representatives was utilized to ensure that the decision was informed by those who are the subject matter experts for public safety communications and who stand on the frontlines of all-hazard emergency response. The decision to opt-in was based on the desire to ensure as quickly as possible that public safety is able to leverage the benefits of priority and preemption service, as well as to prevent costs to the Commonwealth and move forward with the collaborative process of building the network to meet the Virginia-specific needs of public safety.

## **Virginia's Decision-Making Process**

### **Engagement with FirstNet & AT&T**

Since FirstNet was created, Virginia has been in continual contact with the agency; there have been countless meetings, briefings, calls, and emails. Virginia's State Single Point of Contact (SPOC) ensured continued communication throughout the process so that Virginia remained informed of developments as they occurred. Since the announcement of FirstNet and AT&T's public/private partnership, Virginia's SPOC has facilitated numerous briefings for Virginia public safety leaders and the Commonwealth's senior leadership in the Governor's Office and the Office of the Attorney General.

### **Engagement with Stakeholders**

Virginia has held over 70 state, regional, and local engagements with our stakeholders to ensure they are informed and involved in the process. These meetings engaged subject matter experts to



help identify Virginia's needs and priorities. This process helped to ensure state and local officials outside of public safety understood the role of FirstNet and how it would affect them. Presentations were neutral with regard to the opt-in/opt-out decision in order to elicit feedback that would enable an effective evaluation of each course of action.

The Statewide Interoperability Executive Committee (SIEC), made up of 33 representatives from state agencies, the seven Regional Preparedness Advisory Committees for Interoperability, and key professional public safety and telecommunication organizations provides guidance to the state on interoperability. The SIEC was integral in developing the state plan vetting and recommendation process.

#### **Engagement with Other SPOCs**

Virginia's perspective has always been, that in order for this to truly be a Nationwide Public Safety Broadband Network, states must work together to ensure the network meets everyone's needs. To this end, Virginia hosted a regional meeting with the SPOCs from six states, as well as the District of Columbia. This meeting produced valuable data to inform the plan evaluation and decision process, as well as feedback that was provided to FirstNet. This feedback directly contributed to the additional information states received after the FirstNet/AT&T SPOC conference in Dallas, TX at the beginning of June.

#### **Request for Information (RFI) Review**

Virginia issued an RFI to ensure our ultimate decision was thorough and fully informed. Six responses were received and were reviewed by both the Office of the Secretary of Public Safety and Homeland Security and the Office of the Secretary of Technology. The responses did not contain information to convince us that opting-out was a viable endeavor.

#### **State Plan Review**

All of the above engagements served to inform Virginia's review of the state plan. Before the portal was accessible, the Office of the Secretary of Public Safety and Homeland Security, the Virginia Information Technologies Agency, the Virginia Department of Emergency Management, the Office of the Attorney General, the Office of the Secretary of Commerce and Trade, the Department of General Services, the Virginia State Police, and the Statewide Interoperability Executive Committee were informed of their role in the state plan review process. Over 100

individuals from localities and state agencies were given access to the state plan portal. It was our view that widespread engagement was essential to a thorough review of the plan.

Once the plans were accessed and reviewed, Virginia was surprised that the information contained in the plans turned out to be a lot of the same information that FirstNet and AT&T had already provided. There was no significant information to analyze. Besides the state coverage map and local data, most of the information was similar to the public site.

## **Opting-In was the Best Decision for Virginia**

### **Virginia Public Safety is Now Better Off**

Opting-in provided Virginia public safety personnel with an additional tool in the tool belt. Because AT&T is making available network capacity on all of its existing LTE bands, ahead of LTE deployment on FirstNet's 700 MHz Band 14 spectrum, public safety agencies who are AT&T subscribers will have priority access on the network now. This will be invaluable in the event of a crisis or emergency situation.

#### ***Early FirstNet Success from Fairfax County***

There are public safety agencies in Virginia who are current AT&T subscribers and, like Fairfax County, have already taken advantage of FirstNet. Fairfax County Fire and Rescue Department's wireless devices were moved over to FirstNet, giving them priority service when they deployed to Houston after the flooding caused by Hurricane Harvey. Fairfax Fire and Rescue is currently piloting ultra-rugged broadband devices to replace standard smartphones and some two-way radios, and currently has interoperability between the public safety radio system and broadband with the push-to-talk application.

Opting-in generated competition among service providers, which will inevitably influence improvements to coverage and reductions in plan costs. Competition will also drive innovation and we want to make sure our responders are in the best position to do their jobs effectively, maintain situational awareness, and communicate within and across jurisdictions.

### **No Cost to the Commonwealth**

Opting-in cost the Commonwealth nothing. Priority access on the network comes at no additional financial cost to subscriber nor to the Commonwealth. There is no requirement for

state agencies or localities to use the network or switch carriers, rather, opting-in provides the option. State and local agencies still have the decision-making power to decide which carrier works best for them based on coverage, reliability, cost, etc.; this simply tool adds to that analysis. The Commonwealth does not advocate for any particular service provider; our goal is to ensure our first responders have the tools they need to save lives.

Opting-in does not commit the Commonwealth to any role in the FirstNet buildout. FirstNet and AT&T will build, operate, and maintain the Commonwealth's portion of the Nationwide Public Safety Broadband Network at no cost to Virginia.

### **Opt-Out Consideration**

Opting out would have required the state to accept the unknown costs and risks for the ongoing deployment, operation, maintenance, and improvement of the network within Virginia, which must be maintained in accordance with FirstNet's policies. Virginia would have had to oversee the buildout of a highly technical broadband wireless network and assume all responsibility, liability, and fiscal accountability, maintenance, and management of users and customer care.

The cost of what it will take to construct, maintain, and operate a public safety dedicated broadband network in the Commonwealth, that is interoperable with the Nationwide Public Safety Broadband Network and matches the quality of service, is still unknown. No one has been able to adequately assess the cost and unfortunately any profits would have to be reinvested in the network and would not have been able to serve as a revenue source for the state.

Based on the legislative constraints, in particular the time constraints, thoroughly vetting an opt-out proposal, to the extent necessary, was not realistic. Choosing to do so would have put the Commonwealth in untenable, ambiguous position. As a one term administration, in the midst of transitioning to a new administration in January 2018, attempting to oversee and execute a project of this magnitude and ambiguity would have put the state on unsolid ground. Moreover, opting out would have delayed the benefits of network access to Virginia's first responders for an unacceptable time, perhaps as much as two years. This reality solidified Virginia's decision to opt-in; there were only benefits to doing so now, and none for waiting.

## Virginia's Path Forward

Virginia understands that the state plans are merely a base-line. There remains much to be seen. Many in Virginia are waiting for FirstNet and AT&T to fulfill the intent of the network before determining their next step. Thus, moving forward, Virginia will continue to assess issues and will remain engaged with FirstNet/AT&T and stakeholders in order to ensure capabilities crucial to the success of the network come to fruition. There are capabilities that Virginia has already identified as critical to a successful public-safety-dedicated broadband network:

- **Coverage:** The public safety community is well aware that AT&T does not have sufficient rural and small market network coverage in Virginia. Band 14 buildout needs to occur where there are gaps in coverage, not just where it is economically viable. Virginia will continue to work with state and local partners to help AT&T identify and bolster its overall coverage.
- **Public Safety-grade:** The network must be hardened to ensure public safety-grade reliability. The opportunities currently presented by AT&T's commercial network are beneficial, but this does not negate the increased level of reliability needed by public safety. Public safety networks must be constructed to provide timely, adequate propagation in a manner that best serves public safety, without regard for profitability.
- **Interoperability:** Competition among wireless carriers drives innovation and brings many other foreseeable benefits; however, it also raises concerns over interoperability. Stakeholders have expressed a desire that the Nationwide Public Safety Broadband Network be compatible with other networks to ensure interoperability—the motivation behind the creation of the network—is achieved.
- **Mission-critical voice:** It is not only the burden of needing multiple devices (one for voice, one for data) that demands this issue be addressed, but each state's economic burden as well, with the desire for new FirstNet data capabilities tempered by the ongoing need to maintain extensive separate voice networks across the same coverage area. FirstNet's RFP includes a March 2019 milestone for the mission-critical-push-to-talk (MCPTT) technical capability to be implemented in its network, but more information is needed on specific, intermediate milestones for technology development, testing and validation, along with committed resources to achieve those milestones.

- **Mission-critical, enhanced location (with z-axis, vertical capabilities):** Unlike mission-critical voice, enhanced location is a more near-term reality, with known technologies capable of rolling out during the same timeframe as the base FirstNet LTE deployment. These capabilities, including 3D geolocation, situational awareness, and incident management command and control, would be of extraordinary value to first responders, both in finding an emergency caller, by floor, in a high-rise building as well as in protecting their own safety in the event they become disabled or endangered. This is a critical function of the network and should be prioritized ahead of the contract deadline.

#### **Continued Collaboration with FirstNet and AT&T**

An essential component of seeing these capabilities come to fruition, is continued collaboration with FirstNet and AT&T. A part of this, is the need to understand what will be expected from the SPOCs moving forward. Virginia wants to ensure we are able to maximize the benefits of the network to support the Commonwealth's public safety. Virginia recognizes that this is only the beginning and has no intention of ending discussions with FirstNet and AT&T.

#### **Continued Collaboration with Stakeholders**

As this process continues, Virginia will continue to work with our local partners to provide feedback to FirstNet and AT&T in order to ensure a viable network that will enhance public safety communications throughout Virginia.

Since opting-in in July, Virginia's SPOC has hosted a series of seven regional conferences attended by over 600 stakeholders. Local and state public safety personnel from all disciplines attended the conferences for an in depth explanation of FirstNet's Virginia State Plan, the actions taken to study the plan, and the various technologies that will leverage the network.

Stakeholder outreach will continue in the upcoming months, with a second set of regional conferences, this time focused on a comprehensive overview of a jurisdiction's decision process in determining whether to use the FirstNet network. This series will specifically target key decision-makers in each jurisdiction with oversight of three main areas: Public Safety, Information Technology, and Contract/Procurement Management. Workshop participants will receive education materials and a customizable modeling tool to guide their jurisdiction's decision-making process.

## Conclusion

Governor McAuliffe views protecting public safety and supporting first responders as his top priority. Each day, Virginia's first responders put on their uniforms and leave their families and homes to risk their lives to keep our communities, citizens, and visitors safe. We are thankful every day for their service and sacrifice, and in return, we must continue to do more to protect their safety.

Ensuring that our first responders have the right tools and resources available to do their jobs is a key component of achieving that goal. That is why Virginia is proud to have been the first state to officially opt-in to the Nationwide Public Safety Broadband Network. This innovative technology will improve public safety throughout the entire Commonwealth and better protect our men and women in uniform.

FirstNet's public safety broadband network marks another significant step forward with these wireless data capabilities. FirstNet and AT&T are committed to working with us to make sure Virginia will have the full coverage that our first responders need. We will continue to work closely with them to provide feedback on the network and look ahead to enhancements that will build on this current success.

Virginia intends to not only lead the nation in the support and deployment of the Nationwide Public Safety Broadband Network, but also in support of the safety of its citizens and first responder community.

Mrs. BLACKBURN. The gentleman yields back.  
Mr. LeGrande, 5 minutes.

#### **STATEMENT OF ROBERT LEGRANDE, II**

Mr. LEGRANDE. Good morning, Chairman Blackburn, Ranking Member Doyle, and members of the subcommittee.

My name is Robert LeGrande, and I am the former Chief Technology Officer with the District of Columbia government. I am a former program executive for the National Capital Region's Interoperability Program. In this role, I led the District's Land Mobile Ready upgrade and, also, led the development of the nation's first citywide 700-megahertz wireless broadband network for first responders. This network was considered a model for the nation and served as a testbed how broadband applications can be shared among public safety agencies.

I left the D.C. Government in 2007 and formed The Digital Decision. My firm leverages lessons learned from the District, the Land Mobile Ready, as well as the 700-megahertz wireless broadband deployments, to help states, locals, and even commercial customers prepare to deploy public safety broadband communication networks.

I appreciate the committee's ongoing efforts to address this critical issue, and I thank you for the opportunity to present my views on FirstNet. It is important to remember that FirstNet was created to address the communications problems that have plagued public safety for many years, especially the lack of interoperability, which we have spoken about so many times already, among our first responders.

Along with my public safety colleagues, I believe that a dedicated public safety broadband network was what was needed to address the public safety requirements. In discussions with this subcommittee prior to the legislation being passed, I referenced my previous experience when working with a Seawolf Class nuclear attack submarine. No one would disagree that the Navy and our fleet is America's first line of defense. By the same token, no one should disagree that our first responders are our last line of defense, including their communication systems.

Now, we would never consider a U.S. Navy and a Carnival Cruise Line partnership in order to cover the operating cost of a nuclear attack submarine. So, why would we rely on anything less than a fully-funded dedicated public safety broadband network for our first responders? Well, of course, that was not possible, given the limitations of the available funding. That would have been \$50 billion or more. But Congress was able to provide FirstNet, and they did a good job of putting this together, with the spectrum and funding to support the development of a public safety broadband network and establish provisions to encourage the private sector involvement.

Now, while many public safety officials, including myself, fought for a true dedicated public safety broadband network, what we actually got from FirstNet is access to AT&T's network with public safety features and functions along with it. Now, while that may have been necessary, and it was, given the limitation of funding, it also means that we must look at this network and its competitive

options for states to make sure that they have viable means to opt out from this commercial offering, because it is truly a commercial offering.

Now, unfortunately, I do not believe, as Mr. Stevens had mentioned earlier, that the opt-out requirements established under FirstNet adequately preserve the states' rights to make their own decisions and consider competitive options for the network providers. This is especially troubling, given that half the FirstNet spectrum came from state and local governments. That sacrifice in spectrum makes state and local governments investors in FirstNet.

At a minimum, states should have the same ability as FirstNet to develop a public-private partnership. States should be able to choose their preferred network provider and use that provider's core to serve its public safety users as long as that network core complies with industry standards and is interoperable with AT&T's network. If states are required to use a network core provided by AT&T, then that means that AT&T must provide service to their public safety users.

This is not the kind of opt-out provision that public safety had in mind. States should not be subjected to stricter limitations or harsher penalties or fees than AT&T. Competition is the reason why the United States has the most advanced commercial LTE networks in the world, and competition must continue to ensure public safety benefits from the tremendous innovation and advances in communications. If there is one thing that the public safety communications industry needs, it is competition at every level.

FirstNet decided that a public safety broadband network, a dedicated one was not achievable, but, instead, chose a commercial solution. FirstNet should, therefore, ensure that this approach is implemented on several key principles.

First, it should support vibrant and fair competition. It should include open and nonproprietary devices and applications that are available to all providers. It should ensure that interoperability for all networks—I'm sorry, let me say that again. It must ensure interoperability for all networks that satisfy a minimum public safety standard. It should create incentives, not penalties but incentives, for private sector involvement that encourages broader industry support, and it should ensure a level playing field for the states' opt-out process.

With that, I really appreciate the committee's time, and I look forward to answering the questions.

[The prepared statement of Mr. LeGrande follows:]





**STATEMENT OF ROBERT LEGRANDE, II  
FOUNDER OF  
THE DIGITAL DECISION, LLC**

**BEFORE THE  
UNITED STATES HOUSE COMMITTEE ON HOMELAND SECURITY  
SUBCOMMITTEE ON EMERGENCY COMMUNICATIONS,  
PREPAREDNESS, AND RESPONSE**

**HEARING ON  
“OVERSIGHT OF FIRSTNET: STATE PERSPECTIVES”**

**REPORT TESTIMONY**

**NOVEMBER 1, 2017**

Good afternoon Chairman Blackburn and members of the Subcommittee. My name is Robert LeGrande and I am the former Chief Technology Officer of the District of Columbia and former Program Executive for the National Capitol Region's Interoperability Program. In this role, I led the District's Land Mobile Radio (LMR) network upgrade and I also led the development of the nation's first city-wide 700 MHz broadband wireless network for first responders. This network was considered a model for the nation and served as a test bed for how broadband applications can be shared securely among public safety agencies.<sup>1</sup> During my time in the D.C. Government, I also formed the Spectrum Coalition for Public Safety which, in partnership with other national public safety groups, started the campaign for additional spectrum to support a nationwide Public Safety broadband network.<sup>2</sup>

<sup>1</sup> See [http://www.ntia.doc.gov/ntiahome/press/2007/WARN\\_060807.html](http://www.ntia.doc.gov/ntiahome/press/2007/WARN_060807.html).

<sup>2</sup> See <http://app.octo.dc.gov/information/scps.shtml>



I left the D.C. Government in 2007 and formed “The Digital Decision. LLC”. My firm leverages lessons learned in the District’s successful LMR and 700MHz wireless broadband network deployments to help state and local governments as well as commercial customers prepare to deploy Public Safety broadband communications networks. Our clients include and have included the states of Pennsylvania, Texas, Louisiana, New York, Florida, Nevada, and Michigan, as well as Baton Rouge, LA, Fairfax County, VA, APCO International, Alcatel-Lucent, Verizon, Motorola, and QUALCOM.

First, please allow me to acknowledge the outstanding efforts of this Committee, FirstNet, NTIA, FCC, DHS, State and Local governments, industry as well as the national public safety organizations who all worked very hard to get where we are today. I appreciate the committee’s ongoing efforts to address this critical issue and thank you for the opportunity to present my views on “FirstNet”. Given the complexity of this issue and time allotted, I will keep my comments brief and focus on three key areas: How we got here; What FirstNet is and what it is not; and What I recommend for FirstNet’s future.

“How we got here.” It is important to remember that the reason that FirstNet was created was to address the communications problems that have plagued public safety for many years; a lack of interoperability and a lack of advanced broadband solutions that meet their unique needs. My team in the District built America’s first

public safety wireless broadband network because we needed more coverage, more capacity, and more control all at a better cost. I was involved in discussions with the Subcommittee as the legislation was being debated and noted, along with my public safety colleagues, that a dedicated public safety broadband network was needed to secure public safety's future.

In defense of a dedicated network, I made a reference to my previous experience working on the Seawolf Class nuclear attack submarine in 1996, and contrasted that project with how we should deploy our next generation public safety broadband network. No one would disagree that our Navy is America's "first line of defense." Similarly, no one should disagree that our first responders and their communications systems are America's "last line of defense." We would never consider a U.S. Navy and Carnival Cruise Line public-private partnership in order for us to pay the operating costs of a nuclear attack sub. So, why would we rely on anything less than a fully-funded network dedicated to first responders?

Of course, that was not possible given the costs of deploying such a network and the limitations of available funding. But, Congress was able to provide FirstNet with an investment of both money and spectrum to support the development of a public safety network and established provisions to encourage private sector investment and leverage the assets and capabilities of commercial providers.

**“What FirstNet is and what it is not”**: While many public safety officials, including myself, fought for a dedicated public safety broadband network, we understood it was necessary to partner with commercial providers. What we didn’t expect is that what we’d get from FirstNet is simply access to AT&T’s commercial network with public safety features and functions. While that may have been necessary for FirstNet to attract a commercial partner, it also means we should view this network arrangement differently than had this been a truly dedicated network. It places even greater importance on ensuring that public safety has competitive options and that states have a viable means to opt-out of FirstNet.

Most people are not aware that the concept of an Opt-Out provision was originally envisioned well before the FirstNet legislation and was considered by the FCC as it attempted to establish a public-private partnership through an auction of the D-block spectrum. As the FCC was developing its rules, the Spectrum Coalition for Public Safety recommended an Opt-Out provision to ensure State and Local jurisdictions had the right to build and operate their portion of a nationwide public safety broadband network. As evidence to support a state-based approach, the Spectrum Coalition presented the FCC with details regarding the public safety 700MHz broadband network we were operating within the District of Columbia. We had the capital to expand the network throughout the region, and a business case and operating agreement among the 19 jurisdictions that would save \$9M annually.

Given my experience in the District, Subcommittee staff asked me in early 2012 to draft recommended State opt-out language for the FirstNet legislation. I proudly offered a draft, and some of the provisions I proposed were used in the final legislation. Unfortunately, I do not believe that the State Opt-Out requirements recently provided to States by FirstNet adequately preserve that States' rights to make their own communications decisions and consider competitive offers from other network providers. This is especially troubling given that half of the FirstNet spectrum came from the State and Local governments. That sacrifice of spectrum makes State and Local Governments full "investors" in FirstNet, and it's critically important that their communications needs are adequately addressed.

At a minimum, States should have the same ability as FirstNet to develop a public-private partnership that meets their needs. States should be able to choose their preferred network partner and be able to use that provider's Core Network to serve its public safety users as long as that Core Network complies with industry best practices and standards and is interoperable with AT&T's network. If States are required to use the Core Network provided by AT&T, then it means they must use AT&T to provide service to their public safety users. That is not the kind of Opt-out provision that public safety had in mind when it recommended such provisions be included in the law. States should be on equal terms in building and operating their own state

networks, and should not be subjected to stricter limitations or harsher penalties or fees than AT&T.

One word best describes the reason the United States has the most advanced commercial LTE networks in the world; that word is “competition”. The fierce competition that exists within the wireless industry has yielded tremendous innovation and advances in communications that benefit both public safety and the general consumer. If there is one thing that the public safety communications industry needs, it’s competition at every level. The lack of effective competition in this area is the reason that public safety’s land mobile radio systems still suffer from high costs and limited innovation.

I do not believe it serves public safety well that FirstNet has linked itself so closely to a single network provider. At conferences around the country, you cannot tell a FirstNet representative from an AT&T one. FirstNet should not be in the business of promoting a particular commercial provider. It should focus on its central mission which is to represent the interests of public safety. And, that should include ensuring that states have a viable means to opt-out should that be their decision.

**What I recommend for FirstNet’s future:** FirstNet decided that a dedicated public safety broadband network was not achievable, and instead chose a Commercial Carrier solution. While that approach may be the most effective way to address

public safety's needs given the limited public resources available, FirstNet should ensure that this approach is implemented based on several key principles:

- It should support vibrant and fair competition;
- It should include the use of open and non-proprietary devices and applications which are available to all providers;
- It should ensure interoperability for all networks that satisfy a minimum public safety standard;
- It should create incentives for private sector involvement that encourage broader industry support ; and
- It should ensure a level playing field for the State Opt-out process so that states are assured of their legislatively guaranteed right to make their own communications decisions.

These adjustments to FirstNet's current approach will result in increased innovation and competitive pricing for the public safety industry. Simply put, let's not alter the tried and true laws of open and fair competition for the FirstNet marketplace. We need to look no further than the problems with the public safety communications of the past to see what we do not desire for public safety's future.

In conclusion, the FirstNet Board and Staff have done a good job in recognizing the potential for leveraging commercial investments and innovation to secure public safety's future. But, we must be sure that FirstNet leverages all of the benefits that a



competitive communications marketplace has to offer. And, we must ensure that it achieves the primary goal that Congress set out to achieve – effective, reliable, and interoperable communications for first responders. I commend this Subcommittee for its efforts to address these critical issues, and I sincerely appreciate the opportunity to share my recommendations. I’m happy to answer any questions you may have.

Thank you.



Mrs. BLACKBURN. The gentleman yields back. That concludes all of our opening statements, and we are going to move to the question-and-answer portion.

For all of our colleagues that are here today, Mr. Doyle and I have discussed how we want to stay right to that 5-minute questioning. And if you get to the end of your 5 minutes and you have got a question, if you will submit it for a written response, that will help us to be mindful of everyone's time and finish the hearing prior to votes being called.

So, I recognize myself for 5 minutes for questioning.

Mr. Sambar, I want to come to you first. Cybersecurity and cybersecurity measures are something we continue to talk about here in this committee. So, as you are looking at this network and the buildouts and the integration, do you all have a strong cybersecurity plan? What type of encryptions or firewalls do you have that will prevent some malicious cyberattacks?

Mr. SAMBAR. Thank you, Chairman. I appreciate the question.

I will start with Mr. LeGrande's point that he just made on interoperable cores. I think that feeds right into your question.

Part of this is a nationwide interoperable network. Part of the strength in that nationwide interoperable network is reducing what I call seams or vulnerabilities as much as possible. When you try to have cores interoperating and force interoperability between cores, you introduce seams. That is why the interpretation of the law that was passed, the RFP that was issued, and the FirstNet Authority, as I have said publicly recently, core-to-core interoperability is not something that they are interested in because they don't want to introduce those vulnerabilities. So, that is really the first step in cybersecurity.

Next, beyond that, we are building a separate public safety core. So, to say that this is going to be traffic on our commercial core is not correct. From a technical standpoint, we are building a separate interoperable public safety core network, which means all of the traffic for first responders that flows across this network will be on that core, not on our commercial core. So, that is the next level of security. That core network will be encrypted from end to end, and we have designed that encryption, at the direction of the FirstNet Authority, to comply with various state and federal requirements.

And then, the last piece of this—well, there is actually another one. I could probably go on for 10 minutes, but I want to—

Mrs. BLACKBURN. No, I have only got 5. That is OK.

[Laughter.]

Mr. SAMBAR. I understand. So, I will respect your time.

The next piece is the device itself in the first responder's hand. So, we do self-certification on all of our devices, but the FirstNet Authority has a lab in Boulder, Colorado, where they will also be certifying the devices.

Then, the applications on the device, oftentimes vulnerabilities are introduced to a device through the applications on a device. That is why we have set up a public safety app store specifically for public safety—you have to authenticate to get into this app store; it is not open to the public—where we can validate the security and functionality of those applications.

And then, the last piece of this, the Security Operations Center. So, AT&T operates a Global Security Operations Center. We are standing up a separate Security Operations Center, roughly 100 people that will do nothing but 24 hours a day, 7 days a week, 365 days a year, monitor the traffic on this core network, the first responder traffic.

So, as you can see, multiple steps that we are taking to ensure cybersecurity is job 1 on this network.

Mrs. BLACKBURN. OK. Mr. Stevens, I want to come to you and Mr. Moran.

There are several of us on this panel that have rural areas, and I am sure Mr. Loeb sack is going to talk to you about some of this. And when we look at the expectation of buildout schedules, you talked a little bit about the timeline on the RFP end. So, on the expectation of the buildout schedule for these rural and remote areas, as you are reviewing proposals, do you think that we should be confident they are going to be able to make these schedules? Should we be apprehensive? Should we change how we are reviewing and monitoring some of this ourselves? What do you think the expectation is here? And is FirstNet being helpful to the process or not?

Mr. STEVENS. The State of New Hampshire certainly is a rural state and it is divided by a number of different sections. The southern part of New Hampshire is considered really metropolitan Boston. We have a major rural area in the western part of the state and in the northern part of the state.

When we originally looked at the maps that were being provided by FirstNet early on in the process, much of the northern part of the state was ruled out as far as development was concerned. In fact, FirstNet said to us at that point in time that primarily they would be looking at building out from Manchester and Nashua, which are the two largest cities in New Hampshire.

Now, since that time, we have had a number of meetings in regards to buildout and price. I will have to say that the meetings that we had with AT&T and FirstNet were extremely constructive, and we felt that the buildout was much larger than we had originally sought from the original plans. However, what we were able to ascertain from our alternative plan was the alternative plan was providing for us statewide coverage from the northern part of New Hampshire to the southern tip and east to west.

Mrs. BLACKBURN. Thank you.

Mr. Poth, I am going to submit a question for the record for you on NTIA. I want to get some answers there.

Mrs. BLACKBURN. And, Mr. LeGrande, I will submit one to you having to do with your work as state and local authorities. We have got a couple of points there.

The gentleman is recognized for 5 minutes.

Mr. DOYLE. Thank you.

Mr. Moran, you look like you are a much younger, better-looking version of former Congressman Jim Moran. Are you related to him? [Laughter.]

Mr. MORAN. I am not sure. Will you accept my comments based on my answer?

[Laughter.]

Mrs. BLACKBURN. We could tell by your voice the minute you started to talk.

Mr. DOYLE. Welcome. Tell Jim we say hello.

Mr. MORAN. Will do.

Mr. DOYLE. Mr. Poth, if a state opts out and contracts with a third party and the network fails or fails to meet its obligations, what are the risks and what are the obligations to FirstNet and other states?

Mr. POTH. That is a great question, and thank you for that. As you point out, if a state that has opted out at any path along the way of that 25-year period is unable to continue because of the contractor, or for whatever reason, we are going to instantly start working with that state to try to minimize the impacts to that state and, most importantly, to public safety in that state, to reconstitute the network and try to move it forward.

As you mentioned in your opening statement, this is a very complicated network with a lot of moving parts. And if a state that opts out—and we are fully supportive of that—has those problems, then we are going to have to figure out ways to recover costs. FirstNet will not have the cost. AT&T is not obligated to put any money into that to help recover the cost in that state that has run into the problem. So, we are going to be working with the state on how to quickly minimize.

If they have, for example, received some grant funding, from NTIA that hasn't been completely expended, that may be an opportunity to use some of those funds to help get the network back to a point where it is, once again, nationwide and operable.

Mr. DOYLE. Thank you.

Mr. Stevens, I understand Rivada has conducted projects here and around the world and has some valuable experience, but I also understand that Rivada is not currently operating a live radio access network in the United States or, for that matter, anywhere else in the world. I understand they made you an offer you couldn't refuse, but I am just curious, are you a little bit nervous contracting with a company that doesn't currently operate a network anywhere in the world?

Mr. STEVENS. Well, based on the information that we have been provided through the alternative plan, and with the safeguards that we have enacted through the negotiation with Rivada as far as having performance and surety bonds in place, we feel that, as we move forward and actually develop a service contract, if, in fact, there should be a decision in New Hampshire to opt out, then we feel that New Hampshire is confident that we would be able to continue and provide a statewide application to FirstNet for all our first responders.

Mr. DOYLE. Thank you.

Let me ask Mr. Sambar and you, Mr. Stevens, we have seen, with the recent devastating hurricanes in Texas, Florida, Puerto Rico, the Virgin Islands, as well as what has happened in California with the wildfires, that communications can go down during disasters because of a lack of electricity and for other reasons. I would think a state would want to be assured that the FirstNet network is supported by a carrier with the wherewithal and the experience to recover communication services during disasters.

Let me ask you, what experiences does Rivada have in restoring communications during hurricanes and fires and other natural disasters of this magnitude? And I would ask Mr. Sambar the same question.

Mr. STEVENS. Are you asking me, sir?

Mr. DOYLE. Yes, sir.

Mr. STEVENS. The only thing that I am familiar with in regards to communications that were set up based on a natural disaster was Rivada's commitment to the State of Louisiana after Katrina.

Mr. DOYLE. Mr. Sambar?

Mr. SAMBAR. So, from AT&T's standpoint, Congressman, you are probably aware of the last four hurricanes, all the restoration efforts. I could go into details of tornadoes, wildfires in California. We have extensive experience. Our natural disaster recovery program has been funded at over \$600 million over the past 20 years. So, we have a significantly large program.

And I will note, just in the Q3 earnings that AT&T released last week, we noted a 2-cents-per-share earnings hit or earnings cost to AT&T based on the recent disasters just in the quarter. That equates to roughly \$200 million in impact to AT&T. So, obviously, a large company with the wherewithal to absorb impacts like that is probably very important to this program, and we think we are that company.

Mr. DOYLE. Thank you.

Madam Chair, I see, in the spirit of what we are trying to accomplish here, that I will not ask my other questions, but submit them for the record for answers.

Mrs. BLACKBURN. Quick learners.

[Laughter.]

Mr. DOYLE. Thank you.

Mrs. BLACKBURN. Mr. Lance, you are recognized, 5 minutes.

Mr. LANCE. Thank you very much, Chair.

Mr. POTH, as I mentioned in my opening statement, interoperability issues faced by the first responders on 9/11 was a significant factor in the creation of FirstNet. The law allows state and local public safety agencies to make their own communications decisions, regardless of the state's opt-out decision. Consequently, it is likely that some public safety agencies will continue to use other network providers beside AT&T. Does FirstNet intend to establish agreements with other providers to enable interoperability across multiple networks and, if not, how would that have an impact on public safety communications?

Mr. POTH. So, the current system will allow the interoperability. So, another carrier provider to public safety, those devices will be able to talk to a FirstNet/AT&T device. We are not going to be pursuing contractual relationships with other providers for that, since the interoperability is a requirement and it is a standard.

We are also, as part of our statute, requiring open standards for the devices and applications, as Mr. Sambar mentioned earlier, for public safety. So, we think that that addresses the needs if a public safety agency all the way down to a local firefighter decides that the better solution for them is to go with another solution set other than the FirstNet one.

Mr. LANCE. Thank you.

Mr. Sambar, would you like to comment on that?

Mr. SAMBAR. Yes. Thank you, Congressman.

So, I would say, to make it brief, there are international standards which govern the wireless industry around the world called 3GPP standards. We have committed to FirstNet Authority, which they asked us to commit to, that we will maintain those standards. We have for the past 40-plus years in the wireless industry and we will continue to do so.

It is the reason that, when I text you on your phone, regardless of what provider you have, we can get a text across with no problem. We can send an email. We could talk to each other. And it works that way around the world.

We will continue that. We are very interested in open interoperable.

Mr. LANCE. Thank you.

And, Mr. LeGrande, could you please comment on what the public safety implications would be in the case of failure to enable interoperability?

Mr. LEGRANDE. Well, we need no, unfortunately, looking further than what happened in New York. That was tragic.

And when I started my work here in Washington, D.C., believe it or not, in 2001 we didn't have any public safety communications at all in the WMATA tunnel systems. That was a program that I led—I think there is a member of the fire department here—proudly, with Chief Ramsey and Chief Thompson.

I think it is important to note that what Mr. Sambar was referring to with regards to interoperability and 3GPP standards, yes, carriers have interoperability that they do every day. There are partners that AT&T has around the world. Core-to-core interoperability is what they do as a standard practice.

What I am advocating for is to make sure that we have established a swim lane internationally and nationally how carriers operate, and that we should not alter that because we have a commercial system that we are leveraging. We are not leveraging a dedicated network only for public safety. It is a shared network with the public. Now it is segregated at the core, as he mentioned, but it is certainly shared at the RAN, which is the lower part of the architecture.

I don't want to be too technical. I don't want to go too far on this answer. But it is important that we continue to allow the carriers who exist to fight for public safety's business. The bottom line, the biggest barrier of entry—and I have been around the country talking to folks, sir, and Frank Gianetti in Pittsburgh, Pennsylvania, where I am from—the biggest barrier to entry is cost. And the best way to drive down cost and to drive up innovation is competition. And, oh, by the way, to ensure that the carriers follow the way they have already done business, which is to interoperate through those standards, and core-to-core is a part of that.

Mr. LANCE. Thank you very much, Mr. LeGrande.

And, Chair, I yield back 50 seconds.

Mrs. BLACKBURN. There you go.

Mr. Loeb sack for 5 minutes.

Mr. LOEBSACK. Thank you, Madam Chair. I have abused the 5-minute rule in the past. I promise I won't do it this time. Thank you very much. I readily admit that.

[Laughter.]

I really appreciate this hearing today.

Mr. Moran, I had the same thoughts—thank you very much for being here today—about your relation.

I do greatly appreciate FirstNet's vigilance to ensure that rural areas of the country gain access to the nationwide public safety broadband network, including by specifying a 15-percent geographic requirement for the prime contractor to partner with existing rural telecom providers. And we have a lot of those folks in Iowa. We do all over rural America.

So, to Mr. Sambar and to Mr. Poth, where is AT&T in its progress toward that 15-percent geographic requirement? Is there any public information that AT&T and/or FirstNet can share with us on this issue?

Mr. SAMBAR. Thank you, Congressman.

The 15 percent is a requirement contractually between AT&T and the FirstNet Authority. I will tell you, the network build is just beginning. So, I can't give you a number today because we haven't actually built it yet. But I have no problem in the coming months and years of providing that information, whether it is in this forum or in a different forum.

Mr. LOEBSACK. Yes, we would like to keep track of that as we are progressing.

Mr. SAMBAR. Yes, and we are happy to. What I will tell you is that, based on the network designs that we have today—and again, only half, just over half of the states have opted in—but should all of the states opt in, or close to all of the states, we actually think we will exceed the 20 percent mark. So, 15 percent is the bare minimum that we need to attain. We are actually looking at over 20 percent at this point. So, we are very confident in our ability to hit that target and use those rural providers.

Mr. LOEBSACK. As you both know, Iowa has opted in.

Mr. POTH. Right, right.

Mr. SAMBAR. Thank you.

Mr. POTH. And it is important to note, also, that in our contract they are required to build out rural in each phase of the contract. They can't wait until the other areas that they wanted to build or built and, then, start rural. The next phase they have to have 20-percent rural buildout; the phase after that, 60 percent; 80, and all the way up to 100 percent.

Mr. LOEBSACK. So, how do we define a rural partner in situations like this? How does AT&T define it or FirstNet define it?

Mr. SAMBAR. I am going to give the quick answer, and he will give the detailed answer. We define it based on their definition, and he will tell you their definition.

Mr. LOEBSACK. All right. Go ahead.

Mr. SAMBAR. You are the boss.

Mr. POTH. So, we required in the RFP that they identify rural TELCO partners in each of the states that they had intended to partner with. And then, that is what we are measuring them

against, to make sure that those relationships have, in fact, been consummated.

Mr. LOEBSACK. So, it is determined at the state level who rural is then? Is that—

Mr. POTH. No, not at the state; at AT&T who, as all the bidders had to, identified rural partners in each of the states.

Mr. LOEBSACK. Right.

Mr. POTH. Some have multiple TELCOs that they may be using. We are measuring them against what they committed to in their proposal.

Mr. LOEBSACK. I have to throw it back to you, Mr. Sambar.

Mr. SAMBAR. Sure.

Mr. LOEBSACK. So, how do you define rural?

Mr. SAMBAR. Sir, I think you are looking for a definition of the word “rural”?

Mr. LOEBSACK. Yes, right.

Mr. SAMBAR. FirstNet Authority defines, because we were curious when we signed the contract, FirstNet defines it based on the Rural Electrification Act.

Mr. LOEBSACK. Right.

Mr. SAMBAR. And it is 20,000 population in a given geography.

Mr. LOEBSACK. OK.

Mr. SAMBAR. So, we are following that definition.

Mr. LOEBSACK. OK. Thank you so much.

Mr. SAMBAR. Yes, sir.

Mr. LOEBSACK. And to you, Mr. Sambar, does AT&T's rural partnership efforts include only wireless networks and towers or is AT&T also planning to leverage fiber-back, all assets?

Mr. SAMBAR. Yes, sir, it will be wireless, wire line. That includes cable, microwave, and fiber. So, it will be all of the above.

Mr. LOEBSACK. OK. Great. Thank you.

Still some time left, Madam Chair?

It will be essential that FirstNet is able to roam onto existing rural networks before the MPSBM is available. Mr. Poth, how are you ensuring that devices are developed that can successfully roam onto Tier 2 and Tier 3 rural wireless networks?

Mr. POTH. That is a great question. I think I will defer to Mr. Sambar since they are the ones that have to implement the technology.

Mr. LOEBSACK. A lot of deference today.

Mr. SAMBAR. We do defer back and forth, don't we?

[Laughter.]

So, the way the wireless world operates today is you have no issue when you go into different areas around the country—and I travel every week—whether it is a rural carrier in one area, and depending on what the backhaul is or the fronthaul with the wireless network; it doesn't matter. We will continue to do the same thing on the FirstNet network.

And again, it is based on the 3GPP standards that I mentioned earlier. Those are international standards. So, whether you are on a domestic wireless network owned by AT&T or a rural provider or international—say you are in Mexico, South America, or somewhere in Europe—you will be able to roam on any provider's network and it won't be an issue.

Mr. LOEBSACK. OK. And again, respecting the Chair's request that we finish up in a timely fashion, I do have a question about affordability, but I think we can probably submit that for the record.

Thank you, Madam Chair.

Mrs. BLACKBURN. The gentleman yields back.

And, Mr. Shimkus, you are recognized for 5 minutes.

Mr. SHIMKUS. Thank you, Madam Chair.

I am wondering how Loeb sack got all my questions. How did you get my questions over there?

Mr. LOEBSACK. I lucked out. I was before you.

Mr. SHIMKUS. OK. Yes.

Mr. LOEBSACK. Not normally am I, but—

Mr. SHIMKUS. That is almost word for word. So, he covered a lot of the rural concerns that I had.

But I guess I would want to follow up with the question of overbuilding that may occur. And that would be to Mr. Sambar. How do you protect from what we have seen, overbuilding in other areas and other aspects of communication? So, what about overbuilding?

Mr. SAMBAR. Sure. Thank you, Congressman.

I should have started off my comments with rural, which everywhere that I have traveled over the last year and a half around the country, whether it is a governor or the governor's staff, public safety entities, some of the gentlemen back here, the first responders—thanking them for coming—but some of them have mentioned it to me. You need to cover rural areas. So, we have gotten the message loud and clear. We absolutely understand that.

We are embarking on an aggressive build plan to build out rural areas. Some of that will be AT&T building it, and some of it, that would be considered us building. And in some cases we will be using rural providers to build that out.

The topic of overbuilding, the 15 percent was set because they believe that is an attainable goal. If our goal was to go and overbuild repeatedly, we would never hit the 15 percent and we surely would not hit a 20-percent number, which is what we are projecting.

There will be some cases where we can't come to commercial agreement with a rural provider, but in those cases we will look to other rural providers to see if they are interested, so that we can maintain that percentage with rural. So, our goal is to use rural providers as much as possible. In many cases their economics are better than ours, and it just makes sense for us to do that.

Mr. SHIMKUS. Great. Thank you.

Let me go to Mr. Stevens from New Hampshire. I pulled up the FirstNet website. So, maybe you can help explain this to me.

The state has released a plan, and the state plan's review is under consultation. Is that how you view that?

Mr. STEVENS. Yes. Yes.

Mr. SHIMKUS. So, part of this plan is your opt-out? That is part of the plan that you have submitted to FirstNet? Or using an outside provider other than AT&T?

Mr. STEVENS. No. We are in the process of reviewing all aspects in regards to opt in and opt out. No decision has been made by New Hampshire at this point in time. And basically, we are com-



paring the two plans, the alternative plan and the state plan provided by FirstNet, to ascertain what is best for New Hampshire.

Mr. SHIMKUS. OK. Thank you. I appreciate that.

Mr. LeGrande, AT&T and its partners did a bid for this to FirstNet, and then, obviously, they won the bid. In your opening statement are you proposing that the bid specifications should be now modified?

Mr. LEGRANDE. No, I am not suggesting that the bid should be modified.

Mr. SHIMKUS. As far as the responsibilities, the agreements, and what they are supposed to do?

Mr. LEGRANDE. No. What I am suggesting, just so we are clear, that FirstNet, if we were to join a dedicated network, meaning when I say "dedicated," I mean——

Mr. SHIMKUS. No, we have got it. We have had that debate here. We did this because we didn't have the money and we wanted to leverage the success of the private sector.

Mr. LEGRANDE. In fact, the exciting thing about it is there is a real opportunity where FirstNet can say, well, OK, I agree that you may not want to establish any contracts or agreements with the other carriers, but certainly try to meet with them to bring them and incent them. Take out the penalties from AT&T; incent them.

When I was a CTO here, my biggest problem is I couldn't get these guys in my office because we are a small market piece now. The great thing about it, the great thing about what is going on with FirstNet is they have created an opportunity where FirstNet can act as a regulatory——

Mr. SHIMKUS. I only have 50 seconds left.

Mr. LEGRANDE. Right. Sorry. I'm sorry.

Mr. SHIMKUS. So, I know you are very passionate.

Mr. LEGRANDE. Absolutely.

Mr. SHIMKUS. And I appreciate it.

[Laughter.]

Mr. Sambar, do you feel that some of these proposals may provide different goals and objectives than what was laid in the original bid?

Mr. SAMBAR. I can't speak for the states and their goals and objectives. Over half of them have opted in, so they are completely aligned with our goals and objectives. When we go into the states, we negotiate with them on where they want additional infrastructure, where they want generators, what areas they want covered. And we leave the decision largely up to them. So, I think our goals are 100-percent aligned.

I think there are some states that may have other goals in mind, not just a first responder network, but monetization, for example, to get money for the state budget. That is not what this is about. This is not a rural broadband initiative. This is for first responders, which does overlap into rural, thankfully. But I think we need to focus on first responders. That is what we are building this for. This is not a money-making scheme. This is not a spectrum deal. This is for first responders for the next 25 years.

Mr. SHIMKUS. Thank you very much.

I yield back.

Mrs. BLACKBURN. Mr. Pallone, you are recognized for 5 minutes.

Mr. PALLONE. Thank you, Madam Chairman.

FirstNet implementation is essential for creating a state-of-the-art nationwide public safety network, and this is critical during emergencies. This week marks 5 years since Superstorm Sandy swept through my district, and the lessons of that storm are as applicable today as they were then. And 5 years later, I can say there are three things we need to focus on to make sure we are better prepared for the next major storm.

First, we need to keep our networks online during these emergencies, and that is why I drafted the SANDy Act to give our network operators the resources they need to repair our networks during disasters. And that is also why I worked with the wireless industry to create the Wireless Network Resiliency Cooperative Framework, to ensure people can call for help during an emergency, even if their network goes down.

And second, we need to upgrade our 911 networks to be more secure and resilient and to handle the information required of a 21st century network. Among other things, that means ensuring that 911 knows your location when you place a call.

And third, we need to get FirstNet operational as quickly as possible to give our first responders the tools they need to better protect us and coordinate emergency responses.

I wanted to mention specifically that New Jersey was one of the first states to opt in, which makes sense, given JerseyNet's success as a proof-of-concept for FirstNet as a whole.

So, I wanted to ask Mr. Poth, are there lessons learned from New Jersey's experience that can benefit the nationwide network?

Mr. POTH. Absolutely, and New Jersey was a great example. The state did opt in. We have been working with them for years. But what actually happened with the recent hurricanes down in Florida, New Jersey, who had already opted in with their assets from JerseyNet, asked if they could respond down to Florida to help another state using those assets. So, the nationwide response for public safety was happening in real time. So, I think that was a great example of taking advantage of an early builder and of New Jersey's "can do" attitude, that really helped Florida with FirstNet assets that were residing in New Jersey. And we hope to see that that model replicates itself throughout the country.

Mr. PALLONE. Well, thank you.

I wanted to clear up some questions about the bipartisan law that we passed in 2012 that established FirstNet. First, when Congress passed the law, we made clear that states could opt out of the wireless portion of the network, but they are prohibited from building a different core of the network.

So, again, Mr. Poth, is that your understanding of the law as well?

Mr. POTH. Yes, and, as it was discussed earlier, one of the other complications with any additional cores is around that cybersecurity. That is something that we cannot have any leniency. This must be a robust, secure network. But a single core is the intent, and that is what we are executing to.

Mr. PALLONE. Well, thank you.

The second thing, when we passed the law, some of us were concerned about the way states divert 911 fees to other projects. And

to stop that from happening to FirstNet, we required all fees raised by the states to be invested only back into the network.

So, let me ask Secretary Moran, if I can, can you walk us through the financial considerations you took into account when Virginia decided to opt into the network?

Mr. MORAN. Well, first of all, in Virginia we don't raise fees. So, it's a low-tax state, very competitive for business.

[Laughter.]

So, Mr. Congressman, it was at no cost. That was one of our primary reasons for opting in, was that it was at no cost to the Commonwealth. In assessing and evaluating the options for the state to build out the network, it would have been cost-prohibitive. And obviously, our primary responsibility, as yours is, is to provide that dedicated network to our first responder community. So, we saw the no cost being one of the primary factors to make that decision. So, there is no cost to the Commonwealth.

Mr. PALLONE. I don't know if anybody mentioned it; you look a lot like your brother, but you sound just like him when you spoke.

Let me ask Mr. Sambar, going back to the three priorities I mentioned earlier—next-generation 911, network resiliency, and FirstNet—as the only carrier testifying today, what are you doing to further these goals?

Mr. SAMBAR. So, your three goals, I will hit them in order.

Networks online. If you use Hurricane Harvey in Texas as an example, at anytime we had no more than 4 percent of our network down at any given time throughout Texas. That is when the hurricane hit through the week following with the floods. So, we are pretty proud of our ability to keep networks online, and that is hundreds of thousands of people working very hard to keep the network going.

Secondly, the 911 networks. AT&T is one of the largest carriers investing in the 911 networks or next-generation 911 in the United States. And we feel really good about the natural synergies between the next-generation 911 that we are offering and the FirstNet network, and the ability to go from the call that the citizen is making into the 911 PSAP and out to the first responder over the FirstNet network. There is some real natural synergies there that work really well.

And then, getting FirstNet up and operational, and that is possible by a big carrier like us. We do start with our commercial network as the foundation. So, states that have opted in, we already have subscribers signing up for FirstNet. They do start on our commercial core and our commercial network. They will graduate in March of next year to the FirstNet network, but we want to get it up and operational as soon as possible. We don't want states to have to wait 2, 3, 4, and 5 years.

Mr. PALLONE. Thank you.

Mr. SAMBAR. So, I think that hits all your priorities, Congressman.

Mr. PALLONE. It does. Thank you.

Thank you, Madam Chairman.

Mrs. BLACKBURN. Mr. Johnson, you are recognized for 5 minutes.

Mr. JOHNSON. Thank you, Madam Chairman.

And it is a really important hearing. I represent a district in Ohio that is very, very needy in terms of broadband. There are many places throughout my district where we have high school children who have to go to the neighboring town to get to a Tim Horton's or a Panera Bread, where there is wifi, so that they can do their homework assignments, or to a public library to get to a computer. Some schools even give out laptops, but the students don't have any connectivity to the outside world with which to do their work. So, it is a really, really important issue for me.

And when you think about the opportunities and the economics of it, companies aren't going to come into a region and set up facilities if they can't get access to their customers, to their suppliers, recruit employees, et cetera, et cetera. So, the urban/rural divide is a very real thing from a broadband perspective.

Mr. Sambar, first of all, thank you for your service. I appreciate that. I have a number of Navy SEALs in my district back in Ohio. I could probably throw their names out there. And I worked for Admiral Tom Steffens. I don't know if you remember him.

Mr. SAMBAR. Yes, sir.

Mr. JOHNSON. But he was my last boss when I was on active duty at Special Operations Command.

So, thank you for your service.

The buildout of rural broadband, obviously, is a priority of mine. I have held multiple roundtables in Ohio to discuss with stakeholders the benefits and challenges of broadband deployment.

If a state such as Ohio opts into FirstNet, how will it impact the broadband buildout in rural areas?

Mr. SAMBAR. Thank you, Congressman. Thank you for your service as well, especially helping my brothers and sisters at the Special Operations Command.

Mr. JOHNSON. You bet.

Mr. SAMBAR. I appreciate that.

So, as I mentioned earlier, it is not a rural broadband initiative, but the benefits for rural customers and those in rural areas are unbelievable when it comes to FirstNet. And I will give you a specific example. I won't give you the state.

But a state in the South that has opted in, one of the main requirements that they put on us was they said, "We want every school in our state covered with coverage, wireless coverage." And they are not all today. They told us specifically which schools were not covered, and we went out and did wireless surveys to ensure that they were. And they said, not only do first responders go to those areas, but in a lot of those areas those are the severe weather centers where people evacuate to. So, we said, absolutely, and we fulfilled that requirement for the state.

So, this goes back to the flexibility of the program and the ability of the states to negotiate where they want the incremental coverage. The public-private partnership between us and the FirstNet Authority makes it possible. You noted the challenging economics in some cases to cover rural areas. The economics of this program make that less challenging and easier for us to do, so that we can fulfill the requirements and the desires of the states.

Mr. JOHNSON. Sure, and I am sure I don't have to tell you and the rest of the panel how important first responders being linked

in is to a rural community. I mean, it takes a long time sometimes to get from point A to point B when something goes down, whether it is a natural emergency or criminal activity, or whatever, an accident, whatever that may be. Having first responders as a part of that is critically important.

For the entire panel, first and foremost, we must provide our first responders with a reliable network and the tools they need to prepare for and respond. We just talked about that. Can you describe the benefits for first responders in rural areas if the state chooses to opt into FirstNet? Let's just go down the line here.

Mr. POTH. Through our exhaustive proposal process, we set out a solution to do just that for public safety, all 56 states and territories where there is rural or urban. And we are absolutely confident that through the solution that we have picked, based on public safety's feedback and the solution provider, in this case AT&T, we will be able to meet that objective.

Mr. JOHNSON. OK. Anybody else care to address that one?

Mr. SAMBAR. Sure. I will give you 10 seconds of your 17 seconds.

Mr. JOHNSON. OK.

Mr. SAMBAR. The benefits to the state of jobs and infrastructure, the rural broadband benefits to the state, and then, features like priority, preemption, mission-critical voice, all those things that public safety has been asking for for years.

Mr. JOHNSON. Do you view it as a negative? If a state chooses to opt out, will it be a negative impact to first responders if a state opts out?

Mr. SAMBAR. I think there are some significant challenges if a state chooses to opt out. Of course, we will be happy to work with them. That is our charter, and we will do everything we can to be interoperable with that state. But there are some challenges as far as the time it will take them to build it out, the reliability/redundancy of that network, interoperability, security of that network. There are some significant hurdles that they need to get over. Again, we are happy to work with them, but I think there would be a lot of concerns there.

Mr. JOHNSON. All right. Well, thank you, gentlemen.

Mrs. BLACKBURN. The gentleman yields back.

Ms. Eshoo, you are recognized for 5 minutes.

Ms. ESHOO. Thank you, Madam Chairwoman.

Thank you to all of the witnesses and to the first responders here. With all due respect to everyone else in the room, including myself, I think you are the most important ones here.

When the 9/11 Commission made its recommendations to Congress, which is a very long time ago now—we have been at this for some time; it was 16 years ago that the country was attacked—there was one recommendation that Congress had not made good on, and it was to build a nationwide interoperable public safety network. And I was bound and determined that we would get that done. I am proud of the legislation, proud that we moved ahead, and that the Congress passed it.

But I think that, in light of what the country has undergone in just the last handful of months, and most recently in my home State of California—I spent last Saturday from 6:30 in the morning until 9:30 at night touring, meeting with the public officials, public

safety officials, first responders, victims, in Sonoma and Napa Counties.

I really think that we need to go back to the air raid system because there really wasn't anything that worked or very, very little. And this is the second decade of the 21st century. So, we have a lot of work to do.

In California, relative to AT&T's existing coverage throughout the state and the interoperability of the public safety broadband network with other cellular networks, how is AT&T dealing with coverage areas where you are not the dominant carrier in that area? Just very quickly.

Mr. SAMBAR. Yes, Congresswoman.

So, we are in the process of negotiating with California. As you know, they haven't opted in.

Ms. ESHOO. I know that.

Mr. SAMBAR. We are in the process of negotiating.

Ms. ESHOO. They have some problems with you. But how are you dealing with coverage areas where you are not the optimum and others are?

Mr. SAMBAR. So, we have given them a significant number of sites that they can move around in the state and give us priority areas, so that we can cover those areas that are not covered today where other carriers are dominant. In those areas where other carriers are dominant—

Ms. ESHOO. Now wait a minute. What does that mean?

Mr. SAMBAR. That means we are—

Ms. ESHOO. You want the state to tell the ones that are more dominant than you what?

Mr. SAMBAR. No.

Ms. ESHOO. Tell me how that works.

Mr. SAMBAR. We are going to build big cell towers in the places where we don't have coverage, so that we can cover ubiquitously throughout California to give them the coverage they are asking for. California has come to us and said, "We need coverage in these areas."

Ms. ESHOO. OK. All right.

Mr. SAMBAR. And we said, OK, we will build those areas out.

Ms. ESHOO. How are you going to ensure interoperability with the public safety network with the jurisdictions that use other networks?

Mr. SAMBAR. So, just like we do today, if you have a different carrier than I have on my phone, we can talk to each other. That is called interoperability. And we will maintain that in the future. This will not be a locked-in proprietary network.

Ms. ESHOO. Why are there penalties? Did the Congress do that or is it part of your contract? It is my understanding that in California's case, I think relative to the RAN, the penalty would be in the area of \$15 billion. Who came up with that? How do you make that determination?

Mr. POTH. No, that—

Ms. ESHOO. And why are there penalties?

Mr. POTH. Excuse me. There aren't any penalties right now. What that \$15 billion—

Ms. ESHOO. Well, that doesn't make me feel too good.

Mr. POTH. Right.

Ms. ESHOO. You just said "right now". Are there going to be? And where did this \$15 billion, approximately, come from?

Mr. POTH. So, that was FirstNet's attempt at trying to make sure in our full transparency. So, in the State of California, as we talked about earlier, if they opt out and they have a problem where they have to default and they are not able to continue to work, the estimates could be as high as that number.

Ms. ESHOO. But I don't understand. Is this a penalty for not opting in?

Mr. POTH. No, absolutely not.

Ms. ESHOO. Well, what is it for?

Mr. POTH. So, we have tried to share with the states what we thought, because of this very involved, complex project, if we had to reconstitute the network from zero after a state, implementation didn't work, that it could be as high as that. That is where I have said earlier, and I qualified, we are working with every state, including California, to minimize any of those impacts. And hopefully, they would never even get to that point.

So, in our zeal to make sure that—

Ms. ESHOO. But why even talk about penalties? Obviously, if something doesn't work, the state is going to be responsible and has to build up a system.

Mr. POTH. That is what that number is. It is not a penalty or fine if someone opted out and weren't able to complete it.

Ms. ESHOO. Let me just ask—thank you for your leadership—

Mr. POTH. Right.

Ms. ESHOO. Did you say, Mr. Sambar, that AT&T does not make any money on this?

Mr. SAMBAR. No, I—

Ms. ESHOO. You said, "We are not in this for profit."?

Mr. SAMBAR. We are a—

Ms. ESHOO. It is a wonderful notion, but it is a real—

Mr. SAMBAR. That would be nice, it would be nice if we were a philanthropist, but—

Ms. ESHOO. It is a stunner to me.

Mr. SAMBAR. Yes, we have shareholders that we are accountable to. So, yes, we do have to make a profit off of it. So, it is profitable.

Ms. ESHOO. But why did you say it is not—

Mr. SAMBAR. It is a public-private partnership, and our primary commitment going into this wasn't to make money.

Ms. ESHOO. All right. All right. Yes. Well, OK. Good.

It is great to have a Moran here.

[Laughter.]

Either over there or at this part. It is just wonderful. Thank you for your leadership in the state.

Thank you, Madam Chairwoman.

Mrs. BLACKBURN. The gentlelady yields back.

Mr. Kinzinger, for 5 minutes.

Mr. KINZINGER. Thank you, Madam Chair.

There is nothing wrong with making money. It is capitalism.

I want to thank you, Chair, for yielding and for holding this hearing. And given the events that unfolded yesterday in New York

that are currently being investigated as a terrorist attack on our country, I think this hearing is especially timely today.

Broadly speaking, we need to get this system operational and running efficiently, so that we can respond to both natural disasters and, frankly, the next attack that is going to happen in the future. We know this is a generational fight we find ourselves in the middle of. It will probably last for the rest of my lifetime.

But, in that vein, Mr. Sambar, during recent emergencies, cell towers have become overwhelmed by the volume of calls and texts. Will first responders avoid similar communications hurdles using the network that AT&T and FirstNet are planning to deploy?

Mr. SAMBAR. Thank you, Congressman.

Yes, that is exactly one of the primary purposes of this network. It is so that first responders are not on the typical commercial networks, subjected to the same congestion that they would be otherwise subjected to on a commercial network.

So, there are two features called priority and preemption. Priority means that their data goes faster than anyone else's. So, if they are trying to get a picture of a subject to another first responder to let them know what is going on, if they are trying to get a picture of a fire to a fire captain, so that he knows the nature of the fire, how many engines he needs to send, that data will go uninterrupted through the network. That is priority.

Preemption, the next one, means that, if a first responder is trying to get on the network and it is congested, which can happen any time you have a crowd of people in an area, preemption will actually move someone on our commercial network off to another frequency band on our commercial network, and allow that first responder on immediately. The only call that it won't preempt is a 911 call. So, we will not take regular commercial citizens and kick them off if they are on a 911 call, but it will preempt other users off. So, they will have an uninterrupted network experience.

Mr. KINZINGER. Excellent. That is really good to hear.

Switching gears a bit, Mr. Poth, with regards to the lease terms that FirstNet sent to the states, is there a process for appealing FirstNet's terms or are these effectively "take it or leave it"? And how did you develop those terms?

Mr. POTH. So, the spectrum management lease is just a draft. We tried to provide that information early, so the governors and their teams could review what would be a working document that we would negotiate probably 2 years from now. Unfortunately, based on the statute and the regulatory requirements that first go into the FCC for approval of an alternative plan, then to NTIA, literally, it would be probably about 2 1A½ years. So, this was just a draft of some of the concepts that are important as the licenseholder, FirstNet, to be able to lease that portion of the spectrum to a state. So, absolutely, we are going to work with the states now and through this entire process to make sure that they feel comfortable and their questions are answered.

Mr. KINZINGER. So, it is not "take it or leave it"? You are saying this is an early draft and—

Mr. POTH. Yes, this is a working draft because we wanted to provide—we didn't want states to get through a 2 1A½ year process



and, then, start looking at terms and say, "Well, why didn't you tell us this 2 1A½ years ago?"

Mr. KINZINGER. OK, and I understand that NTIA has yet to issue a Notice of Funding Opportunity, which would, presumably, provide the states with detailed information regarding the process that NTIA intends to use in its review for state applications for spectrum and construction grants. States now have less than 2 months to make a decision on opting in or opting out, and they are missing some pretty important data. When is NTIA going to release that notice?

Mr. POTH. Talking to NTIA as recent as yesterday, they have published those into the system and it is going through clearance. So, they hope within the next few days it will come out, that guidance.

Mr. KINZINGER. OK. Hopefully. That would be good.

And last, let me ask you, in the FirstNet press release dated June 19th of this year it stated that the FirstNet state plan "comes fully funded and will require no additional resources for the states to deploy or operate the network." It would seem, then, that opting into FirstNet is more economic for states than opting out. However, there are still some unanswered questions with respect to processes and determinations that have been made. In order to fully ensure that FirstNet is the best and most economic option, we do need more answers. So, will you commit here today that you will work with Congress, the states, and stakeholders, to provide these answers to the best of your ability?

Mr. POTH. Absolutely.

Mr. KINZINGER. Excellent.

Mr. POTH. We have met with some states over 30 times over this process, and we are going to continue to do that for the life of this program, to make sure that all their questions are answered, no matter what.

Mr. KINZINGER. Great.

And to the five of you, thank you for being in here. Thanks for giving us your time.

And with that, I will yield back.

Mrs. BLACKBURN. The gentleman yields back.

Mr. McNerney, you are recognized.

Mr. MCNERNEY. Well, I just want to say to the Chair that I appreciate enforcement of the 5-minute rule, being on the lower end of the committee here.

Mr. POTH, we have recently seen a series of natural disasters in California, flooding, earthquakes, and wildfires, including the devastating wildfire we had a couple of weeks ago in which 120 cell phone towers, cell towers, were down and destroyed. In planning and building out and hardening this system, the resiliency of the system, how does FirstNet plan to account for those types of disasters?

Mr. POTH. We require of AT&T via the contract that the installations are public safety hardened. And how we are measuring that is against reliability and up time. But, even with that, unfortunately, Mother Nature, in particular, no matter what hardening is done, can affect those towers.

One of the other requirements that we have is—and Mr. Sambar alluded to it—deployables and the ability to quickly recover into an area. They are contractually obligated throughout the 56 states and territories in those areas where their existing assets go down to restore the network as quickly as possible.

Mr. MCNERNEY. OK.

Mr. POTH. And we are going to hold them to that.

Mr. MCNERNEY. Thank you.

Mr. Sambar, do you plan to provide ways to ensure that communication continues when cell towers go down during the process, before the minis can be in place?

Mr. SAMBAR. Absolutely. As Mr. Poth mentioned, reliability and up time on the network is our priority. So, whether that is something happens to the tower, which that will always happen—you can't keep a tower from burning up, right? That is going to happen. But the deployables, as you mentioned, I actually have a picture of one here in the wildfires in California. So, this is a mobile, 1-ton truck that you pull out—

Mr. MCNERNEY. So, you are saying that that can be in place almost immediately?

Mr. SAMBAR. Yes, it is. You can see the fire in the background. So, this was actually put up immediately after the fire passed through, burned the tower down. We drove this in, so that the first responders in the area had communications.

Mr. MCNERNEY. Very good.

Mr. SAMBAR. Thank you, sir.

Mr. MCNERNEY. All right. Device security, which you have already responded to, to a certain degree, to the chairwoman's questions, it is very important to me. I introduced a bill, the Securing IoT Act, which requires that cybersecurity standards and certifications be established for wireless devices. What cybersecurity or industry standards or guidelines is AT&T considering in developing FirstNet?

Mr. SAMBAR. So, similar to my response earlier, just to recap, the cybersecurity starts at the device level, the applications on the device as well as the device itself. So, AT&T will be certifying all the devices. The FirstNet Authority has a lab in Boulder, Colorado. They will certify the devices as well.

Mr. MCNERNEY. So, what standards are they using?

Mr. SAMBAR. AT&T has our own proprietary standards. FirstNet has developed their own proprietary standards that they will be certifying the devices based on.

Mr. MCNERNEY. So, is there any acceptance of those standards?

Mr. POTH. Yes, and what the FirstNet standards were drawn from is with NIST, the Department of Justice, OMB, DHS, and some of our fellow federal agencies to make sure. We are also capitalizing and requiring that AT&T bring private sector best practices to bear on the cyber approach, too.

Mr. MCNERNEY. OK. Well, I understand that volunteers, first responders, can bring their own devices?

Mr. SAMBAR. Yes.

Mr. MCNERNEY. What steps are going to be taken to make sure those devices are cyber-secure?

Mr. SAMBAR. So, they can bring their own devices, and it is up to them what device they use. If they are purchasing an AT&T device, again, it will be certified and they will know that. The applications on that device are definitely a point of vulnerability, and we will be certifying all the applications, putting them into a public safety application store, so that they can ensure that an application in that store is secure from a cybersecurity standpoint, as well as it functions correctly.

Mr. MCNERNEY. Thank you.

Mr. LeGrande, do you believe that FirstNet with AT&T can ensure competition at every level?

Mr. LEGRANDE. I think they have the opportunity to do that. I think we should not treat this like it is, again, a dedicated public safety broadband network. I think we set up a competitive environment, in that FirstNet leverages its position to, again, incent other carriers. To wildfires, to the hurricanes, the bottom line is what is in the best interest of public safety is all the carriers competing to drive down costs and create the best possible environment. So, I think they are in a very good position to do that, yes. That would be my answer.

Mr. MCNERNEY. Do they need additional incentives to make sure that they assure competition?

Mr. LEGRANDE. I think that FirstNet has the opportunity to reach out beyond AT&T. They have got their contract with AT&T continuing. I am not questioning that. But there is an opportunity to embrace the other carriers and say, "Look, if you come up with these levels of standards and you bring your networks up to this, then we can have all of these guys competing." Because, again, the best thing for public safety is low cost and greater innovation, and competition is what gets us there.

Mr. MCNERNEY. Thank you, Madam Chairman. Thirteen seconds.

Mrs. BLACKBURN. You are doing well.

Mr. Bilirakis, you are recognized for 5 minutes.

Mr. BILIRAKIS. Thank you, Madam Chair. I appreciate it. I will stay under the 5 minutes as well. No guarantees, though I will try. Thank you again for having this hearing.

Governor Scott, my State of Florida has issued a Notice of Information to review the FirstNet proposal as compared to other options the state may have. While we do not know the outcome of this inquiry, I do support the governor's due diligence to subject the proposal to competition in the marketplace and ensure it is right for our state.

My question is to Mr. Sambar. I am a representative of a coastal community in the Tampa Bay area, and it is subject to hurricanes, as you know, with limited evacuation routes, unfortunately. I am intrigued by the shifting of first responder priorities you discuss in your written testimony. Can you elaborate on the benefits of the selective ability to at-risk communities such as mine, please?

Mr. SAMBAR. Absolutely, and I believe you are referring to the priority and preemption services. Those are actually features that will be in the network. Priority exists today. We have been providing that to commercial customers for 2 years now.

Preemption is a new feature that will only be available for first responders, and that will be by the end of this year. Preemption is really the one that first responders have been asking for. And that provides the ability in an area where a network is congested, if it is a coastal community, prior to, during, and after a storm, and there is a significant amount of congestion. Maybe some of the towers aren't working properly. There is a limited amount of bandwidth. It ensures that first responders have first rights to that bandwidth. So, they can actually move others off of a network, and they will have a seamless network experience wherever the network exists. So, a terrific benefit for first responders who have been asking for it for a long time, and we are going to be providing that to them very soon.

Mr. BILIRAKIS. Very good. Thank you.

Mr. Stevens, under the 2012 act that authorized FirstNet, Congress directed FirstNet to develop a plan for each state to deploy the network. From your perspective, has there been sufficient engagement from FirstNet with the states?

Mr. STEVENS. Yes. We have had good conversations with FirstNet along with AT&T along the process. However, we took advantage of the opportunity that the law provided that we would go down the road by developing an alternative plan. As you said, sir, New Hampshire has done its due diligence and we have two viable plans that we are looking at for comparison.

Mr. BILIRAKIS. Very good. Thank you.

And I will yield back, Madam Chair. Thank you.

Mrs. BLACKBURN. The gentleman yields back.

Ms. Matsui, you are recognized.

Ms. MATSUI. Thank you, Madam Chairman, and I thank the witnesses for being here today.

As you know, the FirstNet contract requires a 25-year performance period. That means that the life cycle of this contract will see the deployment of next-generation wireless broadband networks for both consumers and first responders.

Mr. Sambar, could you discuss how auctions that would deliver spectrum suitable for 5G networks also could be critically important for the continued upgrades necessary for the first responders on your network?

Mr. SAMBAR. Thank you, Congresswoman. I appreciate that question because, when the RFP was initially written by the FirstNet Authority, it spoke to the Band 14 spectrum, that one piece of 20-megahertz spectrum that was allocated, and putting up that spectrum and making that available to public safety. And we changed it around a little bit, and we said, yes, we will do that and we are going to cover a significant percentage of the population with it, but we are also going to make available all of our spectrum bands.

So, as we move into a 5G world, millimeter wave technology, small cells on street corners, the first responder may connect to Band 14 on a tower a quarter mile or a half mile away, but they may connect to the street corner small cell, which is a 5G small cell. It may not be Band 14. It may be something else, but it may give them 10 times the speed that they would have had on the Band 14 connection a quarter or a half mile away. So, we are really

opening up our network, so that first responders have the best possible connection.

Ms. MATSUI. OK. OK, great.

Mr. Moran, what is the importance of deploying next-generation wireless broadband networks to states?

Mr. MORAN. Well, it is critically important, as has been noted throughout this hearing, to provide our first responders the latest and greatest technology. It is critical to responding to what is an expanding and even more dangerous threat environment. Being in this position, recognizing whether it be natural disasters or hurricanes and tornadoes, to now more manmade disasters, if we can provide our first responders with the technology, and the firefighters the location technology, they can be in a building and be located immediately, as well as the victims that might be present. I mean, it is critically important.

So, that is why we opted in, because we just saw the positive benefits and with no cost. And so, though we thoroughly reviewed the decision, we think it is the right decision.

Ms. MATSUI. OK. Thank you.

Mr. McNerney talked about the wildfires that cut through northern California, which we visited this last weekend. In my district we also have quite a few flooding risks also. And California is currently in a review process and considering how to evaluate its decision.

Mr. Poth, what network assets will FirstNet be able to provide that will assist first responders in my district to meet such a diverse set of emergencies, such as fires and extreme flooding? I mean, we have both.

Mr. POTH. Right.

Ms. MATSUI. And maybe in earthquakes, too. So, you never know.

Mr. POTH. And that is part of the process that the state is looking at right now and the proposals that we have on the table that AT&T is working with. The state has also identified those areas that are high risk to them because they are responding to those areas. Based on that feedback from public safety, the people that are actually having to do the work, is what is informing AT&T's solution as to where to put fixed assets or to ensure that there is closer responsive deployables.

Ms. MATSUI. All right. OK. Thank you.

Now, with FirstNet having delivered plans to states at the end of September, governors and state single points of contact are currently reviewing FirstNet's maps of wireless broadband coverage. A critical piece in the success of FirstNet is its ability to provide public safety officials and first responders with access to communications in even the most rural and remote areas of our states and districts. These maps must represent where coverage does and doesn't exist, so these areas are not left behind.

Mr. Poth, what steps did FirstNet take to ensure these coverage maps are accurate? And is it possible to use the lessons learned from that effort to furnish the committee's larger efforts to gather more accurate broadband data?

Mr. POTH. Yes. So, we have been, for the last 3 years, in particular, but since the inception of FirstNet, working with all the states to understand their coverage, their perception of coverage,

and what the actual coverage they believe. Now, with the plans, we delivered earlier, 3 months prior to the actual September date, drafts of those plans with the coverage, so that they could start seeing it to validate against what they know. And that is what has been driving a lot of the conversations as to where they want it to go and what they need to do.

We are using those coverages, and, ultimately, it will be a build-out. It is not going to be day one where all the coverage needs are met. It won't even be met by year five, but it will continue to grow. And that is what the states are looking at.

Ms. MATSUI. OK. Thank you very much.

And I yield back.

Mrs. BLACKBURN. Ms. Walters, you are recognized for 5 minutes.

Mrs. MIMI WALTERS OF CALIFORNIA. Thank you, Madam Chairman. Thank you to the subcommittee for holding this hearing and for our witnesses for their testimony,

My home State is California as well, and I know that many of my colleagues have discussed that we are particularly susceptible to widespread natural disasters, including wildfires, earthquakes, and flooding. As you all know because we have been discussing it in recent weeks, California experienced the most devastating wildfires in the state's history. Forty-three people died, nearly 9,000 structures were destroyed, and it will take years for the areas impacted by the fires to fully recover. Canyon Fire 2, which occurred in my district, required the evacuation of thousands of residents.

California is vulnerable to both natural disasters and terrorist attacks. Given the size of the state and its large population, it is critical that California's first responders have a reliable public safety network.

And one of the problems of sitting in this front row is that many of your questions get asked already because you are low man on the totem pole. So, I am going to ask Mr. Sambar, do you have any comment on the testimony you have heard here today from your colleagues or the statements filed by others in this hearing?

Mr. SAMBAR. Generally speaking, I appreciate the dialog. There was some testimony submitted by Verizon at the beginning, and I know it was not read out today. But there are a couple of points in there that I think are important to address in front of this committee.

One is the interoperability of core networks. I think we have beat that horse to death. But serious reasons why cybersecurity becomes an issue when you interoperate the cores. And that won't be allowed, it doesn't sound like, not by our rules, but by others, including the original legislation.

There is also a portion of this testimony where—and I will quote from it real briefly here—“The FirstNet RFP was established as a spectrum deal”. And further quoting, “We have never had an interest in FirstNet's spectrum and could not justify the investment required to build out spectrum that we had no intention of using commercially.” So, this is from Verizon's testimony.

I personally take exception to this. So, it was noted earlier my military service. I spent 23 years between active and Reserves in

the military. This job and this task is personal to me. This is not a spectrum deal.

To the Congresswoman's point earlier, AT&T is going to make money off of it. We are a for-profit company. I am not trying to hide that fact. But this isn't about the spectrum and a spectrum deal. This is about serving first responders, the folks that are behind me. We are building something really special here, and we are giving them something they haven't had in a long time, that the 9/11 Commission said that they needed, that you said that they needed. And that is what we are doing here.

So, I just want to set a level playing field and let everyone know this isn't a spectrum deal. That is really not the right way to talk about this. We feel very passionately about that.

Mrs. MIMI WALTERS OF CALIFORNIA. OK. Thank you.

Mr. SAMBAR. Yes.

Mrs. MIMI WALTERS OF CALIFORNIA. Mr. Poth, in addition to having to cover termination fees, in the case of California, as it was reported, to spend \$15 billion, are there any potential risks of a state opting out of FirstNet?

Mr. POTH. The risk is not whether they opt out or opt in. If they opt out, we are going to do everything we can to make them successful. The risk is that the state that pursues an opt-out truly has a robust solution with financial sustainability. Twenty-five years is a long time, and this is a very complex project. Billions of dollars are being spent. We are investing; the Congress has allowed us to invest \$6.5 billion in the spectrum. So, this is not a trivial exercise. And the length of the program and the complexity create a risk, but it is something that FirstNet realizes and we will work with the state, whether they opt in or opt out, for the next 25 years to make them successful. But the integration and the complexity and the delays of an opt-out state just by statute complicate matters certainly.

Mrs. MIMI WALTERS OF CALIFORNIA. Thank you.

And I yield back the balance of my time.

Mrs. BLACKBURN. The gentlelady yields back.

Mr. Engel, you are recognized for 5 minutes.

Mr. ENGEL. Thank you, Madam Chairman.

Thank you to all the witnesses.

And let me start with Secretary Moran. Virginia was the first state to opt into FirstNet. And Virginia, like New York, has withstood some devastating and high-profile disasters over the years. So, let me ask you, now that Virginia has opted in, what additional tools will it have to respond to these disasters?

Mr. MORAN. Well, I referenced the ability of Fairfax County and their fire, when they went to Houston to respond to Hurricane Harvey, and some of the additional technological benefits that are obtained from the FirstNet opt-in.

But I would say, I very much appreciate this hearing because it has brought to mind all of the issues with respect to our opt-in decision, all the things we discussed. But we need to maintain vigilance, and I say "we" in terms of Congress has to be vigilant because this hearing has identified a number of ongoing discussions we are having with AT&T.

And I would second Mr. Stevens' point that their availability to us has been excellent. And we have had those discussions, the rural concerns. But having access to what they are offering is critical to being able to respond to the ever-increasing and emerging threats. So, we just have to make sure that relationship with AT&T remains robust, so that we can have access to all what they have promised.

Mr. ENGEL. Well, talking about the various tools, when would you expect to see those tools come online?

Mr. MORAN. Congressman, one of the reasons we adopted so quickly in July is because Fairfax and other localities that already had access to AT&T could immediately gain access to the expanded broadband capabilities. And so, some of that has gone on.

Now, in full disclosure, AT&T does not have the coverage of other providers in Virginia. And so, it has to be a significant build-out of the AT&T services in Virginia for all of our localities to be able to benefit.

Mr. ENGEL. Thank you.

Mr. POTH, I have a few questions for you. For states that decide to opt out, I understand that FirstNet will require those states to meet certain subscriber targets. I guess that is true, right?

Mr. POTH. Yes. What we are trying to achieve is the purpose of this is for public safety, and we are not requiring the states, but the state's contractor to make sure that the solution that they provide will meet public safety's needs in that state and that they adopt to be able to take advantage of this nationwide interoperable network.

Mr. ENGEL. How closely do the state requirements mirror AT&T's requirements in the national contract?

Mr. POTH. They are very comparable, absolutely.

Mr. ENGEL. Comparable with what?

Mr. POTH. We are not asking the state any more than what we require of AT&T currently, but it is under contract.

Mr. ENGEL. What if a state falls short? What penalties will they face?

Mr. POTH. We had the discussion a little. That is impossible for us right now to try to determine. We have tried to place a range, but we don't know what the nature of a state that would have a default. We don't know what the technology will even be, say, in year 12. So, the only thing that I can absolutely say for sure is that we will be working with the states during that entire time, and if there is a problem or a default, then we will work with them quickly to try to recover and restore that network at the minimal impact to all, on behalf of that state and public safety.

Mr. ENGEL. Now FirstNet was started within the National Telecommunications and Information Administration, which is part of the Department of Commerce. Am I correct about that?

Mr. POTH. Yes. Yes, sir.

Mr. ENGEL. Yes. So, the legislation that created FirstNet envisioned it being spun off to operate independently at some point in the future, is that true?

Mr. POTH. Well, I am not sure it was ever intended to be completely spun off, but we are an independent authority and we work



very effectively with our partners at NTIA and Commerce and all the other federal agencies.

Mr. ENGEL. So, can you briefly discuss the pros and cons of FirstNet operating as an independent entity?

Mr. POTH. Well, we have had a lot of flexibility and speed to deployment that we like to say because of this procurement. Although people may argue it has been impossibly long since the statute was passed, we have accomplished a great deal in a short time, and we attribute a lot of that to the independence, that we are able to work within the rules and requirements in the federal government, but in a much more quick and nimble way.

Mr. ENGEL. Are we reaching that point in the near term as an independent entity?

Mr. POTH. I don't see a particular need right now because I think we are addressing all the needs to make the states and public safety successful, and we are certainly in a position to make AT&T successful within the constraints of the contract.

Mr. ENGEL. So, what needs to happen first if we are not there yet?

Mr. POTH. I think the thing that we need to do is we have got to execute. We have got to make sure, on behalf of the federal government and public safety throughout this country, that the promise is actually fulfilled. And we think we have a good way of achieving that through this contract.

Mr. ENGEL. Thank you.

Thank you, Madam Chairman.

Mrs. BLACKBURN. The gentleman yields back.

Before I conclude, I ask unanimous consent to enter a list of documents into the record: an op-ed from Thomas Manger; a letter that was submitted by Mr. Doyle by Verizon; a letter from Governor Sununu of New Hampshire to his fellow governors; Governor Sununu's FirstNet Executive Order; a letter from the Competitive Carriers Association; chairman and ranking member's statements for the record; Mr. Sambar's picture—we need that—of the mobile tower in front of the wildfire, and the International Association of Fire Chiefs' letter. Without objection, so ordered.

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

Mrs. BLACKBURN. Seeing there are no further members wishing to ask questions for the panel, I want to thank all of you for being here today.

Pursuant to committee rules, I remind members that they have 10 business days to submit additional questions for the record. And I ask that witnesses submit their responses within 10 business days. Seeing no further business before the subcommittee today, without objection, the subcommittee is adjourned.

[Whereupon, at 12:31 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]



October 31, 2017

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

Dear Chairman Blackburn, Ranking Member Doyle, and Members of the Subcommittee:

Verizon appreciates the opportunity to provide the Subcommittee with its perspective on "Oversight of FirstNet: States Perspective."

Verizon has a long-standing commitment to support and serve the public safety community. Each and every day, we provide first responders with high quality voice and data services to meet their communications needs. More than two thirds of police, fire, and emergency medical service personnel across the nation – in communities both large and small – rely on Verizon's advanced networks, product enhancements, and service commitment to help them protect and serve the public. And, in times of disaster, Verizon is there to provide public safety agencies with the assistance they need in their efforts to prepare for and respond to whatever emergencies occur.

It is no accident that Verizon is the preferred network provider to public safety agencies across the country. It is because we make the investments necessary to ensure that our networks are reliable and resilient and meet the "public safety grade" standard that is so important to first responders. Put simply, first responders have the confidence that Verizon will be there when it matters, and for public safety, reliable and effective communications always matter.

Given Verizon's strong commitment to public safety, we are pleased to file this written testimony for the record to assist the Subcommittee in its efforts to evaluate the current progress of FirstNet. Verizon has long recognized the unique and critical nature of public safety communications, and it has been a strong supporter of efforts to provide first responders with the most effective communications possible.

In passing *The Middle Class Tax Relief and Job Creation Act of 2012*, Congress provided FirstNet with the framework, spectrum, and funding to ensure that public safety's need for reliable and resilient communications was effectively addressed. As FirstNet began to implement Congress' mandate, Verizon offered its expertise and guidance on what we believed would be most effective. We believed that a state-centric

approach was much more likely to meet public safety's unique requirements than a one-size-fits-all approach. We recommended a framework that would promote state- or regional-based partnerships with a requirement that the resulting state or regional networks be required to interoperate in order to create a nationwide network for public safety's use.

Verizon made these recommendations because it recognized that the communications needs of the public safety community and the assets and capabilities of prospective commercial partners often vary from one state or region to another. Recognizing these differences, state officials should have the flexibility and authority to establish those partnerships that best meet their own requirements. Verizon believed then, as it does now, that a flexible, pro-competitive approach for establishing a nationwide interoperable public safety broadband network is in the best interests of public safety.

Ultimately, FirstNet awarded a contract to a single network operator. Moreover, instead of a network dedicated to public safety, it decided to support a commercial solution that relies heavily on monetizing the value of the 700 MHz spectrum licensed to FirstNet. For all intents and purposes, the FirstNet RFP was established as a spectrum deal, with the winning bidder required to commercialize the 700 MHz spectrum in order to fund the construction of a network. While Verizon understands the reasoning behind this decision, we chose not to respond to the FirstNet RFP. We have never had an interest in FirstNet's spectrum and could not justify the investment required to build-out spectrum we had no intention of using commercially.

While Verizon understands FirstNet's decision to select a single network partner, we also recognize that FirstNet has a statutory mandate to ensure that states have a meaningful opportunity to make their own communications decisions including the ability to construct their own networks should they not wish to use the network built and operated by FirstNet and its commercial partner. These "opt-out" provisions allow states to use the spectrum and federal funding provided to FirstNet by Congress to support the deployment and operation of state-based networks should they choose to opt-out of the FirstNet network.

Verizon remains committed to serving the public safety community, and we intend to continue to do that across the country, regardless of whether particular states choose to opt in or opt out of FirstNet. It is critically important, however, that states have viable competitive alternatives in either case. Promoting competition and preserving the rights of states to make their own communications decisions, including building their own state-based networks, are two important tenets of the legislation enacted by Congress. While the law does not require states to participate in the FirstNet network, the opt-out provisions guarantee that states have a meaningful opportunity to participate in the establishment of the network while taking on the responsibilities for deployment within their states.

In order for such an option to be meaningful, however, it must allow states to pick their own commercial partner, or partners, and to establish their own public-private partnership in a manner comparable to FirstNet. It must also allow states and their commercial partners to develop network architectures and service arrangements that are viable and sustainable over the long term.

Critical to the viability of such an option is the ability for a state to use its own core network, or one deployed by its preferred commercial partner. States should not be required to use the core network deployed by FirstNet and its commercial partner, as such a requirement would have several negative implications. First, since the core network defines the service arrangement with the customer, being forced to use AT&T's core network would effectively require that the state use AT&T to serve its public safety users and prohibit them from using their preferred public safety service provider. A requirement to use AT&T's core network would also put the state in the untenable position of being driven by the interests and decisions of FirstNet's commercial partner. For example, any changes to the core network made by AT&T would trigger corresponding changes to the radio access networks deployed by the state's network partner. Any change that the state's partner would wish to make to the state's network would have to first be authorized by AT&T. These conditions are unlikely to be supported by any prospective state commercial partner.

Ensuring interoperability between a state network and the FirstNet network is, of course, an important requirement for any state that opts out. Indeed, the law requires that states opting out of FirstNet demonstrate how they will achieve interoperability in their alternate state plans, which must be submitted to the FCC for approval. The FCC recently released the standards it will use to determine whether or not an alternate state plan is interoperable with FirstNet. The FCC's decision considered input from many parties, including state officials, Verizon, and others that sought clarification on the ability for States to utilize their own state network core. The FCC stated it would not reject a plan that includes the use of a separate state core network, but it declined to find that such a core network was expressly permitted because it believes that decision is outside the scope of its authority. Verizon believes it is important for Congress or NTIA to make clear that the law permits a state wishing to opt-out to have its own core network, as such a finding is imperative to a state having a viable means to opt-out.

Even if no state decides to opt-out of FirstNet, it is important that public safety agencies across the country have competitive options and that other public safety networks used by those agencies are interoperable with FirstNet. Enabling competitive alternatives for public safety is vitally important to ensuring continued innovation, increased reliability, and competitive pricing. A public safety market that provides agencies with only one choice of network provider is unlikely to achieve those objectives.

Verizon's commitment to public safety is not predicated on whether or not a state chooses to opt-in or opt-out of FirstNet, and we are prepared to work with every state regardless of its opt-out decision. In order to best satisfy public safety's unique

requirements, Verizon announced earlier this year its intention to make substantial investments in new network capabilities and enhanced products and services for public safety. This commitment includes building and operating our own private core network dedicated to public safety communications, making priority and preemption services available to our public safety customers, and investing in new applications and capabilities including mission-critical voice communications that will interoperate with existing Land Mobile Radio networks. Put simply, Verizon intends to provide the same advanced features and capabilities that AT&T has promised to provide to FirstNet.

Recognizing that all public safety users have the choice to purchase services from the provider that best satisfies their requirements regardless of the State's opt-out decision, Verizon's public safety solution will be available to all states and all public safety users throughout the country. Moreover, it does not require access to federal funding provided to FirstNet, and does not require state funding to support network deployment. Along with a variety of enhanced products and services designed to meet public safety's unique needs, Verizon will also make available multi-band devices that provide access not only to Verizon's own reliable broadband network, but to Band 14 spectrum and enable full interoperability with any Band 14 radio access network (RAN) deployed by FirstNet or a State that decides to opt-out.

Verizon believes that FirstNet has yielded significant benefits for public safety by focusing attention on the importance of mission critical communications for first responders and establishing a framework that leverages commercial investments and innovation. However, that goal cannot be fully realized unless the FirstNet framework is implemented in a way that preserves the robust competition that exists today for wireless public safety consumers and that will yield significant benefits for public safety. Competition and interoperability are not mutually exclusive. Indeed, in the context of FirstNet, they are both vital. Both can be achieved, and both must be achieved if Congress' vision of effective, reliable, and interoperability communications is realized. Verizon is committed to work with Congress, NTIA, FirstNet, and the public safety community to make that happen.

Thank you again for the opportunity to provide the Subcommittee with Verizon's perspective on the efforts of FirstNet to meet the critical communications needs of public safety agencies around the country.

Respectfully,

Donald Brittingham  
Vice President – Public Safety Policy  
Verizon  
1300 I Street NW, Suite 500E  
Washington, D.C. 20005  
(202) 515-2477  
[Donald.C.Brittingham@Verizon.com](mailto:Donald.C.Brittingham@Verizon.com)



**STATE OF NEW HAMPSHIRE**  
OFFICE OF THE GOVERNOR

CHRISTOPHER T. SUNUNU  
Governor

October 23, 2017

VIA ELECTRONIC MAIL

Re: Review of FirstNet Options

Dear fellow Governors:

I am writing with an important message regarding your state's decision on the development of a high speed wireless broadband network for public safety. We all have an important decision to make before December 28, 2017 – whether to opt in to the plan offered by AT&T on behalf of the First Responder Network Authority ("FirstNet") or opt out and pursue the development of an alternative plan. In brief, I believe there are some very important questions that still need to be answered, and I urge each of you to hold off on making a final decision while we seek further information from Federal officials.

As you may have heard, on October 5<sup>th</sup> New Hampshire's Statewide Interoperability Executive Committee **unanimously recommended that New Hampshire opt out of the FirstNet plan** and contract with Rivada Networks, LLC for the development of an alternative plan. After receiving this recommendation, on October 16th I issued an executive order (attached hereto as Exhibit A) to establish a FirstNet Opt-Out Review Committee to carefully review the regulatory and financial risks of pursuing an opt-out plan.

In the coming weeks, our Opt-Out Review Committee will conduct a thorough legal and financial due diligence review, which will include seeking clarification from Federal officials on fees and penalties that may be imposed by FirstNet in the event that an opt-out is unsuccessful. Our initial review of these fees and penalties has raised some serious questions, and I believe each of us must have the answers to these questions before we make our final decision. Our first responders and all of our citizens deserve nothing less. To this end, we have recently been informed that the U.S. House Communication and Technology Subcommittee will be holding a hearing on November 1<sup>st</sup> to seek answers to some of these questions.

I strongly encourage each of you to pause and work with us as we seek further answers from Federal officials. We are hoping to complete our due diligence by November 21<sup>st</sup>. Whether you ultimately decide to opt in or opt out, I believe that we will all benefit by a collective insistence that each state receive the information it needs to make a fully informed decision. If you have further questions regarding our efforts, please do not hesitate to reach out to me directly or to have your staff contact my legal counsel, John Formella, at 603-271-2121.

Sincerely,

Christopher T. Sununu  
Governor

107 North Main Street, State House - Rm 208, Concord, New Hampshire 03301  
Telephone (603) 271-2121 • FAX (603) 271-7640  
Website: <http://www.governor.nh.gov/> • Email: [governorsununu@nh.gov](mailto:governorsununu@nh.gov)  
TDD Access: Relay NH 1-800-735-2964

EXHIBIT A

An order establishing the FirstNet Opt-Out Review Committee



**STATE OF NEW HAMPSHIRE  
OFFICE OF THE GOVERNOR**

**CHRISTOPHER T. SUNUNU**  
Governor

**STATE OF NEW HAMPSHIRE  
BY HIS EXCELLENCY  
CHRISTOPHER T. SUNUNU, GOVERNOR**

**Executive Order 2017-08**

**An order establishing the FirstNet Opt-Out Review Committee**

**WHEREAS**, the First Responder Network Authority ("FirstNet") was created by the Middle Class Tax Relief and Job Creation Act of 2012 (the "Act") to provide emergency responders with the first high-speed wireless broadband network dedicated to public safety; and

**WHEREAS**, under the Act, FirstNet is charged with developing a plan for each state for the development of a high speed wireless broadband network for emergency responders;

**WHEREAS**, the Act provides that each state, including the state of New Hampshire, may either "opt-in" to the FirstNet plan or "opt-out" of the FirstNet plan and pursue the development of an alternative plan; and

**WHEREAS**, the Act gives the Governor of New Hampshire the authority to determine whether New Hampshire will opt-in to the FirstNet plan or opt-out and pursue an alternative plan; and

**WHEREAS**, the state of New Hampshire has entered into a no-cost contract with Rivada Networks, LLC ("Rivada") in August of 2016 which gives Rivada the exclusive right to negotiate a contract for the development, provision and implementation of an opt-out plan for the state of New Hampshire if the state of New Hampshire decides to opt-out of the FirstNet plan;

**WHEREAS**, the Statewide Interoperability Executive Committee (the "SIEC") reviewed the New Hampshire opt-in plan presented by FirstNet and the New Hampshire opt-out plan presented by Rivada; and

**WHEREAS**, the SIEC conducted a thorough and comprehensive review of the technical aspects of the FirstNet opt-in plan and Rivada's opt-out plan, including spectrum, coverage, cost, devices, and governance; and

**WHEREAS**, by a unanimous vote on September 6, 2017 (15 yes, 2 abstentions) and a report dated September 6, 2017, the SIEC recommended to the Governor that the Governor choose to opt-out of the FirstNet plan and negotiate a contract with Rivada for the provision and implementation of Rivada's opt-out plan for the state of New Hampshire; and

107 North Main Street, State House - Rm 208, Concord, New Hampshire 03301  
Telephone (603) 271-2121 • FAX (603) 271-7840  
Website: <http://www.governor.nh.gov/> • Email: [governorsununu@nh.gov](mailto:governorsununu@nh.gov)  
TDD Access: Relay NH 1-800-735-2964



**WHEREAS**, the pursuit of an opt-out plan may subject New Hampshire to financial risks if necessary regulatory approvals are not received or if Rivada is unable to successfully provide and implement its opt-out plan; and

**WHEREAS**, the decision of whether to opt-in or opt-out requires, in addition to the SIEC's technical review, a thorough review of both (1) the regulatory and financial risks of the pursuit of an opt-out plan and (2) the financial viability of Rivada's opt-out plan; and

**WHEREAS**, the deadline for the state of New Hampshire to decide whether to opt-out of the FirstNet plan is December 28, 2017;

**NOW, THEREFORE, I, CHRISTOPHER T. SUNUNU, GOVERNOR OF THE STATE OF NEW HAMPSHIRE**, by the authority vested in me pursuant to part II, article 41 of the New Hampshire Constitution, do hereby order, effective immediately, that:

1. There is established the FirstNet Opt-Out Review Committee to review (1) the regulatory and financial risks to the State of New Hampshire associated with the pursuit of an opt-out plan and (2) Rivada's financial capacity to achieve the successful provision and implementation of its opt-out plan.
2. The Committee shall meet as necessary and shall submit a report containing a summary of the results of the Committee's review and the Committee's recommendations to the Governor on or before November 21, 2017.
3. The Committee shall consist of five members appointed by and serving at the pleasure of the Governor.
4. The Committee's review and report shall include, but not be limited to, the following:
  - a) A review and summary of all regulatory approvals required for the successful pursuit of an opt-out plan and an assessment of the prospects for obtaining those approvals for Rivada's opt out plan;
  - b) An assessment of the financial risks to the State of New Hampshire in the event any necessary regulatory approvals are not obtained;
  - c) A summary of any stipulations, conditions or other provisions that the Committee feels should be included in a potential final contract with Rivada;
  - d) A due diligence report on the financial viability of Rivada's opt-out plan; and
  - e) An assessment of the financial risks to the state of New Hampshire in the event that Rivada is unable to complete the provision and implementation of its opt-out plan.

Given under my hand and seal at the Executive Chambers in Concord, this 16th day of October, in the year of Our Lord, two thousand and seventeen, and the independence of the United States of America, two hundred and forty-one.

  
GOVERNOR OF NEW HAMPSHIRE



November 1, 2017

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

The Honorable Mike Doyle  
Ranking Member  
Subcommittee on Communications and Technology  
U.S. House of Representatives Committee on Energy  
and Commerce  
2322A Rayburn House Office Building  
Washington, D.C. 20515

Dear Chairman Blackburn and Ranking Member Doyle:

Competitive Carriers Association commends the Subcommittee for its continued oversight of FirstNet, the nationwide public safety broadband network created as part of the Middle Class Tax Relief and Job Creation Act of 2012. CCA members serve many of the most rural and remote parts of the country, and have a keen interest in ensuring that the states in which they provide service have the opportunity to select the best partners for deployment and ongoing operation of the critically important nationwide interoperable public safety broadband network (NPSBN). CCA appreciates the challenge ahead and hopes to work with FirstNet to provide innovative services for our nation's first responders.

#### *Device Interoperability*

Interoperability was a fundamental principle for the creation of FirstNet. Limiting device interoperability will defy the value of the NPSBN to the detriment of public safety and consumers. Non-interoperable devices could leave a first responder without a connection, even in areas where other commercial networks are operational, and eliminate opportunities for greater redundancy and reliability when most needed.

It is troubling that today devices still are being manufactured and marketed for use on the FirstNet network that are compatible only with AT&T's boutique Band Class 17, a subsection of the interoperable Band Class 12. Further, some of these devices may not be compatible with the public safety spectrum in Band Class 14. This will result in limited roaming opportunities. Further, this could result in first responders utilizing devices sold for use on FirstNet unable to access a connection, in areas outside of AT&T's commercial network (deployed on Band Class 17), where the public safety broadband network has been deployed on Band Class 14 spectrum. CCA has long argued for greater device interoperability where technically feasible. Any attempt to deploy a non-interoperable network or devices for FirstNet fails public safety and could unnecessarily put lives at risk.

#### *Partnerships*

In establishing the nationwide public safety broadband network, Congress noted the importance of rural coverage, statutorily requiring that rural coverage milestones be met as part of each phase of network deployment. To facilitate this rural coverage, Congress directed that "[t]o the maximum extent economically desirable, such proposals shall include partnerships with existing commercial mobile providers to utilize cost-

COMPETITIVE CARRIERS ASSOCIATION

805 15th St NW, Suite 401 | Washington, DC 20005 | [ccamobile.org](http://ccamobile.org)

effective opportunities to speed deployment in rural areas.” More recently, a Government Accountability Office report released on June 20, 2017, noted concerns raised by stakeholders related to providing coverage in rural areas.

To meet these goals, CCA continues to urge FirstNet to work collaboratively with competitive carriers that provide service in rural and remote areas, including to state and local public safety officials. The use of existing infrastructure and the time and cost savings that comes with this may be frustrated by terms that limit true partnership. These actions could delay and reduce services for public safety users, and result in AT&T using spectrum and funding provided by Congress for public safety use to eliminate commercial competitors.

#### *Transparency*

Understanding that state plans have been subject to nondisclosure agreements and uncertainty regarding future spectrum lease agreements, it is important that FirstNet, and its vendor AT&T, provide as much transparency to industry and potential partners as possible. Some states have cited the proposed levels of spectrum, termination and minimum subscription fees as significant deterrents to pursuing opt-out, even when the state finds FirstNet’s plan to be deficient and potentially inferior to other alternatives. Lack of further information regarding spectrum pricing and any potential future fees or penalties on states or commercial partners threatens to curtail partnership opportunities, future revenue sources for FirstNet, and the competition necessary to ensure accountability that public safety users have the latest services and devices through the course of the 25-year contract.

CCA members are committed to providing service in some of the hardest to reach geographies in the nation, including providing connections to public safety officials. CCA appreciates the opportunity to contribute to the record for today’s hearing and looks forward to continued work with the Subcommittee, Congress, and FirstNet on these important issues to further public safety services and innovation in the industry and to ensure a successful implementation of the NPSBN.

Sincerely,



Steven K. Berry  
President & CEO

Cc:

The Honorable Greg Walden, Chairman, U.S. House of Representatives Committee on Energy and Commerce  
The Honorable Frank Pallone, Ranking Member, U.S. House of Representatives Committee on Energy and Commerce



## INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

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November 1, 2017

The Honorable Marsha Blackburn  
Chairman  
Committee on Energy and Commerce  
Communications and Technology  
U.S. House of Representatives  
Washington, D.C. 20515

The Honorable Michael F. Doyle  
Ranking Member  
Committee on Energy and Commerce  
Subcommittee on Communications and Technology  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Chairman Blackburn and Ranking member Doyle:

On behalf of the nearly 12,000 members of the International Association of Fire Chiefs (IAFC), this letter provides the views of the IAFC on the First Responder Network Authority (FirstNet). I thank the subcommittee for this opportunity to provide a public safety perspective on the need for a nationwide public safety network and to examine the real progress that FirstNet has made.

The Middle-Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) established FirstNet as an independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration. Under the act, FirstNet is tasked with building, deploying, and operating a self-funding, sustainable, interoperable broadband network for public safety entities across the country and within U.S. territories.

FirstNet's goal of building the nationwide public safety broadband network to meet the needs of first responders is a matter of critical importance for public safety. While the task will not be easy, the IAFC believes that FirstNet has developed the leadership, staff, and support from states, public safety, and other key stakeholders required to make this network a reality for first responders and the public who call on them for help in their time of need.

As a veteran fire chief, and as a firefighter who has responded to numerous incidents, I know firsthand the benefits that the FirstNet broadband network stands to offer in terms of improving communications, coordination, and situational awareness during public safety operations. Just as smartphones have changed our personal lives, FirstNet devices and applications ultimately will change the way public safety operates. The ability for a single broadband communications network to be used to dispatch Emergency Medical Services (EMS) personnel, a medical helicopter, fire personnel, and other emergency responders from different jurisdictions all at the same time, while enabling video, text, and data communications at broadband speeds will save critical minutes when it matters most.

As circumstances and technology continue to make our world smaller, situational awareness, real-time information, and data are critical to the safety of America's fire and emergency service and the public we are sworn to protect. In terms of daily operations, America's firefighters deal with an increasingly complex environment that requires ever-increasing amounts of information and data to keep citizens and themselves safe. The FirstNet network will make it possible to gain quick access to new tools and applications that provide location data and other vital information for firefighting. It will enable the

exchange of real-time data and audio/video feeds on the fire ground to assist incident commanders with operational decision-making and maximize search and rescue and fire suppression effectiveness.

The FirstNet broadband network will make a profound change in how EMS is practiced. In the field of EMS, it is important to arrive at the critical-condition patient's location and transport him or her to emergency care at the hospital within minutes. The FirstNet network will facilitate critical decision-making in real time in the field, which in turn will help save lives.

Lessons learned from many events throughout the nation tell us that under emergency conditions, the nation's cellular carrier networks have quickly become overwhelmed and unusable for transmission of emergency data. The full development of FirstNet's nationwide public safety broadband network will ensure that America's first responders can access vital information under all emergency conditions.

Under the leadership of Chairwoman Sue Swenson, FirstNet is engaged with public safety daily and has sought input from the Public Safety Advisory Committee (PSAC). The PSAC is a 43-member committee established by the law creating FirstNet to provide significant recommendations and advice to FirstNet on mission-critical issues. The PSAC meets several times a year and is assigned projects on the public safety needs for the broadband network.

We believe FirstNet has worked hard to create opportunities for the public safety community to help shape the design of the network in the states and territories. For instance, FirstNet Board members, including Chair Swenson and executive-level staff, have traveled throughout the country reaching out and connecting with local and state public safety officials.

As you are aware, FirstNet awarded the contract to AT&T in March of this year after conducting a competitive process. At this point in time, 27 states and territories have opted-in to the network. No states have opted-out and decided to build their own radio access network (RAN) core which must be interoperable with the FirstNet network. Governors have until December 28 to decide to opt-in, opt-out or make no decision, which effectively means to opt-in.

The IAFC Board of Directors has adopted position statements supporting the nationwide broadband network, and recommending the states opt-in to the network. On June 11, the IAFC sent letters to the 56 governors of all states and territories urging them to opt-in to the network. The IAFC believes that if governors allow FirstNet to build out the RAN in their states, these decisions will result in the rapid delivery of services for the public safety community and financial stability for the states and their taxpayers. An 'opt in' decision by a governor is a low-risk option for the state, as FirstNet and its network partner will take on the financial, implementation and customer service responsibilities, as well as the maintenance and operation of the network over the next 25 years.

In addition, opting in to FirstNet will result in the nationwide broadband network being built out in a much shorter timeframe. Once a governor decides to opt in and allow FirstNet to build out the network, AT&T has stated it will provide immediate priority access to its existing network for emergency responders. This will accelerate the buildout of the network in the state and nationwide, and provide public safety with their much-needed broadband network.

If a governor decides to opt out and have the state build its own RAN, this will undoubtedly delay the delivery of service to public safety in the state or territory. There have been estimates that this could

cause a delay of service of up to two years. States will assume all technical, operational, political, and financial risks and responsibilities related to building their own RAN. In short, the state will need to ensure the interoperability of its RAN with the nationwide FirstNet network and take on the duties for ensuring its mission critical operations for the next 25 years.

Public safety fought hard to establish FirstNet because we knew that we were being left behind compared to the technologies available for personal-use communications. The IAFC is united with other national public safety organizations behind the desire to see FirstNet succeed and we will continue to fight for public safety's access to the best available technology to keep the public safe.

Currently, while FirstNet is focused on building a network for data communications, public safety agencies still must depend on land mobile radio (LMR). The FirstNet broadband network will be very beneficial for mission-critical video and data operations use for public safety. However, it is not ready to support mission-critical voice systems. Section 6103 of P.L. 112-96 calls for the auctioning of the so-called T-Band spectrum (470 MHz-512 MHz) to begin by early 2021 and clearing current public safety operations from the band within two years of the end of the auction. This spectrum is essential to public safety.

This spectrum is utilized in 11 heavily populated metropolitan areas to support critical public safety communications and provide regional interoperability among first responders. These areas are:

- Boston
- Chicago
- Dallas
- Houston
- Los Angeles
- Miami
- New York
- Philadelphia
- Pittsburgh
- San Francisco
- Washington, DC

For example, New York City heavily relies on T-Band for operations and interoperability. Approximately half of the 132 volunteer Fire/EMS agencies in Suffolk County operate in the T-band, making the mandate particularly egregious. In the aftermath of the Boston bombing, much of public safety communications operated on the T-Band. T-Band has been used in the Boston area for 40 years allowing for interoperability which previously did not exist.

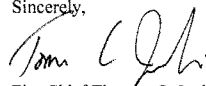
The National Public Safety Telecommunications Council (March 2013 report; updated May 2016) estimates that it will cost at least \$5.9 billion to migrate these jurisdictions' communications systems to another band. At least five jurisdictions do not have sufficient alternative spectrum to which to migrate. Mission-critical voice on the FirstNet broadband network may not be comparable to that on current LMR systems for possibly 10 years or more. Even if public safety was removed from the T-Band, the spectrum would still be heavily encumbered with business and industrial users. This would most likely result in any auction being a failure. There have been at least fifteen years of planning and grant funding since September 11, 2001, used in developing interoperability plans and common channel plans using the T-Band spectrum. This was evident in the Boston terrorist bombings for which T-Band interoperability, common channel plans, and hardened infrastructure proved successful in supporting public safety throughout the region.

The Final Report of the National Commission on Terrorist Attacks Upon the United States (9/11 Commission Report) identified the need for improved interoperable communications between first responders and recommended dedicated spectrum for public safety. These needs were again amplified and identified in the after-action reports of Hurricane Katrina and other incidents. The IAFC knows firsthand the benefits that mission-critical interoperable communications provide. While the FirstNet network stands to improve communications, coordination and situational awareness during emergency response operations, it will not – for the foreseeable future – replace mission-critical voice communications. It is for these reasons that the IAFC supports the repeal of section 6103 of P.L. 112-96 to allow public safety to continue using the T-Band spectrum to accomplish its mission.

While we realize there is still a lot of work to be done and FirstNet must continue to move quickly in building out the nationwide broadband network, the FirstNet network is urgently needed to increase the safety and capabilities of all public safety personnel and protect the American people. It is not only FirstNet which bears the responsibility for success, but it also falls on all public safety agencies to ensure success in the creation and administration of the broadband network. I feel confident that FirstNet is on the right path toward building a broadband network that will serve the nation's firefighters, EMS providers, and other emergency responders.

Thank you for the opportunity to provide our perspectives on the issues. If you have any questions, please contact Mr. Jim Goldstein, Manager of Government Relations, [jgoldstein@iafc.org](mailto:jgoldstein@iafc.org), 202-494-6607.

Sincerely,



Fire Chief Thomas C. Jenkins V  
President and Chairman of the Board

:jg

GREG WALDEN, OREGON  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FIFTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (2021) 225-2927  
Minority (2021) 225-3641  
November 20, 2017

Mr. Michael Poth  
CEO  
First Responder Network Authority  
12201 Sunrise Valley Drive  
Reston, VA 20192

Dear Mr. Poth:

Thank you for appearing before the Subcommittee on Communications and Technology on Wednesday, November 1, 2017, to testify at the hearing entitled "Oversight of FirstNet: State Perspectives."

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 Wednesday, December 6, 2017. Your responses should be mailed to Evan Viau, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to [Evan.Viau@mail.house.gov](mailto:Evan.Viau@mail.house.gov).

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

Sincerely,



Marsha Blackburn  
Chairman

Subcommittee on Communications and Technology

cc: The Honorable Michael F. Doyle, Ranking Member,  
Subcommittee on Communications and Technology

Attachment



Subcommittee Vice Chairman Leonard Lance

1. In his testimony before the Subcommittee, Chris Sambar, Vice President of AT&T, stated that AT&T intends to develop, test and certify devices and applications for use on the FirstNet network based on "proprietary" standards, despite the fact that the Middle Class Tax Relief and Job Creation Act of 2012 requires FirstNet to "promote competition in the equipment market, including devices for public safety communications by requiring that equipment for use on the network be built to open, non-proprietary, commercially-available standards."
- a. How will FirstNet work to ensure that all aspects of its network deployment plan, including the activities of its contractors and subcontractors, are open and fully competitive?

FirstNet's strategy for maximizing interoperability across the nationwide public safety broadband network (NPSBN) is to leverage, consistent with its statutory mandate, open, standards-based network solutions. The need for interoperable communications among public safety users from different agencies helped drive the creation of FirstNet, and it is core to our mission.

Accordingly, FirstNet will hold AT&T to the terms and conditions of the NPSBN contract, including those applicable to promoting competition in the equipment market and requiring that equipment for use on the network be built to open, non-proprietary, commercially-available standards, and will monitor the implementation of these requirements through the review of submitted deliverables and the use of the Quality Assurance Surveillance Plan (QASP), which measures performance and contract compliance.

- b. How will FirstNet work with the National Institute of Standards and Technology (NIST) to ensure that any devices and applications developed for use on FirstNet's network are open and interoperable and agnostic as to device manufacturer, application developer, and network provider?

FirstNet has a close working relationship with the National Institute of Standards and Technology (NIST). NIST has supported, and continues to support FirstNet in technical areas, such as devices and applications, and cooperation on public safety communications research and development. For example, FirstNet is working closely with NIST in the development and creation of FirstNet's Device Approval Program. The Act directs NIST to maintain the "list of certified devices" for the FirstNet network. FirstNet is working closely with NIST and has a program in place to jointly develop and publish the list of certified devices. Additionally, FirstNet collaborates with the Public Safety Communications Research (PSCR) Division at NIST on research to address the security of data and applications via isolation technologies (project completed in 2017), security testing tools (ongoing), and access controls (ongoing).

The Honorable Gus Bilirakis

1. In your testimony, you indicate that FirstNet has provided States with a draft Spectrum Manager Lease Agreement (SMLA), which includes terms and conditions that opt-out states would have to satisfy. In his testimony, John Stevens, the New Hampshire Statewide Interoperability Coordinator, testified that the SMLA New Hampshire received includes various "arbitrary and capricious" fees and penalties. This includes termination penalties and adoption disincentive payments. Please provide additional information regarding any fees, penalties, and other conditions associated with the SMLA states considering an opt-out

have received.

**a. What spectrum fees, if any, are included and how was the amount of such fee determined for each state?**

Under the NPSBN contract, FirstNet fulfills its statutory mandate to be financially self-sustaining, in part, by receiving payments from its NPSBN contractor for use of the FirstNet-licensed spectrum over the next 25 years. Similarly, the model SMLA requires an opt-out state that seeks to use the FirstNet-licensed spectrum to make annual spectrum payments over 25 years, which are included in any opt-out Spectrum Manager Lease Agreement (SMLA) in exchange for the state receiving access to FirstNet's Band 14 licensed spectrum. This spectrum payment is necessary to help ensure FirstNet fulfills its statutory mandate to be a self-funded entity. These payments have been determined based on past spectrum auction amounts and FirstNet's open and competitive Request for Proposal (RFP) process. For example, the amounts payable by a state if it elects to opt-out are the same as the amounts that the NPSBN contractor would pay to support the NPSBN if the state elects to opt-in. This relationship is consistent across all states.

Given that all 50 states, five territories and the District of Columbia have opted in, the opt-out provisions as illustrated in the model SMLA that was distributed to the states, is no longer germane.

**b. What adoption disincentive payments, if any, are included and how was the amount of such fees determined for each state?**

Based on feedback, FirstNet has removed mandatory adoption targets and disincentive payments from the model SMLA. Instead, the model SMLA will require adherence to any user adoption assumptions provided by a state in its State Alternative Plan Program (SAPP) application submitted to the National Telecommunications and Information Administration (NTIA).

**c. What termination penalties, if any are included in the SMLA?**

The SMLA does not include termination penalties. A prior draft of the SMLA included a reference to a range of estimated termination payments, based on the possibility of a "greenfield" build at some point over the 25-year term of the SMLA. Based on feedback, FirstNet has removed that reference from the model SMLA and clarified that, in the event an opt-out state is unable to build out and operate its own RAN, the state would only be responsible for any actual costs FirstNet reasonably incurs reestablishing a Band 14 RAN in the state. An independent third party would be used to validate that the actual costs are reasonable for reestablishing the RAN. FirstNet would work with the state and all interested parties to develop the most cost-efficient solution to minimize any disruption to public safety communications as well as minimize the fiscal impact to the state.

**d. Additionally, please expand on the process that FirstNet and any opt-out states will go through as the "draft" SMLA shifts to a final set of terms and conditions. What flexibility will states have, if any, to negotiate the terms? At what point in the process will that discussion take place?**

All 50 states, five territories and the District of Columbia have opted in. Prior to the opt-in, states could have chosen to opt-out of the FirstNet proposed build and assume responsibility for building, operating, maintaining, and improving the RAN component of the NPSBN within their state. Under the Act, before entering into an SMLA with FirstNet, the opt-out state would have needed to: formally reject the FirstNet State Plan, engage in a procurement for its alternative RAN plan, submit to the Federal Communications Commission (FCC) an alternative plan showing that its RAN will comply with statutory interoperability

requirements, and, if the FCC approves the State's alternative plan, apply to NTIA's State Alternative Plan Program (SAPP) for the authorization to enter into spectrum capacity leasing rights with FirstNet (SMLA) and for optional grant funds to cover a part of the cost of constructing its RAN (RAN Construction Funds).

At the request of the state, FirstNet would have engaged in discussions with a state as soon as the state provided the statutory notice of its intention to opt-out of the FirstNet proposed RAN deployment and assume the full responsibility for conducting its own RAN deployment within the state. These steps were to balance FirstNet's statutory duties with regard to the NPSBN, the State's responsibility to build, operate, maintain, and improve the RAN, including the long-term financial responsibility, and accommodations appropriate for the alternative RAN plan proposed by the state.

**The Honorable Susan W. Brooks**

- 1. In your opening statement, you referenced risk. Can you expand upon the risks that you at FirstNet face?**

The primary risks to FirstNet include those related to nationwide network deployment and the challenge of providing a service offering that meets the needs of public safety entities throughout the country.

- a. I understand that your RFP was designated to shift risk away from the government and onto your partner, AT&T, but what are the issues that concern you going forward? Security? Deployment? Adoption?**

The primary risks to FirstNet include those related to nationwide network deployment and the challenge of providing a service offering that meets the needs of public safety entities throughout the country, including cybersecurity, deployment, and adoption of the service.

FirstNet protects itself from risk through its contract with AT&T. The FirstNet task orders issued against the NPSBN contract to provide services in support of public safety entities are firm-fixed price. This type of vehicle has less risk to the Government as the price is not dependent on the contractor's cost experience. AT&T is not able to move forward with any additional or other work unless explicitly approved by the Government Contracting Officer.

Additionally, the contract and task orders includes specific milestone deliverables that AT&T must meet to be paid such as meeting key adoption targets of public safety users. If AT&T fails to meet its adoption targets, the Government has the ability to withhold funds from the contractor.

**The Honorable Anna G. Eshoo**

- 1. My home state of California has serious concerns regarding estimated costs to states that opt out of FirstNet, and are unable to build out and operate its own Radio Access Network (RAN). In California's case, the cost would be in the area of \$15 billion. California was told this figure was calculated based on the assumption that if California failed in deploying its own RAN, a "green field" build (one in which all construction is new and on bare soil) could cost as much as that amount. However, in its partnership with FirstNet, AT&T is basing its deployment of the NPSBN on existing infrastructure.**

- a. Why wouldn't the transition to a FirstNet/AT&T deployment use the same "existing AT&T infrastructure?" There would be no change to the cost for AT&T for its NPSBN deployment from that already planned.**

FirstNet's NPSBN contract with AT&T requires AT&T to maintain its current pricing for 900 days following State Plan delivery, in the event AT&T is tasked with building or deploying a RAN in an unsuccessful opt-out state during that period. However, AT&T is not required to maintain that pricing after 900 days, and the circumstances that might render a state unable to build out and operate its RAN at any point during the 25-year term are unknowable at this stage. In the event an opt-out state is unable to build out and operate its own RAN, the state would only be responsible for any actual costs FirstNet reasonably incurs reestablishing a Band 14 RAN in the state. An independent third party would be used to validate that the actual costs are reasonable for reestablishing the RAN. The state would not be charged any termination penalty. FirstNet would work with the state and all interested parties to develop the most cost-efficient solution to minimize any disruption to public safety communications as well as minimize the fiscal impact to the state. FirstNet also would explore how to leverage existing infrastructure to keep actual costs as low as possible.

- b. Will you provide California with a detailed breakdown of how this cost was calculated?**

FirstNet offered each state an estimated range, which was on the basis of a green-field build. Importantly, these were estimates and, as such, do not represent actual costs in the event a state is unable to build out and operate its own RAN at some point during the 25-year term. Any actual costs reasonably incurred by FirstNet might be less than those estimates and would only be known at the time the state is unable to proceed with its obligations. Based on feedback, FirstNet has removed references to these estimates in the updated model Spectrum Manager Lease Agreement (SMLA).

- 2. In addition to the basis for the \$15 billion Termination Payment Estimates, please provide the basis for your calculation of Annual Spectrum Network Capacity Payment as presented by NTIA.**

Under the NPSBN contract, FirstNet fulfills its statutory mandate to be financially self-sustaining, in part, by receiving payments from its NPSBN contractor for use of the FirstNet-licensed spectrum over the next 25 years. Similarly, the model SMLA requires an opt-out state that seeks to use the FirstNet-licensed spectrum to make annual spectrum payments over 25 years, which are included in any opt-out Spectrum Manager Lease Agreement (SMLA) in exchange for the state receiving access to FirstNet's Band 14 licensed spectrum. This spectrum payment is necessary to help ensure FirstNet fulfills its statutory mandate to be a self-funded entity. These payments have been determined based on past spectrum auction amounts and FirstNet's open and competitive Request for Proposal (RFP) process. For example, the amounts payable by California if it elects to opt-out are the same as the amounts that the NPSBN contractor would pay to support the NPSBN if California elects to opt-in. This relationship is consistent across all states.

- a. If under an Opt-Out scenario California is responsible for a payment exceeding \$250 million annually, what is the total calculation for all such payments for the 56 states and territories year to year?**

If every state and territory opted-out, the total annual spectrum payments for the 56 states and territories year to year would vary over the 25-year term from a low of \$120 million to a high of \$1.7 billion.

Given that all 50 states, five territories and the District of Columbia have opted in, this calculation is no longer germane.

3. **If one were to apply the same basis that NTIA used for determining the range of grant funds that California could receive in an Opt Out scenario, the total revenue expected from all such use should exceed \$3.4 billion annually.**

- a. **If so, how would that \$3.4 billion, or portion thereof, be used to expand coverage in California?**

Any revenue FirstNet receives, including annual spectrum lease payments from opt-out states, in accordance with the Act, must be reinvested into the nationwide network or in enhancing public safety communications, including in the State of California. FirstNet's State Plan for California includes significant buildout milestones to expand coverage in the state that AT&T will be contractually obligated to meet at no cost to California taxpayers.

4. **It is my understanding that FirstNet requires AT&T to meet aggressive adoption targets in California. Specifically, FirstNet is requiring 218,000 subscribers in California by the third year and 350,000 subscribers by the 25th year.**

- a. **How can AT&T meet this adoption target when there are only approximately 160,000 first responders in the entire state of California?**

In determining the number of potential users and adoption targets, FirstNet relied on the statutory definition of public safety entity in the Act, which defines the potential public safety user base of the network beyond traditional first responders (police, fire, emergency medical services). In addition, the adoption targets are measured by the number of device connections (not by the number of responders subscribed to the network), such that there can be multiple device connections per responder (e.g., the use of phone and a tablet).

Relatedly, based on feedback, FirstNet has removed mandatory adoption targets and disincentive payments from the model SMLA. Instead, the model SMLA will require adherence to any user adoption assumptions provided by a state in its State Alternative Plan Program application submitted to NTIA.

5. **I'm also concerned about the interoperability with FirstNet of existing public-safety broadband networks like Los Angeles Regional Interoperable Communications System (LA-RICS), which was built using \$150 million from the Broadband Technologies Opportunity Program (BTOP) grant program.**

- a. **Will LA-RICS be interoperable with FirstNet's network if California opts-in?**

On December 14th, 2017, LA-RICS board members approved an agreement that would transfer the LA-RICS BTOP-funded assets to AT&T, so they can be integrated into the FirstNet system. The agreement to transfer the BTOP-funded assets is currently under review by NTIA and NOAA.

**The Honorable Peter Welch****1. What is the specific statutory authority for FirstNet to assess any kind of termination or disincentive fees or penalty against states that decide to opt out?**

Based on feedback, FirstNet has removed mandatory adoption targets and disincentive payments from the model SMLA. Instead, the model SMLA will require adherence to any user adoption assumptions provided by a state in its State Alternative Plan Program (SAPP) application submitted to the National Telecommunications and Information Administration (NTIA).

Given that all 50 states, five territories and the District of Columbia have opted in, the opt-out provisions as illustrated in the model SMLA that was distributed to the states is no longer germane.

**2. What is the specific methodology FirstNet used to calculate proposed termination fees, disincentive payments and spectrum lease fees?**

Termination Fees:

Based on feedback, FirstNet has clarified in the model Spectrum Manager Lease Agreement (SMLA) that, in the event an opt-out state is unable to build out and operate its own RAN, the state would only be responsible for any actual costs FirstNet reasonably incurs reestablishing a Band 14 RAN in the state. An independent third party would be used to validate that the actual costs are reasonable for reestablishing the RAN. FirstNet would work with the state and all interested parties to develop the most cost-efficient solution to minimize any disruption to public safety communications as well as minimize the fiscal impact to the state.

Disincentive Payments:

FirstNet no longer includes disincentive payments in its model SMLA. Since FirstNet spectrum (Band 14) must be used to provide service to public safety users, the SMLA requires a State to abide by any user adoption assumptions reflected in its State Alternative Plan Program (SAPP) application to NTIA.

Spectrum Lease Payments:

Under the NPSBN contract, FirstNet fulfills its statutory mandate to be financially self-sustaining, in part, by receiving payments from its NPSBN contractor for use of the FirstNet-licensed spectrum over the next 25 years. Similarly, the model SMLA requires an opt-out state that seeks to use the FirstNet-licensed spectrum to make annual spectrum payments over 25 years, which are included in any opt-out Spectrum Manager Lease Agreement (SMLA) in exchange for the state receiving access to FirstNet's Band 14 licensed spectrum. This spectrum payment is necessary to help ensure FirstNet fulfills its statutory mandate to be a self-funded entity. These payments have been determined based on past spectrum auction amounts and FirstNet's open and competitive Request for Proposal (RFP) process. For example, the amounts payable by a state if it elects to opt-out are the same as the amounts that the NPSBN contractor would pay to support the NPSBN if the state elects to opt-in. This relationship is consistent across all states.

**3. Does FirstNet plan to disclose the terms of its contract with AT&T to the public?**

Although some elements of the NPSBN contract are considered public information, certain terms are protected by statute and regulation and accordingly will not be disclosed to the public.

**4. If FirstNet has no plans to release the AT&T contract(s), why not?**

Although some elements of the NPSBN contract are considered public information, certain terms are protected by statute and regulation and accordingly will not be disclosed to the public.

**5. Why does FirstNet require a FOIA exemption or PIA exemption?**

FirstNet is complying with an express mandate from Congress in administering these exemptions. Under section 6206(d) of the Act, "any action taken or decisions made by the First Responder Network Authority shall be exempt from the requirements of (1) section 3506 of Title 44, United States Code (commonly referred to as the Paperwork Reduction Act); (2) chapter 5 of Title 5, United States Code (commonly referred to as the Administrative Procedures Act); and (3) chapter 6 of Title 5, United States Code (commonly referred to as the Regulatory Flexibility Act)."

**6. Why are there no proposed service fees in the state plans specified for mission critical public safety services such as Push to Talk (PTT), Group communications and direct mode?**

As aspects of the mission critical public safety services, such as Push to Talk (PTT), Group communications and direct mode offerings become available, competitive rates will be set to drive continued FirstNet adoption. These services were still under development at the time of State Plan release, and therefore specific service fees were not included.

**7. What assurances will FirstNet make to a state that it will require AT&T to continue to provide these three services at a price comparable to a competitive service or at a discount after a state has entered a 25 year monopoly agreement?**

As an advocate for public safety, FirstNet intends to hold AT&T accountable for competitive pricing. The NPSBN contract specifies that AT&T deploy the NPSBN and offer competitive pricing throughout the life of the contract. This is accomplished through Government oversight and the review of required pricing deliverables and reports. Additionally, the NPSBN contract requires AT&T to provide a most favored customer pricing arrangement to public safety subscribers of the NPSBN, in order to ensure public safety subscribers to the NPSBN pay no more than the lowest price available for any type of customer receiving broadband Long Term Evolution (LTE) services on Band 14 or other bands.

**8. What mandatory roll out schedule for MCPTT and group communications and direct mode is FirstNet contractually binding AT&T to deliver?**

AT&T is required to deliver Mission Critical Push to Talk (MCPTT) and group communications and direct mode in accordance with the Initial Operational Capability (IOC) / Final Operational Capabilities (FOC) milestones under the terms and conditions of the NPSBN contract, estimated to be implemented the second quarter of FY2020. The Government monitors performance of each of those milestones throughout the life of the NPSBN contract (through March 2042) through the review of deliverables and key performance indicators (KPIs).

**9. As these services are in the proposed roadmap and their costs can significantly impact the FirstNet service affordability in evaluating the option for opting into the ATT proposal, how do you justify the omission?**

Aspects of the mission critical public safety services, such as PTT, Group communications, and direct mode offerings, were still under development at the time of State Plan release, and therefore specific service fees were not included. As these services become available, competitive rates will be set to drive continued FirstNet adoption. These services remain in the roadmap.

**10. If opt-out states are prohibited by the Spectrum Manager Lease Agreement (SMLA) from building an Evolved Packet Core (EPC) for public safety, please specify the fees for an opt-out state to connect to the National Public Safety Broadband Network (NPSBN) core?**

FirstNet, consistent with the Act, and following public notice and comment, determined that, for the design of the NPSBN to be based on a single, national network architecture and be truly interoperable, it alone must deploy the nationwide Core Network to service all public safety users. This requirement is incorporated as a term of the model SMLA. In addition, the Act requires states to pay fees associated with the state's use of the elements of the Core Network. The specific fees for these "core services" have not been determined yet. These types of carrier-to-carrier services are typically provided through separate, standard agreements.

Given that all 50 states, five territories and the District of Columbia have opted in, the opt-out provisions as illustrated in the model SMLA that was distributed to the states is no longer germane.

**11. What is the basis for establishing the core connection charge for a state that chooses to opt out?**

The Act requires states to pay fees associated with the state's use of the elements of the Core Network. The specific fees for these "core services" have not been determined yet. These types of carrier-to-carrier services are typically provided through separate, standard agreements.

Given that all 50 states, five territories and the District of Columbia have opted in, the opt-out provisions as illustrated in the model SMLA that was distributed to the states is no longer germane.

**12. Will FirstNet acknowledge the need for a state right of appeal to the FCC as to the reasonable determination of the core interconnection charges?**

The Act provides that FirstNet, not the FCC, has authority over establishment and operation of the NPSBN, including opt-out state access to the FirstNet Core Network. Since no state elected to opt-out, there will be no fees associated with connection to the FirstNet Core Network payable by a state.

**13. As this cost is a critical component in determining the financial sustainability of operating an opt-out state Radio Access Network (RAN) how can any state make an informed decision lacking this information?**

Network providers routinely enter into interconnection agreements with one another through standard agreements.

Given that all 50 states, five territories and the District of Columbia have opted in, the opt-out provisions as illustrated in the model SMLA that was distributed to the states is no longer germane.



**14. Since AT&T has announced that it will leverage most of its commercial network to provide public safety services, why do the penalties specified in the SMLA assume costs of a complete green field "reconstitution" of a mobile network in a failed opt-out RAN scenario?**

The SMLA does not include termination penalties. A prior draft of the SMLA included a reference to a range of estimated termination payments, based on the possibility of a "greenfield" build at some point over the 25-year term of the SMLA. Based on feedback, FirstNet has removed that reference from the model SMLA and clarified that, in the event an opt-out state is unable to build out and operate its own RAN, the state would only be responsible for any actual costs FirstNet reasonably incurs reestablishing a Band 14 RAN in the state. An independent third party would be used to validate that the actual costs are reasonable for reestablishing the RAN. FirstNet would work with the state and all interested parties to develop the most cost-efficient solution to minimize any disruption to public safety communications as well as minimize the fiscal impact to the state.

**15. As in the above scenario, most of the AT&T network infrastructure will already be in place and only parts of the state RAN might need to be hardened and surgical coverage updated, how do you justify the proposed enormous penalties based on a green field build?**

FirstNet's NPSBN contract with AT&T requires AT&T to maintain its current pricing for 900 days following State Plan delivery, in the event AT&T is tasked with building or deploying a RAN in an unsuccessful opt-out state during that period. However, AT&T is not required to maintain that pricing after 900 days, and the circumstances that might render a state unable to build out and operate its RAN at any point during the 25-year term are unknowable at this stage. As noted above, in the event an opt-out state is unable to build out and operate its own RAN, FirstNet would work with the state and all interested parties to develop the most cost-efficient solution to minimize any disruption to public safety communications as well as minimize the fiscal impact to the state. As a part of this process, FirstNet would explore how to leverage existing infrastructure to keep actual costs as low as possible.

**16. What is the basis of the expected 30 month delay for an opt-out state?**

Pursuant to the Act, a state that chooses to opt-out of FirstNet's proposed deployment plan assumes responsibility for constructing, operating, maintaining, and improving the RAN in the state. The state must successfully complete the statutorily mandated opt-out process – including formal rejection of the FirstNet State Plan, procurement for its alternative RAN plan, submission to the Federal Communications Commission (FCC) an alternative plan showing that its RAN will comply with statutory interoperability requirements, and, if the FCC approves the State's alternative plan, application to NTIA's SAPP for the authorization to enter into an SMLA and for optional RAN Construction Funds, and execution of an SMLA with FirstNet – prior to beginning deployment of the network in the state. Based on the timeframes prescribed in the Act along with those being established independently by the FCC and NTIA for their review processes, it is expected that there could be as much as a two-year (or more) delay until network services would be available to public safety in an opt-out state.

**17. What provisions has FirstNet considered or implemented to mitigate or minimize the unsafe disadvantage of the estimated 30 month delay in approving a state plan exercising its right under law to opt and build its own RAN?**

All 50 states, five territories and the District of Columbia have opted in. FirstNet's overarching mission is to ensure that public safety has the communication tools it needs to help save lives and protect our communities across the nation, regardless of whether the state has opted into or out of the FirstNet

proposed plan. FirstNet would have worked with any opt-out state, as well as our federal and tribal partners, to have helped make the process as smooth and expeditious as possible. The opt-out process was explicitly mandated by the Act.

**18. Is FirstNet willing to provide assurances that an enforceable cause of action is available to the state in the event AT&T fails to meet the requirements as set forth in the state plan?**

FirstNet has sole responsibility for ensuring that the NPSBN contractor, AT&T, complies with its obligations with respect to each and every opt-in state. The NPSBN contract contains terms and conditions that enable FirstNet to hold AT&T accountable for meeting its contractual obligations. To that end, FirstNet intends to be vigilant in its oversight and enforcement of AT&T's commitments to the public safety community throughout the nation and throughout the 25-year term of the contract.

**19. Is FirstNet willing to assume responsibility for enforcing the terms of the add-on tower or deployable agreements offered by AT&T above and beyond those specified in the state plan?**

FirstNet intends to incorporate AT&T's network commitments to a state as part of the task order for the state once the state opts-in to the FirstNet network.

**20. Is FirstNet willing to provide written assurances and binding enforceable agreements to the state that in the event that AT&T fails to deliver on time the coverage, public safety grade infrastructure and Band Class 14 deployment, that the state will have the option to revert to opt-out status and recover the entire amount of the NTIA grant, the Band 14 spectrum and equivalent "reconstitution" costs from AT&T?**

Pursuant to the express provisions of the Act, a state's choice to participate in the FirstNet-proposed network deployment or deploy its own RAN is a one-time decision. Once a state opts-in, FirstNet and AT&T assume the risks, responsibilities, and costs associated with the network. In accordance with the Act, FirstNet executed a rigorous Requests for Proposal (RFP) process to select a private sector partner that provided the best value to the government and to public safety across the country. FirstNet's contract with AT&T for the NPSBN contains terms and conditions that enable FirstNet to hold AT&T accountable for meeting its contractual obligations and FirstNet intends to be vigilant in its oversight and enforcement of AT&T's commitments to the public safety community throughout the nation and throughout the 25-year term of the contract.

**21. Is FirstNet willing to pledge the full faith and credit of the First Responder Network Authority in order to stand behind the FirstNet state plan provisions and contracts it has entered with AT&T?**

FirstNet is an independent federal authority with a statutory duty and responsibility to take all actions necessary to ensure the building, deployment, and operation of the NPSBN. FirstNet takes this directive from Congress very seriously and is committed to making sure that the network consistently meets the needs of public safety nationwide, including by vigilantly monitoring and enforcing the terms of the NPSBN contract with AT&T. Additionally, FirstNet has obtained a parental guarantee from AT&T to ensure the deployment and operation of the NPSBN over the next 25 years.

**22. Is FirstNet willing to post Performance bond to assure that the state is made whole in the event the state plan provisions are not completed and on time?**

FirstNet is an independent federal authority with a statutory duty and responsibility to take all actions necessary to ensure the establishment of the NPSBN. Consistent with the Act, FirstNet has contracted to

build, operate, maintain, and improve the NPSBN in each state at no cost to the state. Once a state opts in, FirstNet and AT&T assume the risks, responsibilities, and costs associated with the deployment and operation of the network. The contract is the means by which FirstNet will enforce AT&T's buildout obligations in each state and ensure the needs of public safety are satisfied. Additionally, FirstNet has obtained a parental guarantee from AT&T to ensure the deployment and operation of the NPSBN over the next 25 years.

**23. Why is there no discussion of, or assurances for, "public safety grade" system hardening standards for the existing towers and proposed new towers in the State Plans?**

The contract with AT&T requires a high level of system availability which measures, among other things, accessibility for both data and voice. This is accomplished not only through site hardening, but also through various system redundancies, coverage overlap, and a robust deployable strategy to address network outages. AT&T is planning for system level resiliency and will be taking extra measures at key strategic sites.

**24. The SMLA is clear with regards to the penalties to states if performance criteria are not met. Will AT&T be subject to the same penalties if they:**

- a. Do not add the towers included in their state plans? b. Do not meet the 99.99% reliability standard? c. Do not meet the standards for deployables during emergency events?

AT&T is being held to specific performance criteria/metrics as established per the NPSBN contract and subsequent task orders. This gives FirstNet the ability to take action against AT&T if AT&T fails to meet the commitments specified in the State Plan or through other network commitments to a state, which will be incorporated as requirements into the task order award once the state opts-in to the FirstNet network. FirstNet will continuously monitor AT&T for performance throughout the 25-year term of the contract.

In addition, under the NPSBN contract, AT&T is subject to disincentive payments for meeting certain public safety adoption targets. The model SMLA has been modified to remove disincentive payments for the states. Instead, the model SMLA requires a State to abide by any user adoption assumptions reflected in its State Alternative Plan Program (SAPP) application to NTIA.

**25. Will the very large penalties described in the draft SMLA for opt-out states that do not meet First Net system requirements be levied against AT&T if the AT&T system is found by the state Public Utility Commission and/or the FCC to be deficient in a state and that opt-in state finds it necessary to invest in replacement RAN?**

Once a state opts-in to the FirstNet network, FirstNet will issue a task order for that state that formalizes AT&T's obligations contractually for deployment of the network in that state. This gives FirstNet the ability to take action against AT&T if AT&T fails to meet the commitments specified in the State Plan. In addition, under the NPSBN contract, AT&T is subject to disincentive payments for meeting certain public safety adoption targets. Additionally, FirstNet has obtained a parental guarantee from AT&T to ensure the deployment and operation of the NPSBN over the next 25 years.

**26. Under what circumstances is it inappropriate for all FirstNet subscribers to have access to all FirstNet applications regardless of which FCC approved state RAN, core or national core network is used to reach those resources?**

Public safety entity users of the NPSBN will be given the opportunity to have access to FirstNet applications regardless of whether the state has opted-in or opted-out.

- 27. Because many states share borders with Canada and Mexico, it is important to know how communications will be managed near our borders. In addition, the possibility that opt out states will develop their own systems add other sets of examples where the state FirstNet RAN systems must include roaming agreements that allow seamless communications during emergency situations. How will FirstNet require AT&T ensure roaming agreements are implemented and maintained at borders where non-AT&T systems are necessary for communication?**

There are existing agreements that govern the use of spectrum in the international border areas between Canada and the United States and Mexico and the United States. Operations by FCC licensees, including NPSBN operations, must comply with these existing agreements. All builders and operators that utilize FirstNet's Band 14 spectrum, *i.e.*, AT&T and opt-out state providers, will be required by FirstNet to cooperate in border areas.

- 28. Will FirstNet do everything in their power to ensure the States right, to Opt- out of using FirstNet's contracted supplier, is preserved?**

Yes, FirstNet worked with states to ensure they understood the statutorily mandated opt-out process that Congress prescribed in FirstNet's enabling legislation. All 50 states, five territories and the District of Columbia have opted in.

- 29. Will FirstNet continue to leverage their authority to ensure the success of a State Opt-out decision, if a State so chooses to exercise that option?**

Yes. FirstNet is committed to Congress' vision of a nationwide interoperable network for the betterment of public safety nationwide. All 50 states, five territories and the District of Columbia have opted in.

GREG WALDEN, OREGON  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FIFTEENTH 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  
November 20, 2017

Mr. Christopher Sambar  
Senior Vice President  
AT&T  
208 South Akard Street  
Dallas, TX 75202

Dear Mr. Sambar:

Thank you for appearing before the Subcommittee on Communications and Technology on Wednesday, November 1, 2017, to testify at the hearing entitled "Oversight of FirstNet: State Perspectives."

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 Wednesday, December 6, 2017. Your responses should be mailed to Evan Viau, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to Evan.Viau@mail.house.gov.

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

Sincerely,



Marsha Blackburn  
Chairman  
Subcommittee on Communications and Technology

cc: The Honorable Michael F. Doyle, Ranking Member,  
Subcommittee on Communications and Technology

Attachment



**David J. Chorzempa**  
Assistant Vice President – Senior Legal Counsel

AT&T Services, Inc.  
1120 20<sup>th</sup> Street, NW – Suite 800  
Washington, D.C. 20036  
Phone 202-463-4172  
Fax 202-463-8066  
[david.chorzempa@att.com](mailto:david.chorzempa@att.com)

December 6, 2017

Mr. Evan Viau  
Legislative Clerk  
Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

**Re: Subcommittee on Communications and Technology, Committee on  
Energy and Commerce; November 1, 2017 Hearing:  
“Oversight of FirstNet: State Perspectives”**

Dear Mr. Viau:

Attached please find the responses to the questions for the record directed at AT&T Senior Vice President, Chris Sambar in the above-referenced hearing.

Please call me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to be "D. Chorzempa", with a long horizontal flourish extending to the right.

David J. Chorzempa

Enclosure: a/s

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

*Hearing: "Oversight of FirstNet: State Perspectives."*

*Questions for the Record Submitted by the Honorable Susan W. Brooks for AT&T's Chris Sambar*

**The Honorable Susan W. Brooks**

1. Now that Indiana has opted-in, what can we expect from AT&T over the coming months?
  - a. I expect that you all will be pushing for adoption; however, I'm more interested in the physical deployment of the RAN. Can you expand please?

**Response:** We have already begun the buildout process, including site acquisition and design work on the additional RAN sites in the state plans. The FirstNet network core will be up in March 2018. Having said that, first responders in "opt in" states are already able to utilize enhanced features of the FirstNet network. For example, first responders in "opt in" states can have priority, meaning that in times of emergencies and network congestion, our network will give first responders' communications precedence. And as early as this month, first responder communications for primary users will also have "preemption," meaning that their communications will preempt all communications, other than 911 calls, in times of emergencies.

We have worked closely with the State of Indiana and the FirstNet authority to identify areas of the state that will receive coverage enhancements. Where appropriate, AT&T is also committed to working with the state to use state assets to support the FirstNet buildout.

- b. I hear that gaining access to priority and preemption on the network will be as simple as swapping out a SIM card in a device, is it really that simple? How do first responders actually get access to priority and preemption?

**Response:** As noted, priority and as early as this month, preemption will be made available in all opt-in states. Thus, at present, first responders with AT&T service and an AT&T device can immediately take advantage of priority and, expected shortly, preemption on AT&T's network without having to swap out a SIM. However, once the FirstNet network core is up (in March 2018), first responders will simply need to swap out their SIM card in their AT&T device in order for the phone to "point to" the FirstNet network core.

- c. What sort of outreach is FirstNet and AT&T doing with public safety officials so they fully understand what FirstNet is, how it will benefit them, what exactly they are gaining access to, and how they can gain access?

**Response:** FirstNet has been reaching out to public safety experts in the states for the last three years, not only to explain the benefits of FirstNet, but also to receive their feedback on what they wanted in this network. That is why FirstNet is a solution designed by public safety for public safety. Since FirstNet announced (on March 30<sup>th</sup>) that it had selected AT&T, we have been working closely with states and territories to provide them all the information they need to make an informed decision to opt in to FirstNet. In early June, we held a two-day meeting with states

officials in Dallas to discuss the network AT&T is building, the services we will deliver, as well as the delivery of the state plans. And before and after this meeting, FirstNet and AT&T have had countless meetings with state public safety experts to answer any questions they may have. We are committed to continuing this outreach and collaboration to ensure that states have all the information available to them to fully understand FirstNet's benefits and how they can utilize the network.

In Indiana, the AT&T FirstNet team has actively engaged first responders across the state. Prior to the state's decision to "opt in," the AT&T FirstNet team met with numerous first responders throughout the state and sponsored several public-safety focused events that gave us the opportunity to describe the benefits of FirstNet. In May, the AT&T FirstNet team held a statewide conference in French Lick that was attended by more than three hundred first responders from across the state.

Since Indiana opted in, the AT&T FirstNet team has worked with state agencies to provide details of the state plan and describe the process of migrating to FirstNet. This outreach includes the Indianapolis State Police and the City of Indianapolis Police and Fire.

On November 30<sup>th</sup>, AT&T presented at the State of Indiana "FirstNet Launch" at the Indianapolis Marriott East. Sixteen AT&T FirstNet teammates participated in the event, offering details of the FirstNet solutions AT&T will offer.



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

*Hearing: "Oversight of FirstNet: State Perspectives."*

*Questions for the Record Submitted by the Honorable Anna G. Eshoo for AT&T's Chris Sambar*

**The Honorable Anna G. Eshoo**

1. Some questions have been raised in my home state of California about AT&T's existing coverage throughout the state, and the interoperability of the Public Safety Broadband Network with other cellular networks that may have a more expansive network of coverage than AT&T.

- a. How are you dealing with coverage areas where AT&T is not a dominate carrier in an area?

**Response:** With all we bring to the table, we estimate that we will cover over 99% of the U.S. population and its geography. This includes the combination of our commercial LTE network, agreements with rural telecommunications networks, deployables, and additional satellite technology. We are actively working with states, including California, to identify areas where they believe added coverage is necessary. We will continue to discuss with each state how we will address their unique coverage needs, using this combination of assets.

- b. What is your specific plan for year to year improvement including the number of sites to be built annually and the number of those sites that will be built to serve rural and tribal areas?

**Response:** Each state or territory has received this information along with its state plan and may access it, on a confidential basis, via the state portal. The detailed FirstNet buildout and coverage information provided to the states is confidential, for both security and competitive reasons. For network security purposes, it is important that AT&T's network and the FirstNet build plans are kept confidential and not publicly available to those seeking to harm the network, which will be relied upon by our first responders in times of emergency. We would be happy to discuss this question with your office in a private setting.

2. FirstNet has made statements that only the AT&T/FirstNet core can provide a nationwide interoperable base and that other carriers providing public safety services would not be allowed to connect.

- a. How will AT&T ensure interoperability with the Public Safety Network among jurisdictions that utilize other cellular networks?

**Response:** To be clear, we will provide the same level of interconnection with other networks for the exchange of our customers' traffic, as we do today. Thus, FirstNet users will be able to communicate with public safety personnel served by other cellular networks, and vice versa. However, our mission and focus is to deliver a network with a highly secure nationwide core. That network will fulfill Congress' mandate to establish a single, nationwide public safety interoperable broadband network.

Introduction of multiple networks controlled by a multitude of carriers creates additional security risks, additional points of failure, and can degrade the services offered over that network. Introduction of multiple carriers with multiple cores would create the same problems that led Congress to create the FirstNet network in the first place.

- b. How will AT&T guarantee interoperability with other carriers if they are not allowed such connection?

**Response:** Please see the response to Question 1.a.

- c. Will applications between different networks be able to interoperate seamlessly?

**Response:** Yes. Our applications ecosystem will support application developers that design applications for first responders that can operate on both FirstNet and non-FirstNet devices.

- 3. It is my understanding that California requested AT&T to provide more precise and granular information on gaps in AT&T's coverage in California and AT&T refused.

- a. Can you explain why? Will FirstNet share this information with California?

**Response:** We are in constant communications with California officials to provide the information they are requesting. We are unaware of any pending requests from California to which we have not responded. We stand ready to work with California and other states to ensure they have all the information they need to make an informed decision to "opt-in" to the FirstNet network.

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

*Hearing: "Oversight of FirstNet: State Perspectives."*

*Questions for the Record Submitted by the Honorable Peter Welch for AT&T's Chris Sambar*

**Honorable Peter Welch**

1. Are you willing to identify all personnel hired by AT&T since January 1, 2016, who had prior played any role whatsoever in any state's consideration of FirstNet state plans or alternatives?

**Response:** AT&T continues to bolster its public safety expertise, relying on individuals with relevant experience, subject to conflict of interest safeguards. AT&T is committed to ensuring that those on the FirstNet team do not have any relevant conflicts of interest. AT&T will comply with all applicable federal or state statutes or rules, as well as any obligations in the FirstNet contract, concerning employment of former state employees. There are safeguards in place to address organizational conflicts of interest and we intend to abide by them. That said, AT&T has not hired any individuals while they were still employed by a state.

2. If yes is the response to the above question, who are these individuals?

**Response:** Please see the response to Question 1.

3. All mobile networks worldwide inter-operate with multiple cores, even between countries, including AT&T which interoperates with hundreds of core networks worldwide and locally in the US. As the 3GPP security standards as well as current IT best practices, combined with Federal security standards such as FIPS 140-2 end-to-end encryption, and 2-factor authentication, all ensure a highly secure interoperability standards, why would a state deployed Evolved Packet Core (EPC) network, that meets all the required security standards increase the risk of security for the NPSBN?

**Response:** Congress mandated that FirstNet deploy a public safety network "based on a single, national network architecture," 47 U.S.C. § 1422(b), because the introduction of multiple networks controlled by a multitude of carriers creates additional security risks, additional points of failure, and possible degradation of services offered over that network. Allowing opt-out states to deploy their own core networks would create the same problems that led Congress to create the FirstNet network in the first place.

4. Does this unpacked argument not demonstrate that any state RAN cores, Verizon, Sprint or US Cellular can all be safely interconnected with AT&T's FirstNet core?

**Response:** Please see the response to Question 3.

5. According to the proposals included in the state plans, AT&T will share significant parts of the NPSBN with their commercial network, including the Radio Access Network, Operational Support Systems, Business Support Systems, Network Management Services, EPC hardware, core transport network, IP Multimedia sub-systems, network service

platforms, and physical network locations. Many of these systems which are part of the NPSBN core network. How do you explain the contradictions between these facts and your testimony before Congress in July and November hearings?

**Response:** AT&T does not believe there is a contradiction. Rather, it was Congress' vision that FirstNet would (1) rely upon existing infrastructure, including network assets owned and operated by mobility carriers and used to support customer traffic today, where it made economic and engineering sense, and (2) use a public/private partnership strategy to help accelerate the deployment of the FirstNet network dedicated to public safety.

6. How is security and NPSBN isolation maintained in light of AT&T's use of all these shared network components?

**Response:** AT&T is 100% committed to public safety and to delivering a network engineered to the needs of first responders and compliant with the requirements in its agreement with FirstNet that were based on guidance and efforts from many organizations, including NPSTC (National Public Safety Telecommunications Council), APCO (Association of Public-Safety Communications Officials), and PSAC (Public Safety Advisory Committee) to name a few.

Managing a reliable, highly-secure network is not new to AT&T. AT&T has 8 world-class Global Security Operations Centers, where our security experts analyze the traffic on our network 24/7/365 to understand and identify the latest emerging threats. We will have one such center dedicated to FirstNet. With more than 150 petabytes of data crossing our network every day, our experts have unique insight into the threat landscape that helps them detect new threats before they become a problem.

AT&T's robust cybersecurity program has been benchmarked against the NIST security framework. We have deployed a multi-layered approach to help secure devices and applications, so security is embedded in our network. Finally, our use of software-defined networks (SDN) also allows us to "virtualize" our security functions, letting us automatically update security instead of relying on manual updates. SDN also allows us to expand the network during a denial-of-service attack to keep things up and running.

7. What does AT&T mean by Public Safety Grade core network?

**Response:** AT&T is 100% committed to public safety and to delivering a network engineered to the needs of public safety and compliant with the requirements in its agreement with FirstNet that were based on guidance and efforts from many organizations, including NPSTC (National Public Safety Telecommunications Council), APCO (Association of Public-Safety Communications Officials), and PSAC (Public Safety Advisory Committee). Consistent with FirstNet's vision, AT&T will design and engineer the NPSBN and infrastructure with the appropriate public safety grade attributes to meet its 99.99% AT&T mobility network end-to-end service level objective. In addition, the resiliency of AT&T's network will be buttressed by a fleet of 72 FirstNet satellite Cells-on-Light-Trucks that can be deployed to provide network coverage if elements of the network are not available. Finally, AT&T's network is already supported by AT&T's vast Network Disaster Recovery fleet of vehicles, generators, and other deployables that can be used to ensure service continuity.

8. What does AT&T mean by Public Safety Grade towers?

**Response:** Please see the responses to Questions 7 and 10.

9. What does AT&T mean by Public Safety Grade backhaul?

**Response:** Please see the responses to Questions 7 and 10.

10. What is AT&T's description of a fully hardened public safety grade tower – including back-up power, back-up generators, wind-loading, shelter descriptions, backhaul redundancy, etc.?

**Response:** AT&T recognizes the importance of the physical security and resiliency of the sites and infrastructure comprising the NPSBN solution. AT&T will harden the network for reliability and survivability as an essential effort to the NPSBN's success. Our approach uses a site hardening requirement regimen to provide a high degree of operational security. AT&T currently builds sites to uniformly high standards nationwide. AT&T's RAN infrastructure measures include: established densification in urban and suburban areas to create site overlap, permanent batteries at all sites, permanent generators at critical sites, physical access control to all sites, and special hardening and location of critical sites, where reasonable and appropriate, recognizing local hazards such as hurricanes, tornadoes, earthquakes, flooding and wildland fires so that the network is engineered to increase survival in the face of such hazards.

11. What percentage of AT&T's own existing towers meet public safety grade standard today?

**Response:** AT&T's towers and sites are in full compliance with applicable laws as well as with the terms of the agreement between AT&T and FirstNet. Any AT&T cell site towers and structures that will be built to support FirstNet will also be compliant with applicable laws and contract terms.

12. What percentage of AT&T's leased towers meet public safety grade standard today?

**Response:** Please see the response to Question 11.

13. What percentage of AT&T's own existing towers meet public safety grade standard in year three?

**Response:** Please see the response to Question 11.

14. What percentage of AT&T's owned towers across the country will be equipped with Band Class 14 deployed in year three?

**Response:** Each state or territory has received this information along with its state plan and may access it, on a confidential basis, via the state portal. The detailed FirstNet buildout and coverage information provided to the states is confidential, for both security and competitive reasons. For network security purposes, it is important that AT&T's network and the FirstNet build plans are kept confidential and not publicly available to those seeking to harm the network, which will be relied upon by our first responders in times of emergency. We would be happy to further discuss this question with your office in a private setting.

Having said that, we expect to deploy a significant percentage of Band Class 14 over the next five years and the vast majority over the 25-year length of the contract with FirstNet. Moreover, if AT&T is tasked to build all 56 RANS in the states and territories, with all we bring to the table, we estimate that we will cover over 99% of the U.S. population and its geography.

15. What percentage of AT&T's leased towers across the country will be equipped with Band Class 14 deployed in year three?

**Response:** Please see the response to Question 14.

16. What percentage of AT&T's owned towers in each state will be equipped with Band Class 14 be deployed in year five?

**Response:** Please see the response to Question 14.

17. What percentage of AT&T's leased towers in each state will be equipped with Band Class 14 be deployed in year five?

**Response:** Please see the response to Question 14.

18. Will AT&T commit to deliver Public safety wireless broadband service across their national network footprint?

**Response:** Yes. AT&T has already made this commitment. First responders will have access to this service, including priority and, for primary users, preemption, on all of AT&T's spectrum bands as well as on Band Class 14 as it is deployed. In fact, AT&T is already providing service on AT&T's existing national network to first responders in states that have opted in.

19. Is it true that public safety subscribers will have wireless radio access using Band Class 14 to all of AT&T's commercial tower sites?

**Response:** AT&T expects to deploy a significant percentage of Band Class 14 over the next five years and the vast majority over the 25-year length of our contract with FirstNet. Moreover, if AT&T is tasked to build all 56 RANS in the states and territories, with all we bring to the table, we estimate that we will cover over 99% of both the U.S. population and its geography. First

responders will have access to priority and, for primary users, preemption on all sites, whether or not they are utilizing Band Class 14.

20. Will public safety users on the AT&T First Responder network generally need to rely on commercial (non-LTE band-14) spectrum for their day-to-day use of the first responder broadband network?

**Response:** No, because we expect to deploy Band Class 14 on the vast majority of our sites. Whether a first responder will generally use Band Class 14 or AT&T's other spectrum bands depends on whether AT&T has deployed the Band Class 14 network in the public safety user's location. However, because all FirstNet subscribers will have priority and preemption across all spectrum bands, and because all FirstNet subscribers also will use the FirstNet core for full features and functionalities, a first responder will receive the same high-quality service whether utilizing Band Class 14 or one of AT&T's other spectrum bands.

21. How does AT&T define Public Safety Grade?

**Response:** AT&T is 100% committed to public safety and to delivering a network engineered to meet first responders' needs and compliant with the requirements in its agreement with FirstNet that were based on guidance and efforts from many organizations, including NPSTC (National Public Safety Telecommunications Council), APCO (Association of Public-Safety Communications Officials), and PSAC (Public Safety Advisory Committee).

22. To what extent does it incorporate the NPSTC definition of Public Safety Grade?

**Response:** Please see the response to Question 21.

23. What percentage of AT&T sites will be compliant with the NPSTC public safety grade definition within 3 years after network development begins?

**Response:** AT&T is 100% committed to public safety and to delivering a network engineered to meet first responders' needs and be compliant with the requirements in its agreement with FirstNet that were based on guidance and efforts from many organizations, including NPSTC (National Public Safety Telecommunications Council), APCO (Association of Public-Safety Communications Officials), and PSAC (Public Safety Advisory Committee). All sites will be compliant with the FirstNet contract specifications to allow AT&T to deliver a highly-secure NPSBN that is reliable, resilient, and redundant. Consistent with FirstNet's vision, AT&T will design and engineer the NPSBN and infrastructure with the appropriate public safety grade attributes to meet its 99.99% AT&T mobility network end-to-end service availability objective.

24. What is the percentage compliant within 5 years?

**Response:** Please see the response to Question 23.

25. What is the percentage compliant within Vermont in 3 years?

**Response:** Please see the response to Question 23.

26. What is the percentage compliant within Vermont in 5 years?

**Response:** Please see the response to Question 23.

27. Will this Public Safety Grade specification be applied across the entire public safety broadband network, even to coverage sites that only supply commercial spectrum?

**Response:** AT&T recognizes the importance of the physical security and resiliency of the sites and infrastructure of the AT&T network that supports first responders and other customers. AT&T has and will continue to harden all of its network for reliability and survivability where reasonable and appropriate. Our approach uses a site hardening requirement regimen to provide a high degree of operational security. AT&T currently builds sites to uniformly high standards nationwide. AT&T's RAN infrastructure measures include: established densification in urban and suburban areas to create site overlap, permanent batteries at all sites, permanent generators at critical sites, physical access control to all sites, and special hardening and location of critical sites, where reasonable and appropriate, recognizing local hazards such as hurricanes, tornadoes, earthquakes, flooding and wildland fires so that the network is engineered to increase survival in the face of such hazards.

28. To what extent can State public safety organizations have control over network maintenance schedules in order to prevent the loss of LTE service during critical communication hours, such as weekend nights?

**Response:** AT&T fully expects to be able to meet FirstNet's 99.99% AT&T mobility network end-to-end service availability objective. AT&T understands that at the heart of protecting a network is the ability to know and control what is on the network. We offer a suite of tools, processes, and experienced people that perform network and configuration management allowing us to maintain availability of service. AT&T performs network and configuration management of our existing world-class network delivering 99.99% available uptime for our mobility IP core network. The NPSBN will receive an integrated security operations center and network operations center approach for security management, reducing service impact time.



GREG WALDEN, OREGON  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FIFTEENTH 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  
November 20, 2017

Mr. John Stevens  
Statewide Interoperability Coordinator  
New Hampshire Department of Safety  
33 Hazen Drive  
Concord, NH 03305

Dear Mr. Stevens:

Thank you for appearing before the Subcommittee on Communications and Technology on Wednesday, November 1, 2017, to testify at the hearing entitled "Oversight of FirstNet: State Perspectives."

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 Wednesday, December 6, 2017. Your responses should be mailed to Evan Viau, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to [Evan.Viau@mail.house.gov](mailto:Evan.Viau@mail.house.gov).

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

Sincerely,



Marsha Blackburn  
Chairman  
Subcommittee on Communications and Technology

cc: The Honorable Michael F. Doyle, Ranking Member,  
Subcommittee on Communications and Technology

Attachment

## State of New Hampshire

JOHN J. BARTHELMES  
COMMISSIONER OF SAFETY



ROBERT L. QUINN  
RICHARD C. BAILEY, JR.  
ASSISTANT COMMISSIONERS

### DEPARTMENT OF SAFETY

James H. Hayes Safety Building, 33 Hazen Drive, Concord, NH 03305  
Tel: (603) 223-3889  
Speech/Hearing Impaired  
TDD Access Relay NH 1-800-735-2964

December 4, 2017

Chairman Marsha Blackburn  
Subcommittee on Communications and Technology  
Congress of the United States  
House of Representatives  
Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515-6115

Dear Chairman Blackburn,

Pursuant to the Rules of the Committee on Energy and Commerce, I submit the following answers to the questions presented by The Honorable Peter Welch. I trust my testimony, written statement, and now the answers to the questions provided, afford some insight to the challenges faced by states that are performing nothing more than their "due diligence" regarding a first responder wireless broadband network in accordance with the First Responder Network Authority (FirstNet).

If there is any further information I can provide, please don't hesitate to contact me. I wish to thank you for the invitation and the opportunity to speak before your committee.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Stevens", written over a horizontal line.

John T. Stevens  
Statewide Interoperability Coordinator  
New Hampshire Department of Safety  
33 Hazen Drive  
Concord, New Hampshire 03305  
Office: (603) 223-8003  
Fax: (603) 271-7660  
Cell: (603) 892-4688  
John.Stevens@dos.nh.gov

Additional Questions for the Record

From: The Honorable Peter Welch

1. **What are the advantages that the State of New Hampshire has identified in potentially Opting-out, building and managing a state RAN in partnership with a carrier, integrator?**

The alternative plan for the State of New Hampshire will construct a purpose-built, public safety grade statewide network covering 99.9% of the population and 97% of the territory with a cost projection of \$0.01 per/month, per/device for all tier #1 first responders statewide. Capital investment costs pertaining to infrastructure development will be borne by the vendor throughout the life of the contract, supported by security and performance bonds to insure the feasibility and sustainability of the network. The governance model created will promote true local control of the network providing guidance for reinvestment for next generation technology over the life of the 25 year vendor driven contract, based on conservative projections of the sale of excess spectrum. A dedicated network specifically designed for first responders statewide will create residual benefits for broadband connectivity for communities throughout the state that will have a direct correlation to an overall and significant economic benefit to the state.

The public/private partnership that has been created with the State of New Hampshire and Rivada Networks will provide a platform of comprehensive interoperability, through neutral carriers, that will allow public safety to operate in a secure environment. We have no greater purpose, than to equip our first responders with the necessary and most advanced communications tools to enable them to provide our citizens with the highest degree of service.

2. **Does Rivada have partners and teaming members that have wireless operating experience?**

The New Hampshire/Rivada First responder Network will feature a comprehensive, end-to-end architecture. Strategic suppliers will be instrumental in establishing and operating the public safety LTE RAN network. Back-up solutions will be critical to a well-established dual sourcing approach. So, should cost, performance, or reliability of a given supplier come into question there can be a smooth pivot to a pre-defined backup/replacement partner already engaged at a defined level within the project. This approach assures good local support to boost the New Hampshire ecosystem and economy, while ensuring world class end-to-end quality across the entire project. Multiple suppliers have been identified in each of the caveats listed;

- RAN Equipment Vendors
- Infrastructure Vendors
- Backhaul Services Vendors

- Roaming Network Vendors
- Network Development Partners
- Network Operating Partners
- State, County, and local Partners

Rivada Networks has partnered with US Cellular, and as recently as this past week with Macquarie Capital, who will incorporate and develop their telecommunications assets throughout the state. They will use hardware from wireless infrastructure leaders including Fujitsu, Ericsson, and Nokia. Among their network development partners is Black & Veatch who will oversee end-to-end site development services. The experience and knowledge that has and will continue to be provided by Rivada Networks is unparalleled and New Hampshire has every confidence that a dedicated network for first responders statewide will grow and prosper as next generation communications technology becomes available.

**3. Does Rivada have partners and teaming members that operate wireless networks today? Has this influenced your views on the reliability of partnering with Rivada?**

Rivada has partnered with US Cellular which owns and operates the fifth-largest wireless telecommunications network in the US. Rivada Networks as of this week has partnered with Macquarie Capital, who will provide extensive global expertise as a premier developer of infrastructure assets. Rivada Networks Board Members have personal experience and possess the knowledge and expertise with disaster recovery directly as Governors and other senior officials. Rivada Network Executives and personnel have years of experience deploying 4G LTE networks as major wireless operators and equipment vendors and possess the required diversity and proficiency to grow with next generation technology. The entire Rivada Networks team understands the issues faced by public safety pertaining to priority preemption and represent a company that has not only identified the problems, but has offered solutions in a manner unequaled to public safety. We have full confidence in the leadership and expertise of the Rivada Networks team, and we anticipate a full and complete statewide application to FirstNet.

**4. Has FirstNet reached out to you to help assist you in any effort to Opt-out or have they only pushed Opt-in solutions? Please describe. Has FirstNet suggested that penalties and the process would be too hard to do an Opt-out?**

There is little doubt that FirstNet has pushed hard for states to opt-in. The challenges put in front of states who are considering an opt-out decision are onerous and purposely intimidating, which is emphasized by FirstNet/AT&T consistently warning against the inherent risk. The decision for New Hampshire to move forward with an RFP when we did was representative of the arduous process that FirstNet was forecasting. The 90/180 day rule was from the beginning impractical and unrealistic to think that a state could accomplish all the necessary tasks required within that prescribed period of time. Coupled with the fact that we understood that there would be underserved areas of the country, it was to our benefit to investigate only what the

law allowed. Since New Hampshire attracted the attention of the industry, it appears that the Rules and Procedures for states considering an opt-out scenario have become even more strenuous and demanding. When FirstNet proposed over \$600,000,000 in termination penalties, spectrum fees totaling tens of millions of dollars, adoption disincentive payments, and adoption payments at 5 and 20 years, it was pretty clear that FirstNet was intent to make the penalties, fees and process as difficult as possible.

FirstNet however, has recently provided information that the SMLA termination fees will be subject to negotiation, as stated by Firstnet's CEO Michael Poth at the Congressional Hearing and again before New Hampshire's Opt-out Review Committee on November 21<sup>st</sup>, 2017. They have also stated their commitment to work with the State of New Hampshire in the event of an opt-out decision, to ensure our network is successful.

**5. Can you expand on Rivada Networks public safety communications experience and why you believe it is an appropriate fit for a State who Opt-out?**

Rivada Networks was formed in the wake of September 11th with a focus on developing solutions for interoperable public safety communications. Our experience with Rivada Networks has been entirely consistent with that history. Rivada Networks has a patent portfolio that exceeds 100 patents. They have developed eLBS patents which bring accuracy and precision to pinpointing a phone's location. This was developed specifically to address the situational awareness challenges in emergency situations by providing accurate 3D positioning, and map exact locations of wireless infrastructure which addresses some of the most critical needs of public safety. This technology improves accuracy in the vertical dimension, often referred to as the "Z-axis". The sustainable network solution Rivada Networks provided to New Hampshire successfully addressed all of our concerns. We would encourage every state to do their due diligence and put forth an RFP to explore their options.

**6. How would you characterize Rivada's responsiveness to your specific State needs in New Hampshire? Can you speak to how this has helped or hindered the decision-making process in New Hampshire?**

Rivada Networks has committed a tremendous number of man hours, including travel costs for a host of executives, with bi-weekly in-state meetings over the past 15 months working with state leadership. They have traveled with us throughout the state speaking to first responders, industry, business leaders and local communities to gather a true understanding of their individual needs and adjusting the alternative state plan based on those requirements. Rivada Networks has been responsive to all of our requests for information, and to the concerns we have expressed about the complexities of building a wireless broadband network. What has developed over the past year-and-a-half is a plan that truly works for New Hampshire and is representative of our needs. Having this alternative plan in place to compare against the FirstNet plan helped immensely with our evaluation process, which ultimately lead to the SIEC's

Data Communications Working Group and the overall Statewide Interoperability Committee to recommend a unanimous Opt-out decision. The recommendation to "Opt-out" was provided to Governor Sununu on October 6<sup>th</sup>, 2017.

GREG WALDEN, OREGON  
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY  
RANKING MEMBER

ONE HUNDRED FIFTEENTH CONGRESS  
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2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3641  
November 20, 2017

Mr. Robert LeGrande, II  
Founder  
The Digital Decision, LLC  
7579 Venture Drive  
Alexandria, VA 22315

Dear Mr. LeGrande:

Thank you for appearing before the Subcommittee on Communications and Technology on Wednesday, November 1, 2017, to testify at the hearing entitled "Oversight of FirstNet: State Perspectives."

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.

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

Sincerely,



Marsha Blackburn  
Chairman  
Subcommittee on Communications and Technology

cc: The Honorable Michael F. Doyle, Ranking Member,  
Subcommittee on Communications and Technology

Attachment



12/18/2017

Chairman Marsha Blackburn  
Committee on Energy and Commerce  
Subcommittee on Communications and Technology  
2125 Rayburn House Office Building  
Washington, DC 20515

Dear Chairman Blackburn,

It was an honor to appear before your Subcommittee hearing entitled "Oversight of FirstNet: State Perspectives" on November 20, 2017. After the hearing, many of my colleagues as well as state and local government officials expressed sincere appreciation for the Subcommittee's efforts and your willingness to address the concerns facing public safety's communications future. Your Subcommittee staff recently provided several questions from the hearing and below please find my responses.

Subcommittee Questions	Responses to Subcommittee Questions
Should all FirstNet subscribers have access to all FirstNet applications regardless of which FCC approved RAN, Core or national core network is used to reach these resources?	Yes, because it is important that first responders have interoperability across all networks and applications. While we develop the ecosystem that will support public safety's future, it is important to understand our past. In the past, we failed to setup seamlessly interoperable voice (LMR) networks and as a result our First Responders experienced communications problems that has cost lives. Data is becoming a more and more important part of PS communications every day and the need for data interoperability is as important as our continuing need for voice interoperability.
Explain why you believe that all carriers should be able to have access to the access to the FirstNet core apps? How can that be accomplished and still provide secure connection? Can that be done?	The law rightfully allows for federal, state and local PS agencies to pick what network provider is best for their needs. For this reason and because AT&T's current network offering does not meet National Public Safety Telecommunications Council (NPSTC) public safety grade recommendations, the AT&T/FirstNet solution will never be the single provider of PS broadband



Subcommittee Questions	Responses to Subcommittee Questions
	<p>communications in the United States. Giving AT&amp;T exclusive access to FirstNet's application environment will not offset AT&amp;T's shortfalls. Other providers who wish to continue to provide PS communications should not be foreclosed from competing by this monopolistic policy. In fact, they should be encouraged to do so as this will enable much needed data interoperability and critically needed competition that together will result in the best possible solution, the best possible pricing and thereby the best operations for our "Last line of Defense." Providers deliver secure communications for our country's highly secured agencies every day. Standards and standards enforcement are key to protecting our networks. To suggest that we can only protect public safety networks by granting a single provider a monopoly position in the commercial marketplace is a ridiculous and antiquated notion.</p>
<p>Has this process caused carriers to get more competitive with public safety? Better meet public safety needs.</p>	<p>Yes, FirstNet's process has promoted greater competition for the benefit of public safety. While FirstNet originally envisioned a dedicated public safety network, it ultimately decided on a commercial solution provided by a commercial provider (AT&amp;T) with a business plan to operate in the commercial marketplace. Verizon, for example, responded with a comparable commercial solution. To take full advantage of the benefits of a commercial marketplace, however, there must be healthy competition at every level. Unfortunately, FirstNet and AT&amp;T have engaged in monopolistic practices that are impacting competition for States considering Opt-out and threaten fair and open competition. For example, FirstNet did not provide final State opt-Out requirements and a "draft" SMLA until 30 days prior to a</p>

Subcommittee Questions	Responses to Subcommittee Questions
	State's legislatively required opt- IN/OUT decision (90days). This left the States 30 days to make a 25-year decision based on a draft spectrum lease document with inflated spectrum valuations and that conditions approval of the SMLA on granting AT&T exclusive authority as the State's service provider.
Would an additional public safety carrier create more competition and result in better services for public safety?	Yes, and additional public safety providers already exist. A commercial marketplace drives increased innovation, better services, and lower prices. The only way to take advantage of what a commercial marketplace offers is competition. Monopolies never work for customers and there is no reason that Congress, the Department of Commerce, NTIA, or FirstNet should think that it would work for the PS communications marketplace and our First Responders.
As FirstNet struggles to ensure user adoption is a priority for the NPSBN RAN, can you suggest a fair way to enforce that public safety user adoption goals are met, despite having different providers of public safety wireless broadband service competing for the end user business?	FirstNet's goal should not be to ensure that first responders adopt a single public safety broadband network, but to ensure they have access to communications that meet FirstNet's rigorous standards of reliability, resiliency, priority and preemption – while, at the same time, ensuring that competition continues. To do that, FirstNet should create reasonable terms and conditions for all providers to be a "FirstNet Network Provider" and, depending on the number of providers that choose to participate, adjust AT&T's required adoption penalties to give them reasonable adoption goals to ensure they (AT&T) take full advantage of the PS (FirstNet) B14 spectrum it received from the FirstNet procurement process.
In a scenario where public safety broadband users in a specific state subscribe equally across three different service providers (e.g. 1/3 AT&T, 1/3 Verizon, 1/3 Rivada),	The best-case scenario would have been for our country to build a national "private" (Not shared with commercial users) public safety broadband network while leveraging a competitive commercial carrier marketplace



Subcommittee Questions	Responses to Subcommittee Questions
assuming interoperability is preserved, should the public safety community consider this a positive outcome?	for secure roaming and redundancy. FirstNet rejected that approach in favor of a commercial solution. Attempting to treat this commercial solution as a private closed network would be one of the worst things we could do now, as it would establish "another" PS communications monopoly (e.g. LMR). Given that FirstNet selected a commercial solution (LTE), a commercial provider (AT&T) and is thereby leveraging the commercial marketplace; the best possible scenario is to incentivize that marketplace to compete and in doing so the PS Community will have the best possible solutions at the best possible pricing.
How should FirstNet hold the designated NPSBN supplier accountable if their agreed adoption targets are not met, but overall all users are satisfied and interoperable with other networks?	FirstNet should create reasonable terms and conditions for all potential providers to be a "FirstNet Network Provider" and depending on the number of Providers that choose to participate, adjust AT&T's required adoption penalties to give them reasonable adoption goals to ensure they (AT&T) take full advantage of the PS (FirstNet) B14 spectrum it received from the FirstNet procurement process.

I sincerely appreciate the opportunity to provide answers to the Subcommittee's questions and I stand ready to support you and the Subcommittee in your efforts to address these and other concerns facing our nation's "Last Line of Defense".

Sincerely,

Robert LeGrande, II,  
Founder, The Digital Decision, LLC