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AN EVALUATION OF FIRSTNET'S PROGRESS

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS,
TECHNOLOGY, INNOVATION AND THE INTERNET

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

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ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

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AN EVALUATION OF FIRSTNET'S PROGRESS

THURSDAY, SEPTEMBER 24, 2020

U.S. SENATE,
SUBCOMMITTEE ON COMMUNICATIONS, TECHNOLOGY,
INNOVATION AND THE INTERNET,
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10 a.m. in room SR–253, Russell Senate Office Building, Hon. John Thune, Chairman of the Subcommittee, presiding.

Present: Senators Thune [presiding], Schatz, Fischer, Blackburn, Blumenthal, Capito, Tester, Young, Rosen, Cantwell, and Klobuchar.

OPENING STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM SOUTH DAKOTA

Senator THUNE. Good morning, and welcome to today's subcommittee hearing, Reviewing the Progress of First Responder Network Authority, also known as FirstNet, has made in deploying a nationwide public safety broadband network.

Following several communications failures during national emergencies, Congress recognized the need for a reliable communications network for public safety officials which led to the creation of FirstNet under the Middle Class Tax Relief and Job Creation Act of 2012.

In 2017, FirstNet, which acts as an independent authority under the Commerce Department's National Telecommunications and Information Administration, awarded AT&T a contract to build out, operate, and maintain the network.

Since that time, the Committee has held several oversight hearings to ensure that FirstNet in partnership with AT&T is meeting its statutory requirements to deploy the network, and I look forward to continuing those efforts today.

Having reliable communications services for our country's emergency personnel is critical, something the COVID–19 pandemic has highlighted.

I know we have folks on the panel today who, along with many medical professionals and first responders, have played a part in the Nation's coronavirus response.

FirstNet, along with other carriers that support our medical professionals and first responders, enables those individuals to connect with Americans in need. Public safety officials face numerous challenges accessing reliable services and those challenges are even greater for the more rural areas throughout the country.

In my home state of South Dakota, the diverse terrain of the Black Hills Region, an area that attracts millions of visitors every year, makes communication even more difficult. Many Americans and international visitors alike escape to the Black Hills to unplug or to disconnect from technology.

However, when an emergency occurs, reliable communications and access to public safety personnel, even in these beautiful remote places, is a top priority.

Expanding geographical coverage is critical to addressing the region's unique challenges and making it a safer place for everyone to enjoy.

We must ensure that our public safety officials have the tools that they need to best serve our communities and to that end, I do appreciate FirstNet and AT&T's commitment to enhancing coverage in rural areas.

Building an interoperable nationwide public safety network is not without its challenges and FirstNet, with AT&T, is only in its third year of a 25-year contract.

Earlier this year, the Government Accountability Office identified several areas in which FirstNet could strengthen its oversight of AT&T. One of the areas mentioned was end user engagement. GAO's report found that AT&T does not collect enough robust data around the satisfaction of the end user, the very groups who will at the end of the day be depending upon the FirstNet system to do their jobs.

I share GAO's view that FirstNet's lack of formal oversight into end user satisfaction could ultimately affect the long-term success of the program.

Today, I look forward to hearing how FirstNet and AT&T have worked to address this and other concerns raised by GAO.

We have an excellent panel before us today with representatives from FirstNet and AT&T as well as individuals who utilize the FirstNet network every day.

Joining us is Mr. Ed Parkinson who serves as the Executive Director of FirstNet, Mr. Jason Porter from AT&T, Captain Tony Harrison from the Sheriff's Office of Pennington County, South Dakota, and Ms. Karima Holmes, Director of the Office of Unified Communications for the District of Columbia. Thank you all for being here.

I now want to recognize Ranking Member Schatz for any opening remarks that he may have and I believe he is joining us virtually.

Senator Schatz.

STATEMENT OF HON. BRIAN SCHATZ,
U.S. SENATOR FROM HAWAII

Senator SCHATZ. Thank you, Chairman Thune, and I want to really thank the testifiers.

It is customary to thank testifiers every time we have a hearing, but I want to thank all of you for everything you do for public safety and for taking the time out of your incredibly busy schedules for this.

In the face of a global pandemic, FirstNet is more important than ever. A decade ago, first responders had no dedicated communications network and a patchwork of systems left public safety of-

ficials exposed and competing with commercial users for bandwidth.

Services and devices for first responders were few and far between. Those that existed were expensive and not interoperable.

Today, through FirstNet, public safety now has its own communications highway and marketplace catering to its unique needs and every state has opted in. FirstNet is the result of smart bipartisan legislation, private sector partnership, and market-based collaboration.

FirstNet is also a sobering reminder of the way Congress and the Federal Government can and should be playing in emergency preparedness.

In Hawaii, police, EMS, and firefighters use FirstNet on several islands and dead zones. They can transform a cell phone tower into a radio with a touch of a button and FirstNet's assets have brought temporary connectivity to isolated areas in the state, even during the recent volcanic eruptions on Hawaii Island, to ensure that first responders never miss a beat.

In recent months, FirstNet had its first true nationwide stress test. It's been used nationally in the COVID–19 response efforts. FirstNet's capabilities have been used to deliver broadband connections to COVID testing centers, emergency medical sites, and 9–1–1 dispatchers working from home.

Its curated app store has even made wellness services available to frontline workers. These efforts are encouraging but our job is not done until FirstNet serves everyone.

To reach that goal, ongoing collaboration at the community, state, and Federal levels is more essential than ever. It's imperative that FirstNet responders continue to openly engage with states and local first responders to meet the build-out deadlines. This will ensure that we achieve other important FirstNet milestones, further migrating first responders on to the network and hardening it against security threats.

As we move forward toward a fully integrated infrastructure, FirstNet should be the inspiration for bringing other public safety services into the 21st Century, like Next Gen 9–1–1.

Imagine a future where you could text a photo or video of an accident or crime directly to 9–1–1 or cars that relay timely information to dispatchers about a crash, helping responders predict injuries and equipment that might be needed. That's the promise of Next Gen 9–1–1, a digital system that can share voice and data-rich communications directly with emergency dispatchers.

Next Gen 9–1–1 will improve our public safety infrastructure by feeding data into FirstNet. However, like FirstNet, it will need Federal support for adoption and interoperability.

In December, my colleagues and I proposed using C band auction revenues to modernize this important element of public safety and I hope we will act on this proposal soon.

I also want to note that Senator Klobuchar has been a real leader on Next Gen 9–1–1 and want to thank her for her leadership and dogged focus on this issue.

Delivering the FirstNet network is monumental and the innovation and persistence of FirstNet gives me hope about the next phase of emergency planning, including 9–1–1 services.

I want to thank the testifiers and look forward to our exchanges. Thank you.

Senator THUNE. Thank you, Senator Schatz.

We'll move right into our testimony, and as I mentioned, we will start with Mr. Ed Parkinson, who is the Executive Director of FirstNet, followed by Mr. Jason Porter, who is the Senior Vice President of FirstNet Program at AT&T, and then we'll go virtually to Captain Tony Harrison of the Sheriff's Office of Pennington County, South Dakota, and Ms. Karima Holmes, who is the Director of Unified Communications.

So we will do that, and then we'll get into questions. I would ask all of you, if you can, to confine your oral remarks to 5 minutes or thereabouts and it will optimize the amount of time we have to get into Q&A.

So thank you again, all, for being here. I'm delighted to have you here today, and we look forward to hearing what you have to say.

So we'll proceed first with Mr. Parkinson.

STATEMENT OF EDWARD PARKINSON, EXECUTIVE DIRECTOR, FIRST RESPONDER NETWORK AUTHORITY

Mr. PARKINSON. Thank you, Senator.

Good morning. Good morning to you, Senator Schatz, members here in person and joining us virtually.

I'm here to testify about FirstNet, our Nation's only dedicated interoperable broadband network built for and dedicated to public safety.

The genesis of FirstNet goes back to the tragic events of 9/11 and the ensuing 9/11 Commission report that found that first responders could not seamlessly communicate over existing networks on that tragic day over 19 years ago.

Congress heard the call from public safety and established the FirstNet Authority back in 2012 with the clear mission to ensure the deployment and operation of a nationwide network that public safety would use in order to save lives and protect our community.

Our incredible team strives each day to ensure that public safety receives state-of-the-art performance from their network.

At the time of passage of our legislation, it was hard to imagine the environment in which we find ourselves here today. However, I'm pleased to report to the Committee that we have come a long way in a relatively short period of time.

Deployment of the network began in 2018 and in the almost 3 years since, we now have 1.5 million connections with more than 13,000 public safety agencies and organizations having signed on for service.

Not only does this reflect the breathtaking speed of deployment and adoption but when one compares our spectrum's clearance efficiency to other spectrum studied by organizations like CTIA, which states in a report that on average it takes 13 years to reallocate spectrum for wireless use, FirstNet did it in just six.

In my opinion, this progress illustrates two important factors. First, public safety needs and is making use of their network. For years, first responders were asking carriers to access for services, such as priority preemption for unthrottled service and for choice.

Because of the innovative public/private framework that Congress outlined for FirstNet and the oversight that my organization, FirstNet Authority, brings, responders can now trust that these critical communications services are available to them and their network will continue to evolve to meet their needs.

Second, FirstNet has done something unique. We've actually done what we said we were going to do. We've listened to public safety. We've taken their feedback and incorporated it into our strategies, acknowledged where we can do better, and doubled down on what we've done right.

We've made incredible progress and our goal is to keep this momentum going. We intend to stay at the forefront of technology and this is reflected in our first investments approved by our board back in June. These investments lay the groundwork for 5G and to expand the FirstNet dedicated fleet of assets.

In the past, this committee has asked my team if we were running a tight fiscal ship and I'm pleased to report that we continue to do just that. Deployment of this network remains ahead of schedule and it will be delivered within the resources allotted for this project.

We are self-sustaining and do not take annual appropriations from Congress. Our recapitalization model, which was established as part of the public/private arrangement that we have with our contractor, AT&T, ensures that continued operations at the FirstNet Authority will not cost the taxpayer one additional dollar and even as we continue to invest in and improve the network over the next 23 years.

I encourage everyone listening here today to visit firstnet.gov where we recently launched pages with information specific to each state and territory. There, you can find the latest on FirstNet build-out in your state and see how public safety agencies are leveraging the FirstNet dedicated connection.

Public safety officials can also find their contact information for their FirstNet Authority public safety advisor and encourage them to reach out.

Our culture at FirstNet is to listen, learn, and evolve. We are constantly striving to improve and to do better. Ultimately, public safety lives and their mission of protecting our communities depends on it.

FirstNet is the only public safety broadband network that exists because public safety called for it and that is a responsibility that I and my team take very seriously.

For each of us here today, we all know a first responder. These are our neighbors, our friends, the lifelines in the community when we call for help. We're proud to serve them and to connect communities across this country in every state, territory, and tribal nation.

We are just over halfway into this initial FirstNet build-out and we've had many successes, yet there is much more to do as we evolve the network for public safety, and we look forward to pushing innovation for the men and women on the front lines.

If I may be so bold as to ask something from this committee, it would be that you continue to remain as engaged in this project as you have been over the last few years. Continuing to ask what is

happening in your respective states and identify and observe the progress that we are making. Each time and in time, you will hear from public safety on why our spectrum lease should be renewed in 2022 and in time why our program should be reauthorized.

I'd like to thank the Subcommittee again for inviting me here to testify. I look forward to any questions you may have.

[The prepared statement of Mr. Parkinson follows:]

PREPARED STATEMENT OF EDWARD PARKINSON, EXECUTIVE DIRECTOR, FIRST RESPONDER NETWORK AUTHORITY

Introduction

Chairman Thune, Ranking Member Schatz, and all Members of the Subcommittee, I would like to thank you for the opportunity to appear here today to provide an update on the progress we are making at the First Responder Network Authority (FirstNet Authority) on the deployment of the nationwide, interoperable public safety broadband network (Network or FirstNet). My name is Edward Parkinson, and I am the Executive Director of the FirstNet Authority.

The FirstNet Authority was established by the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) (2012 Act) based on recommendations of the 9/11 Commission Report.[1] The FirstNet Authority's mission is to ensure the building, deployment, maintenance, improvement, and ongoing operation of a nationwide, interoperable broadband network that helps public safety save lives and protect our Nation's communities.

Leading up to the passage of the 2012 Act, the public safety communications market in the United States was stagnant. There were few advancements in technology for our first responders. As a result, teenagers with a smartphone had more advanced communications tools than our police officers, firefighters, or paramedics. Further, the lack of interoperability among vendors and equipment caused voice communications to be fractured, expensive, and resulted in a patchwork of networks across the country.[2] For broadband data, first responders relied on commercial solutions that were insufficient to meet their needs. To resolve these issues, public safety asked for a network specifically built for their mission, utilizing dedicated nationwide spectrum[3]—a superhighway that would give public safety communications "lights and sirens" to cut through commercial congestion by prioritizing their voice and data traffic during times of emergency.

Recognizing the need for a single, nationwide broadband network dedicated to America's public safety community, Congress created the FirstNet Authority to establish and oversee the FirstNet network. FirstNet uses spectrum reserved specifically for public safety to provide a wireless communications network that is interoperable across jurisdictions and public safety disciplines, with quality of service, priority, preemption (QPP),[4] and market scale. As the FirstNet Authority planned for the Network, we consulted public safety in all 50 States, 5 U.S. territories, and the District of Columbia, and across Indian Country. Public safety told us the Network needed to be affordable, reliable, interoperable, and custom-built for the customer. The network solution needed to be designed to work in the most urban areas, where network challenges come in the form of urban canyons, Z-axis geolocation,[5] and in-building coverage dead zones; and in the most rural parts of our country, where previously, the business case did not exist to build networks just for public safety use.

The 2012 Act directed the Federal Communications Commission (FCC or the Commission) to allocate 20 MHz of spectrum (plus two 1 MHz guard bands)—the

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[1] National Commission on Terrorist Attacks upon the United States., *The 9/11 Commission Report: Final report of the National Commission on Terrorist Attacks upon the United States,* Washington, D.C. (2004), available at *https://www.9-11commission.gov/report/911Report.pdf.*

[2] J.M. Peha, *"How America's Fragmented Approach to Public Safety Wastes Money and Spectrum,"* Telecommunications Policy, Vol. 31, No. 10–11, 2007, pp. 605–618.

[3] S. Rep No. 112–260, at 3 (2012), available at *https://www.congress.gov/112/crpt/srpt260/CRPT-112srpt260.pdf.*

[4] QPP refers to a very large set of 3GPP features and functionality that the FirstNet Authority and AT&T will utilize to ensure that first responders have priority access to Band 14 when they need it and, if the situation requires it, prioritization among first responders. *See* FirstNet Authority, *Quality of Service, Priority, and Preemption, http://www.npstc.org/download.jsp?tableId=37&column=217&id=3685&file=FirstNet_QPP_Intro.pdf.*

[5] Location based technology to solve the Z-axis (vertical) challenge would help pinpoint what floor a first responder is on in a building. This is a top priority for firefighters.

D-Block (758–763 MHz/788–793 MHz) along with existing public safety broadband spectrum (763–769 MHz/793–799 MHz) (collectively referred to as "Band 14")—to deploy FirstNet. The ten-year license to the spectrum shall be up for renewal with the Commission in 2022. Additionally, the FCC played a critical role in the establishment of the Technical Advisory Board for First Responder Interoperability, which delivered its recommendations for the minimum technical requirements for the Network.[6]

Public safety officials supported the use of Band 14 as the nationwide spectrum for the Network.[7] With a nationwide license to 20 MHz of spectrum, $7 billion in funding, and after extensive consultation with federal, state, local, and tribal public safety stakeholders, the FirstNet Authority held an open, transparent, and competitive procurement, as directed by Congress, to find a private sector partner to deploy the Network. In March 2017, after a comprehensive acquisition process, AT&T was selected to build, operate, and maintain the Network and signed a 25-year contract with the FirstNet Authority.

A Truly Nationwide Network

When the FirstNet Authority last testified before this Subcommittee,[8] we were focused on working with AT&T, and our Nation's Governors, the State Points of Contact (SPOCs), and public safety leadership in the states to design individualized FirstNet state plans to build out the Network and meet public safety's needs.

These state plans detailed the initial five-year deployment of the Network for each state, with expanded coverage and capacity in rural, suburban, and urban areas. While Governors had a choice to "opt-out" and build their own state networks, all Governors ultimately decided to "opt-in" and have the FirstNet Authority oversee and AT&T build the Network in their states.

By March 2018, with all states and territories having "opted-in" to the Network, the FirstNet Authority and AT&T officially began the nationwide deployment of the Network and offering public safety services, such as priority and preemption, through the dedicated FirstNet Enhanced Packet Core, to FirstNet subscribers. Today, we are just 2 years into the deployment of Band 14 on both new and existing towers, and already we have seen the Network make a major difference in the lives of first responders and the communities they serve.

AT&T recently announced there are more than 1.5 million connections—with public safety customers from over 13,000 agencies using FirstNet's interoperable public safety communications platform throughout the Nation.[9] AT&T remains ahead of schedule on the nationwide deployment, recently stating that it reached over 80 percent of the contracted Band 14 build.[10] By the time the FirstNet Authority seeks renewal of its FCC license, just two years from now, we anticipate that the initially contracted for Network will be complete or nearly complete. Moreover, the Network is operational today and serving public safety users. Since the FirstNet Authority is satisfying its duties and obligations under the 2012 Act, resulting in a Network for public safety that is operational and serving users today, there is no question that it is in the public interest to renew the FirstNet Authority's FCC license so that the FirstNet Authority can fulfill its mission throughout the life of the 25-year agreement with AT&T.

Supporting COVID–19 Response, Hurricane Recovery Efforts, and Other Public Safety Operations

Upon the deployment of FirstNet and the availability of its services, public safety has relied on the Network to serve its broadband communications needs. Notably, we have seen an increase in the use of FirstNet during the pandemic—a sign that the Network is helping public safety carry out its mission in the face of COVID–

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[6] *See* 2012 Act § 6203(c)(3)(A) (47 U.S.C. § 1423(c)(3)(A)), Pub. L. No. 112–96, 126 Stat. 156 (2012); "Recommended Minimum Technical Requirements to Ensure Nationwide Interoperability for the Nationwide Public Safety Broadband Network" (May 2012), *https://docs.fcc.gov/public/attachments/FCC-12-68A3.pdf.*

[7] *See* Testimony of Chief Harlin McEwen before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Communications, Technology, and the Internet (Sept. 24, 2009), available at *http://www.npstc.org/documents/PSST_McEwen_Testimony_Final_090924.pdf.*

[8] *See* Testimony of Michael Poth, Chief Executive Officer, FirstNet Authority, before the U.S. Senate Committee on Commerce, Science, and Transportation, Subcommittee on Communications, Technology, Innovation, and the Internet (July 20, 2017), available at *https://www.commerce.senate.gov/services/files/E9B67AE8-D32F-42A2-AF42-6A5B9AFC8A13.*

[9] *See* Jackson, Donny, "FirstNet tops 1.5 million connections, 13,000 agencies, according to AT&T," *Urgent Communications* (July 24, 2020), available at *https://urgentcomm.com/2020/07/24/firstnet-tops-1–5-million-connections-13000-agencies-according-to-att/.*

[10] *See id.*

19. Health-care workers and responders are using FirstNet services at COVID–19 testing centers, field hospitals, and incident command posts across the country. We are seeing an increase in the use of data to confront the pandemic at nearly two times the rate of consumer data traffic. First responders are taking advantage of FirstNet for telehealth as well as adapting the use of the Network in creative ways to fit the needs of their specific operations.

For example, hotspots and smartphones powered by FirstNet are enabling 9–1–1 dispatchers to take calls and dispatch operations from their homes and remote locations. This enables agencies to allow for social distancing among their staff, keeping these frontline essential workers safe so they can continue to serve the community. Throughout the pandemic, the City of Alexandria, Virginia's emergency communications center has relied on FirstNet to support remote operations. Using hotspots and smartphones powered by FirstNet, Alexandria dispatchers are able to take calls from their homes and remain in contact with staff on-site. The FirstNet Push-to-Talk (PTT) solution, enabling FirstNet phones to act as two-way radios, ensures that telecommunicators working from home are as connected and ready to respond as if they were still back at the call center.

FirstNet priority and preemption and access to dedicated Band 14 spectrum has provided the fast and reliable connectivity first responders and medical personnel have needed during the pandemic. Additionally, where FirstNet subscriber agencies have needed additional connectivity, they have a dedicated fleet of deployable Network assets available on request at no cost to the agency. There have been dozens of requests for FirstNet portable cell sites during the pandemic. This included boosting connectivity to the U.S. Navy hospital ship Mercy when it was docked at the Port of Los Angeles; and supporting in-building coverage for the U.S. Navy hospital ship Comfort docked in New York Harbor[11] as well as at COVID–19 testing sites, quarantine facilities, field hospitals, and emergency operation centers. The FirstNet Authority was able to work with its government partners to identify the right points of contact aboard the U.S. Navy ship Comfort so that AT&T FirstNet could install the best solution for the operational needs aboard the ship.

The Network has also supported mutual-aid efforts, including situations where ambulances are called in to assist from outside a hard-hit region. Paramedics using FirstNet devices and enhanced PTT can seamlessly communicate and work together with neighboring agencies. As we do for all major emergency operations, the FirstNet Authority will continue to gather public safety use cases and best practices from the response to COVID–19 so that agencies and practitioners can learn from each other and further understand how public safety broadband can support their communications needs. Even in the midst of a pandemic, responders must address and prepare for other emergencies. FirstNet has been there to assist with its dedicated fleet of deployable assets to augment coverage and capacity, including during the tornadoes in the southeastern United States earlier this spring, recent wildfires across California, and what has already been an active hurricane season along the east coast and in the gulf.

Most recently, FirstNet was leveraged in the Gulf states in response to Hurricane Laura, a category 4 hurricane making landfall in Louisiana on August 28, 2020. Prior to the storm, AT&T's FirstNet Response Operations Group (ROG), a team of former first responders who manage FirstNet's response in these types of disasters, staged deployable units and backup generators outside the path of the storm. Immediately following the devastating storm system, the ROG team coordinated with state emergency operations centers (EOCs), local agencies, and Federal Emergency Management Agency (FEMA) Urban Search and Rescue (US&R) teams to deploy Satellite Cell on Light Trucks (SatCOLTs), in-building solutions, and generators to impacted areas to support public safety communications efforts on the ground. Additionally, FirstNet One (a one of its kind in the world, 55-foot aerostat/blimp) was launched on September 3rd to deliver sustained network coverage in Cameron Parish, Louisiana, over an expansive area, in the aftermath of such a large-scale catastrophic event.

It is clear, Congress' vision for a nationwide interoperable public safety broadband network to serve first responders is working and evolving to meet public safety's needs during crises. The pandemic has underscored how FirstNet supports communities' ability to respond as new challenges arise.

In addition to the use during the pandemic response, public safety has relied on FirstNet in a myriad of other ways since the deployment of the Network. The fol-

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[11] *See* Hill, Kelly, "FirstNet-AT&T supporting naval hospital ships in New York, Los Angeles," *RCR Wireless* (Apr. 1, 2020), available at *https://www.rcrwireless.com/20200401/carriers/firstnet-att-supporting-naval-hospital-ships-in-new-york-los-angeles.*

lowing are just a few examples of how FirstNet has supported public safety across the country in various situations and events:

Fire: Seattle, Washington: Last summer, more than 350,000 people attended Seattle's SeaFair festival, and for the first time the Seattle Fire Department covered the event using FirstNet. Seattle Fire Department Chief Harold Scoggins said, "With FirstNet in place, we have increased confidence in our communication methods for use during highly attended public events. During this year's SeaFair activities, we were able to communicate important safety information without worry of encountering congestion issues."

EMS: Hattiesburg, Mississippi: AAA Ambulance Service subscribed to FirstNet to help connect its 24-hour emergency and non-emergency medical transport service. FirstNet is helping the ambulance service to seamlessly communicate as they serve 1.2 million residents living across 16 counties in southern Mississippi. Andy Geske, Chief of Information Technology for AAA Ambulance Service, said, "What's important to me and my crew members is the ease of accessing FirstNet. [It] can put everybody on the same page where that response is best for the patient." In facilitating the integration of telemedicine capabilities, FirstNet has allowed the AAA Ambulance Service to swiftly and efficiently deliver care to its patients in rural Mississippi.

Integration with Emergency Communications Centers (ECCs)/9–1–1 Dispatch: Oglala Sioux Tribe: The FirstNet Authority continues to deliver quality service to the 9–1–1 community, and recent successes have demonstrated how FirstNet can enhance and enable 9–1–1 communications. For example, the Oglala Sioux Tribe's Department of Public Safety relies on FirstNet to keep their police officers connected to ECC dispatch when they are responding to an incident. FirstNet supports applications that enable dispatchers to transmit mission critical information to responders and remain in touch with them as they respond to an incident. And in addition to supporting remote call-taking and mobile communications, FirstNet can act as a secondary network for ECCs in case of a primary network failure. These applications will only grow in their importance as ECCs transition to Next Generation 9–1–1, in which data needs to be able to travel in and out of an ECC in a quick and seamless manner.

Consultation: Red Cliff Band of Lake Superior Chippewa (Red Cliff): The FirstNet Authority has worked closely with the Red Cliff Band of Lake Superior Chippewa in Wisconsin. FirstNet helped to boost access to broadband communications with the addition of a new, purpose-built cell site located on the Red Cliff Reservation. Public safety stakeholders, in consultation with the FirstNet Authority, identified the location as a priority area for increased Network coverage and capacity to better support emergency communications. "Breaking ground on this new cell site will not only support the public safety mission, but it will also pave the way for new technical capabilities and innovations—furthering economic opportunity and extending access to telehealth, online learning, and overall communications during emergencies," said Theron Rutyna, Red Cliff IT Director.

Large Planned Events: Lake Race at the Lake of the Ozarks: In a typical summer, over 10,000 racing enthusiasts gather in Missouri as boaters test the limits at one of the most popular powerboat racing events in the Nation. The two-day event takes months of planning and preparation to ensure that competitors and spectators stay safe on and around the lake. During the 2019 event, the Lake Ozark Fire Protection, Osage Beach Fire Protection, Missouri State Highway Patrol, Rocky Mountain Fire District, Camden County Sheriff's Office, Lake Regional Hospital, Lake West Ambulance, and Eldon Fire and Rescue Department relied on a FirstNet SatCOLT to ensure robust capacity to support communication and data needs. The FirstNet Authority facilitated a pre-planned event planning meeting with the responder agencies. This planning meeting provided AT&T FirstNet ROG with additional information regarding the locations where public safety needed coverage, and allowed them to deploy the right solution. "The event went very well. Communication with the enhanced PTT devices was seamless, and to have the [SatCOLT] on site made our communications between command and patrol boat work flawlessly," said Matthew Birdsley, Assistant Fire Chief, Lake Ozark Fire Protection District.

These use cases are just a sample of public safety agencies across the country making use of FirstNet.

Consultation with Public Safety

The FirstNet Authority would like to thank all public safety stakeholders throughout the country who have engaged with us—they have had and will continue to make a direct impact on FirstNet. Since the FirstNet Authority was established in 2012, we have built our programs and activities around direct consultation and engagement with and feedback from the public safety community in every state and

territory. It is the cornerstone of everything we do at the FirstNet Authority. We have focused on maintaining a close working relationship with a diverse group of public safety stakeholders—states, territories, tribes, local governments, Federal agencies, Non-Governmental Organizations (NGOs), and the members of the FirstNet Authority's Public Safety Advisory Committee (PSAC).[12]

Just last year, our public safety advocacy team participated in more than 1,100 public safety engagements representing all states, tribal nations, and across all public safety disciplines. Through these engagements, the FirstNet Authority had discussions with more than 25,000 stakeholders and collected their feedback on: the Network; broadband successes, challenges, and needs; and suggestions for product development. These interactions with public safety continue to be critical as we lay the groundwork for our future strategy and long-term planning for the organization, and as we reinvest back into the Network and help drive innovation in the public safety marketplace. We have continued our engagement with public safety during the pandemic through webinars, virtual briefings, and virtual conferences across the country.

The FirstNet Roadmap

In 2019, the FirstNet Authority worked with our public safety, industry, and government stakeholders across the country to develop a Roadmap[13] to guide the growth, evolution, and advancement of the Network. Released a year ago, the Roadmap provides a view of public safety's operational needs and technology trends for mobile broadband communications over the next several years.

The Roadmap is organized around six domains representing technologies and capabilities that are vital to public safety operations now and in the future, including:

1. Network Core: provides the essential intelligence for the functioning of the Network and is foundational to the Network
2. Coverage and Capacity: enables robust and ubiquitous access to the Network
3. Situational Awareness: envisions real-time access, collection, and distribution of critical information
4. Voice Communications: envisions high-quality, reliable voice communications nationwide working seamlessly across analog and digital platforms
5. Secure Information Exchange: provides the ability to access, exchange, and manage data securely and conveniently within and across public safety agencies and jurisdictions
6. User Experience: seeks to ensure interfaces are designed for specific public safety users' operational challenges

The Roadmap guides the FirstNet Authority's engagement with stakeholders across public safety, the industry ecosystem, government, and with AT&T. We identify and pursue opportunities that promote technology innovation, policies, procedures, and programs that benefit public safety users. The FirstNet Authority uses the Roadmap to help prioritize our programs, activities, and investments in Network improvements to ensure first responders continue to have the communications tools they need to help save lives and protect communities. As we gather input through continuing stakeholder engagements, we will update the Roadmap so that it remains current with public safety's needs and technology developments.

The Public Safety Marketplace

As we implement the FirstNet Roadmap, we continue to strengthen the public safety marketplace. We've seen commercial carriers competing fiercely to gain public safety's business. And we've seen industry rising to the occasion with new devices, apps, and solutions for use on FirstNet. FirstNet has worked with the National Institute of Standards and Technology (NIST) to certify devices that meet appropriate protocols and standards for access, use of, and compatibility with the Network, and

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[12] Under the 2012 Act, the FirstNet Authority was required to "establish a standing public safety advisory committee." 2012 Act § 6205(a)(1) (47 U.S.C. § 1425(a)(1)), Pub. L. No. 112–96, 126 Stat. 156 (2012). The FirstNet Authority established the PSAC in February 2013 consisting of member representation across all disciplines of public safety as well as state, territorial, tribal, and local governments. The PSAC also has at-large members and Federal members. The mission of the PSAC is to assist the FirstNet Authority in carrying out its statutory duties and responsibilities.

[13] *See* FirstNet Authority, *First Responder Network Authority Roadmap* (rel. Aug. 2019), *https://firstnet.gov/system/tdf/FirstNet_Roadmap.pdf?file=1&type=node&id=1055.*

offerings now include more than 100 apps[14] and over 200 devices[15] as part of the FirstNet ecosystem.

FirstNet has raised the bar and brought real competition to public safety. Now the marketplace is delivering for public safety, and we are seeing public safety respond to and adopt these services.

FirstNet also is delivering new solutions that were never previously available to public safety. These include our dedicated fleet of SatCOLTs and Cell on Wings (COWs). The network-boosting devices are available 24/7 on request and at no cost for FirstNet-subscribed agencies. This is an important aspect of a public safety network because emergencies can happen anywhere. AT&T has since begun to provide three COWs and, most recently, FirstNet One—deployed in Louisiana earlier this month, as previously mentioned—for use by FirstNet subscribers in the aftermath of major disasters. FirstNet One can fly up to 1,000 feet, potentially providing over double the coverage area as compared to other deployable solutions such as SatCOLTs.

FirstNet Investment and Innovation

The FirstNet Authority will continue to deliver for public safety and drive innovation. We are only in the third year of a 25-year contract with AT&T and have made substantial progress in Network buildout and enhancement, such as the successful recent roll-out of FirstNet PTT.

Going forward, we look to reach other important milestones for FirstNet and public safety:

- We will continue to engage with global standards bodies to work towards mission-critical video and data standards, as well as location-based services based on the needs of our users.
- The FirstNet Authority recently took the first step to begin evolving the FirstNet core to prepare for 5G—ensuring that FirstNet will be 5G ready.
- Following the recent investment approval, the FirstNet Authority will expand the fleet of FirstNet deployables to enhance network coverage and capacity for public safety during emergencies and events.[16]

All of this is in concert with our statutory responsibility to consider new and evolving technologies—preparing us for a future where the Internet of Things and 5G will help improve public safety operations.

The FirstNet Authority Roadmap drives these efforts and sets a path forward for advancing FirstNet. The Roadmap incorporates public safety's feedback and accounts for technology trends.

Conclusion

Thank you to the Subcommittee for the opportunity to update you on the FirstNet Authority's progress and our plans for the future of the Network. First responders are experiencing the benefits of FirstNet in their daily operations. Our primary goals at the FirstNet Authority this year and beyond are to continue to responsibly oversee the Network, ensure it evolves to meet the needs of public safety by engaging and gathering their feedback, and promote competition in the public safety marketplace.

The FirstNet Authority will continue to meet our statutory obligations, partner with those who will use and benefit from the Network, engage with and seek input from our public safety and governmental stakeholders, and work to ensure the successful deployment, operation, and improvement of FirstNet.

I ask that this Subcommittee continue to support the FirstNet Authority—particularly with our spectrum license renewal approaching—as we enter the next phase of this program, to innovate and invest in public safety's Network. The support of Congress is critical to FirstNet's and, in turn, public safety's success. It is always important to remember—this is not the FirstNet Authority's network; it is public

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[14] *See* FirstNet App Catalog, *https://apps.firstnet.att.com/?auth=false.*

[15] 47 U.S.C. § 1426(c)(6) requires NIST, in consultation with the FirstNet Authority, to ensure the development of a list of certified devices that meet appropriate protocols and standards for access to, use of, or compatibility with the Network. *See* FirstNet list of approved devices, also known as the "NIST List" at: *https://www.nist.gov/ctl/pscr/process-document-nist-list-certified-devices.*

[16] *See* FirstNet Authority, *FirstNet Authority Board Approves Network Investments for 5G, On-Demand Coverage* (June 17, 2020), *https://firstnet.gov/newsroom/press-releases/firstnet-authority-board-approves-network-investments-5g-demand-coverage#:~≦text=The%20Board%20approved%20%24218%20million%20for%20the%20FirstNet,safety%20turned%20to%20the%20FirstNet%20deployables%20for%20additional.*

safety's network. The public safety community fought long and hard for the creation of the Network, and it is up to us to continue to strive to achieve their vision.

Thank you, and I look forward to your questions.

Senator THUNE. Thank you, Mr. Parkinson.

Mr. Porter.

STATEMENT OF JASON PORTER, SENIOR VICE PRESIDENT, AT&T INC.

Mr. PORTER. Thank you, Chairman Thune, Ranking Member Schatz, and Members of the Committee.

I'm Jason Porter, Senior Vice President leading the FirstNet Program at AT&T.

I appreciate the opportunity to update the Subcommittee on the critical role FirstNet is playing to connect first responders during the unprecedented COVID–19 pandemic, the recent hurricanes, and the ongoing wildfires on top of the daily activities of public safety.

I'm proud to report that FirstNet is delivering on Congress's vision of a single dedicated and nationwide public safety network. Providing first responders with the capabilities, coverage, and capacity they need to combat one of the greatest challenges of our time.

Last time we met with this committee, we celebrated five states opting into FirstNet. FirstNet is now available to first responders in all 50 states, the District of Columbia, and five U.S. territories. Usage has grown exponentially with more than 13,000 organizations having subscribed and over 1.5 million connections. With Band 14 deployed in more than 700 markets, we have surpassed 80 percent of our Band 14 nationwide coverage target approximately a year ahead of schedule.

In an emergency or high-traffic environment, this band is cleared and locked just for FirstNet subscribers, something that first responders will not get anywhere else.

The COVID–19 pandemic underscores the need for a nationwide high-speed and interoperable communications platform dedicated to first responders. FirstNet has answered the call.

FirstNet is meeting the dynamic communications needs of first responders, including frontline public health workers conducting telehealth and those at quarantine locations, testing sites, health care facilities, and field hospitals.

Responding to the pandemic earlier this year was like responding to a fire, flood, and tornado in every city at the same time. The FirstNet network is performing as designed, providing reliability, connectivity wherever first responders need it, even with the significant increase in consumer usage.

FirstNet's fleet of deployable assets augmented coverage for medical staff aboard the U.S. Naval Ships *Mercy* in Los Angeles and *Comfort* in New York. We also deployed FirstNet satellite cell tower on wheels to support the COVID–19 response of the Navajo Nation and Confederated Tribes of the Colville Reservation in Keller, Washington.

FirstNet's performance during the pandemic has been exceptional, fulfilling Congress's goal to establish a reliable nationwide

network that first responders can rely on during an unprecedented emergency.

Unfortunately, during the pandemic, we also had to contend with powerful storms and catastrophic wildfires. In response, FirstNet is demonstrating its ability to handle multiple emergencies at once.

I was on the ground in Louisiana helping public safety respond to Hurricane Laura. AT&T pre-staged assets and deployed FirstNet One, an approximately 55-foot blimp which you see behind me, which flew above Cameron Parish, Louisiana, to boost connectivity for first responders. Public safety thanked FirstNet, saying that we were the only ones there and the only network working.

In California and Oregon, we were providing 24/7 support for FirstNet-subscriber agencies, and we were proactively deploying generators and other assets where there is a power outage or a cell tower is down due to fire damage.

Finally, I want to emphasize that reaching rural parts of America is one of our top priorities. Over 1,000 new purpose-built FirstNet sites are currently planned as part of the initial nationwide FirstNet network expansion, most of those in rural areas.

We've launched over 250 of these sites across the country already, including areas, such as Preston County, West Virginia, Zerkel, Minnesota, the Chippewa Reservation in Wisconsin, Bethel, Alaska, Michigan's Upper Peninsula, Roswell, New Mexico, Pennington County, South Dakota, Ashland, Montana, Naselle, Washington, and in Lewisdale, Mississippi.

Together, the FirstNet Authority and AT&T are delivering a public safety network and solutions ecosystem that gives first responders what Congress intended.

As a West Point graduate and former Army officer, I personally view FirstNet as a second opportunity to serve my country by giving back to the public safety and health care workers who are putting their lives on the line for us every day.

I'm extremely proud of our support for public safety and I welcome your questions.

[The prepared statement of Mr. Porter follows:]

PREPARED STATEMENT OF JASON PORTER, SENIOR VICE PRESIDENT, AT&T INC.

Thank you, Chairman Thune, Ranking Member Schatz, and Members of the Committee.

I am Jason Porter, the Senior Vice President leading the FirstNet program at AT&T. I appreciate the opportunity to update the Subcommittee on the critical role the nationwide public safety broadband network ("FirstNet") is playing in connecting first responders across jurisdictions and disciplines to enable a unified emergency response during the unprecedented coronavirus (COVID–19) pandemic. Built in partnership by AT&T and the First Responder Network Authority ("FirstNet Authority"), FirstNet is delivering on Congress's vision of a single, dedicated, nationwide public safety network, providing first responders with the modern capabilities, broad coverage, and robust capacity they need to combat one of the greatest challenges of our time.

FirstNet's COVID–19 Response

The COVID–19 pandemic underscores the need for a nationwide, high-speed communications platform dedicated to first responders—which include health care workers battling the pandemic on the front lines. FirstNet has answered the call.

To begin with, FirstNet is providing critical connectivity to support telehealth services, including remote patient monitoring for at-risk patients in their homes. FirstNet has also met the communications needs and supported the operations of first responders, doctors, nurses and public health workers at quarantine locations,

testing sites, health care facilities and field hospitals. In coordination with the Federal Emergency Management Agency ("FEMA") and state, local and tribal emergency operations centers, we performed nearly 5,000 COVID–19 related operational location assessments, including an evaluation of sites being considered for the staging of COVID–19 field hospitals. The FirstNet network performed as intended, allowing first responders to maintain reliable connectivity even with the massive increase in consumer mobility usage during these unprecedented times.

In those rare cases where additional coverage and capacity was needed, we promptly responded to COVID–19 first responder requests with FirstNet's fleet of dedicated deployable network assets or other innovative connectivity solutions to boost connectivity. These efforts included augmented coverage for medical staff aboard the U.S. Naval Ship Mercy in Los Angeles and the U.S. Naval Ship Comfort in New York. We also deployed two FirstNet SatCOLTs (cell towers on wheels) that supported the Navajo Nation's COVID–19 response, supplementing connectivity for tribal first responders and FEMA, as well as a FirstNet SatCOLT that boosted connectivity for the tribal emergency operations center on the Confederated Tribes of the Colville Reservation in Keller, Washington.

FirstNet also enabled the City of Alexandria, Virginia, a FirstNet subscriber, to use hotspots and smartphones powered by FirstNet to enable 9–1–1 dispatchers to take calls and handle dispatch operations from their homes and remote locations during the pandemic.

FirstNet's performance during the pandemic has been exceptional, fulfilling Congress' goal to establish a nationwide network that first responders can rely on when our Nation is encountering an unprecedented emergency. I am pleased to report that first responders, our customers, have heralded the network as a "game changer," describing FirstNet's "quick action and network performance" as essential to support "hundreds of public safety personnel actively engaged in response efforts" when "commercial network devices were unable to handle the heavy data transmission needed to adequately communicate" during the pandemic.[1] Recognizing these benefits, first responders are subscribing to FirstNet in strong numbers. Since the pandemic began, over 450 public safety agencies have joined or expanded their use of FirstNet's services to support their COVID–19 response efforts.

FirstNet Band 14 Coverage Is Ahead of Schedule

While we are proud of how FirstNet is supporting our first responders in this time of crisis, we are also proud to report that FirstNet's capabilities are rapidly growing and our nationwide Band 14 coverage is ahead of schedule. When we last briefed the Subcommittee, we had just started our Band 14 build. Today, our nationwide Band 14 coverage build is more than eighty percent (80 percent) complete and ahead of schedule, and usage has exponentially grown—with more than 13,000 first responder and supporting organizations having subscribed and over 1.5 million FirstNet connections now in service.

FirstNet is now available to the complete ecosystem of first responders, including physicians and nurses and other frontline healthcare workers, in all 50 states, the District of Columbia, and five U.S. territories. Leveraging public safety's Band 14 spectrum and all AT&T LTE bands, FirstNet currently covers more than 2.61 million square miles. Band 14 is nationwide, high-quality spectrum set aside by Congress specifically for FirstNet. With Band 14 deployed in more than 700 markets, we have surpassed 80 percent of our Band 14 nationwide coverage target—well ahead of schedule. Band 14 is providing a VIP lane for first responders and is at the heart of our success. In an emergency, this band can be cleared and locked just for FirstNet subscribers. That means only those on FirstNet can access Band 14 spectrum, further elevating their connected experience and emergency response. This is unique in the industry and something that first responders will not get anywhere except on the FirstNet network.

FirstNet's Focus on Rural America

FirstNet is for *all* first responders wherever they are located. That is why reaching rural and remote parts of America is one of our top priorities. Over 1,000 new, purpose-built FirstNet sites are currently planned as part of the initial nationwide FirstNet network expansion. Most of these sites are in rural areas. Thus far we have launched over 250 of these sites across the country—including areas such as: Lusk, Wyoming; Tilghman Island, Maryland; Yamhill County, Oregon; Preston County, West Virginia; Zerkel, Minnesota; the Red Cliff Band of Lake Superior Chippewa Reservation in northern Wisconsin; Bethel, Alaska; Michigan's Upper Peninsula; Roswell, New Mexico; Pennington County, South Dakota; Ashland, Mon-

[1] *https://about.att.com/newsroom/2020/fn_covid_19.html*

tana; Naselle Washington along the Long Beach Peninsula; Lucedale, Mississippi (near the De Soto National Forest); and in northwestern Minnesota, serving the White Earth Reservation. These sites were identified by state and public safety stakeholders as priority locations. Our ongoing network expansion has also enabled communities—like Pennington County, South Dakota; Village of Linden, Wisconsin; the Oglala Sioux Tribe; and Mammoth Lakes, California—to modernize their communications and transform their emergency response capabilities.

We are also collaborating with rural network providers across the country to help build out additional LTE coverage and extend FirstNet's reach in rural and tribal communities. For example, one rural provider is adding Band 14 spectrum and AT&T commercial LTE spectrum bands to hundreds of its cellular sites across rural Colorado and Nebraska, as well as select portions of South Dakota and Wyoming. Similar activities by other rural providers are also taking place in Alaska, Arizona, New Mexico, Wyoming and more to help us extend the reach of the first responder network.

FirstNet Background

As you take stock of FirstNet's success, it is important to remember how and why it began. Congress created FirstNet in the wake of the tragedy of 9/11 and based upon a recommendation in the 9/11 Commission Report because first responders frequently lacked the ability to communicate with each other during emergencies. Prior to FirstNet, first responders relied solely on over 10,000 disparate radio networks for push to talk voice communications to do their job and they used the same commercial wireless networks that we all do for calls, texts, mobile applications and data. Those networks quickly become congested during a significant emergency. We have unfortunately witnessed how these communication challenges hamper first responders, such as in responding to the 9/11 attacks and many other emergencies since.

In response, Congress recognized that we can and should do better to support our first responders and their critical mission. In 2012 Congress established the FirstNet Authority to address the critical problem that the tragic events of September 11, 2001 exposed: namely, different agencies of first responders being unable to communicate effectively because their radios operated on multiple, different networks. To solve this problem, Congress authorized the FirstNet Authority to build, maintain, and operate a single, nationwide, interoperable public safety broadband network dedicated to first responders. The resulting FirstNet network, which AT&T has been both privileged and proud to partner with the FirstNet Authority to execute, is operating precisely as Congress intended. The current pandemic, and the cycles of life-and property-threatening hurricanes, storms, tornadoes and wildfires that have roiled America since we last appeared before the Subcommittee remind us how important communication is during such events.

The FirstNet Authority and AT&T offer the only nationwide, high-speed broadband communications platform dedicated to and purpose-built for America's first responders and the extended public safety community. Additionally, FirstNet is unique because the network's buildout and performance is subject to strict contract deliverables and accountability from the FirstNet Authority. Through FirstNet, our Nation's first responders are receiving the unthrottled, connectivity and priority communications they need on a highly secure and dedicated platform. This unparalleled highly secure and dedicated platform distinguishes FirstNet—public safety's network—from commercial wireless networks that are not designed to cut through the potential clutter of commercial mobile traffic and that are not subject to oversight by the FirstNet Authority. And it illustrates precisely why public safety fought so hard for the creation of the FirstNet Authority and the deployment of the FirstNet network.

FirstNet Overview

FirstNet is the only dedicated wireless broadband communications ecosystem built for America's first responders, meeting the needs of firefighters, EMS, law enforcement, 9–1–1 centers, and emergency managers, providing:

- *Security.* FirstNet provides a unique, differentiated, and highly secure network platform, encrypted at its dedicated network core.
- *Priority/Preemption.* FirstNet provides its eligible users with priority and, for primary users, pre-emption. "Priority" means just that—in times of emergencies and network congestion, FirstNet gives first responder communications precedence and, for "primary users," preempts all other communications. And, if an area is hit with an emergency (*e.g.,* hurricane, wildfire), a local commander can provide elevated priority to the FirstNet users supporting the response. For example, in a hurricane, a commander could upgrade the priority level of evacu-

ation vehicle operators prior to the storm, then shift priority to the medical personnel and utility workers after the storm passes through.

- *Interoperable.* FirstNet delivers interoperability across public safety agencies and jurisdictions, meaning that they can communicate with each other using a common, highly secure network platform that avoids the congestion that impacts commercial networks in times of emergency. In New York City, for example, FirstNet equipped hundreds of ambulances, EMS and other first responders with a common, interoperable communications platform and dedicated connectivity to help them coordinate the transport of patients between hospitals and health systems across the state. Coordinating with New York public safety agencies, government officials, and city hospitals, the FirstNet team at AT&T provided a cross-agency solution to marshal hundreds of ambulances that came from outside the region into the city to perform mutual aid.
- *Dedicated Customer Service.* Customized customer service with dedicated 24/7/365 security and helpdesk operations support centers just for FirstNet subscribers.
- *Network Disaster Recovery resources.* AT&T supports FirstNet with its FirstNet Response Operations Group (ROG), which serves as public safety's direct partner to meet their connectivity needs, whenever they need it. This group helps to manage the FirstNet-dedicated portable network assets, such as the mobile cell sites that link to FirstNet via satellite and do not rely on commercial power availability. These assets are available free of charge to FirstNet subscribed agencies and include 72 Satellite Cell on Light trucks (SatCOLTS), three Flying Cells on Wings (Flying COWs) and FirstNet One—an approximately 55-foot blimp, which most recently flew above Cameron Parish, Louisiana to boost connectivity for first responders following the devastation left by Hurricane Laura. FirstNet users are further supported by the hundreds of AT&T commercial deployable assets that are also available to help meet their connectivity needs—when and where they need it. More than 40 sites nationwide house the 72 SatCOLTs dedicated to FirstNet subscribers, enabling a 14-hour delivery window. The assets can be called upon by FirstNet users after a natural disaster has struck and infrastructure has been damaged or when first responders are responding to an emergency incident in a remote location. The deployable program has been a huge success. So far this year, public safety has turned to FirstNet deployable network assets and requested additional support during more than 450 emergencies and planned events—like sporting events, parades and training activities vital to keeping first responders mission-ready. Of these requests, more than 60 requests were related to COVID–19 response operations and more than 50 requests were associated with Hurricane Laura.
- *FirstNet App Ecosystem and FirstNet App Developer Program.* AT&T is bringing 21st Century innovation to first responders. In 2017 we launched the FirstNet App Catalog and Developer Program dedicated to America's first responders. The catalog now identifies more than 125 highly secure applications tested for public safety that can help cost-effectively enhance their situational awareness and other capabilities. For instance, fire fighters have access to applications that allow them to track the progression of a fire and view a map that shows the location of their team members and other assets. This information can help equip the incident commanders with vital information to help them stage and respond to the fire and help keep their crews and equipment safe. The FirstNet Developer Program encourages developers to design applications with solutions built for the unique needs of first responders and provides Application Programming Interfaces (APIs) that in turn can support the sharing of information and integration across different mobile applications. It also provides a platform for the first responder community to educate the developer community about their unique needs and priorities. The program thus provides first responders with a one-stop-shop for reliable, highly secure solutions optimized for the FirstNet network platform. Before any app is made available in the App Catalog, the FirstNet Authority and AT&T jointly review the applications for, at a minimum, security, reliability and privacy, giving first responders added confidence that the mobile application performs in critical situations. By pushing innovation to the application level, we are making these innovations readily available to all public safety users, no matter their location or size.
    - One particularly successful solution developed and found within the FirstNet App Catalog is FirstNet Push-to-Talk (PTT), the first-ever nationwide mission-critical standards-based push-to-talk solution to launch in the U.S. We tested the FirstNet PTT solution with public safety agencies across the coun-

try, including the Cranford Police Department in New Jersey. FirstNet PTT is designed to enable public safety to use their smartphones, feature phones, and specialized ultra-rugged devices like they would use a two-way radio, with highly reliable, high-performance calling. FirstNet PTT will also deliver new features that allow first responders to better react to changing events.

- *Devices.* There are now over 150 FirstNet Ready devices, with Band 14 capability access built in and compatible with the FirstNet SIM card. Devices range from the iOS and Android platforms, ruggedized mobile and in-vehicle devices, and custom designed solutions, such as the built-in "Push-to-Talk" capability on some devices. Critically, the ability for health care professionals and first responders to disinfect the ruggedized, public safety devices has been helpful during the COVID–19 pandemic. When managing patients and working to mitigate the spread of COVID–19, "mobile hygiene" is top of mind to frontline workers. For instance, the FirstNet Ready Sonim XP8 is ideal for ambulances and those at COVID–19 testing sites due to its resistance to chemicals. The XP8 can be fully submerged and can withstand a variety of different cleaning products from simple soap and water to heavy-duty cleansers and disinfectants, such as bleach and isopropyl alcohol. This is simply another example of the FirstNet ecosystem driving innovation for first responders and delivering solutions that are specifically tailored for their unique needs during difficult circumstances, such as the current pandemic. Together, these capabilities will better connect first responders to the critical information they need both in their routine operations and during an emergency, helping them do their jobs more effectively and efficiently.

FirstNet Is Aiding First Responders in Other Emergency Situations

We take the greatest pride in reporting on how FirstNet is meaningfully serving as a partner to America's public safety and aiding first responders during large planned events and in emergency situations. In addition to the COVID–19 and other response examples above, I would like to highlight the following for the Subcommittee:

- *Pacific Northwest Wildfires.* The FirstNet ROG and the AT&T network teams are actively supporting FirstNet subscribed agencies responding to the active wildfires in California, Oregon and Washington. We are doing this by: (1) dynamically monitoring the network and carefully tracking where the fires are located, and communicating with the states emergency teams in order to protect critical communications infrastructure; (2) proactively tracking and deploying generators and other assets where there is a brownout, commercial power outage, or disruption due to fire damage; and (3) FirstNet ROG liaisons are providing 24/7 support to FirstNet subscribed agencies in the states. If a FirstNet subscribed agency has connectivity needs, the agency can reach out to its FirstNet Solutions Consultant or the FirstNet Customer CARE (staffed 24x7x365) to submit a FirstNet deployable request. Thus far, since June 2020, we have managed more than 50 deployable requests in the western United States to support emergency response to the wildfires, having deployed assets and other connectivity solutions to support FirstNet subscribed agencies responding to numerous fires, including the Red Salmon Fire in Willow Creek, California, the El Dorado Fire in Yucaipa, California, the Holiday Farm Fire in Blue River Oregon, the fires in Gates, Oregon, and the Cold Spring Canyon Fire in Bridgeport, Washington.
- *Hurricanes Laura and Sally.* In late August 2020, the FirstNet ROG—led by a team of former first responders—guided the deployment of the dedicated FirstNet fleet based on the needs of public safety in anticipation of Hurricane Laura, the strongest Hurricane to come ashore in Louisiana in two centuries. The team activated FirstNet liaisons to support the affected states' Emergency Operations Centers. The FirstNet ROG also deployed alongside FEMA's Urban Search and Rescue management team to provide real-time assessment and triage capabilities in support of the teams on the ground in the hardest hit areas. In addition, AT&T pre-staged assets to support Hurricane Laura response efforts. For Hurricane Sally, the FirstNet ROG staffed Emergency Response Centers and managed deployable requests in Florida, Louisiana and Alabama, including sending assets to Pensacola, Florida, Sulphur, Louisiana, and Robertsdale, Alabama.
- *Tennessee Tornados.* During the devastating early March tornados in Tennessee, Putnam County's Emergency Operations Center turned to FirstNet to provide critical communications. Within hours, FirstNet deployed dedicated portable network assets, including SatCOLTs to Putnam County, reinforcing

communications and allowing first responders to more efficiently and effectively coordinate their efforts. The land mobile radio (LMR) network tower—which is public safety's traditional two-way radio system—serving Cookeville and the surrounding area was damaged by the storm. In the storm's immediate aftermath and the days that followed, FirstNet served as the primary line of communications for first responders supporting search and rescue and recovery efforts

- *Hurricane Dorian.* Last year, in 2019, when Hurricane Dorian threatened the east coast, the FirstNet Response Operations Group jumped into action, pre-staging deployable assets and coordinating across dozens of public safety agencies and organizations to provide them with the communications needed before, during and after the storm. FirstNet liaisons provided 24/7 staffing to support Emergency Operations Centers in the affected states, and we were on-site supporting the FEMA National Response Coordination Center. From planning and pre-storm prep to post-storm support, the team was working beside public safety every step of the way.
- *2020 Super Bowl.* We worked with public safety more than a year ahead of the Super Bowl in 2019 and again in 2020 to make public safety-specific preparations, ensuring the FirstNet communications platform was ready. As fans continue breaking data usage records at these major events, first responders using FirstNet do not have to compete with spectators uploading photos and videos from the game.
- *Tribal Search and Rescue.* In the fall of 2018, the Yankton Sioux Tribe Police Department conducted a search and rescue mission for a missing person in a remote area in southeastern South Dakota. The department requested a FirstNet deployable network asset to boost connectivity. Within hours of the request, a FirstNet SatCOLT was in place to help the tribal first responders carry out their operation.
- *Hurricane Florence.* During Hurricane Florence, in 2018, the FirstNet Response Operations Group was ready to support first responders. We deployed a SatCOLT to the staging area in Whiteville, North Carolina to aid emergency response efforts. According to the Director of Emergency Services for Whiteville, they lost their land-based mobile systems in the storm, but when everything was down, FirstNet was working.
- *Hurricane Michael.* Prior to Hurricane Michael, in 2018, we pre-staged network assets along the Gulf Coast for quick deployment, including 32 Cells on Wheels (COWs) and SatCOLTs; 7 Emergency Communications Vehicles and Emergency Communications Portables; and one Hazmat and Mobile Command Center. We received 30 FirstNet deployable requests from FirstNet subscribed public safety agencies. The FirstNet ROG sent assets to the hardest-hit areas to support national guardsmen, airmen, state patrol, trauma care, police, fire and rescue teams from as far away as Oregon. A Flying COW hovered at 200 feet above the ground over Mexico Beach, Florida and provided service to customers and first responders in the surrounding area. Working with then-Florida Governor Rick Scott, we identified public safety agencies that were without commercial service and activated hundreds of FirstNet enabled devices to help these first responders carry out their mission.
- *California Camp Wildfire.* AT&T worked closely with the California Emergency Operations Center regarding the quick moving fires to address the needs of the state and first responders working to contain the Camp Wildfire, then the most destructive and devastating fire in California history. Between FirstNet-requested assets and assets deployed by the AT&T Network Disaster Recovery team, 11 portable cell sites and additional network recovery equipment were deployed throughout the state to support public safety communications and to bring connectivity to affected communities in Northern and Southern California. This included SatCOLTs deployed at locations in Paradise and Oroville, California.

Conclusion

While we are proud of what we've accomplished in a short time, I am even more excited about what the future will bring, as we continue to meet Congress' goal (and our commitment) to give our first responders the advanced communications capabilities that they need to stay connected and help them operate faster, safer and more effectively when lives are on the line. As the leader of the AT&T team supporting FirstNet, I can assure you that AT&T views FirstNet as much more than a business proposition, it is a core mission. We are honored to be the private partner working together with the FirstNet Authority to make the vision of Congress and the public safety community a reality. Together, the FirstNet Authority and AT&T are deliv-

ering a public safety network and solutions ecosystem that gives first responders what Congress intended: the advanced technology they need to communicate and collaborate nationwide across agencies and jurisdictions during routine operations and emergencies. Supporting first responders is part of our company's DNA. From installing the first telephone at the Chicago Police Department in the late 1800s, to delivering on FirstNet today, we have been the partner to America's first responders for over 140 years. As a former Army officer, I personally view FirstNet as a second opportunity to serve my nation by giving back to the public safety and health care workers who are putting their lives on the line for us every day. I look forward to continuing this important dialogue as FirstNet moves forward. I welcome your questions.

Senator THUNE. Thank you, Mr. Porter, and thank you for your service to our country.

Mr. PORTER. Yes, sir.

Senator THUNE. Next up is Captain Tony Harrison of the Sheriff's Office of Pennington County, South Dakota, someone I've known and been acquainted with for a long time, and I know they are very involved in the work of FirstNet and I'd love to hear what Captain Harrison has to say.

So, Tony, if you're out there virtually, please proceed.

STAEMENT OF CAPTAIN TONY HARRISON, SHERIFF'S OFFICE, PENNINGTON COUNTY, SOUTH DAKOTA

Captain HARRISON. Yes, sir. Ranking Member Schatz, Members of the Senate Subcommittee on Communications, Technology Innovation, and the Internet, and to my own Senior Senator from the great state of South Dakota, Chairman John Thune, it's an honor to be speaking with you this morning.

I am Captain Tony Harrison of the Pennington County Sheriff's Office in the State of South Dakota.

Pennington County is the home of the beautiful Black Hills with many lakes, hiking trails, Badlands National Park, Ellsworth Air Force Base, and, of course, Mount Rushmore.

I have served the great citizens of Rapid City and Pennington County for over 24 years while I worked as a patrol officer. I spent 8 years in the Narcotics Unit as an investigator, undercover operatives, and supervisor. I moved through the ranks and I currently hold the position of captain in our Criminal Investigation Division where I oversee every major crime and death investigation that happens in Pennington County.

I command the largest SWAT team in the state of South Dakota, a team that can travel anywhere in the state when requested to help other agencies with having to typically deal with someone who's in a major state of crisis.

I tell you all this just to make you comfortable with my experience over the years and my aspects of law enforcement which is why I'm here today to talk to you about this important issue.

Pennington County is about 130 miles wide and nearly 60 miles tall, roughly 2,800 square miles, over twice the size of the state of Rhode Island. We serve close to 150,000 residents every single day and in the summer months, nearly three million people come to see the great faces and great places of South Dakota.

Throw in a little motorcycle rally about 20 miles down the road in Sturgis and an occasionally blizzard, nothing beats the snow,

hopefully not at the same time, and you can bet our services are tested daily as we keep the citizens of our county safe.

I'm here today on behalf of Sheriff Kevin Thom to talk about the FirstNet Program as it relates to providing services across the country and for our state's first responders.

In South Dakota, over 50 percent of the sheriff's offices, the state of South Dakota itself, and seven of the top 10 largest cities as well as half the tribal agencies use FirstNet as their service provider in some capacity.

Our agency decided to switch to FirstNet about 18 months ago after the promise of having better coverage. After speaking with Lisa Home, Pam Bryan, and Doug Pennington, and other representatives, they also committed to a future build plan which will provide much more reliable service in the future.

By the way, Senator Thune, Pam Bryan said she went to school with you and wanted to tell you hello.

Pennington County is very unique. Our east side has the rolling plains, the Badlands, farm and ranch land. It's fairly flat and sparsely populated and cell signal can quickly be lost out there.

The lowest elevation of Pennington County is about 2,100 feet above sea level near the Badlands. The highest spot in Pennington County is over 7,200 feet near Black Elk Peak. Mount Rushmore sits at 5,700 feet.

You can see the vast difference from one side of our county to the other. When you get into the Black Hills, oftentimes radio and phone coverage can be very difficult. One of our greatest concerns is as we ensure the safety of everyone in Pennington County is the ability to communicate. In any critical event, the first thing that goes typically is communication. Losing the ability to communicate can be devastating and lead to failed missions whether the mission is something as simple as rescuing someone who's fallen and gotten hurt in the Black Hills or an active threat in a school.

FirstNet has provided the tools we need to get the communication and it should only get better.

We've spend a lot of time looking for lost and missing people in Pennington recently, including a young girl named Serenity, who we'd been searching for since February 2019. In her search, we have logged thousands and thousands of man hours, walked over 6,000 miles and had over two dozen different search dogs as we have paced back and forth across the most rugged terrain of the Black Hills. Many times, those areas have been very rugged with no cell reception.

We called FirstNet and they immediately deployed one of their "cell on wheels," a COW, and those were able to help us communicate better.

As recently as July 3 of this year, President Trump came to our great state to watch the fireworks at Mount Rushmore. Obviously this is a major undertaking, having not just fireworks at Mount Rushmore but also a Presidential visit on top of it.

We knew the cellular networks would be stressed. On the day prior as I was preparing the mobile command posts, we quickly realized our current cell signal was not going to be strong enough to pipe all the information through it that we needed.

I made one call to our FirstNet representative and within hours, he had set up a dedicated band for our command posts which was

able to efficiently manage the entire day's events. FirstNet was truly a lifesaver for the agency on that day.

Is FirstNet the perfect solution? It is not. There's not a perfect solution out there and we know that. In the beginning, we had billing complications but working with FirstNet and especially Pam, we were able to work through those issues in a short period of time and I note today our billing staff is much happier.

Thank you. This is a testament to FirstNet's commitment to our customers.

We're holding FirstNet accountable for the expanded tower networks in the Black Hills. We got onboard with FirstNet because we saw the vision and we trust that they're going to fulfill the promises of coverage in Pennington County and South Dakota. They have completed two towers that already have 5G coverage nearby in Selder and Wall, South Dakota, and two towers are currently being worked on right now in the Hill City area.

This has added some logistical work because it's happening on Forest Service land. So if I have one ask for this committee, it is this. Please help our citizens by helping FirstNet get through any of the issues that come with working and trying to build on Federal land. It will be greatly appreciated from our end.

I've been told it will be done by the end of 2022 and we're anxious to have the builds done as soon so they can, so we have better coverage in the Black Hills.

In closing, I'm happy to report FirstNet has been very good for Pennington County Sheriff's Office and the citizens of our county. We're excited to see the next step in coverage and trust it will be completed in the very near future.

Thank you for having me today, and I'll stand for any questions.

[The prepared statement of Captain Harrison follows:]

PREPARED STATEMENT OF TONY HARRISON, CAPTAIN, PENNINGTON COUNTY SHERIFF'S OFFICE, RAPID CITY, SOUTH DAKOTA

Ranking Member Schatz, Members of the U.S. Senate Subcommittee on Communications, Technology, Innovation, and the Internet and to my own Senior Senator from the Great State of South Dakota, Chairman John Thune, it is an honor to be speaking with you this morning. I am Captain Tony Harrison, from the Pennington County Sheriff's Office in the State of South Dakota. Pennington County is home of the beautiful Black Hills. We are the home of many lakes, hiking trails, Badlands National Park, Ellsworth Air Force Base, and of course, Mt. Rushmore.

I have served the great citizens of Rapid City and Pennington County for 24 years. I have worked on the street as a patrol officer, spent 8 years in the narcotics unit as an investigator, undercover operative and supervisor. I have moved through the ranks and currently hold the position of Captain in our Criminal Investigations Division where I oversee every major crime and death investigation that occurs in Pennington County. I command the largest SWAT team in South Dakota, a team that can travel anywhere in the state when requested to help assist other agencies who are typically dealing with someone in a state of crisis. I tell you this hoping to make you comfortable with my vast experience in all aspects of Law Enforcement, which is why I am here today to talk about this important issue.

Pennington County is about 130 miles wide and nearly 60 miles tall, roughly 2800 square miles, over twice the size of the state of Rhode Island. We serve close to 115,000 residents day in and day out and in the summer months, nearly 3 million guests come to see the GREAT FACES AND GREAT PLACES of South Dakota. Throw in a little motorcycle rally called Sturgis just 20 miles down the road that draws nearly ½ million people and an occasional blizzard dumping several feet of snow (hopefully not at the same time!) and you can bet, our services are tested daily as we work to keep the citizens of our county safe.

I am here today on behalf of Sheriff Kevin Thom to talk about the FirstNet program as it relates to providing service across the country and our state for first responders. Over 50 percent of the Sheriff Offices in SD, the State of SD itself, 7 of the top 10 largest cities and half of the tribal agencies use FirstNet as their service provider in some capacity.

Our agency decided to switch to FirstNet almost 18 months ago because of the promise of having better coverage. After speaking with Lisa Hohn, Pam Bryan and Doug Penniston, and other representatives, they also committed to future build plans that will provide much more reliable coverage in the future. By the way Senator Thune, Pam went to school with you and she says HI.

Pennington County is very unique. Out east, we have rolling plains, the Badlands and farm and ranch land. It is fairly flat, but as sparsely populated as the east end of our county is, cell signal can quickly get very spotty. The lowest elevation in Pennington County is about 2100 feet above sea level, near the Badlands. The highest spot in Pennington County is over 7200 feet, near Black Elk Peak. Mt. Rushmore sits at about 5700 feet.

You can see the vast difference from one side of our county to the other. When you get in to the Black Hills, radio and phone coverage can get very difficult. One of greatest concerns as we help to ensure the safety of everyone in Pennington County is the ability to communicate. In any critical event, the first thing to go is typically communication. Losing the ability to communicate is devastating and can lead to failed missions, whether the mission is as simple as rescuing someone who has fallen and gotten hurt in the Black Hills or an active threat in a school. FirstNet has provided the tools we need to have great communication and it should only get better.

We have spent a lot of time looking for lost and missing people in Pennington County recently, including searching for a young girl named Serenity who we have been searching for since February 2019. In her search, we have logged thousands and thousands of man-hours, over 6000 miles of walking and over 2 dozen different search dogs as we have paced back and forth across the most rugged terrain of the Black Hills. Many times we have been in areas with no cell reception. We called FirstNet and they immediately provided their "Cell on Wheels", or COWs, which gave us the ability to communicate.

As recently as July 3rd of this year, President Trump came to our great state to watch the fireworks at Mt. Rushmore. Obviously, this was a major undertaking, having not just the fireworks event at Mt. Rushmore, but also a Presidential visit on top of that. We knew cellular networks would be stressed. On the day prior, as I was preparing our mobile command post, we quickly realized our current cell signal was not going to be strong enough for all the information we needed to pipe through it. I made one call to our FirstNet representative, and within hours, he set up a dedicated band that only our command post had access to, which allowed us to manage the day's events efficiently. FirstNet was truly a lifesaver for our agency.

Is the FirstNet solution the perfect solution? It is not. But there is not a perfect platform either. In the beginning, we had billing complications, but working with FirstNet and especially Pam, we were able to work through the issues within a short period of time. I know our billing staff is much happier! This is a testament to FirstNet's commitment to their customers.

We are holding FirstNet accountable for the expanded tower network in the Black Hills. We have got onboard with FirstNet because we saw their vision and we trust they are going to fulfill their promises of coverage across Pennington County and South Dakota. They have completed two towers and we have 5G coverage near Box Elder and near Wall SD due to those builds. The two towers we are most interested in right now are planned to be built on forest service land, both near Hill City, SD. That has added some logistical work due to them being on Federal land and if I have one ask, it is this: *Please help our citizens by helping FirstNet get through any of the issues that come with working and trying to build on Federal land.* I know we would greatly appreciate the help from your end. I've been told they will be done by the end of 2022 but we are anxious to have these built sooner because they will greatly improve our coverage in the southern Black Hills.

In closing, I am happy to report, FirstNet has been good for the Pennington County Sheriff's Office and the safety of our citizens. We are excited to see the next step in coverage and trust it will be completed in the very near future.

Thank you for having me today and I'll certainly stand for any questions.

Senator THUNE. Great. Thank you, Captain Harrison.

I will now move to Ms. Holmes and also joining us virtually. So please proceed.

STATEMENT OF KARIMA HOLMES, DIRECTOR, UNIFIED COMMUNICATIONS

Ms. HOLMES. Thank you.

Good morning, Chairman Wicker, Subcommittee Chair Thune, Ranking Member Senator Schatz, Senator Cantwell, other Distinguished Committee Members, staff, guests, and the viewing public.

My name is Karima Holmes. I serve under the leadership of Mayor Muriel Bowser as the Director of Washington, D.C.'s Office of Unified Communications, which is the 9–1–1 and 3–1–1 Emergency Communications Center, ECC.

I am proud to sit before you today representing over 6,500 ECCs across this Nation.

I deeply appreciate this opportunity to highlight the vital role the 9–1–1 centers play in creating a comprehensive and truly seamless first responder network.

Before I continue, I would also like to state for the record that I was appointed to the FirstNet Authority Board in October 2019. However, my testimony today will only reflect my perspective as D.C.'s 9–1–1 Director and will be based on the expertise I honed during my decades-long career at the helm of ECCs in the states of Georgia, Texas, and the Nation's Capital, as well as my stints at the industry engagement with 9–1–1 advocacy groups.

The OUC operates and maintains 10 radio sites, over 8,000 radios for public safety and city services, along with the regional cache of close to 1,000 radios which are deployed for events, like inaugurations, protests, and major weather systems.

We're also responsible for the District's Respondent Mobile Data Computing Units and other handheld devices.

All told, my agency processes over three million 9–1–1 and 3–1–1 calls for service and 12 million push-to-talk radio transmissions annually.

More recently, we completely overhauled our technical infrastructure, software platforms, and critical programs. These enhancements are coupled with the FirstNet platform and FirstNet power devices.

In fact, as the Nation grappled with the far-reaching demands brought on by COVID–19 pandemic, my resolute and sharp mayor, Mayor Bowser, commissioned me to leverage the full extent of our capabilities to enact methods that would safeguard my staff while maintaining the District's public safety lifeline without interruption.

Immediately, I spread my staff out between our three worksites and transitioned some of my teams to operate remotely. My five devices powered by FirstNet have enabled my entire administrative staff. The majority of my 3–1–1 agents and my nine emergency 9–1–1 call-taking operations to telework using a secure, reliable connection from their homes.

Having a dedicated network, knowing that the critical information that we are processing related to literally hundreds of incidents per hour from the caller to the call-taker to responding units in the most secure manner possible is not negotiable.

Due primarily to its proximity and responsibility for providing public safety communications services for the seat of our govern-

ment, the OUC operates with a unique advantage over most ECCs in terms of resources and support.

I will be remiss not to recognize this privilege and use this opportunity to advocate for resources that will help every ECC in this country implement the same life-saving technologies.

As 9–1–1 centers handle higher call volume for increasingly extreme and dire circumstances, publicly available communications technologies have substantially outpaced the legacy communications technologies still used by most 9–1–1 systems across this country.

Because most 9–1–1 systems were originally built using analog rather than digital technologies, ECCs need to be upgraded to a digital or IP-based 9–1–1 system. This is commonly referred to as Next Gen 9–1–1. It will allow videos, texts, and photos and other data to flow seamlessly from the public to the 9–1–1 network to partnering agencies and our field responders.

Richer and potentially real-time information shared with first responders from ECCs Next Gen systems to FirstNet will be a critical improvement that can ensure they are better informed and operate more safely in big cities, small ones, and rural communities.

In sum, FirstNet and Next Gen 9–1–1 are complementary initiatives. When coordinated, we can greatly improve the provision of public safety communications between the public, 9–1–1, and our first responders.

Thank you for your consideration of my testimony today regarding FirstNet and the 9–1–1 industry. I look forward to answering any of the questions you may have.

[The prepared statement of Ms. Holmes follows:]

PREPARED STATEMENT OF KARIMA HOLMES, DIRECTOR,
OFFICE OF UNIFIED COMMUNICATIONS

Good morning Chairman Wicker, Subcommittee Chair Thune, Ranking Member Senator Schatz, Senator Cantwell, other distinguished subcommittee members, staff, guests and viewing public. My name is Karima Holmes and I am the Director of Washington, DC's Office of Unified Communications (OUC), which is the city's Emergency Communications Center (ECC) or consolidated 9–1–1/3–1–1 center. I am proud to sit before you today representing one of the over 6,500 ECCs across the Nation. I deeply appreciate this opportunity to highlight the vital role that the 9–1–1 center plays in creating a comprehensive and truly seamless first responder network. Today's ECCs are public safety communications nerve centers that have evolved extensively beyond early iterations and have become dynamic and highly technical operations capable of quickly processing an immense volume of datapoints to ensure both first responder safety and the most efficient and appropriate response to emergencies. In a very real sense, 9–1–1 call takers and dispatchers are the first-first responders. It is with profound respect for my colleagues in this profession that I offer my testimony today.

Before I continue, I would also like to state for the record that I was appointed to the FirstNet Authority Board in October 2019. However, my testimony today will only reflect my perspective as the District of Columbia's 9–1–1 Director and will be based on the expertise I honed during my decades-long career at the helm of ECCs in the states of Georgia, Texas, and the Nation's capital, as well as through my extensive industry engagement with 9–1–1 advocacy groups such as the Association of Public-Safety Communications Officials, the National Association of State 911 Administrators and the National Emergency Number Association.

The essential mission of the District's 9–1–1 center, the Office of Unified Communications, is to provide accurate, professional and expedited emergency and non-emergency call management for the District of Columbia while maintaining radio interoperability between 27 local, regional and Federal first responder agencies and other partners in the District and across the National Capital Region (NCR).

The OUC operates and maintains 10 radio tower sites, over 8,000 radios for the city's police, fire and emergency medical services personnel, along with a regional cache of close to 1,000 radios which are deployed for planned events like Inauguration and unplanned occurrences such as protests or major weather systems, as well as thousands of first responder mobile data computing units, and other handheld devices. All told, the District's ECC processes over 3 million 9–1–1 and 3–1–1 calls and 12 million push to-talk radio transmissions annually. Understanding the critical importance of maintaining secure and reliable connectivity for this vast operation, the District of Columbia began testing broadband-type solutions for public safety over ten years ago. And when FirstNet launched, my ECC was quick to subscribe.

More recently, we completely overhauled our technical infrastructure, software platforms and critical programs by completing a telephony system upgrade, introducing Text-to-911 and executing criteria based dispatching protocols among other improvements. These enhancements, coupled with the FirstNet platform and FirstNet powered devices deployed and maintained by my agency, the District has been better able to provide informed responses to incidents through FirstNet's reliable, integrated communications network.

In fact, as the Nation grappled with the far-reaching demands brought on by the COVID-19 pandemic, Washington DC Mayor Muriel Bowser commissioned me to leverage the full extent our capabilities to enact methods that would safeguard my staff while maintaining the District's public safety lifeline without interruption. Immediately, I spread my staff out between our worksites and transitioned some of my teams to operate remotely. MiFi devices powered by FirstNet have enabled my entire administrative staff, my 3–1–1 agents and my non-emergency 9-1–1 call taking operation to telework using a secure, reliable connection, from their homes.

Having a secure network—knowing that the critical information that we are processing related to literally hundreds of incidents per hour—from the caller, to the call taker, to police and fire and emergency medical responders in the field in the most secure manner possible—is not negotiable. These are high stakes circumstances and FirstNet has made this a reality for my ECC, without condition. The District and its stakeholders have benefited greatly from the bold innovation of the FirstNet Authority.

Due primarily to its physical proximity to and responsibility for providing public safety communications services for the seat of government, the District of Columbia's ECC operates with a unique advantage over most other ECCs in terms of resources and support. I would be remiss not to recognize this privilege and use this opportunity to advocate for resources that will help every ECC in this country implement the same lifesaving technologies.

With that said, I would also like to mention that this is a pivotal time for all ECCs across the US. As 9–1–1 centers handle higher call volume for increasingly extreme and dire circumstances, the public safety communications industry has been collectively engaged in determining how all 9–1–1 centers can best execute their missions to serve as the vital link between the public and first responders. As you may know, publicly available communications technologies have substantially outpaced the legacy communications technologies still used by most 9–1–1 systems across the country.

Because most 9–1–1 systems were originally built using analog rather than digital technologies, ECCs need to be upgraded to a digital or Internet Protocol (IP)-based 9–1–1 system, commonly referred to as Next Generation 9–1–1 (NG911) to allow photos, videos and text messages to flow seamlessly from the public to the 9–1–1 network.

While the technology to implement these new IP-based 9–1–1 systems is available now, the collective transition to NG911 in states and counties nationwide will require the support, coordination and dedicated resources from legislative and governing entities, in keeping with the Next Generation 9–1–1 Act of 2019.

It is clear within the 9–1–1 industry that this more robust, mobile-and digitally adapted system will revolutionize how the public can communicate in emergencies thereby creating a greater degree of public safety across the Nation. Richer and potentially real-time information shared with first responders through the FirstNet network would be a critical improvement that can ensure that they are better informed and operate more safely, in big cities and in rural communities. In sum, FirstNet and NG911 are complementary initiatives, and if coordinated, can greatly improve the provision of public safety communications between the public, 9–1–1 and first responders.

Thank you for your consideration of my testimony regarding FirstNet and the 9–1–1 industry. I look forward to answering any questions that you may have at this time.

Senator THUNE. Thank you, Ms. Holmes.

We'll get right into questions and I'll start. As I mentioned in my home state of South Dakota, we have several public safety entities on the FirstNet network, as you heard Captain Harrison reference.

However, there are also many agencies that are supported by other communications providers which is why ensuring the interoperability between public safety agencies was a fundamental objective in establishing FirstNet.

So the question is, and I'll direct this to you, Mr. Parkinson, what steps has FirstNet taken or does it plan to take to ensure that its users can communicate effectively with public safety agencies that use networks other than FirstNet, the FirstNet/AT&T network?

Mr. PARKINSON. Thank you, Senator.

The key around this is the vision that Congress established back in 2012 when the legislation was passed and what we found in the legislation is that Congress was looking to deploy a nationwide interoperable network and the biggest risk we saw at the time was that you would have states that chose not to adopt the FirstNet platform. They would choose to opt out, use a different technology, and that would have to interconnect with the NPSBN, the National Public Safety Broadband Network, FirstNet.

Luckily, as a result of the work in coordinating our efforts with the states and working together with public safety, every single state and territory and the District of Columbia chose to opt into the network and as a result, we now have a single nationwide interoperable network.

In terms of other carriers and other users from different systems, really anything that we have internally at FirstNet is prioritized based on local control. That means that that agency, that local incident commander has the power and, frankly, the control to choose how to operate the system. That's for all incoming calls, data, any uses whatsoever.

There's nothing that a user has to do and there's nothing that a user has to allow for prioritization or preemption to occur. It's just inherent in the system and that is unique to FirstNet.

It's all on the agency. They set these needs based on their requirements and as far as connectivity to other non-FirstNet users is concerned, all FirstNet users can call, text, send data packages, similar to if you were on one system on your commercial device and I was on a different one, we could do the same thing. We could communicate with one another. That is what happens at FirstNet and it's all because we've based this network on global standards. That was a requirement in the statute and that's something that we've followed to the T.

So the data package comes in from one carrier, from a different user. It just works on FirstNet. We don't care where it comes from. It just works and it has priority preemption on the FirstNet system.

So when one considers the congressional plan and the vision regarding opt-in and opt-out, we have interoperability through that and from the technology perspective, we have full interoperability.

Senator THUNE. So how is FirstNet ensuring that all public safety agencies, regardless of the network there that they use, can fully utilize the applications that are important to their mission?

Mr. PARKINSON. It's such an important part. When we were developing the RFP, we set out to set up 16 core objectives, one of which was the development of an application ecosystem. We set up an app developer's program which would allow for folks who were interested in deploying and creating apps specific for public safety to submit those into our app catalog so that public safety users who were on the FirstNet system could then download those applications that are much more secure than we've seen elsewhere and they can leverage them day-in and day-out.

So currently we have just north of a 130 applications on the FirstNet ecosystem and that's growing. That's continuing. We've seen that growing with many years to come and to be a FirstNet user, you get access to those and that's unique. Again, having that app catalog, that is unique and from any other carrier you see across the nation, and it's something that we're very, very proud of.

Senator THUNE. Thank you.

Mr. Harrison, in your testimony, you talked about the coverage of the FirstNet network in the Black Hills which contains a lot of Federal land, and in addition to burdens of deploying infrastructure in those areas because of the terrain, there are also greater regulatory burdens that carriers face when building out networks on Federal lands.

So I'm wondering maybe if you could talk about the importance of having reliable coverage in these areas and the benefits of streamlining the build-out in that region.

Captain HARRISON. Yes, sir, Senator. I thank you for the question.

Coverage is critical. We go in the Black Hills, like I was saying awhile ago. It's so vast, but there are places you lose complete total cell reception. Even radio reception, we can lose, and so when we talk about the build-out, you know, since two of the towers that we're really looking at building right now, the ones in the Hill City area near Deerfield and near Tree Fort, are on Federal land, there is a little extra red tape to go through and so that's one of the lowdowns because the building the tower, the physical structure, is not the hard part. The hard part is all the fiscal stuff and getting land and property and all that stuff handled before.

So I would say for us time is the enemy, because the more times we have to have meetings or have to have another hearing on something that we can build on that just delays the back end of what we're looking for.

An example I can give you is just a couple days ago, we were working a homicide Investigation in one of our area lakes and there was no ability for me to communicate with the sergeants that were on scene dealing with that, the scene, because there's no cell coverage and it's just with the lay of the land.

But I will tell you that position of those officers and the detectives were standing in 2 days ago was less than five miles from the build site that's being planned. So the delay in getting that built hurt us yesterday and I'm hoping that won't hurt us tomorrow. We

can get that build done as soon as possible so the citizens of our county can have the service they need.

Senator THUNE. Thanks. Thank you, Mr. Harrison.

Mr. Porter, during the COVID–19 pandemic, there has been an unprecedented amount of traffic on our communications networks and I believe we should continue to encourage more investment by the private sector in our communications infrastructure and when building out the FirstNet network.

Let me ask what regulatory hurdles have you faced and what steps can Congress take to facilitate the deployment of reliable broadband networks?

Mr. PORTER. Thanks, Senator. So the pandemic, as you point out, has shown the importance of broadband and particularly why FirstNet was founded and its importance to public safety.

It's also reinforced the need for rural coverage and capabilities which is a foundational element of FirstNet and so, first, I want to thank this committee and, Senator, you, for your efforts to expand broadband coverage, particularly with the Streamline Act.

Our biggest challenge, as the Captain pointed out, is access. The time it takes to gain access, it's a challenge at the local, the state, and the Federal level, and, in particular, Federal lands are a challenge to build. They can take years to get access and rights to be able to go dig the trench or build the tower and so it's that time of approval that is the biggest challenge for us in continuing to deploy and cover Rural America.

I appreciate this committee's efforts to streamline access and approval procedures to help improve rural broadband.

Senator THUNE. Thank you. And as Captain Harrison pointed out in a very real-world way that those delays and the bureaucracy and red tape associated with getting all that necessary approval just really does delay the implementation of these in critical areas of the places around the country where we really need it.

I'll turn now to Senator Schatz for his questions.

Senator SCHATZ. Thank you, Mr. Chairman. Thank you for great testimony.

The first question I have for Mr. Parkinson, and I apologize if you mentioned this, but what's the time-frame for the full buildout?

Mr. PARKINSON. So we signed a contract with AT&T back in 2017, in March, and as part of the contract, we have a 25-year contract with AT&T, and there's an initial five-year deployment through multiple phases that ends in March 2023, and so the state plans that the State of Hawaii, the State of South Dakota, and all 50 states and territories and D.C. adopted, that was related to that initial five-year deployment which is due to end in March 2023.

Of course, there are an additional 20 years for us to make strategic investments in areas, such as coverage and expanding the network, but as I said, initial deployment March 2023.

Senator SCHATZ. So that's my question. I get that the sort of contract period is 5 years, but in my mind's eye, if I'm imagining what the Sheriff is talking about, which is pretty much total connectivity with some very minor exceptions, when do you think it's realistic to hit that goal?

Mr. PARKINSON. I think, sir, the key here is the operability and the access to information, the access to data. I think the stories that you see coming from public safety across the Nation do show a dramatic increase in the abilities and the capabilities from a broadband perspective that FirstNet has been able to provide teams.

We know that this is a situation that we have to continually upgrade the network on. We have to expand coverage. We have to bring new technologies to public safety so that they can do their jobs better and more efficiently and to try and keep us safer. So——

Senator SCHATZ. OK. So not so binary as connected versus not connected because part of this is going to be you sort of have gradations of connectivity and you do work-arounds and all the rest of it.

Ms. Holmes, thank you for your service in Washington, D.C. Thank you for trying your very best to keep us safe.

I want to talk to you about Next Gen 9–1–1 and its potential, but I also wonder how worried we should be about the ability to sort of hijack the process and flood the system to the point where people can't sort out what is sort of malfeasance in the cyber space.

Ms. HOLMES. Thank you, Senator. So I think that we all lose sleep, I've lost sleep on cybersecurity and how that looks in the 9–1–1 space. I think what Next Gen 9–1–1, what you have is a graduated space that we are attempting to do across the country with close to 7,000 pace acts but we're all doing it differently.

And so the goal with the unified national Next Gen 9–1–1 is to basically put us all on the same path with the same standards and headed toward the same goal.

Basically right now, the public has IP networks, right? You can order a pizza from Dominos. They know where you are before you even know where you are.

FirstNet has come to fruition and basically done what it promised to do and it's allowing our first responders to stay connected. It's allowing the 9–1–1 center to stay connected to the first responders, but we do have a piece in there that is not being coordinated in the way we want and that piece is from the caller to the responder which is where I come in and that's what Next Gen 9–1–1 is.

Part of the planning with Next Gen 9–1–1 is not only just the 9–1–1 call, text, data, you're talking about transferring calls to other pace acts. I get about 55,000 calls in the District that belong to one of my border states because they're coming in to my 9–1–1 center. We have to transfer it out.

Unfortunately, right now with our technology, we're only transferring out the voice. I can't transfer the address. I can't transfer anything else and so with Next Gen 9–1–1 you would get that, but there has been much planning across the states, regions. We have a regional approach here in D.C. that does address things like cyber-security. How do we transfer these calls? How do we train?

I think one of the key things that you brought up was the influx of data and what type of information we get, not only if there are any type of egregious acts, but how do we mine that data and give

it out to our responders, and so Next Gen 9–1–1 encompasses all of that.

It's much more than the technology. It's about the training our people and so basically what I said in my testimony is that, you know, we have to have some type of national cohesive process going forward with it, and it's not that no one knows that we need to do it. Everyone is in agreement across the industry that we need to do it. It's just that the resources and the coordination is not there.

Senator SCHATZ. And just a final point of clarification.

When we in Congress think about funding Next Gen 9–1–1, that's going to be hardware, software training?

Ms. HOLMES. Yes. So 911.gov, which is out of the Highway and Transportation Agency, I believe, they did a cost study a couple years ago and that cost study shows what it will cost for the entire infrastructure for 9–1–1 in the Nation to progress to Next Gen 9–1–1. That includes everything.

We're talking about the plug in the wall, the training, the governance, the MOUs, all of that process, software, and everything, so yes. It would be from literally end to end.

Senator SCHATZ. Thanks very much.

Senator THUNE. Thank you, Senator Schatz.

When Ms. Holmes was talking about the 55,000 calls she gets from border states, that's a lot of calls coming in from next door and an issue that Senator Schatz doesn't have to worry as much about in his home state probably.

Next up is Senator Fischer from Nebraska. Senator Fischer joining us remotely.

STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM NEBRASKA

Senator FISCHER. Are we OK?

Senator THUNE. We hear you, yes. We don't see you but we hear you.

Senator FISCHER. OK. Thank you.

Senator THUNE. There you go.

Senator FISCHER. Captain Harrison, among rural stakeholders, there has been some apprehension about FirstNet's reliance on what is referred to as deployable networks in rural areas versus deploying a fixed network.

I noticed that your agency may use one type of deployable, the cell on wings known as C-O-Ws.

How did the functioning of this work in your experience, and were first responder communications adequately supported?

Captain HARRISON. Thank you, Senator, for that question.

The answer is the COWs, cells on wheels, worked awesome. The example I'll give you is last fall, we had an elk hunter that went missing and she was in an area that was near Deerfield Lake, which is extremely—has no cell coverage. There's absolutely zero cell coverage where we were. And so we called FirstNet and within probably 12 to 14 hours, they had a mobile cell tower there that we were able to fully communicate back and forth with, back in dispatch which is obviously important in having that communication, and so their COW again made our work so much easier.

It would not have been able to have been done as easily as it was if we had not had that and the timely response was perfect for us and so if I could say, to answer your question how was it, we found it to be extremely wonderful.

And the thing about it is there's supposed to be a tower built there and that's kind of we're waiting for the Federal land stuff to go through, like what we talked about, but in the short time, the COW was perfect.

Senator FISCHER. Great. Thank you. In my part of the state, we have a lot of COWs but they don't have wings.

Mr. Porter, I am pleased to hear from Nebraska stakeholders that FirstNet build-out in our state is proceeding ahead of schedule. During last year's floods in Nebraska, FirstNet deployed a SatCOLT to assist with FEMA operations.

How does FirstNet ensure the appropriate deployables are where they need to be for unplanned events?

Mr. PORTER. Thank you, Senator.

Yes, so our deployables, first of all go along with our commitment to be where public safety needs us when they need us and that can be, as Captain Harrison just said, maybe in a remote location, a search and rescue mission, or, as you can see behind me, we deploy our SatCOLTs, in the fires out West and also in Cameron, Louisiana, after a hurricane.

So we've got a mix of SatCOLTs. We've got 72 deployables on wheels and we've got deployables on wings that are drones and then we also have our blimp, as well, that is FirstNet One. They can provide sustained coverage of an area.

So we've got the opportunity to provide the necessary tool to the environment and what we do is we work locally hand-in-hand with public safety within the state and local communities to prioritize where are these assets, where they are moving.

In fact, on the ground in the wildfires right now, we're working hand-in-hand with FEMA as they're directing at the Federal level with individual fire camps as they're talking about where they need coverage and so we've got a lot of opportunity to continue to grow this fleet, which we're doing at FirstNet's direction, and we're very excited to be able to provide these capabilities to public safety.

Senator FISCHER. And also, Mr. Porter, in terms of how FirstNet is assisting with other critical communications, such as at Offutt Air Force Base and with the Buffalo County Hazmat Team, would you expand on those latest efforts in Nebraska?

Mr. PORTER. Yes. Great, Senator. Yes. So Offutt Air Force Base is a great example of our continued innovation and what we're doing with public safety and with the community.

It's important to remember that the Department of Defense provides tremendous mutual aid to the communities outside of the military installation and so they work hand-in-hand together and so the FirstNet capabilities on the military installation in support of that also cross the lines and help the communities around.

So at Air Force Base Offutt there in your home state, it's a continuation of what we saw in Tindall and Nellis Air Force Bases. When we went and renovated those Air Force bases, arming them with 5G and upgrading them and modernizing them, we are now delivering that to three more additional Air Force bases, as you

mentioned, Offutt in your home state, and so we're very excited about the opportunity to modernize with the Air Force and with the Department of Defense in general. So thank you.

Senator FISCHER. Thank you. Thank you, Mr. Chairman.

Senator THUNE. Thank you, Senator Fischer.

Senator Blackburn.

STATEMENT OF HON. MARSHA BLACKBURN, U.S. SENATOR FROM TENNESSEE

Senator BLACKBURN. Thank you, Mr. Chairman, and thank you to our witnesses.

I think that having a good dependable FirstNet system is something we all want and, Mr. Porter, I want to chat with you for just a second.

We had some pretty bad tornadoes in Tennessee this year and I'd like to ask you—I know AT&T has a very strong presence in Tennessee—what kind of impediments did you see to re-establishing your networks in the wake of the tornadoes and what did you hear from AT&T customers in the area and was your FirstNet integration able to meet the needs? Was it adequate during that time?

Mr. PORTER. Great question, Senator Blackburn, and, yes, the tornadoes in Tennessee were tragic and we were a part of that recovery.

In fact, I think you'll find as you ask public safety the real strength of FirstNet is that we're there when they need us most after those disasters. So in the wake of that tornado, we were quickly on the ground. We position our response operations group and the deployable assets in positions so that we can come in immediately following that. We stage them across the country so that they can get anywhere they're needed very rapidly and the FirstNet Authority provides oversight to make sure that happens.

And so it was a dramatic response and I will tell you the public safety community was extremely thankful. They were pleased. They consistently told us we went above and beyond the mission. We met their needs. We don't just show up with deployables at these times.

I was on the ground in Louisiana after the hurricane and just like that in Tennessee. We're there providing devices. We're sometimes providing water and meals and helping these communities.

Senator BLACKBURN. Let me ask you this. What about FirstNet's capabilities in the rural areas and the remote areas?

Mr. PORTER. Yes. Great question. So in Tennessee, for example, we're on air with new towers in Macon, Jackson, Pickett, Bledsoe, Overton, Rutherford, Claiborne, Fentress, Hancock, Warren, Polk, and Grundy Counties, and we've deployed Band 14 in Nashville, Memphis, Knoxville, Fayette, Guiles, and Morey, Tennessee, and we've got more coming.

So we're providing a layer of permanent service in both rural and non-rural sites, and we are measured for our build to deploy both rural and non-rural, and then we supplement that with our deployables to make sure that we can reach every area within Tennessee or across the country.

Senator BLACKBURN. Sure. OK. Let me ask you one more thing before my time runs out.

Ms. Holmes was talking about the Next Gen 9–1–1, which I think is vitally important. So where are you all on having a more innovative ecosystem for our first responders in these areas where we don't have high-speed Internet or we don't have cell service or we're just remote and unserved? Talk to me a little bit about that because AT&T still has large gaps in their fiber or their high-speed Internet systems even in suburban areas. Believe you me, I know firsthand about this one. So where are you all on building out that ecosystem?

Mr. PORTER. Yes. As was mentioned before, over 125 applications in our application ecosystem. We've got compelling and exciting ways that we're working with PSAPs, like Ms. Holmes is, to help them use FirstNet.

In fact, we have an application here that was used in a fire I'll show you in a rural area and essentially what it is is it's an application that shows where the fire is. You can communicate with everybody on the ground. You can see the assets, your own assets and people moving, and so it's a situational awareness app that was only possible through a broadband network and anybody who goes to that fire, whether it's mutual aid from across the country, they can access this and you can see everyone moving. Even the FirstNet assets show up on that application.

So this is a great example of where we're working with public safety every day and we're using their innovation and our technology to help better the abilities of public safety on the ground.

Senator BLACKBURN. Thank you so much. Yield back.

Senator THUNE. Thank you, Senator Blackburn.

I'm going to turn momentarily to Senator Blumenthal who is here, but I do want to ask a question, if I might, as he gets ready, and that's this is for Mr. Parkinson and Mr. Porter, but in its most recent report, which I alluded to earlier, the GAO had found that there was limited information and insights about FirstNet's user experiences.

So could you perhaps speak to what steps you have taken to address this concern?

Mr. PARKINSON. Thank you, Senator. We appreciate the GAO and the diligent work that they've done.

We received a lot of positive feedback as a result of that and we take the relationship we have with the GAO very seriously. We felt that the report was very good and accurate and we took steps in preempting that report but also as a result of it, one thing we've done is we've drawn from the public safety community. We have a dedicated team of public safety advocacy groups whose sole responsibility is to engage with public safety in the field, to receive feedback from them, to push information out to.

We've also drawn in and have on staff a number of public safety professionals from various disciplines that we have that integrate public safety knowledge in the organization.

Just this week on our website, we've updated a portal, a new portal where public safety users can go and submit data through our website, and I encourage everyone to go to firstnet.gov who are FirstNet users, so that we can gather additional information.

Over the coronavirus pandemic, we've had a great opportunity to engage through webinars and through other virtual events and we're very proud about the interaction we have with public safety.

I think you can always do more and understanding the evolving needs of public safety is an important part of that and we continue to evolve how we engage with public safety.

So all in all, I'm proud of the work we've done but obviously look forward to doing more public safety.

Senator THUNE. Mr. Porter? Thank you.

Mr. PORTER. Yes, Senator. Just to add on, you know, at AT&T, we're excited to work with FirstNet on the recommendations and implement those. As Mr. Parkinson said, we've always got opportunity to improve.

I will, though, say that the success of FirstNet shows the demand and the excitement in public safety for FirstNet. We're just over 2 years in the market and we already have 1.5 million connections and we have 13,000 agencies that have signed up with public safety and as Senator Blackburn pointed out, when you are there on the ground in Cameron, Louisiana, or on Mexico Beach, Florida, or in the Hills of South Dakota, and you're the only coverage and people are in desperate situations, those are extremely powerful connections and strong connections, and I will tell you after those events, we have seen tremendous momentum and acquisition to FirstNet.

Senator THUNE. Thank you.

Senator Blumenthal.

STATEMENT OF HON. RICHARD BLUMENTHAL,
U.S. SENATOR FROM CONNECTICUT

Senator BLUMENTHAL. Thanks, Mr. Chairman, and thank you for holding this very important hearing.

When Congress first created FirstNet, we were responding to the communications breakdowns that occurred in previous national emergencies, as you know. I think we had our first test of this system during the COVID–19 pandemic.

During this process, I've heard that your teams have been responsive to Connecticut's questions and I appreciate it that FirstNet has been able to support EAO and other medical centers in their response to the pandemic. I hope that this close collaboration will continue as Connecticut adopts and builds on FirstNet and this health crisis continues unfortunately.

I wonder if you could tell me, Number One, what resources are immediately available for Connecticut's medical centers and others on the frontline of the COVID–19 pandemic?

I appreciate that AT&T has built out new tower sites in Litchfield and Fairfield Counties for FirstNet, but there's still more coverage needed. How are you coordinating with Connecticut's first responders about where to locate new towers, and as you know, GAO reported that some stakeholders describe having little contact with FirstNet or receiving insufficient information from FirstNet and AT&T.

For those in Connecticut who need answers from FirstNet and who might need, for example, a satellite truck to ensure access,

who should they turn to and what assurances are there that they will receive sufficient information and the right support?

Mr. PORTER. Thank you, Senator. So appreciate your comments.

We've been very focused on working with the local and state leadership there in your home state and we're excited and pleased that you've been receiving good reports.

I'll tell you, you mentioned Litchfield and Fairfield, we've also added Band 14 capability, the dedicated public safety spectrum, for your public safety community to Hartford, Bridgeport, New Haven, New London, Norwich, Litchfield, and Windom.

And you asked what could we do to help the health care workers on the frontline during this pandemic. I will tell you we are on the frontlines, as well, with you. We're donning our PPE and going out and serving field hospitals, quarantine sites, and test facilities, and so we're right there with you, and that's where we learn the most and get the best information is by working side-by-side with public safety, and some of the unique things you get with FirstNet.

First of all, the public health workers there get all of the assets, all of the capabilities of FirstNet, but some unique things they get. In our device ecosystem, we now have over 150 devices in our device ecosystem. We even have a device that you can drop into Clorox and pull back out for full disinfection and protection of the health care worker on the frontline.

We've got apps, as you heard, in the app ecosystem. We have apps that as you're requesting mutual aid and they're moving into the area, you can get statistics and information that tells you the local environment as you're heading into that area. So we've got tremendous capabilities and we're continuing to work with public safety.

As far as communications, as I mentioned, the way that we continue to get better and improve for public safety is working hand-in-hand with the folks, the great leaders that are on the ground there doing the heroic work in Connecticut.

We spend countless hours with them learning and understanding where they want connectivity, what they need, what they want us to prioritize, and how we can help them better.

Mr. PARKINSON. Senator, if I may just add, one additional tool that we have is on our website, firstnet.gov, on the FirstNet Authority site, there are dropdown menus where every single public safety official is able to identify from their state the FirstNet Authority's point of contact and so his or her contact information is up there, both e-mail and cell phone, and that's just another great resource that public safety has in order to push information out to us and ensure that their voice is heard in the system.

Senator BLUMENTHAL. Thank you both. Thanks, Mr. Chairman.

Senator THUNE. Thank you, Senator Blumenthal.

Next up is Senator Capito remotely. Senator Capito.

STATEMENT OF HON. SHELLEY MOORE CAPITO, U.S. SENATOR FROM WEST VIRGINIA

Senator CAPITO. Thank you. Thank you, Mr. Chairman. Have you got me? Am I good?

Senator THUNE. We've got you. You're on.

Senator CAPITO. All right. Great. Thank you for the hearing today.

I was really pleased in May 2019 to be able to see FirstNet put their tower site up in Kingwood, West Virginia. I also saw the demonstration of their FirstNet satellite cell on light trucks which was one of their first deployable network assets, and my understanding has been that since we had that meeting with FirstNet with the (audio glitch) has been very, very good.

So I'm curious to know, Mr. Parkinson, first of all, let's see here. I don't know what to do. I'm hoping I'm OK. They just asked me a question. Let me start it over again. OK. Am I OK?

Senator THUNE. Yes, ma'am. We can hear you.

Senator CAPITO. All right. How ironic that I'm having these issues. I'm having to be at home because I'm quarantining.

I'm wanting to know, Mr. Parkinson, in short, has there been much disruption because of COVID? How have you all handled that, and are you able to say that you're on target to meet your goals that you set forward in your roadmap?

Mr. PARKINSON. Senator, thank you.

The roadmap is the key component of what we do at FirstNet. We unveiled it in August of last year and it comprises really six core areas that we look at from the public safety perspective.

It provides us the blueprint for where we're going to go from investment and we are looking to update that sometime next month. It's a goal we have to continually update that as we see with public safety. Just as similar technology evolves, as will our roadmap will in the direction we go.

We are very happy with the amount of information that we've been able to push out to public safety. Again, it's been tricky not being able to travel to visit with folks in person, but all in all, we're very pleased with the progress we've made so far, but look forward to making additional progress in the future.

Senator CAPITO. Thank you. Mr. Porter, let me ask a question. When we went out to the site, I lost cell service on my way out there. These are remote sites, as many of the sites that you've talked about and our witnesses have talked about, as well.

So as we look at what's happened for the need of rural broadband that this committee works a lot on, do you see any role at all where FirstNet could help, not just our first responders, but then push out further from those spots more broadband deployment as we seek to get to those more remote homes, businesses, and other areas in the communities?

Mr. PORTER. Great question, Senator. First of all, thank you for being at that site and helping us participate in the ribbon-cutting. We appreciate it.

Senator CAPITO. Thanks for the opportunity.

Mr. PORTER. Yes. And we're very excited about the coverage that we've provided there in West Virginia. Obviously a bunch of rural area there, as well, where we've put Band 14 in Huntington, Ashland, Monongahela, Charleston, and Parkersburg, Marietta, and we've also hit with new sites, we've established Hardy, Raleigh, Preston, and Mineral Counties.

So we're hard at work there in West Virginia, and we appreciate your support.

In reference to how we can help every time we go and deploy a Band 14 radio, it certainly helps public safety, but there are also secondary benefits for the local community and that happens in two ways.

Number One, when we hang the Band 14 radio, when that network is not congested or we're seeing a high traffic situation, the local community can join that band as a secondary user and partake in the additional coverage provided by Band 14.

Additionally, as a company, AT&T has decided that our method when we deploy a Band 14 radio, we do something we call a single touch climb, which means that we will go up and add commercial spectrum to that tower oftentimes when we're deploying a Band 14 radio. So now the local community gets the benefit of their own commercial network as well as the benefit of Band 14 when it's not in use or in a high-capacity situation.

Senator CAPITO. Well, that's precisely where my interest lies. I mean, I think we have opportunities here to get to those last spaces and I think the utilization off of the, as you said, climb once or however you characterized it might be one of those.

The last question I want to ask is on—well, I see my time has expired. So I did have a question on hot spots because our Governor is creating hot spots for our educational delivery.

Is that a technology that FirstNet uses at all in any form or fashion? I'm curious to know about that.

Mr. PORTER. So, Senator, yes, it is one of our assets we use. In fact, we often use it in emergency situations. We have an array of solutions, as I mentioned, from deployables on wheels to deployables on wings and blimps, but we also have generators and hot spots and routers and switches and for me personally, I was in Calcasieu, Louisiana, shortly after that hurricane hit, and literally walked into a sheriff's department and they were operating in an ag center for the short term because they couldn't get down to Cameron, Louisiana, because of the flooding, and so essentially we had to do what you just said.

We essentially established communications with FirstNet and with a router so that they had local connectivity inside their facility. So we use all of our assets. We bring them all to bear to help public safety.

Senator CAPITO. Thank you. Thank you so much. Thank you, Mr. Chairman.

Senator THUNE. Thank you, Senator Capito, and we look forward to having you back from quarantine.

Next up, if he's out there, is Senator Tester.

STATEMENT OF HON. JON TESTER,
U.S. SENATOR FROM MONTANA

Senator TESTER. I am, and thank you, Chairman Thune, and I appreciate the opportunity. I want to thank the panelists for joining us today.

During my time on this committee, I have repeatedly raised concerns while cities across America will have access to 5G technology, folks in Rural America will be left with no G.

This is a question for you, Mr. Parkinson. So, as FirstNet builds out their public safety network, they cannot leave anybody behind

and, Mr. Parkinson, tell me how FirstNet will balance updating technology, ensuring that every corner of a state like mine will be covered?

Mr. PARKINSON. Thank you for the question, Senator.

As part of the legislation that created FirstNet, there were significant rural milestones were laid out in the legislation and so when we were developing our procurement which ultimately AT&T bid on and won, as part of the contract with AT&T at every phase of the deployment, AT&T has to go out and deploy in rural parts of the state, not only in Montana but everywhere across the United States.

This is something that we continue to monitor. So as Mr. Porter has referenced, the network's about 80 percent deployed. We have a certain amount of oversight that we need to ensure that AT&T meets the obligations that were adopted not only in the state plan but in the contract overall which those state plans are.

I don't think—I can't stand here or sit here, rather, and say that every square inch of the United States is going to be covered. There's just no carrier will ever do that.

What we can do, though, is taking advantage of the towers that are out there, the deployable assets, and identifying areas by working with public safety so that their needs can be met is the most important thing, and I think that's where the strength of a 25-year contract comes in.

We're not stopping in 2023. This will continue and understanding the needs of public safety in Montana as well as those in other states and territories. We solicit that feedback. We bring it back into our strategic plan, feed it into our roadmap, and will make future investments. I think that's probably the best solution there.

Senator TESTER. So, Mr. Parkinson, what kind of metrics are you using to determine if they're meeting goals? Is it based on square miles? Is it based on population? What is it based on?

Mr. PARKINSON. Senator, we have a variety of assets and tools that we use, data that AT&T supplies us that we have to verify. There's also a certain amount of independent checking that we are also able to do and——

Senator TESTER. Just stop for a second. So the data that AT&T gives you, is it based off of maps that currently exist?

Mr. PARKINSON. Some of the data, AT&T has supplied state maps that are part of the state plan portal, and every user who was part of the Governor's decision to opt in can have access to that information.

Senator TESTER. How often do you check the accuracy of those maps which has been a big issue on this committee, by the way? The inaccuracy, not only—of all maps coming across the board when it talks to this kind of technology.

Mr. PARKINSON. Sure. The maps that we use, Senator, are specific to the FirstNet deployment and we have certain specifics in there that we continue to monitor. Our team is some of the best in the business in ensuring that where AT&T is meeting or exceeding their coverage, they do so.

There have been times where the timeline where AT&T had planned to deploy didn't quite meet up with where we are. We discussed that and we found solutions to that. Ultimately when in

2023, the final operating procedure of this initial build is met, AT&T will have covered the contractual requirements that they have put out there as part of this.

Senator TESTER. I would just say this. I appreciate that answer and I think that you understand the issue.

The key is, is that if we have a first responder network and you leave out Rural America, it's really not a first responder network, and so, look, I get it, there are not many people in certain areas of my state, but that doesn't make them any less important and so I just want you to keep that in mind moving forward.

This next question is for Jason Porter from AT&T, and I am excited about AT&T's commitment to serving first responders throughout the country.

The truth is, though, that AT&T's coverage in Montana has been heading in the wrong direction. There are big parts of Northeastern Montana where you used to be able to get AT&T service but today you cannot, and as AT&T works to make FirstNet available to first responders in those areas, tell me if consumers can expect to see coverage again.

Mr. PORTER. Thank you, Senator. I appreciate it, and, yes, as you mentioned, some of your state has some of the most challenging rural areas and we're committed and excited to improve coverage in those areas, and, you know, as Mr. Parkinson mentioned, we've got rigorous rural and non-rural commitments that we must meet.

We also, as I mentioned in my oral, have a thousand purpose-built sites and those are largely in rural areas that we've committed to in the states and we've deployed 250 of those and so in Montana, we've already added new sites in Rosebud, Beaverhead, Stillwater, Mineral, and Hill Counties.

We've also added Band 14 in Billings and Great Falls, and we're really excited about what we're doing in the tribal lands there because we have also added a FirstNet site to the Northern Cheyenne Reservation and we're excited about the future of our build plans there in Montana to continue to provide more and more coverage.

So we are very committed and, as I mentioned, every time we deploy these sites, it benefits not just first responders. There are two distinct benefits for the general population. One of those is that every time we hang a Band 14 radio, the general public gets to access that spectrum as a secondary user when we are not in an emergency high-traffic event where capacity is limited.

The other benefit for the general consumer is that when we climb a tower in most cases, we do what we call a single touch climb, which means we climb that tower, we hang the Band 14 radio, and we also hang commercial radios so that the general population gets their commercial traffic and also can participate on the Band 14 radio when it's not congested.

Senator TESTER. Jason, I'm going to close really quick because I'm way past. I appreciate you guys putting up those towers. I really do. The one in Hill County is relatively close to where I live in Montana, but I'm not in Northeastern Montana and none of those towers you've mentioned are in Northeastern Montana.

Thank you. Pay attention to those guys all across the state. It's important, the ones you put up. We also need to make sure the ones that don't have service get it back.

Thank you very much.

Senator THUNE. Thank you, Senator Tester, and it is a big state. Next up is Senator Young, the Senator from Indiana.

STATEMENT OF HON. TODD YOUNG,
U.S. SENATOR FROM INDIANA

Senator YOUNG. Thank you, Chairman.

I'm going to continue with some of Senator Tester's line of questioning because I know it's your objective to try and serve as many Americans as possible through your network, urban areas and rural areas, and that comes with certain challenges, and you spoke a bit about how you're addressing those challenges. But why don't we turn to the state plans? You get state-by-state plans to address this issue.

Mr. Porter and Mr. Parkinson, how have AT&T and FirstNet worked with states like mine, Indiana, to identify coverage gaps that will help public safety agencies extend coverage out to where they need it?

Mr. PARKINSON. If I could take that first, Senator. So the state of Indiana is an incredibly powerful position and a very, very strong position because of two things. One, the statewide Interoperability and Integrated Public Safety Commission and the people that you have working on that.

The statewide Interoperability Team, they really are leading the Nation in terms of their ability to integrate different systems. So in the state of Indiana, you have a statewide LMR system, walkie-talkie radio system, and it's been in existence for many, many years, and it's a very, very powerful tool.

What the Commission has done in Indiana is they've connected their statewide radio system into the AT&T-enhanced push talk system demonstrating interoperability between these two systems, between Landrover radio and LTE, and that is just another tremendously powerful tool.

It's the first state in the Nation to do that. I know the neighbors up in Michigan have been doing something similar, but that is, I think, another example of the power of broadband and what FirstNet can do. By integrating these two systems, you're expanding the ability for public safety to have communications in areas that they perhaps otherwise wouldn't have.

I don't know if Jason has got anything to add to that.

Mr. PORTER. No. I just want to celebrate that, as well. What Mr. Parkinson said really is groundbreaking, and we appreciate your state for leaning in and it answers your question honestly about how we operate with your state.

We operate by working hand-in-hand with them, whether it's for the creation of interoperability, new applications in the application ecosystem, new devices to our device ecosystem, or coverage. What we do is we roll up our sleeves. We walk the ground with public safety. We ask them what do they need and how can we serve them, and we try to deliver what they ask for as quickly as we possibly can, and so, you know, there are so many sites that we've added there in Indiana.

Senator YOUNG. Well, since Indiana is a national leader, as you've indicated, in this area, as we are in most other areas, it does

beg the question, in all seriousness: are there other things that we in Congress should be doing to ensure that things continue to go smoothly across the country so that we might incentivize other states to adopt this model or a variance of this model and ensure that everyone has access to first responders—rural, urban, and everything in between?

Mr. PORTER. Senator, I will go first, and I welcome, you know, the other participants' comments, as well, but I'll give you a couple of areas.

Number 1, and we talked about it early on, the Streamlining Act is a great opportunity for us to streamline, as we're trying to go into rural areas, like Montana.

As was mentioned, Northeast Montana is hard to get into, Federal lands, getting approvals to go into those lands. If we can break down that red tape and those barriers so that we can deploy these sites more rapidly for your general population as well as for public safety, that's tremendous, and then as Ms. Holmes mentioned, I think continuing to focus on Next Gen 9–1–1 and modernizing Next Gen 9–1–1.

We are eager to work with Next Gen 9–1–1 providers. We already work with cloud-based CAD systems, like Rapid Deploy. If we can continue to progress Next Gen 9–1–1 at a rate that allows us to work together and modernize in unison that would help public safety tremendously.

Senator TESTER. Excellent. Thank you both, gentlemen, for being here today.

I yield back, Mr. Chairman.

Senator THUNE. Thank you, Senator Young.

And I think we have remotely right now Senator Rosen. Senator Rosen, are you there?

STATEMENT OF HON. JACKY ROSEN,
U.S. SENATOR FROM NEVADA

Senator ROSEN. I'm here.

Senator THUNE. OK.

Senator ROSEN. Thank you, Mr. Chairman. I appreciate it. I appreciate everyone for being here today and lots of exciting news on this front for sure. We absolutely need it.

I want to speak a little bit about your deployment in Nevada because this past March, AT&T reported that FirstNet network deployment is 80 percent complete and the company is nearly a full year ahead of schedule on its network build. I really applaud these efforts.

I think we can all agree that the COVID–19 pandemic has highlighted the urgent need to bridge the digital divide and ensure all Americans have access to reliable broadband internet.

But in looking at the maps, various parts of Nevada have no coverage. About a third of my state has low coverage, especially in our rural and tribal communities, and according to my state's Department of Public Safety, AT&T plans to build out about 30 cell sites in Nevada in the next 6 months.

So, Mr. Porter, first of all, I wonder if you could utilize existing cell sites, Number 1, but could you also provide us an update on the progress of building out this infrastructure? Has COVID–19

had an impact on your schedule? We know some parts were ahead, and where do you stand right now?

Mr. PORTER. Thank you, Senator. Appreciate it.

We are, as we've stated in my oral, very excited to announce that we are about a year ahead of the build plan. We've surpassed that and continue to deploy very, very rapidly, and you asked whether COVID–19 is an impact.

COVID–19 has been one of the biggest challenges for public safety that we've seen in our time. It's certainly been a challenge. As I mentioned, it's like a fire, flood, and tornado in every city across the country at the same time.

It has not impacted our build, but it has proven in the need for a national public safety broadband network that provides agency interoperability. So what we've seen is as we go to cities and states, we see Federal, local, and state representatives working together hand-in-hand, law enforcement with fire, with EMS, and with medical. So it is going really, really well.

In Nevada, as you mentioned, we've added sites in Reno. We've added sites in Las Vegas and Storey, and we've also supported some significant events. The Area 51 event in Alamo was one that strikes me, as I remember going out and having that deployment support, your communications in that area of your state.

Senator ROSEN. So do you have any time table for some of our more rural, remote, frontier communities about how quickly you might bring some more connectivity to them because our tribal areas and our rural areas are often—you talked about Area 51—fairly remote?

Mr. PORTER. Right, yes. So, yes, we work hand-in-hand with your state updating them on our plans, on our build status, and where we're at, and I can get back to you with the specifics of that build plan so you can see all the sites as they come in.

Senator ROSEN. Well, that's fantastic. Would you also—one of my questions was, is how you partner with our local communities when you select the locations of the new cell sites, your other infrastructure, and maybe all of you want to speak to that in the short time that we have left so that I can be sure when I'm talking to everyone across Nevada that they know how they can be part of the process to get on the list.

Mr. PORTER. Yes. That's great, and I'll go first and then I'll let Mr. Parkinson weigh in, but we do. We work every day with your state. Your state has established a state point of contact for FirstNet and we work exclusively or extremely well with your state and we're also working with public safety at large, so all the agencies and departments can funnel requests to us and through your POC, and so we do that to help prioritize and make sure we're building at the places that your state and your public safety teams need it the most.

Senator ROSEN. Thank you.

Mr. PARKINSON. And, Senator, from the FirstNet Authority side, we have on firstnet.gov a single page for every state which has the contact information of the FirstNet Authority representative who works in your state with his or her contact information, both e-mail and phone number. It's on firstnet.gov. I encourage all the public safety in Nevada and across the Nation to access that website to

get that information so they can have the direct relationship with the FirstNet Authority.

Senator ROSEN. Well, thank you for putting that out there. We will make sure that those links are out for everyone in all of our communities, as well.

I yield back my time. Thank you.

Senator THUNE. Thank you, Senator Rosen.

I think we're going to wait just a minute here for Senator Cantwell to arrive.

While we are, I would just ask both to you, Mr. Parkinson and to Mr. Porter. Mr. Parkinson, could you discuss how FirstNet plans to further improve its outreach and engagement with public safety stakeholders at the Federal, tribal, state, and local levels?

And the follow up for Mr. Porter, you briefly mentioned AT&T's collaboration with rural providers to extend the FirstNet network to more rural and tribal areas. Could you talk about that further and what other steps you have taken to ensure that Rural America is not left behind without reliable broadband coverage?

So, Mr. Parkinson, could you go first?

Mr. PARKINSON. Thank you, Senator.

The interaction with public safety at every level across government is fundamental to the success of FirstNet. This, after all, is public safety's network, and when FirstNet engaged with public safety before the drafting of the RFP, we had to ensure that local public safety data was inputted into the RFP. So whoever the responders were, we're able to take tangible information from public safety and craft their responses to that because we know that public safety response to local emergencies and everything is local but everything can be different.

You can't find uniform solutions from Northern Maine in the winter to Southern Florida in the winter. It's different solutions.

So the network had to provide similar solutions that were applicable at the local level and that goes across the level from Federal, state, local, and this engagement that we have, leveraging our public safety advisory group and engaging at the Federal teams, we have a dedicated team whose sole purpose is to engage with Federal agencies, trying to identify partnerships where we can not only encourage folks to join the FirstNet system but, most importantly, to identify how we can partner with other Federal agencies.

There are so many tremendous assets that are out there that we would like to take advantage of and have as part of the FirstNet network, and I think that kind of strong collaboration at the Federal, state, local, and tribal level is something that we've had a good start on and we look forward to building upon.

Mr. PORTER. And, Senator, I will be brief, but you mentioned rural. Rural coverage is obviously paramount for public safety and so we're committed to it. It's a foundational goal for FirstNet.

We've mentioned that there are rigorous rural and non-rural build commitments and we are committed to meeting those. We are also to do that extensively working with rural broadband and rural wireless providers. In fact, Senator, in your state, we're working with SDN Communications and what that allows us to do is use those rural communities and their rural knowledge and their abil-

ity to build locally to help us build out that rural coverage that we so desperately need for public safety.

So we're real excited about the progress we've made. We'll stay ahead of schedule and provide that critical connectivity.

Senator THUNE. Thank you.

Senator Cantwell.

STATEMENT OF HON. MARIA CANTWELL,
U.S. SENATOR FROM WASHINGTON

Senator CANTWELL. Thank you, Mr. Chairman. Thanks for holding this hearing. It's so important to us in the Northwest, particularly in fire season, and all that we're doing.

So I joined two letters, you know, to the Administration asking that Washington State be declared a disaster area for that and obviously get assistance. We have a Wildlife Management Technology Act, which is helping firefighters get access to mapping, GPS tools, and location of firefighters, which we think is a critical part of how we address this issue moving forward.

The FirstNet nationwide wireless broadband network dedicated to the public safety is another aspect to that, and so we need to have effective communications. So FirstNet in 2012 made progress in the deployment of, you know, an essential network to help with that.

My question is I'm hoping that as we look at this moving forward, and part of it is just we always get into this situation where in disaster areas, not everybody has access, and then people don't—what's the right way to say this? States want to get their ducks in a row before they ask for the declaration because when they ask for the declaration, they don't have their ducks in a row, they feel like they'll get turned down.

But in the meantime, a community's sitting there without great access trying to coordinate a disaster response. So we've been pushing for more clarity on that so that everybody just has all the broadband access that they need in coordination.

So as I mentioned, fires are what we're dealing with. So, Mr. Parkinson and Mr. Porter, how has FirstNet been able to help during those disasters in providing, you know, communication in the current fire season, and what are you doing particularly with tribal areas because they're particularly on the short end of the stick when it comes to broadband capacity? Many of these are, you know, again the center point.

Four years ago, one of our biggest fires, the Colville, had to just—I mean, they were their own response, and so we need to have good communication with them, as well.

Mr. PORTER. Yes. So I can start. Senator Cantwell, thank you.

First of all, I want to just thank your state for being so progressive and such a leader in this area. I have regular communications with Chief Lombard. Chief Lombard has been a great fire leader out in your state and also, as you know, serves on FEMA and we have done innovative things collectively working together to put us closer together with his emergency operations centers and his planning so that we can be there.

You mentioned the fires. We have a picture over here from Washington that is us hand-in-hand with FEMA at their oper-

ations center as well as the state EOC, emergency operations center, as they're working.

So we're, you know, tightly integrated with your response team to the fires, but I will say it goes even far beyond this.

We did deploy a SatCOLT in your state to help provide coverage for the fire response, but it's so much more than that. We actually have members of my team that are sleeping at base camps, at fire camps, to make sure that we understand the needs and are there to provide devices, to consult with equipment and the use of it.

We've mentioned that we need multiple layers of support to help public safety. So you can see the SatCOLT and the deployable behind me, but there are also, as we mentioned, routers and switches that we need to be able to deploy to help these operations work and in the field give them hardened devices and capabilities to be able to withstand the fire.

I also wanted to mention you talked about rural and tribal areas. Your state is one of the areas that we've been very focused on trying to build in those rural areas as well as the other states.

We have put new sites on air in Lewis, Pacific, Grant, and Yakima Counties. We've also deployed Band 14 in Seattle, Tacoma, Spokane, Richland, Kennewick, Olympia, Bremerton, Yakima, Kittitas, and Whitman, and we're very excited about the new coverage that we put near Yakima Nation, and we've got several other sites that are prepared for tribal lands that we're working on access and ability to deploy.

Senator CANTWELL. So do you think that we're ready to integrate then with these other tools that we've given on fighting fires so that you can do firefighter location and system?

Mr. PORTER. Yes. In fact, right behind this picture was—I mentioned it earlier, but this is an application that is in our application ecosystem and this you can only do with a broadband network like FirstNet. You cannot do it with two-way radios.

This is an application that fire is using today and what they do is they can see their own assets and people moving on the ground and then they can also see the fire as it moves on the ground and so they can use this to move their assets into the ideal location to make the most effect to put that fire under control and keep their people safe.

Senator CANTWELL. Well, Mr. Chairman, there's no amount of effort, I don't think, that we need to be doing here, given the increase in the fires, but in the Carleton Complex, this is how the Colville got left on their own, but then another two counties over, Pend Oreille, literally that county was left to their own.

The resources that we have as the Federal Government and the state were all, you know, right in the center trying to deal with basically the Okanogan and various aspects of that.

So then more fire starts for which now we're seeing, rapid fire starts. These people literally, the county citizenry, were left on their own, and guess what they were trying to do? Communicate to the whole county what people should do, but they didn't even have broadband. So literally these rural counties are left to fight these disasters on their own and the one thing—listen. I believe in our citizenry. They are—I'm, you know, working on legislation with my colleague, Cathy McMorris Rodgers in the House, and some of

our Senate colleagues, to how do we, you know, empower them more to help us in these emergencies.

But one of the things they need is broadband. So I hope we can continue this effort, and I hope we can get the network smart enough so that we really know where everybody's deployed in fighting the fires.

So thank you, Mr. Chairman.

Senator THUNE. Thank you, Senator Cantwell.

We have been joined by Senator Klobuchar.

STATEMENT OF HON. AMY KLOBUCHAR, U.S. SENATOR FROM MINNESOTA

Senator KLOBUCHAR. Thank you very much, and thank you to you, as well, Senator Cantwell. I'm sorry. I was at another hearing and I just got here. In Judiciary, there are a few things going on there.

As co-chair of the Senate Next Generation 9–1–1 Caucus with Senator Burr, our focus is ensuring safe and reliable communication networks for public safety professionals, and FirstNet, the only nationwide network dedicated to the public safety community, is critical to do that.

Senator Cortez Masto and I have introduced the Next Generation 9–1–1 Act to create a Federal grant program to help state and local governments deploy Next Generation 9–1–1 systems and just yesterday, Senator Burr and I introduced the Emergency Reporting Act to improve standards that require mobile carriers to report network outages to 9–1–1.

And we have made, as you all know, progress with FirstNet. Our 9–1–1 systems yet are still in urgent need of upgrade.

Do you agree that we need to upgrade our 9–1–1 system?

Mr. PARKINSON. Yes, ma'am.

Senator KLOBUCHAR. OK.

Mr. PORTER. Yes, ma'am.

Senator KLOBUCHAR. All right. And where are our virtual people? I think they're above somewhere.

Ms. HOLMES. I am here. This is Karima. Yes, ma'am, I do.

Senator KLOBUCHAR. OK. Mr. Porter is right here. OK. Captain Tony Harrison?

Captain HARRISON. Yes, ma'am.

Senator KLOBUCHAR. OK. Very good. Ms. Holmes, do you agree that Next Generation 9–1–1 technology could complement our existing FirstNet infrastructure? Ms. Holmes?

Ms. HOLMES. I'm sorry. I have problems unmuting. Yes, I do. I think the systems are complementary.

Senator KLOBUCHAR. OK. Very good. And then to both of you, our virtual guests here, reliable 9–1–1 emergency communications are vital, especially during natural disasters.

Ms. Holmes, do you believe legislation, like the one that we just introduced, would help ensure more reliable communication or reporting for public safety professionals during emergencies, wildfires, hurricanes, other natural disasters?

Ms. HOLMES. Yes, Senator, without a doubt. I was able to peruse your legislation and to be completely honest, I think it is in the mind and it is the words of every 9–1–1 leader in this country. I

think that it's very important, if I may just add quickly, that one of the things that I try and stress and make sure is understood is that these are incidents that occur and usually our first responders are the citizens, the residents, the callers, and they don't have the cell phone number to the responder. They have 9–1–1. We have the cell phone number to the responder and so just as important as making sure that our responders are connected, we want to make sure that our callers are connected to our public safety answering points.

Senator KLOBUCHAR. OK. Thank you.

I'm going to focus this on a Minnesota question here which would probably help with South Dakota, as well, because it's about bad weather.

Minnesota has unique, we'll call it that, that's a nice euphemism, public safety needs given our weather conditions, including snowstorms and very, very cold weather, making communications between public safety professionals even more difficult.

We'll have situations where people will be out on a snowmobile and get lost or run out of gas and have to communicate.

Mr. Parkinson, can you provide an update on the progress of building out these networks to meet the public needs of states, particularly those with unique weather challenges?

Mr. PARKINSON. Thank you, ma'am. Indeed, Senator, one of the key things we have to think about when drafting the procurement, the RFP, back in 2015, was providing local solutions, local solutions to local problems, and the weather topic that you mentioned up in Minnesota is very different to the weather challenges that one has to face in Southern Florida, for example.

We did think about that, and the data that we were able to capture from public safety back in 2015 and the ongoing interaction we had with public safety throughout the nation, not just in Minnesota but across the country, allows us to have insight into what those local needs are so that as the network is deployed and as, frankly, the technology evolves over time, we'll be able to offer solutions on the FirstNet system that are unique and that are tailored to local public safety.

I think that's a key strength of the power of the network.

Senator KLOBUCHAR. OK. Very good. Thank you.

Captain Harrison, what is your view on state and local coordination with FirstNet? Should there be more meetings? What additional measures should be taken to improve the communication with local officials and FirstNet?

Captain HARRISON. Thank you, Senator. I don't know if more meetings are necessarily what we need versus just having—I referenced this in my testimony—the ability for FirstNet to actually go forward with the building they want to do to actually get the end product out there.

I've not been involved with the meetings at my level, but I'm involved In the result and that's what I know the citizens of our county and our officers and deputies are certainly the most interested in.

Senator KLOBUCHAR. OK. Very good. One last question.

As we confront the coronavirus pandemic, we have to ensure that people suffering from mental health crises can easily access life-

saving support and in March, I co-sponsored the National Suicide Hotline Designation Act, which would designate 9–8–8 as the three-digit number for a national suicide prevention and mental health crisis hotline. The legislation passed the Senate in May.

I guess I could ask this of Mr. Parkinson. Do you believe 9–1–1 systems need to advance to coordinate efforts to respond to emergencies, particularly related to mental health, and do you believe 9–1–1 centers with advanced technologies have an advantage in helping individuals with mental health issues?

Mr. PARKINSON. Thank you for the question, ma'am.

It's a little bit out of the wheelhouse in the work that we're doing with regards to FirstNet, but that being said, integration to provide solutions to every man and woman across the United States to ensure that they are safe is fundamental to the success of what we're trying to achieve at FirstNet.

I think working with members across both parties and both chambers and across the nation, we've seen the need for FirstNet to answer local needs, as I mentioned before, and that's not just related to weather systems. That's not just related to how public safety responds, but it's taking into account disabilities. It's taking into account the hard-of-hearing, for example, and all of that, I think, is necessary for us to look at and, to be honest, we're doing well, but, of course, we can do better, and I think that's something that we can continue to work perhaps with you and your staff on to ensure that we can integrate some of those solutions going forward.

Senator KLOBUCHAR. Ms. Holmes, do you just want to add anything on the mental health front with 9–1–1?

Ms. HOLMES. I do. I do want to add that about 15 years ago, for 8 years, I was a 9–1–1 call-taker, and I had taken multiple calls with suicidal callers or callers that are having mental health and that is a very hard call to take.

So thank you, first of all, for establishing the three-digit suicide hotline. That will definitely help us in 9–1–1, and then the question about mental health is huge. That's something that we're discussing here in the District, especially since COVID–19. We didn't see a spike in calls about mental health, and I think this ties back into Next Gen 9–1–1. The 9–1–1 centers can't carry the data that is needed.

It will be great if we could have data or health reports about individuals with mental health that we could pass on to maybe not the responders but to mental health providers to respond and so those type of things, of course, is needed.

We do need to talk. You know, 9–1–1 is an easy number to call, but we want to make sure that the infrastructure is updated and able to carry information like that.

Mr. PORTER. Senator, if I may, I just want to thank you for your passion to help mental health and really help those in need and, you know, the public safety area which is our focus here today with FirstNet, it struggles with mental health and with suicide rates, as well. They have high suicide rates.

When I was in the Army, we were obviously dealing with PTSD and trying to recover from those things and so this is an example

of where FirstNet is going far beyond the directive to provide coverage in these rural areas and applications and services.

What we are doing at FirstNet, we've taken on the mission of partnering with public safety to help alleviate and try to give them the tools and capabilities to help remediate and minimize mental health and suicide within public safety, and we've brought on one of the experts in the field, a Ph.D., who came from the Army, who is now providing services to help with mental health within fire, police, EMS, doctors and nurses, and as you know in this pandemic, the doctors and nurses on the frontlines that are dealing with this pandemic will have ramifications of that for years.

So equipping them with these capabilities is essential, we feel.

Senator KLOBUCHAR. Thank you very much, Mr. Porter.

Senator THUNE. Thank you, Senator Klobuchar.

We have a vote on, 5 minutes left. This has been very helpful. Thank you to you gentlemen and to both of our remote panelists, Captain Harrison and Ms. Barnes, and very much appreciate.

I would simply say, too, that we will keep the hearing record open for a couple of weeks and there are members who will probably want to submit questions for the record. We would ask that you all when you receive them, if you could respond to them as quickly as possible and then we'll be able to complete the hearing record.

But this is a subject that we'll continue to pay attention to here and obviously we want to make sure that everything is moving forward as smoothly as can be possible, and we're grateful for the light that you all helped shed on how this is being implemented in rural areas of the country which many of us on this panel represent.

So thank you for your time today, and with that, this hearing is adjourned.

[Whereupon, at 11:51 a.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER WICKER TO EDWARD PARKINSON

Question 1. AT&T has completed eighty percent of its buildout of the FirstNet network. Yet, according to FirstNet's annual report to Congress, the network only provides coverage to forty-five percent of the rural population. How does FirstNet plan to complete the deployment of new towers in Mississippi?

Answer. Deployment of the Nationwide Public Safety Broadband Network (NPSBN) to support communications in rural America remains a top priority for the FirstNet Authority. The program has worked closely with the Department of Commerce (the Department), including the National Telecommunications and Information Administration (NTIA), to make rural broadband for public safety one of the Department's Annual Performance Goals (APG).

To track rural deployment progress on the APG, the FirstNet Authority analyzes network deployment utilizing the Office of Management and Budget's definition of rural population using U.S. Census Bureau data. In September 2019, the FirstNet network covered approximately 45 percent of the rural population, or approximately 23 million of the approximately 51 million people who constitute the Nation's rural population. By the end of March 2020, this coverage had increased by over 8 percent to cover almost 54 percent, or approximately 27.4 million people in rural areas. This growth in coverage surpasses the network deployment targets for the year as FirstNet continues the initial five-year network deployment, scheduled for completion in 2023.

Regarding the specific buildout of the NPSBN in Mississippi, the FirstNet Authority's contractor, AT&T, is responsible for deploying, operating and maintaining the network in Mississippi, as detailed in its State Plan, including the siting of any new towers. To ensure this work continues and the deployment is completed as promised, the FirstNet Authority maintains rigorous network management and oversight to verify and validate AT&T's contractual obligations and ensure that public safety in Mississippi and all across the Nation have access to quality NPSBN services that meet their needs.

Question 2. How is FirstNet making sure that its AT&T cellular towers are "hardened" to withstand natural disasters such as hurricanes and tornadoes?

Answer. The FirstNet Authority learned early during consultation with public safety stakeholders that hardening and redundancy is a priority for public safety communications, along with extending the reach of coverage in rural areas and making portable network assets available upon request to augment network coverage and capacity. These needs were included in the request for proposal (RFP) and ultimately informed the FirstNet Authority's contract with AT&T to build, operate, and evolve the FirstNet network. As a result of this public-private partnership, the FirstNet Authority is delivering a robust and reliable network pursuant to the requirements in the contract with AT&T that were based upon guidance and input from public safety stakeholder organizations, including the National Public Safety Telecommunications Council (NPSTC), APCO International, and the FirstNet Authority's Public Safety Advisory Committee (PSAC), to name a few.

In building out the NSPBN, the program has taken a multi-pronged approach to strengthen the network's physical resilience, recognizing there is no one-size-fits-all solution for every geography and every natural disaster. The FirstNet network is hardened though structural design; network, power and transport redundancy where possible; and the fleet of dedicated FirstNet deployable network assets. The NPSBN exists to equip first responders with a nationwide interoperable communications network and reliable, high-speed and dedicated connectivity when it is needed during emergencies and daily operations.

In the event that a tower serving FirstNet users is damaged during a natural disaster or disrupted due to commercial power or transport outages, FirstNet-subscribed agencies have access to a dedicated fleet of portable network deployable as-

sets, including: 72 Satellite Cells on Light Trucks (SatCOLTs), 3 Cells on Wings (Flying COWs), and other solutions such as FirstNet One, an aerostat (large blimp), to boost network coverage and capacity. These mobile cell sites link to FirstNet via satellite, do not rely on commercial power availability, and provide similar capabilities and connectivity as a cell tower.

Before natural disasters with advanced warning, such as an approaching hurricane, deployable assets are pre-staged to promptly respond to potential requests for network support from FirstNet-subscribed agencies. The deployment of these assets is led by the FirstNet Response Operations Group (ROG) that manages the FirstNet deployable program in alignment with the National Incident Management System and the Federal Emergency Management Agency (FEMA) National Response Framework to better guide the deployment of these assets. This Federal guidance helps to prioritize deployments based upon their situational awareness of life safety, incident stabilization, and property conservation.

FirstNet ROG liaisons provide support to state emergency operations centers and the FEMA National Response Coordination Center during large-scale emergency events, which helps to enable effective alignment with local, state, tribal, and Federal first responders and inform the staging and deployment of the portable network assets. FirstNet-subscribed agencies can request deployable assets through their FirstNet Solutions Consultant or by directly calling FirstNet Customer Care, which is staffed 24x7x365.

In addition, to enable redundancy and improve performance nationwide, core network elements are geographically distributed across multiple locations.

The public-private arrangement between the FirstNet Authority and AT&T is a 25-year commitment. As the program is only approximately two and a half years into the five-year initial deployment, one unique and exciting aspect about FirstNet is that public safety stakeholders will guide the future buildout, expansion, and evolution of the NPSBN. The FirstNet Authority has established a Roadmap to guide future investments and plans to continuously consult with first responder stakeholders. This will inform how the network evolves in the years to come to meet the unique needs and priorities of public safety.

Question 3. In your testimony you highlight several instances where FirstNet has used deployable assets to augment coverage and capacity. Please list all 2020 requests for deployable assets to augment the coverage and capacity of the FirstNet network. Please include the corresponding entity that requested and used the deployable asset, where that entity is located, and the reason why the FirstNet network's coverage and capacity was not sufficient.

Answer. The FirstNet Authority, in collaboration with the program's contracted partner, AT&T, offers agencies subscribed to FirstNet access to a dedicated fleet of portable network deployable assets, including: 72 SatCOLTs, 3 Flying COWs, and other solutions such as FirstNet One, an aerostat (large blimp), to boost coverage during disasters or large planned events. These mobile cell sites link to FirstNet via satellite, do not rely on commercial power availability, provide similar capabilities and connectivity as a cell tower, and are available to public safety subscribers 24/7 at no extra cost.

FirstNet deployables provide public safety users with dedicated coverage and capacity when public safety needs it, in a variety of situations, including during emergency operations in remote locations with limited connectivity, as well as when a disaster has impacted wireless towers, such as in a fire, tornado, hurricane, or other severe storm event. The ability to request support from the dedicated fleet of FirstNet deployable assets is a unique advantage for FirstNet users and makes sure first responders on FirstNet have the connectivity they need—when and where they need it.

The FirstNet Authority has contracted with AT&T to provide the deployable network solution to FirstNet customers. In 2020, the program has actively supported public safety personnel so that they can remain connected as they responded to the COVID–19 pandemic, wildfires in the western United States, an active hurricane season in the Gulf of Mexico, and many other emergency and planned situations. Already this year, as of October 12, 2020, FirstNet users have submitted hundreds of requests for deployable assets, including 59 requests to provide connectivity to support wildfire response, more than 60 requests related to COVID–19 response operations, and 49 requests for network support following Hurricane Laura, 8 requests for Hurricane Sally, and 2 requests for Hurricane Delta.

While the FirstNet Authority cannot publicly share all of the customer requests for deployable assets because of the terms of the customer privacy agreements AT&T holds with FirstNet customers, below are some publicly released examples from agencies that have agreed to publicly share their experiences using the deployable program:

- FirstNet helps public safety respond to tornado damage in Tennessee: *https://firstnet.gov/newsroom/blog/firstnet-helps-tennessee-public-safety-respond-tornado-damage*
- Communications Boosted at Birkebeiner Race with FirstNet Deployable in Wisconsin: *https://firstnet.gov/newsroom/blog/communications-boosted-birkebeiner-race-firstnet-deployable*
- FirstNet One Takes to the Skies; Elevates Public Safety Communications Following Hurricane Laura: *https://about.att.com/innovationblog/2020/09/fn_one_hurricane_laura.html*
- FirstNet deploys mobile cell sites supporting Navajo Nation COVID–19 response: *https://indiancountrytoday.com/the-press-pool/firstnet-deploys-mobile-cell-sites-supporting-navajo-nation-covid-19-response-vT6EEqWDSUyDwK2-4egFg*
- FirstNet: Caring for Those Who Care for You: *https://about.att.com/innovationblog/2020/05/fn_covid_19_response.html*

Additionally, the FirstNet Authority would like to submit for the record a recent study released about the FirstNet deployable program by the Police Executive Research Forum. The study can be viewed here: *https://www.policeforum.org/assets/FirstNetDeployables.pdf*.

Question 4. How many fire departments use FirstNet as their primary provider? How many law enforcement agencies use FirstNet as their primary provider? How many Federal agencies in the Department of Justice or Department of Homeland Security have adopted FirstNet as their primary provider?

Answer. After contracting with AT&T in March 2017 and working with Governors and state public safety leadership in all U.S. states, territories, and the District of Columbia, FirstNet formally began offering service to public safety customers in March 2018. By the start of Fiscal Year (FY) 2020, there were approximately 9,000 public safety agencies and 750,000 device connections on the FirstNet network. By the end of FY 2020, there were more than 13,000 public safety agencies and 1.5 million device connections on the network.

FirstNet public safety users are now using the service throughout the country every day in their efforts to save lives. The FirstNet service, offered by AT&T, is a voluntary service to adopt, and it is up to the public safety entity or agency to decide to subscribe to the service. FirstNet subscribers are a diverse group of public safety entities across a variety of disciplines; and these connections include fire departments, law enforcement agencies, and Federal agencies such as those within the U.S. Department of Justice and the U.S. Department of Homeland Security.

The number of entities, agencies and other FirstNet subscriber information is contract-sensitive trade secret proprietary information that the FirstNet Authority is not authorized to publicly disclose. We would be happy to meet with you and your staff to discuss this matter further.

Response to Written Questions Submitted by Hon. Rick Scott to Edward Parkinson

Question 1. After Hurricane Michael devastated Florida's panhandle, our law enforcement lost communications due to the power and cell outages. And earlier this month, Hurricane Sally brought record flooding and rain to the Pensacola area, causing outages across the Panhandle.

How has FirstNet enhanced telecommunication to ensure that, no matter the situation, our first responders and law enforcement stay connected?

Answer. FirstNet users have access to dedicated Band 14 spectrum, with priority and preemption, to deliver fast and reliable connectivity for first responders and other public safety personnel. The FirstNet network provides public safety with its own "fast lane" so that users have wireless connectivity even if commercial networks are congested. When FirstNet-subscribed agencies need additional connectivity (for example, due to a natural disaster), they have access to a dedicated fleet of deployable network assets available on request at no cost to the agency. These assets are often pre-staged to areas just outside of where a hurricane is expected to land, to ensure that agencies have connectivity immediately following the storm.

In the wake of recent storms, AT&T deployed its FirstNet-dedicated aerostat, FirstNet One, to provide coverage to particularly affected areas. As a resilient and dedicated network with priority and preemption and deployable resources at the ready, FirstNet provides enhanced communications capabilities to the Nation's public safety responders for every-day use and in emergency situations.

Question 2. Have gaps in FirstNet been identified during the build out? How are they being addressed?

Answer. The FirstNet Authority is required to consult with federal, state, tribal, and local public safety entities to ensure that the FirstNet network is designed to meet the needs of first responders across the country. Consultation is critical to the FirstNet Authority's work. Consultation informed the Request for Proposal that resulted in the 25-year contract to AT&T to build and maintain the network and was key in the development of customized State Plans outlining how the FirstNet network would be deployed over a five-year period in each state and territory. These State Plans were designed to meet the needs of first responders and other public safety personnel across the country. FirstNet coverage was planned with local practitioners and officials—and ultimately approved by governors—because public safety knows what works for them. The FirstNet Authority will oversee continuous improvements, expansions, and upgrades to the network to ensure that it will adapt and evolve to meet the changing needs of public safety.

Question 3. What is the pathway for our states with rural areas to receive the same quality FirstNet services?

Answer. Deployment of the Nationwide Public Safety Broadband Network (NPSBN) to support communications in rural America remains a top priority for the FirstNet Authority. The program has worked closely with the Department of Commerce (the Department), including the National Telecommunications and Information Administration (NTIA), to make rural broadband for public safety one of the Department's Annual Performance Goals (APG).

To track rural deployment progress on the APG, the FirstNet Authority analyzes network deployment completion utilizing the Office of Management and Budget's definition of rural population using U.S. Census Bureau data. In September 2019, the FirstNet network covered approximately 45 percent of the rural population, or approximately 23 million of the approximately 51 million people who constitute the Nation's rural population. By the end of March 2020, this coverage had increased by over 8 percent to cover almost 54 percent, or approximately 27.4 million people in rural areas. This growth in coverage surpasses the network deployment targets for the year as FirstNet continues the initial five-year network deployment scheduled for completion in 2023.

The FirstNet Authority is responsible for verifying AT&T's delivery of the NPSBN, including in rural areas, to ensure Florida's public safety community receives the enhanced communications capabilities promised in Florida's State Plan. To ensure this work continues and the deployment is completed, the FirstNet Authority maintains strong network management and oversight to validate AT&T's contractual obligations and ensure that public safety is receiving quality NPSBN services that meet their needs.

Question 4. What is FirstNet and AT&T doing to ensure that the network and technology are secure and protected from our adversaries or bad actors?

Answer. Congress was clear in Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) that securing the FirstNet network from cyber threats was fundamental to the successful implementation of the NPSBN. End-to-end cybersecurity is critical to the network and its users. In partnering with AT&T, the FirstNet Authority is capitalizing on years of planning and experience to create the secure environment that first responders expect. The FirstNet Authority and AT&T have worked closely with respect to the design for the FirstNet network's cyber solution and the overall security of the network. Among the key components of the enhanced cybersecurity of the NPSBN design is the nationwide dedicated core network AT&T is implementing. Rather than simply treating public safety as another customer, FirstNet subscribers are handled by a separate core, ensuring higher levels of reliability, redundancy, and protection through the dedicated processing of its network traffic.

Another essential enhancement is AT&T's dedicated Security Operations Center (SOC) that monitors, detects, and mitigates threats in cybersecurity for the NPSBN. The SOC provides 24/7/365 coverage and support for all cybersecurity considerations and is backed up by the full global network visibility of AT&T to ensure proactive security for public safety.

The cybersecurity team is also working cross-functionally to ensure that future users understand FirstNet's cyber solution and have trust in the tools used on the FirstNet network. Fundamental to these efforts is objective oversight of the cybersecurity solution for the NPSBN. This oversight includes an independent verification and validation of the solution's compliance with the objectives set forth in the FirstNet Authority's contract with AT&T. This ongoing process will be exten-

sive and dynamic, and will include specific reporting, real-time access to incident tracking, onsite meetings, and other avenues as the system evolves.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARSHA BLACKBURN TO EDWARD PARKINSON

Interoperability

Question 1. FirstNet was created to provide a single platform for first responders to communicate to address the challenges they confronted during the 9/11 terrorist attacks, Hurricane Katrina and other emergency events.

How has FirstNet improved interoperability across public safety agencies and jurisdictions?

Answer. Through a successful effort by the FirstNet Authority that culminated in individualized network deployment plans for every state and territory, all states and territories decided to opt-in to the FirstNet network. As a result, the FirstNet Authority has established a single, interoperable nationwide network, as required by Congress, which ensures that users from different jurisdictions, agencies, and across levels of government have seamless interoperable communications. By utilizing one contiguous band of spectrum, Band 14, and operating on a single, dedicated nationwide core network, FirstNet has overcome the interoperability challenges and risks incumbent in a network comprised of patchwork systems.

FirstNet is also inherently interoperable with other networks. Per the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) requirements, the FirstNet network solution is based upon open commercial standards such as 3GPP—the same standards that apply to commercial LTE networks. Additionally, the FirstNet network connects to the public Internet and Public Switched Telephone Network. Consequently, public safety subscriber communications between FirstNet and other networks interconnect in the same manner as is the current practice between commercial carriers, including calls, texts, and multimedia messages to any other wireless user on any other network. The FirstNet App Catalog also offers innovative solutions that allow interoperability between traditional Land-Mobile Radios (LMRs) and FirstNet smartphones and devices.

Any first responder data that flows through FirstNet receives priority as it transits the network. There is nothing that a public safety user has to do to allow for its data to be prioritized—it is simply inherent to the network. In addition to their data being processed on a priority basis, primary users (*e.g.,* law enforcement, fire service, EMS) are designated such that they have the ability to preempt others to ensure access to the system even in cases of emergencies and congestion. As far as connectivity to non-FirstNet users, all users can call, text, message with any other commercial/landline network worldwide just like normal cellular today.

Network Performance

Question 2. I understand there has been some issues with devices operating on FirstNet's signal strength as compared to devices operating on commercial networks.

What steps has FirstNet taken, or expects to take, to ensure that the coverage meets its required objectives, including a signal strength required to provide acceptable network performance for its users' needs?

Answer. Network performance and signal strength are critical to first responder user needs, especially in comparison to traditional commercial networks. To address those needs there are a number of steps the FirstNet Authority is taking, such as improving coverage over the life of the contract with AT&T and offering enhanced technology, such as High-Power User Equipment (HPUE) that will improve signal strength and network performance.

The FirstNet Authority is responsible for ensuring that its contractor, AT&T, deploys, operates, and maintains the Nationwide Public Safety Broadband Network (NPSBN) for 25 years. Part of this responsibility includes validating that the coverage deployed in Tennessee and across the United States meet the required objectives, including signal strength, and that the network provides acceptable performance for the Nation's first responders.

The initial deployment plan for the NPSBN commenced in 2018 and the network's wireless coverage continues to expand on a regular basis as AT&T progresses towards completing the nationwide network build. Additionally, FirstNet users have access to not only Band 14 (the FirstNet Authority's licensed spectrum) but all of AT&T's LTE spectrum bands and the company's entire coverage footprint.

To ensure performance, AT&T is regularly conducting field tests and the FirstNet Authority lab team conducts similar tests in a lab setting that demonstrates the sig-

nal strength threshold for Band 14 is sufficient to satisfy the throughput required by public safety. The FirstNet Authority is also responsible for ensuring AT&T delivers enhanced communications capabilities such as push-to-talk and video connectivity, among other solutions. As the network build continues over the next several years, additional capabilities are becoming available such as HPUE devices that will further extend the range and improve the experience of public safety users. These devices have a longer range than traditional radios.

Communication Apps

Question 3. Communication Apps on the FirstNet App Catalogue are paramount to keeping our first responders safe, aware, and informed of any given situation.

I know some of these apps use considerable bandwidth while in use. Can you please site examples or specific apps that extend the reach of radio users with LTE interoperability and improve the capabilities of radio with multi-media data and video exchanges?

Answer. Mission Critical Push-to-Talk (MCPTT) is a set of standards established by the 3rd Generation Partnership Project (3GPP) to address some of the most specific needs of first responders for their LTE-based communications. When realized, mission critical services are not just a feature within the network but rather represent an entire ecosystem encompassing the applications, devices, and services that leverage the network. One of the FirstNet Authority's Roadmap priorities is to operationalize this concept, striving for consistency of experience and ease of adoption throughout the mission critical services suite of capabilities.

The FirstNet Authority shares what it learns from public safety engagements with AT&T as a collaborative effort to improve the network and its services for public safety. The FirstNet Authority actively engages with AT&T in early beta trials of new products, and shares feedback and lessons learned to help hone those products more specifically toward first responder needs.

The FirstNet Authority followed this process to support AT&T as they developed FirstNet Push-to-Talk (FirstNet PTT), the first nationwide, mission-critical standards-based service of its kind ever released in the United States. This product focuses on augmenting Land Mobile Radio (LMR), giving responders additional ways to expand their communication capabilities.

The FirstNet PTT Release 1.0 delivered initial foundational capabilities for public safety including: one-to-one calling, group calling, ability to declare an emergency and preempt other PTT calls, text messaging to groups or individuals, and mutual aid capabilities. Release 1.0 was followed shortly by release 1.5 that introduced a downloadable application that could be installed on Android devices such as the Samsung S9 and S10. The FirstNet Authority continues to support the development of future upgrades that will expand offerings and boost the ecosystem of devices able to support these applications.

Interoperability with existing LMR systems is key to making FirstNet PTT complement an agency's existing communication plans. LMR to FirstNet PTT via Radio over Internet Protocol (ROIP) interfaces will be available for talk-group interoperability between FirstNet PTT users and LMR users this fall. The more sophisticated interfaces that deal with the demands of larger systems and larger numbers of talkgroups are scheduled for a future release.

Many agencies throughout the country are using FirstNet certified devices, which are certified by the National Institute of Standards and Technology's (NIST) Communications Technology Laboratory, to disseminate video to responders in the field, something they simply could not achieve on narrowband LMR devices. A preponderance of Computer Aided Dispatch (CAD) solution providers are now offering a mobile version of their field applications so that first responders can continue to receive and transmit data about the calls they are responding to—whether on foot, on a bike, or in a vehicle. These data-intensive applications can include photo and video attachments in addition to other information. These features have been widely requested by responders, as they enhance their ability to locate individuals in need and track how quickly back-up or mutual aid will arrive. Ultimately, these applications serve to improve responder safety, communications, and response times.

Spectrum

Question 4. Public Safety and commercial partners are making immense investments in equipment to support FirstNet implementation.

What oversight is FirstNet taking to ensure the long-term viability and use of these systems given the push to frequently change how the spectrum is used and the historic disablement of other devices that used it?

Answer. The FirstNet Authority must be vigilant in its responsibility to be self-sustaining while also continuing to future-proof the FirstNet network for public

safety. One area that the FirstNet Authority has been focused on is the future investment into the FirstNet network. Earlier this year, the FirstNet Authority Board approved the first set of investments for enhancing the NPSBN. Specifically, the Board approved more than $200 million for initial network upgrades to set FirstNet on the path to 5G and to expand the dedicated fleet of deployable assets.

Evolving the network to 5G is expected to be a multi-phase effort, beginning with upgrades to the dedicated FirstNet network core. The physically separate, highly available, redundant, and highly secure network core is foundational to FirstNet. This infrastructure acts as the nervous system of the network, separates all public safety traffic from non-public safety user traffic, and enables differentiated services for network users. In the future, 5G is expected to drive major increases in the quantity and types of connected devices for FirstNet users, including connected vehicles, unmanned aerial vehicles, and the Internet of Things.

The FirstNet Authority's investments are made possible through a sustainable business model that enables the organization to continually improve and advance the network. The investments align with the FirstNet Authority's Roadmap, which outlines the key priorities and activities for advancing and evolving the network beyond current contractual commitments. In addition, the FirstNet Authority established a set of investment principles to further guide the decision-making process for network investment.

Regarding devices, the FirstNet network currently supports a multitude of devices, over 200+ certified for use on FirstNet by NIST's Communications Technology Laboratory, which are based on international standards and support 3G to 5G. The FirstNet Authority will continue to ensure that flexibility, choice, and affordability characterize the device portfolio available to FirstNet subscribers.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO EDWARD PARKINSON

FirstNet plays a vital role ensuring public safety by enabling connectivity, especially in areas without reliable broadband. The COVID–19 pandemic underscores it importance. However, in conducting oversight of FirstNet, the Government Accountability Office ("GAO") found local, state, and tribal stakeholders felt a lack of engagement by FirstNet and AT&T. The stakeholders described minimal contact and insufficient information from FirstNet and AT&T. At the hearing, you and Mr. Porter introduced firstnet.gov, explaining that public safety officials in each state could use this website to locate the name, phone number, and e-mail for the FirstNet point of contact in their state. While a start, this falls short of addressing the greater transparency and information sharing recommended by the GAO report. I seek additional information about FirstNet and AT&T's accountability to their stakeholders and any improvements made in light of the GAO report.

Question 1. In accordance with GAO's recommendations, do you make the state-specific FirstNet commitments and metrics available to Congress and state officials?

Answer. In accordance with the GAO's recommendation, the FirstNet Authority, in collaboration with AT&T, is strengthening its process by which the state-specific commitment reports are shared with the states and is developing a regular cadence and approach to sharing information with states and Congress that is consistent, reliable, and transparent. The FirstNet Authority anticipates completing this action by December 2020.

Question 2. On your recently launched website, firstnet.gov, you provide contact information for the FirstNet Authority representative in each state. Beyond the information listed, how are public safety officials able to contact and communicate with you?

Answer. The FirstNet Authority encourages public safety officials to contact and communicate with the program in any way possible. Firstnet.gov is an excellent resource for public safety to connect with state and regional representatives via e-mail or phone with questions, feedback, or requests for information about the program. There is also a general e-mail box (*info@firstnet.gov*); phone number (571–665–6100); and mailing address (12201 Sunrise Valley Dr., Reston, VA 20192) that public safety officials can use to communicate with the FirstNet Authority. All of this information appears on the firstnet.gov website. Additionally, in an effort to continue to survey public safety feedback on the program, the FirstNet Authority has launched a public safety user survey tool at: *https://www.firstnet.gov/public-safety/public-safety-advocacy.* Moreover, the FirstNet Authority's Public Safety Engagement team is dedicated to ongoing, pro-active engagement with Federal, tribal, state, and local stakeholders across the country to educate public safety about the program and solicit input to ensure the network continues to meet their needs.

If individuals want to learn more about the FirstNet network service or how to subscribe, the FirstNet Authority directs them to *FirstNet.com,* which is the website managed by the Nationwide Public Safety Broadband Network contractor, AT&T. For billing, verification, and/or account assistance, FirstNet subscribers can call the FirstNet-dedicated customer service number: 800–574–7000.

Question 3. The GAO report recommended increased transparency and sharing of deployment and oversight information with stakeholders. What concrete steps have you taken towards implementing these changes?

Answer. The FirstNet Authority is working collaboratively with AT&T to examine and identify oversight and monitoring information that can be shared with public safety stakeholders, consistent with adequate protection of program-sensitive and trade-secret information. The FirstNet Authority also plans to determine the best methods and appropriate frequency for the release of such oversight and monitoring information to stakeholders. Finally, the program is modifying the process and approach for sharing relevant portions of the state-specific commitment reports with the states. These actions commenced earlier this year, and the FirstNet Authority anticipates completing them by December 2020.

Question 4. Do you plan to take any further action to better communicate with and receive feedback from your stakeholders? If so, what is the plan? If not, please describe how and why your current communication methods are sufficient in addressing stakeholder concerns.

Answer. The FirstNet Authority plans to continue to find new and better ways to communicate with and receive feedback from stakeholders. Guided by the FirstNet Authority's Strategic Plan, the program is enhancing its efforts to obtain feedback on public safety sentiment through surveys, targeted engagements, and contractually delivered data. Aligned with these efforts, the FirstNet Authority is analyzing new and existing data to identify public safety satisfaction indicators and measurements that align to and drive future engagements and contract oversight.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. KYRSTEN SINEMA TO EDWARD PARKINSON

Question 1. Throughout the country, first responders put their lives on the line to protect us, and reliable communications are critical to their response efforts. Wildfire season is always a difficult time for my state, and the current public health crisis further complicates fire season for Arizona families.

I am pleased to hear many positive reports from Arizona public safety officials in our larger communities that have switched to FirstNet, such as in Phoenix, Mesa, and Flagstaff. But we need to continue these efforts to more rural areas of the state. I have spoken to Arizona first responders in rural areas that cannot utilize FirstNet services due to a lack of infrastructure.

It is critical to have infrastructure in place so that firefighters and other first responders can ensure a swift initial response to contain fires. What is FirstNet doing to ensure first responders in rural areas have the accessible communications network necessary for their work, particularly in the following areas of Arizona: the southern border with Mexico; the Grand Canyon tourist area; the northwest portion of the state; and rural areas with a high likelihood of wildfires and other potential natural disasters.

Answer. The FirstNet Authority agrees that it is critical to have infrastructure in place in Arizona so that first responders can communicate to perform their life-saving missions. When the FirstNet Authority engages and consults with public safety agencies in Arizona and across the United States, frequently the number one priority is the need for additional wireless coverage.

The FirstNet Authority's contractor, AT&T, is responsible for the completion of Arizona's State Plan deployment, and the deployment of new towers in the state. This initial deployment commenced in 2018 and will continue through 2023. The FirstNet Authority is responsible for verifying AT&T's delivery of the Nationwide Public Safety Broadband Network (NPSBN), including in rural areas, to ensure Arizona's public safety community receives enhanced communications capabilities. To ensure this work continues and the deployment is completed, the FirstNet Authority maintains strong contract management and oversight to validate AT&T's contractual obligations and ensure that public safety is receiving quality NPSBN services.

The public-private arrangement between the FirstNet Authority and AT&T is a 25-year commitment. As the program is only approximately two and a half years into the five-year initial deployment, one unique and exciting aspect about FirstNet is that public safety stakeholders will guide the future buildout, expansion, and evolution of the NPSBN. The FirstNet Authority has established a Roadmap to guide

future network investments and plans to continuously consult with first responder stakeholders. This will inform how the network evolves in the years to come to meet the unique needs and priorities of public safety.

Question 2. Tribal communities in Arizona have been disproportionately impacted by the coronavirus and face particular challenges for connectivity. Please describe your progress developing FirstNet infrastructure in tribal areas and your engagement and coordination with tribal communities on the development of FirstNet in tribal areas.

Answer. The FirstNet Authority respects the nation-to-nation relationship that exists between Federally recognized Indian tribes and the United States government. In partnership with the Public Safety Advisory Committee's Tribal Working Group, the FirstNet Authority adopted a Tribal Consultation Policy to establish a foundation for honoring tribal sovereignty, accompanied by productive communications, consideration, and engagement with tribal governments surrounding the deployment of the NPSBN.

The FirstNet Authority and its contractor, AT&T, have worked with several tribes to plan for and deploy infrastructure on tribal lands, such as the Cocopah, the Navajo, Tohono O'odam Nation, Pascua Yaqui, and White Mountain Apache. Additionally, deployable FirstNet infrastructure has supported public safety response in tribal communities. For example, FirstNet recently supported a response to COVID–19 on the Navajo Nation by providing several deployable assets to critical response locations in coordination with partnering Federal agencies.

Question 3. How many deployable resources are stationed in the state of Arizona? Have you performed any analysis to determine if the number of deployable resources is sufficient to meet the needs of first responders during the busiest times, such as wildfire season?

Answer. The FirstNet Authority, in partnership with its contractor, offers FirstNet-subscribed agencies access to a dedicated fleet of portable network deployable assets, including: 72 Satellite Cells on Light Trucks (SatCOLTs), 3 Cells on Wings (Flying COWs), and other solutions, such as FirstNet One, an aerostat (large blimp), to boost coverage during disasters or large planned events. These mobile cell sites link to FirstNet via satellite, do not rely on commercial power availability, provide similar capabilities and connectivity as a cell tower, and are available to public safety subscribers 24/7 at no extra cost.

While the FirstNet Authority cannot publicly release where these deployable assets are located because that information is contract-sensitive and proprietary, these dynamic FirstNet-dedicated assets can be deployed and staged anywhere across the country as circumstances warrant. During emergency situations or planned events where augmented coverage and capacity are required and following an established services request process, AT&T will then evaluate the request and provide the warranted FirstNet dedicated deployable services at no cost to public safety, within a 14-hour delivery window.

FirstNet deployables provide public safety users with dedicated coverage and capacity when they need it, in a variety of situations, including during emergency operations in remote locations with limited connectivity, as well as when a disaster, such as a fire, tornado, hurricane, or other severe storm event, has impacted cell towers. The ability to request support from the dedicated fleet of FirstNet deployable assets is a unique advantage for FirstNet users and ensures first responders on the network have the connectivity they need—when and where they need it.

The FirstNet Authority has contracted with AT&T to provide the deployable network solution to FirstNet customers. In 2020, the program has actively supported public safety personnel so that they are able to remain connected during responses to the COVID–19 pandemic, wildfires in the western U.S., an active hurricane season in the Gulf of Mexico, and many other emergency and planned situations. As of October 12, 2020, FirstNet users have submitted hundreds of requests for deployable assets, including 59 requests to provide connectivity to support wildfire response, more than 60 requests related to COVID–19 response operations, 49 requests for network support following Hurricane Laura, 8 requests for Hurricane Sally, and 2 requests for Hurricane Delta.

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cell-sites-supporting-navajo-nation-covid-19-response-vT6EEqWDSUyDwK2-4eg-Fg

- FirstNet helps public safety respond to tornado damage in Tennessee: *https://firstnet.gov/newsroom/blog/firstnet-helps-tennessee-public-safety-respond-tornado-damage*
- Communications Boosted at Birkebeiner Race with FirstNet Deployable in Wisconsin: *https://firstnet.gov/newsroom/blog/communications-boosted-birkebeiner-race-firstnet-deployable*
- FirstNet One Takes to the Skies; Elevates Public Safety Communications Following Hurricane Laura: *https://about.att.com/innovationblog/2020/09/fn_one_hurricane_laura.html*
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Additionally, the FirstNet Authority would like to submit for the record a recent study released about the FirstNet deployable program by the Police Executive Research Forum. The study can be viewed here: *https://www.policeforum.org/assets/FirstNetDeployables.pdf*.

Finally, an internal analysis of the deployable program aided the FirstNet Authority in the decision to invest in more of these deployable assets in the future, so that the program may continue to support public safety when and where they need connectivity. Earlier this year, the FirstNet Authority Board approved the first set of investments for enhancing the NPSBN. Specifically, the Board approved more than $200 million for initial network upgrades to set FirstNet on the path to 5G and to expand the dedicated fleet of deployable assets.

Question 4. In my outreach with Arizona first responders, some mentioned particular applications and capabilities which they are looking to deploy to advance their response efforts. Please describe FirstNet's progress on push to talk capabilities, and on connectivity to unmanned aircraft and helmet cams.

Answer. Mission Critical Push-to-Talk (MCPTT) is a set of standards established by the 3rd Generation Partnership Project (3GPP) to address some of the most specific needs of first responders for their LTE-based communications. When realized, mission critical services are not just a feature within the network but rather represent an entire ecosystem encompassing the applications, devices, and services that leverage the network. One of the FirstNet Authority's Roadmap priorities is to operationalize this concept, striving for consistency of experience and ease of adoption throughout the mission critical services suite of capabilities.

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Many agencies throughout the country are using FirstNet-certified devices, which are certified by the National Institute of Standards and Technology's (NIST) Communications Technology Laboratory, to disseminate video to responders in the field, something they simply could not achieve on narrowband LMR devices. A preponderance of Computer Aided Dispatch (CAD) solution providers are now offering a mobile version of their field applications so that first responders can continue to receive

and transmit data about the calls they are responding to—whether on foot, on a bike, or in a vehicle. These data-intensive applications can include photo and video attachments in addition to other information. These features have been widely requested by responders, as they enhance their ability to locate individuals in need and track how quickly back-up or mutual aid will arrive. Ultimately, these applications serve to improve responder safety, communications, and response times.

Additionally, the FirstNet Authority has been engaging with agencies throughout the country to understand their utilization of unmanned aerial systems (UAS) and body/helmet worn camera video to enhance their operational response and increase situational awareness. In September 2020, the FirstNet Authority team spoke with representatives from the Chandler Arizona Police Department (Chandler PD) regarding UAS operations, how the data products are consumed, and how FirstNet can be used to transmit sensor video to those consumers. The region's FirstNet Authority Public Safety Advisor will continue to engage with the Chandler PD team as they develop their UAS data dissemination solution.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JACKY ROSEN TO EDWARD PARKINSON

DEPLOYMENT IN NEVADA: According to my state's Department of Public Safety, AT&T plans to build out about 30 cell sites in Nevada in the next 6 months.

Question 1. Can you describe FirstNet's partnerships with rural and regional carriers to expand service to these communities?

Answer. One of the FirstNet Authority's top priorities is expanding coverage for first responders where they need connectivity in rural areas across the country. As the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) specifically calls out, the network must be deployed in rural America, not just urban centers. The FirstNet Authority stimulated the speed of deployment in its contract with AT&T by encouraging rural carrier partnerships with service providers that had existing infrastructure that complemented AT&T's coverage footprint. This has allowed AT&T to expand the Nationwide Public Safety Broadband Network's (NPSBN) reach in parts of Nevada, and other regions of the country, more rapidly than by putting up brand new cell sites in those harder to reach rural and tribal areas.

LOCAL, STATE, AND TRIBAL ENGAGEMENT: The January GAO report on FirstNet described comments from some local, state, and Tribal stakeholders about a perceived lack of engagement. These stakeholders claimed that they initially had extensive consultations with FirstNet, but later were not receiving much information or transparency on broadband deployment and FirstNet oversight. GAO made several recommendations to FirstNet on improving information-sharing and collaboration with shareholders.

Question 2. Can you share how FirstNet has begun implementing these recommendations for local, state, and Tribal engagement?

Answer. In accordance with the GAO's recommendation, the FirstNet Authority, in collaboration with AT&T, is strengthening its process by which the state-specific commitment reports are shared with the states and is developing a regular cadence and approach to sharing information with states that is consistent, reliable, and transparent. Additionally, the FirstNet Authority plans to continue to find new and better ways to communicate with and receive feedback from local, state, Federal, and tribal stakeholders. Guided by the FirstNet Authority's Strategic Plan, the FirstNet Authority is enhancing its efforts to obtain feedback on public safety sentiment through surveys, targeted engagements, and contractually delivered data. Aligned with these efforts, the FirstNet Authority is analyzing new and existing data to identify public safety satisfaction indicators and measurements that align to and drive our future engagements and contract oversight.

Question 3. How does FirstNet partner with local communities, especially when selecting locations of new cell sites or other infrastructure?

Answer. The FirstNet Authority is required to consult with Federal, state, tribal, and local public safety entities to ensure that the FirstNet network is designed to meet the needs of first responders across the country. Consultation is critical to the FirstNet Authority's work. Consultation informed the Request for Proposal that resulted in the 25-year contract to AT&T to build and maintain the network and was key in the development of customized State Plans outlining how the FirstNet network would be deployed over a five-year period in each state and territory. These State Plans were designed to meet the needs of first responders and other public safety personnel across the country. FirstNet coverage was planned with local prac-

titioners and officials—and ultimately approved by governors—because they know best what their first responders need. The FirstNet Authority will oversee continuous improvements, expansions, and upgrades to the network to ensure that it will adapt and evolve to meet the changing needs of public safety.

The FirstNet Authority is aware that emergency responders' needs will change. To keep up to date, the FirstNet Authority employs a dedicated team whose mission is to engage with public safety nationwide, including in local communities, to learn what works, what does not, and how services can be improved. That feedback is instrumental in helping to shape the future of the network.

Question 4. I know that the cost of upgrading equipment can be a barrier for our state and local agencies. Do you know of any available grant funding to help state and local agencies transition to FirstNet?

Answer. The FirstNet Authority understands the budget constraints many public safety agencies must manage and that FirstNet, while voluntary, does come at a cost. The program's contractor, AT&T, has worked hard to control costs so that the network can be affordable for public safety agencies and is incentivized to do so through NPSBN contract. The FirstNet Authority also understands that state and local agencies often look to Federal grant programs for assistance. Federal financial assistance has long been a critical funding resource for public safety, and will help drive NPSBN user adoption by providing financial support to many first responders who subscribe to the network.

Federal grants are a significant resource to support state, local, tribal and territorial emergency communications systems across the Nation and grant dollars fund emerging technology systems, training, equipment, and planning costs. Most recently, funding in the Coronavirus Aid, Relief, and Economic Security (CARES Act) provided some assistance for the procurement of devices and other information technology equipment. The FirstNet Authority engages with Federal, state, tribal, and local agencies in discussions around grant programs that these agencies have available to them.

Although these programs are not administered by the FirstNet Authority, they include, but are not limited to: the Homeland Security Grant Program at the U.S. Department of Homeland Security, a number of grants at the U.S. Department of Justice such as the Edward Byrne Memorial Justice Assistance Grant Program and the Tribal Access Program, and grant programs at the U.S. Department of Health and Human Services and the U.S. Department of Agriculture.

The FirstNet Authority has also received feedback from users, such as the Indiana Integrated Public Safety Commission, that found FirstNet can cut costs across public safety departments. In the case of Indiana (see: *https://firstnet.gov/newsroom/podcast/episode-29-indiana-approach-lmr-lte-interoperability*) use of FirstNet devices and an app that enables smartphones to communicate with traditional Land-Mobile Radios (LMRs) has meant that agencies are able replace certain radio equipment with low-cost smartphones.

SOFTWARE APPLICATION CYBERSECURITY: Earlier this year, AT&T struck an agreement with Nellis Air Force Base to deploy its 5G services and deliver FirstNet to the base. This agreement provides the necessary coverage to the 9,500 military and civilian personnel and over 40,000 members of our military population in the area, including families and retirees.

I applaud and support the efforts made to bring the next generation of telecommunications and 9–1–1 first responder services to one of Nevada's crown jewels, but given the critical infrastructure at play, I also want to ensure that the cybersecurity policies and standards are top-notch and that the users of the network are not vulnerable.

One specific aspect of cybersecurity I'm interested in is how the data shared over this network and application ecosystem is protected.

Question 5. How is the First Responder Network Authority ensuring that the sensitive data, like exact location and other identifiable information, is not vulnerable to bad actors, especially when talking about software applications for the public safety market?

Answer. Congress was clear in the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112–96) that securing the FirstNet network from cyber threats was fundamental to the successful implementation of the NPSBN. End-to-end cybersecurity is critical to the network and its users. In partnering with AT&T, the FirstNet Authority is capitalizing on years of planning and experience to create the secure environment that first responders expect. The FirstNet Authority and AT&T have worked closely with respect to the design for the FirstNet network's cyber solution and the overall security of the network. Among the key components of the enhanced cybersecurity of the NPSBN design is the nationwide dedicated core network

AT&T has deployed. Rather than simply treating public safety as another customer, FirstNet subscribers are handled by a separate core, ensuring higher levels of reliability, redundancy, and protection through the dedicated processing of its network traffic.

Another essential enhancement is AT&T's dedicated Security Operations Center (SOC) that monitors, detects, and mitigates vulnerabilities and threats that might impact the cybersecurity of the NPSBN. The SOC provides 24/7/365 coverage and support for all cybersecurity considerations and is backed up by the full global network visibility of AT&T to ensure proactive security for public safety.

The cybersecurity team is also working cross-functionally to ensure that public safety users understand FirstNet's cyber solution and have trust in the tools used on the FirstNet network. Fundamental to these efforts is objective oversight of the cybersecurity solution for the NPSBN. This oversight includes an independent verification and validation of the solution's compliance with the objectives set forth in the FirstNet Authority's contract with AT&T. This ongoing process is extensive and dynamic, and will include specific reporting, real-time access to incident tracking, onsite meetings, and other avenues as the system evolves.

Question 6. What processes are in place for vetting the software applications developed for that market?

Answer. The FirstNet Authority takes cybersecurity and the security of applications that public safety uses on the network extremely seriously. Today, the FirstNet Applications Catalog (App Catalog) is available to FirstNet subscribers and identifies a range of vetted and reliable public safety focused applications. While first responders can use applications from any commercial store, the FirstNet App Catalog only includes those that have undergone a rigorous vetting and approval process.

Any application in the App Catalog must meet public safety criteria, including security and data privacy conditions to be listed or certified. The software is reviewed and vetted to 1) verify the application is directly relevant to the needs of first responders, 2) be highly confident the software is secure and protects data, and 3) demonstrate a history of limited unplanned outages with three 9's (99.9 percent) availability. Additionally, applications can become FirstNet Certified™. These applications have demonstrated their ability to limit unplanned outages with four 9's (99.99 percent) availability and meet the additional criteria of resiliency, scalability, and optimized use of mobility resources.

The FirstNet App Catalog is growing quickly ‒ 150 applications are now included. Every addition to the FirstNet App Catalog means more ways for public safety to take advantage of the unique features of the FirstNet network. Each application in the catalog is identified with a primary activity it enables, making it easy for responders to identify the ones they may need.

WILDFIRES: The ongoing wildfires in the West are devastating our communities, businesses, and our environment. They also pose a danger to our communications and critical infrastructure, making it harder for our first responders to respond. I know that FirstNet currently has over 70 deployable assets, and is helping to ensure that our firefighters and other first responders have connectivity and enhanced network coverage during the current wildfires, as well as other emergencies.

Question 7. Can you describe FirstNet's plans to grow your fleet of deployables and how they can improve effectiveness for public safety operations?

Answer. The FirstNet Authority, in collaboration with its contracted partner, AT&T, offers FirstNet subscribed agencies access to a dedicated fleet of portable network deployable assets including: 72 Satellite Cells on Light Trucks (SatCOLTs), 3 Cells on Wings (Flying COWs) and other solutions, such as FirstNet One, an aerostat (large blimp) to boost coverage during disasters or large planned events and are available to public safety subscribers 24/7 at no extra cost. These mobile cell sites link to FirstNet via satellite, do not rely on commercial power availability, and provide similar capabilities and connectivity as a cell tower.

FirstNet deployables provide public safety users with dedicated coverage and capacity when they need it, in a variety of situations, including during emergency operations in remote locations with limited connectivity, as well as when a disaster, such as a fire, tornado, hurricane or other severe storm event, has impacted cell towers. The ability to request support from the dedicated fleet of FirstNet deployable assets is a unique advantage for FirstNet users and ensures first responders on the network have the connectivity they need—when and where they need it.

The FirstNet Authority has contracted with AT&T to provide the deployable network solution to FirstNet customers. In 2020, the program has actively supported public safety personnel so that they are able to remain connected during responses

to the COVID–19 pandemic, wildfires in the western United States, an active hurricane season in the Gulf of Mexico, and many other emergency and planned situations. As of October 12, 2020, FirstNet users have submitted hundreds of requests for deployable assets, including 59 requests to provide connectivity to support wildfire response, more than 60 requests related to COVID–19 response operations, 49 requests for network support following Hurricane Laura, 8 requests for Hurricane Sally, and 2 requests for Hurricane Delta.

Below are some examples of public safety's use of the deployable program:

- FirstNet supporting public safety response to the Wildfires in the western U.S.: *https://about.att.com/newsroom/2020/west_coast_wildfires.html*
- FirstNet deploys mobile cell sites supporting Navajo Nation COVID–19 response: *https://indiancountrytoday.com/the-press-pool/firstnet-deploys-mobile-cell-sites-supporting-navajo-nation-covid-19-response-vT6EEqWDSUyDwK2-4eg-Fg*
- FirstNet helps public safety respond to tornado damage in Tennessee: *https://firstnet.gov/newsroom/blog/firstnet-helps-tennessee-public-safety-respond-tornado-damage*
- Communications Boosted at Birkebeiner Race with FirstNet Deployable in Wisconsin: *https://firstnet.gov/newsroom/blog/communications-boosted-birkebeiner-race-firstnet-deployable*
- FirstNet One Takes to the Skies; Elevates Public Safety Communications Following Hurricane Laura: *https://about.att.com/innovationblog/2020/09/fn_one_hurricane_laura.html*
- FirstNet: Caring for Those Who Care for You: *https://about.att.com/innovationblog/2020/05/fn_covid_19_response.html*

Additionally, the FirstNet Authority would like to submit for the record a recent study released about the FirstNet deployable program by the Police Executive Research Forum. The study can be viewed at: *https://www.policeforum.org/assets/FirstNetDeployables.pdf*.

Finally, an internal analysis aided the FirstNet Authority's decision to invest in more of these deployable assets, so that the network can continue to support public safety when and where they need connectivity. Earlier this year, the FirstNet Authority Board approved the first set of investments for enhancing the NPSBN. Specifically, the Board approved more than $200 million for initial network upgrades to set FirstNet on the path to 5G and to expand the dedicated fleet of deployable assets.

Question 8. How do FirstNet and AT&T work with our public land management agencies—such as Forest Service or Bureau of Land Management—during wildfires and other disasters?

Answer. AT&T's FirstNet Response Operations Group Program operates in alignment with the National Incident Management System and the Incident Command System, developed by the Federal Emergency Management Agency. This approach helps FirstNet coordinate with a multitude of agencies across various levels of government and prioritize deployments based on a number of situational awareness factors. It also facilitates the efficient deployment of mobile assets for requesting FirstNet-subscriber agencies during critical incidents, such as wildfires.

The FirstNet Authority, through its Public Safety Engagement team, has educated Federal agencies on the use and integration of public safety broadband data during planned and unplanned events. The FirstNet Authority and AT&T have been working closely with the U.S. Department of the Interior (DOI) Office of Wildland Fire over the past two years in planning and execution of a proof-of-concept to bring broadband onto the fireground during complex wildland fires. Select Incident Management Teams are utilizing the FirstNet solution and equipment packages to determine performance characteristics and processes through the 2020 fire season in order to determine practicality for a wider distribution and implementation in the future. The U.S. Forest Service and other DOI bureaus, such as the Bureau of Land Management, have been involved in this proof-of-concept effort as part of the overall interagency approach to battling wildfires.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER WICKER TO JASON PORTER

Question 1. How is AT&T ensuring that its cellular towers are sufficiently "hardened" to withstand natural disasters such as tornadoes and hurricanes in Mississippi?

Answer. Whether it is an owner or a lessee of a macro cell tower, AT&T confirms that every tower in Mississippi on which network facilities are attached has undergone structural analysis to ensure that it has been built to the Telecommunications Industry Association Standards and International Building Code. Additionally, there are annual inspections to affirm compliance with these standards. Similar analyses are conducted before modifications or attachments to towers are made.

AT&T has placed fixed generators at 80 percent of new site build locations in the state to guard against loss of commercial power, and further ensures a minimum of four hours of battery backup power at locations without a fixed generator. The sites in Mississippi with battery backup are also covered by the company's national generator overlay plan that provisions generators at existing mobility locations when they are needed. All generators are exercised on a monthly basis to ensure they will run in the event of a commercial power loss, and AT&T completes preventive maintenance on each location twice per year. Where AT&T has entered into shared generator agreements with other tower owners, AT&T has service level agreements in place to ensure that the generator will be in working condition 24/7/365.

In hurricane and tornado-prone areas like Mississippi, AT&T has taken extra hardening steps such as installing back-up and permanent generators at critical cell sites and switching facilities, locating critical equipment in less vulnerable areas, and protecting against flooding by elevating critical equipment in flood-prone areas. AT&T supports FirstNet users in Mississippi with its FirstNet Response Operations Group (ROG), which serves as public safety's direct partner for their connectivity needs, whenever they need it. This group, established in 2018, is staffed by a team of former first responders and helps manage the FirstNet-dedicated fleet of deployable assets, such as the mobile cell sites that link to FirstNet via satellite and do not rely on commercial power availability.

Examples of recent FirstNet deployable responses in Mississippi include:

- A FirstNet SatCOLT boosted connectivity for first responders at a response center in Soso, MS following an EF4 tornado in April, 2020.
- A FirstNet deployable asset supported the annual PATRIOT South 2020 emergency response training at the Bobby L. Chain Airport in Hattiesburg, MS and Camp Shelby in March, 2020.
- A FirstNet SatCOLT boosted connectivity for first responders at Keesler Air Force Base during the "Thunder Over the Sound" airshow in Biloxi, MS in May, 2019.

In addition to these specific initiatives, AT&T has over 120 years of complex network management and recovery experience and leads one of one of the Nation's largest and most advanced network disaster recovery programs. These resources can be brought to bear on any contingency that may occur in Mississippi. Since 1992, AT&T has invested more than $650 million in its domestic world-class Network Disaster Recovery (NDR) Team and equipment, which is dedicated to recovering 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 AT&T team members. This team, including Disaster Recovery First or "DRF" responders, have spent more than 145,000 working hours on field exercises and deployments in training for all types of situations. We practice our disaster response plans several times each year in anticipation of events, both foreseen and unforeseen.

The AT&T Business Continuity Team (BCT) has extensive experience in planning for and responding to a wide variety of situations that can affect the AT&T network. The BCT plans are designed to get the network back to a Business as Usual (BAU) state as quickly and safely as possible. The BCT planning process is predicated on continuous improvement: it includes incorporating improvement opportunities from previous events into future response activities, as no two natural disasters are ever exactly like. The BCT publishes the Business Continuity Preparedness Handbook, *https://www.att.com/Common/about_us/pdf/business_continuity_handbook.pdf* (last accessed Oct. 22, 2020), and, as part of its Business Continuity Management mission, administers the Telecommunications Service Priority, Wireless Priority Service and Government Emergency Telecommunications Service programs for AT&T.

Finally, the AT&T Global Technology Operations Center (GTOC) 3P (Preventive, Predictive, Pro-Active) Process collects, identifies, and evaluates the consolidated view of any high-risk network vulnerabilities that occur in a particular area in order to determine if there is a need to develop a mitigation network response plan. The GTOC Service Continuity Compute & Storage organization establishes safeguards to minimize the risk, cost, and duration of disruption to essential business processes. The work of the GTOC is essential to all AT&T up-front prevention and mitigation efforts, as well as to comprehensive emergency response and recovery plans.

Question 2. When does AT&T estimate that all new towers that were committed to be built in Mississippi's FirstNet State Plan will be completed?

Answer. AT&T has five years, until 2023, to build out coverage as agreed by Mississippi Governor Phil Bryant, the Federal government, and AT&T in the FirstNet State Plan for Mississippi. For the next 20-plus years, continuous improvements, expansions, and upgrades will be made and the network in Mississippi will adapt and evolve to meet changing needs. AT&T is on target to meet or exceed its contractual obligations to the FirstNet Authority with respect to the completion of Mississippi's FirstNet State Plan deployment, including the deployment of new towers. Under the state plan deployment there are a number of new, purpose-built FirstNet tower sites coming to Mississippi, and Band 14 has been added to existing sites. New, purpose-built FirstNet tower sites are on-air in Lucedale, George County and in Leakesville, Greene County, near the De Soto National Forest while Band 14 has been deployed in the Mississippi Cellular Market Areas of Jackson, Benton, Biloxi-Gulfport, Lamar, Tunica, Leake, Smith, Pascagoula, Washington, Bolivar, Yalobusha, and Copiah.

The specific FirstNet buildout information presented to each state, including Mississippi, is confidential for both security and competitive reasons. We would be happy to provide additional specific information to your office in a private setting.

Question 3. What is the percentage of the rural geographical coverage in Mississippi by AT&T FirstNet's Band 14 network?

Answer. FirstNet is built for all first responders, including career or volunteer; federal, tribal, state or local; urban, suburban or rural. That is why reaching rural and remote parts of America is one of our top priorities. Over 1,000 new, purpose-built FirstNet sites are currently planned as part of the initial nationwide FirstNet network expansion. Most of these sites are in rural areas. Thus far we have launched over 250 of these sites across the country—including areas in Mississippi such as outlined above.

There are strict rural and non-rural coverage targets that must be met at every phase of the initial five-year buildout of the FirstNet Band 14 spectrum. Now in year three of the buildout, AT&T remains ahead of schedule on the nationwide deployment, reaching over 80 percent of the contracted nationwide Band 14 build in both non-rural and rural areas. AT&T is on track to meet its state deployment plan in Mississippi, where FirstNet adoption has been strong in both rural and urban areas. There are now thousands of FirstNet users from across public safety disciplines, including AAA Ambulance Service in Hattiesburg, MS that serves 16 counties in southern Mississippi. The 24-hour emergency and non-emergency medical transport service is using FirstNet to share life-saving information with dispatch, EMS units, hospitals and other medical providers in rural areas, which often face communications challenges. The FirstNet Authority prepared a use case video featuring AAA Ambulance Service. In August 2018, Acadian Ambulance also announced its use of FirstNet. Acadian Ambulance provides services to communities in Mississippi, Texas, and Louisiana. We would be happy to meet with your office to provide additional details.

The specific FirstNet Band 14 coverage information for each state, including Mississippi, is confidential for both security and competitive reasons. We would be happy to provide additional details to your office in a private setting.

Response to Written Questions Submitted by Hon. Rick Scott to Jason Porter

Question 1. What is the pathway for our states with rural areas to receive the same quality FirstNet services?

Answer. The pathway for each state was established in coordination with each state in the context of their individual custom deployment plans, in which States were able to identify where they had coverage priorities. These priorities in turn informed the placement of the new FirstNet tower sites. Over 1,000 new, purpose-built FirstNet sites are currently planned as part of the initial nationwide FirstNet

network expansion. Most of these sites are in rural areas. Thus far we have launched over 250 of these sites across the country—including areas in Florida.

New, purpose-built FirstNet tower sites are now on-air in Florida, including in the following counties: Orange, Lake, Citrus, Gulf, Suwanee, Lee, Putnam, Glades, Osceola, Saint Johns, Marion, Flagler, Sumter, Nassau, Hendry, Brevard, Bradford, Alachua, and Hernando. And more new towers are on the way. Band 14 has been deployed in the following Cellular Market Areas in Florida: Miami, Tampa, Orlando, Jacksonville, W. Palm Beach, Citrus, Fort Myers, Lakeland, Melbourne, Daytona Beach, Pensacola, Fort Pierce, Sarasota, Collier, Bradenton, Tallahassee, Ocala, Glades, Gainesville, Hardee, Fort Walton Beach, Putnam, Panama City, Walton, Hamilton, Dixie, Monroe, Jefferson, and Calhoun.

AT&T prepares regular updates regarding the FirstNet Band 14 and new site deployment progress in each state to keep state stakeholders apprised of the FirstNet buildout. Additionally, rural and non-rural areas alike receive the same quality FirstNet services, and the entire first responder ecosystem, including health care workers on the pandemic frontlines, have access to competitively priced FirstNet services.

Congress baked this collaborative process into FirstNet's enabling legislation, which required the FirstNet Authority to consult with federal, state, tribal, and local public safety entities to ensure that the FirstNet network was designed to meet the needs of first responders across the country. Since 2012, multi-stakeholder consultation has informed every action taken by the FirstNet Authority, including its original Request for Proposal (RFP) and subsequent contract award to AT&T to build and maintain the network.

Indeed, the FirstNet Authority set milestones for rural and nonrural coverage in the RFP that the private-sector partner would have to meet. In addition, AT&T, in its role as the private-sector partner under the contract, is collaborating with rural wireless network providers across the country to help build out additional LTE coverage and extend FirstNet's reach in rural and tribal communities. In addition, AT&T has also worked with rural broadband providers to provide the fiber transport for some of the new FirstNet tower sites.

The specific FirstNet buildout information presented to each state, including Florida, is confidential for both security and competitive reasons. We would be happy to provide additional specific information to your office in a private setting.

Question 2. What are FirstNet and AT&T doing to ensure that the network and technology is secure and protected from our adversaries or bad actors?

Answer. Congress's mandate to establish a single and secure nationwide public safety interoperable broadband network is fulfilled through FirstNet's encrypted physically separate core, and in this key respect is differentiated from every other commercial wireless network. The highly available, redundant, physically separate, dedicated core was designed to comply with many standard security regulations and needs, and it will continue to evolve to take advantage of new technologies and address emerging requirements. FirstNet is designed with end-to-end encryption tools to support public safety users transmitting encrypted data securely across Long-Term Evolution (LTE)–enabled devices.

No other major commercial wireless provider submitted bids during the FirstNet RFP process, indicating that other carriers were not willing, or did not see a business case, in building a new network to public safety's requirements, including stringent security requirements, that would also subject them to the Federal government's scrutiny and accountability. The FirstNet solution—a single, highly secure and interoperable network with a single, common, highly secure core as required by Congress—addresses the security risks that would otherwise be introduced in an alternative network architecture in which multiple networks controlled by a multitude of carriers create additional security risks, additional points of failure, and multiple opportunities for service degradation.

Integral to FirstNet's secure capabilities is a dedicated Security Operations Center (SOC) and security engineering organization, both staffed by dedicated FirstNet security experts at AT&T. The SOC monitors and manages FirstNet traffic 24x7 and employs many of the security systems and procedures that AT&T has honed over decades of operating its highly secure global networks. The FirstNet security engineering unit focuses solely on the security needs of FirstNet but collaborates closely with the thousands of other engineers working throughout AT&T.

FirstNet also offers a highly secure app ecosystem, including the FirstNet App Catalog that features mobile apps particularly valuable to public safety, such as apps related to situational awareness and apps particularly useful for EMS. These apps, most of which are provided by third-party app providers, are examined for security, reliability and relevance to public safety according to standards set by the FirstNet Authority before they are listed in the FirstNet App Catalog. These stand-

ards go well beyond the basic security reviews required for apps to be listed in commercial application stores and catalogs.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARSHA BLACKBURN TO JASON PORTER

Interoperability

Question 1. Mr. Porter: FirstNet was created to provide a single platform for first responders to communicate to address the challenges they confronted during the 9/11 terrorist attacks, Hurricane Katrina and other emergency events.

How has FirstNet improved interoperability across public safety agencies and jurisdictions?

Answer. The events of September 11, 2001 showcased a lack of interoperability across public safety agencies and jurisdictions, and spurred Congress to work to establish FirstNet to address this fundamental issue. FirstNet implements Congress's vision to the issues exposed by 9/11 by delivering interoperability across all public safety agencies and jurisdictions on the network, meaning that they can communicate seamlessly with each other using a common, highly secure network platform that avoids the congestion that impacts commercial networks in times of emergency.

The current pandemic has showcased this value. In New York City, for example, FirstNet equipped hundreds of ambulances, EMS and other first responders with a common, interoperable communications platform and dedicated connectivity when needed to help them coordinate the transport of patients between hospitals and health systems across the state. Coordinating with New York public safety agencies, government officials, and city hospitals, the FirstNet team at AT&T provided a cross-agency solution to marshal hundreds of ambulances that came into the city from outside the region to provide mutual aid.

Apart from the pandemic, in early March, tornadoes tore a 60-mile path through West and Middle Tennessee, devastating many communities including those in Putnam County, where first responders within the Emergency Operations Center (EOC) turned to FirstNet to provide the critical communications necessary to do their jobs. As Brandon Smith, Putnam County's EOC manager explained, "we knew we had damaged cell networks almost immediately. . . Our immediate priority became to create a network for first responders to communicate. Having a single network, with Uplift capabilities and deployable assets tailored to our needs, was an essential part of our plan and is why we quickly reached out to FirstNet." *https://southregion.att.com/firstnet-americas-public-safety-communications-platform-provided-vital-support-in-aftermath-of-march-tornadoes-in-putnam-county/*

Within hours, FirstNet deployed dedicated portable network assets, including Satellite Cells on Light Trucks (SatCOLTs) to Putnam County. SatCOLTs are heavy-duty mobile cell sites that link to FirstNet via satellite and do not rely on commercial power availability. They provide first responders with similar capabilities and connectivity as a cell tower. In total, the FirstNet Team at AT&T and the AT&T Network Disaster Recovery Team deployed eight assets across Putnam County in the days following the tornadoes to serve both first responders and residents. These deployed resources reinforced communications capabilities and allowed first responders from multiple organizations to more efficiently and effectively coordinate their efforts over FirstNet's fully interoperable platform.

In addition, the land mobile radio (LMR) network tower—which is public safety's traditional two-way radio system—serving Cookeville and the surrounding area was damaged by the storm. In the storm's immediate aftermath and the days that followed, FirstNet served as the primary line of communications for first responders supporting search and rescue and recovery efforts.

Finally, when the President of the United States arrived in Tennessee to tour the devastation, a local first responder agency requested a FirstNet dedicated deployable asset to aid their communication and further enable interoperable coordination across the federal, state and local agencies on duty during the presidential visit.

Network Performance

Question 2. Mr. Porter: I understand there has been some issues with devices operating on FirstNet's signal strength as compared to devices operating on commercial networks.

What steps has FirstNet taken, or expects to take, to ensure that the coverage meets its required objectives, including a signal strength required to provide acceptable network performance for its users' needs?

Answer. As noted in a recent study by the Police Executive Research Forum (PERF), "signal strength is not the only measure—or even the most important measure—for evaluating LTE networks for public safety." In the key takeaways section of PERF's study, they note that the ability to move data, text, photos and videos quickly and reliably is critical. PERF's evaluation during everyday drive tests and two large-scale demonstrations on the National Mall found that FirstNet had faster data download and upload speeds and greater performance and reliability than major commercial networks, even in locations where FirstNet exhibited weaker signal strength. See more detailed information in the report at the following website—*https://www.policeforum.org/assets/FirstNetCaseStudy.pdf*

Additionally, there are strict nationwide rural and non-rural coverage targets that must be met at every phase of the initial five-year buildout of the FirstNet Band 14 spectrum, and AT&T is meeting those targets. In Tennessee, new, purpose-built FirstNet tower sites are now on-air in Macon, Jackson, Pickett, Macon, Bledsoe, Overton, Rutherford, Claiborne, Fentress, Hancock, Warren, Polk, and Grundy counties, with more new towers on the way. Band 14 has been deployed in the Nashville, Memphis, Knoxville, Fayette, Giles, and Maury cellular markets.

In addition, FirstNet offers first responders a robust ecosystem of devices and mobile applications, including solutions to help public safety agencies further enhance reliability, such as with mobile routers, modems, and the Rapid Deployment Kit (RDK). The RDK solution provides a 300-foot connected wi-fi bubble via LTE or satellite to support mobile command posts and emergency incidents in rural and remote locations. AT&T has witnessed great responsiveness from device manufacturers in connection with rolling out Band 14 capable devices that convey the power and capabilities of the FirstNet network to subscribers.

Communication Apps

Question 3. Mr. Porter: Communication Apps on the FirstNet App Catalogue are paramount to keeping our first responders safe, aware, and informed of any given situation.

I know some of these apps use considerable bandwidth while in use. Can you please cite examples or specific apps that extend the reach of radio users with LTE interoperability and improve the capabilities of radio with multi-media data and video exchanges?

Answer. Prior to FirstNet, public safety encountered difficulty when trying to communicate across agencies due to lack of interoperable communications between existing land mobile radio (LMR) systems. And when a significant public safety crisis occurred, heavy public use often caused traditional wireless communications networks to become congested, making it difficult for first responders to communicate on those networks.

Public safety communication is rapidly changing, and FirstNet and LTE-enabled technology are the future. We can expect to see as much progress over the next 60 months as what has occurred over the last 60 years. LTE-enabled technology offers distinct benefits. LMR networks have not traditionally supported apps, video and multimedia, but FirstNet does. FirstNet is driving innovation with push-to-talk solutions over LTE that are built to mission critical standards. Additionally, LMR-to-LTE interoperability enables state, tribal and local governments to extend the reach of their existing radio system.

As part of our commitment to public safety and the FirstNet Authority, we have built FirstNet Push to Talk based on the public safety standards set by the Third Generation Partnership Project (3GPP). This is the body responsible for LTE and 5G global standards. In addition to voice services, FirstNet PTT's rich, future capabilities gives first responders access to the timely and relevant information they need for enhanced situational awareness. With FirstNet PTT, public safety users have the highest priority on the network [1], enabling dependable, high performance group communications. FirstNet PTT is built right into the core of the FirstNet network. With PTT servers in six data centers across the country, calls are routed through the nearest node to provide lower latency and faster access. Engineered to the key performance indicators defined by the global standard, FirstNet PTT delivers low latency and high availability, resulting in superior calling performance.

Spectrum

Question 4. Mr. Porter: Public Safety and commercial partners are making immense investments in equipment to support FirstNet implementation.

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[1] Preempts all traffic other than mandated emergency calling.

What oversight is FirstNet taking to ensure the long-term viability and use of these systems given the push to frequently change how the spectrum is used and the historic disablement of other devices that used it?

Answer. AT&T has witnessed great responsiveness from device manufacturers in connection with rolling out Band 14 capable devices that will fully convey the power and capabilities of the FirstNet network to subscribers. Unlike the proprietary, closed architecture platforms and closed device ecosystems with limited advanced capabilities that have long characterized legacy public safety operational solutions, FirstNet is built upon open standards, including 3GPP international wireless standards. FirstNet is driving innovation through a robust device and mobile application ecosystem that is lowering costs, increasing choice and boosting capabilities for first responders, affording far greater flexibility and affordability than legacy solutions.

AT&T made a commitment to the FirstNet Authority to offer a robust solutions ecosystem for public safety that will continue to evolve over the life of the contract to meet public safety's needs. FirstNet offers innovative device options that enable first responders to tap into the power of FirstNet. As part of our commitment with the FirstNet Authority, we are working closely with device manufacturers to deliver next generation technologies to public safety. And so far, we've kept that commitment, working with the device community to include Band 14 in new offerings. There are now more than 180 FirstNet Ready™ devices available to FirstNet users.

AT&T also committed to the FirstNet Authority to launch, and then to continue to improve and evolve throughout the life of the contract, a dedicated applications ecosystem that consists of a FirstNet Applications Catalog featuring applications specific to public safety, as well as an applications developer program. In 2017, AT&T launched the FirstNet App Catalog and Developer Program dedicated to America's first responders. The catalog now identifies more than 150 highly secure apps tested for public safety that can help agencies enhance their situational awareness and other capabilities.

While competition, constant network evolution and regular advancements to the device ecosystem have been characteristics of the flourishing commercial wireless marketplace in America, AT&T has made efforts to address this dynamic in the context of the first responder community through such innovative offerings as the Free Smartphones for Life initiative launched at the outset of the COVID–19 pandemic. Under this initiative, FirstNet subscribed public safety agencies can get premium FirstNet Ready™ smartphone devices for free for their agency-paid users. This offer helps agencies equip their first responders with the latest technology and cost effectively connect them to critical communications when and where they need it most and ensures that they are able to upgrade their devices every two years at no cost, keeping them up to date with the latest technology at no charge. The Free Smartphones for Life offer is available to agencies that commit to a new FirstNet Mobile—Unlimited for Smartphone line of service or eligible upgrade with either a 2-year service agreement or a new AT&T Installment 30-month agreement, among other conditions.

Response to Written Questions Submitted by Hon. Richard Blumenthal to Jason Porter

Richard Blumenthal: FirstNet plays a vital role ensuring public safety by enabling connectivity, especially in areas without reliable broadband. The COVID–19 pandemic underscores it importance. However, in conducting oversight of FirstNet, the Government Accountability Office ("GAO") found local, state, and tribal stakeholders felt a lack of engagement by FirstNet and AT&T. The stakeholders described minimal contact and insufficient information from FirstNet and AT&T. At the hearing, you and Mr. Parkinson introduced firstnet.gov, explaining that public safety officials in each state could use this website to locate the name, phone number, and e-mail for the FirstNet point of contact in their state. While a start, this falls short of addressing the greater transparency and information sharing recommended by the GAO report. I seek additional information about FirstNet and AT&T's accountability to their stakeholders and any improvements made in light of the GAO report.

Question 1. In accordance with GAO's recommendations, do you make the state-specific FirstNet commitments and metrics available to Congress and state officials?

Answer. While the GAO recommendation was directed to the FirstNet Authority, AT&T, in its role as private sector partner to the FirstNet Authority, prepares periodic state-level status updates, as it is contractually required to do. AT&T maintains a FirstNet lead for every state who has the job of interacting with state, local officials and public safety leaders. The FirstNet Team at AT&T is available to meet

with state leaders to provide them with an update on the progress of the deployment of Band 14 and new FirstNet purpose-built tower sites in their state. We are also happy to provide updates to Congress upon request as necessary. The specific FirstNet buildout information for each state is confidential for both security and competitive reasons.

Question 2. On your recently launched website, firstnet.gov, you provide contact information for the FirstNet Authority representative in each state. Beyond the information listed, how are public safety officials able to contact and communicate with you?

Answer. The firstnet.gov site is operated by the FirstNet Authority, which provides the contact information for a public safety advocate for each region of the country. Separately, AT&T, in its role as private sector partner to the FirstNet Authority, has assigned a FirstNet Solutions Consultant for every state who is available to support any FirstNet subscriber, whether public safety, health care, or any other type of eligible Primary or Extended Primary FirstNet User. Eligible FirstNet users may visit the "FirstNet Built with AT&T" website at *http://www.firstnet.com* to request outreach by a FirstNet Solutions Consultant.

Question 3. The GAO report recommended increased transparency and sharing of deployment and oversight information with stakeholders. What concrete steps have you taken towards implementing these changes?

Answer. This recommendation was made to the FirstNet Authority, which has accepted GAO's recommendations relating to ways to further enhance its contract oversight and stakeholder outreach processes, and AT&T looks forward to working with FirstNet Authority to implement those recommendations. In addition, as noted above, AT&T prepares regular state-level status updates, as it is contractually required to, on the progress of the deployment of Band 14 and new FirstNet purpose-built tower sites in their state. AT&T further solicits direct and indirect feedback from first responder stakeholders, and we appreciate the value of performance studies, like the one released by the Police Executive Research Forum.

Question 4. Do you plan to take any further action to better communicate with and receive feedback from your stakeholders? If so, what is the plan? If not, please describe how and why your current communication methods are sufficient in addressing stakeholder concerns.

Answer. FirstNet Authority, as noted above, intends to implement the GAO recommendations with respect to transparency and keeping state stakeholders apprised of the progress to meet the buildout commitments. AT&T, as FirstNet Authority's private sector partner, looks forward to working with FirstNet Authority to implement those recommendations. In addition, as also noted above, AT&T is preparing regular state-level status updates on the progress of the deployment of Band 14 and new FirstNet purpose-built tower sites in each state. AT&T maintains a FirstNet lead for every state who has the job of interacting with state, local officials and public safety leaders. AT&T further solicits direct and indirect feedback from first responder stakeholders, and we appreciate the value of performance studies, like the one released by the Police Executive Research Forum. We are also happy to provide updates to Congress upon request.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. KYRSTEN SINEMA TO JASON PORTER

Question 1. Throughout the country, first responders put their lives on the line to protect us, and reliable communications are critical to their response efforts. Wildfire season is always a difficult time for my state, and the current public health crisis further complicates fire season for Arizona families.

I am pleased to hear many positive reports from Arizona public safety officials in our larger communities that have switched to FirstNet, such as in Phoenix, Mesa, and Flagstaff. But we need to continue these efforts to more rural areas of the state. I have spoken to Arizona first responders in rural areas that cannot utilize FirstNet services due to a lack of infrastructure.

It is critical to have infrastructure in place so that firefighters and other first responders can ensure a swift initial response to contain fires. What is FirstNet doing to ensure first responders in rural areas have the accessible communications network necessary for their work, particularly in the following areas of Arizona: the southern border with Mexico; the Grand Canyon tourist area; the northwest portion of the state; and rural areas with a high likelihood of wildfires and other potential natural disasters.

Answer. FirstNet is built for all first responders, including career or volunteer; federal, tribal, state or local; urban, suburban or rural. That is why reaching rural and remote parts of America, including in Arizona, is one of AT&T's top priorities as FirstNet's contractor. We are also collaborating with rural wireless network providers across the country to help build out additional LTE coverage and extend FirstNet's reach in rural and tribal communities, including in Arizona.

There are strict nationwide rural coverage targets that must be met at every phase of the initial five-year buildout of the FirstNet Band 14 spectrum, and AT&T is meeting those targets. New, purpose-built FirstNet tower sites are already on air in Yavapai and Pima counties, and more towers are on the way. The State of Arizona identified coverage along the state's southern border and around the Grand Canyon, as well as on tribal lands, in rural regions and in and around state prisons as priority coverage areas, which informed the development of the FirstNet State Plan for Arizona.

FirstNet adoption has been strong in Arizona, including within the State's largest cities and counties and in the rural and tribal areas. There are thousands of FirstNet users from across public safety disciplines on FirstNet in Arizona, including the Mesa Police Department and the Arizona Department of Emergency and Military Affairs.

Some examples of the value that the FirstNet Response Operations Group and the dedicated fleet of FirstNet portable network assets have brought to some of the areas you outline in your question are:

- A FirstNet Satellite Cell on Light Truck (SatCOLT) boosted connectivity for tribal first responders at the Navajo Nation Fair in September, 2019.
- A FirstNet SatCOLT augmented connectivity for public safety at the Granite Mountain Hotshots Memorial event in Yarnell, AZ in February, 2019.
- In October, 2019, a FirstNet deployable asset was sent to provide connectivity in Pima County after communication was disrupted due to infrastructure damage at a tower site.
- A FirstNet deployable was staged and available on standby while firefighters battled a wildland fire near Page, AZ in 2019.

The specific details on the progress of the FirstNet buildout available to state leaders in each state, including Arizona, is confidential for both security and competitive reasons. We would be happy to further discuss this question with your office in a private setting.

Question 2. Tribal communities in Arizona have been disproportionately impacted by the coronavirus and face particular challenges for connectivity. Please describe your progress developing FirstNet infrastructure in tribal areas and your engagement and coordination with tribal communities on the development of FirstNet in tribal areas.

Answer. Tribal lands represent a large portion of the land-base for the entire state and include diverse geographies, including canyons, mountains, large desert areas and underpopulated regions where communication is challenging. As noted, FirstNet's reach in rural and tribal communities in Arizona is being extended by AT&T through its deployment of wireless infrastructure and through its collaboration with rural wireless network providers to help build out additional LTE coverage.

FirstNet enables unique solutions to address the communications needs in rural and remote locations. For instance, two FirstNet SatCOLTs provided connectivity for Navajo Nation first responders and FEMA personnel in response to the COVID–19 outbreak on the reservation in Window Rock, AZ and Tse Bonito, NM. Further examples of deployable assets sent to rural and tribal lands are outlined in our response to your first question.

We are proud that Navajo Nation President Jonathan Nez publicly expressed his gratitude to AT&T for a recent contribution to the Navajo Nation COVID–19 Relief Fund and the support for FirstNet users during the public health crisis by noting, "AT&T has developed a strong partnership with the Navajo Nation over the years by working together to implement FirstNet to help our Nation's first responders, and now with their generous donation that will benefit our frontline warriors and our Navajo people." *https://southwestregion.att.com/att-supports-navajo-nation-covid-19-response*

Question 3. How many deployable resources are stationed in the state of Arizona? Have you performed any analysis to determine if the number of deployable resources is sufficient to meet the needs of first responders during the busiest times, such as wildfire season?

Answer. Examples of such resources deployed to Arizona are provided above. In terms of planning and analysis, AT&T leads one of the Nation's largest and most advanced network disaster recovery programs. AT&T is the first company nationwide to receive the United States Department of Homeland Security's (DHS) Private Sector Preparedness Program (PS-Prep) certification. AT&T supports FirstNet users with its FirstNet Response Operations Group (ROG), which serves as public safety's direct partner for their connectivity needs, whenever they need it. This group, established in 2018, is staffed by a team of former first responders and helps to manage the FirstNet-dedicated fleet of deployable assets, such as our mobile cell sites that link to FirstNet via satellite and do not rely on commercial power availability. There are dedicated AT&T personnel in Arizona providing support and coordination with state and local first responder organizations.

The FirstNet deployable fleet has 72 FirstNet Satellite Cell on Light Trucks (SatCOLTs) that are stationed nationwide, three Flying cells on wings (Flying COWs), and an aerostat blimp designed for use following large-scale, catastrophic events. In addition to deploying new permanent infrastructure, the dedicated fleet of FirstNet portable network assets is available 24/7 to FirstNet subscribed agencies at no charge to them. The FirstNet deployable assets provide first responders connectivity when and where they need it—both during large planned events and during times of emergency. The portable network assets link to FirstNet via satellite and do not rely on commercial power availability.

These dynamic assets can be deployed and staged anywhere across the country as circumstances warrant. During emergency situations or planned events where augmented coverage and capacity are required, FirstNet and AT&T will evaluate the request, and when warranted, AT&T will provide the deployable services at no cost within a 14-hour delivery window.

Question 4. In my outreach with Arizona first responders, some mentioned applications and capabilities which they are looking to deploy to advance their response efforts. Please describe FirstNet's progress on push to talk capabilities, and on connectivity to unmanned aircraft and helmet cams.

Answer. As part of our commitment to public safety and the FirstNet Authority, we have built FirstNet Push to Talk based on the public safety standards set by the Third Generation Partnership Project (3GPP). This is the body responsible for LTE and 5G global standards. In addition to voice services, FirstNet PTT's rich, future capabilities gives first responders access to the timely and relevant information they need for enhanced situational awareness. With FirstNet PTT, public safety users have the highest priority on the network,[1] enabling dependable, high performance group communications. FirstNet PTT is built right into the core of the FirstNet network. With PTT servers in six data centers across the country, calls are routed through the nearest node to provide lower latency and faster access. Engineered to the key performance indicators defined by the global standard, FirstNet PTT delivers low latency and high availability, resulting in superior calling performance.

FirstNet PTT offers users an opportunity where both the device and the network are working hand in hand to constantly improve the user PTT experience. For these and other reasons, public safety has recognized the value of FirstNet PTT as a complement and supplement to their existing LMR solution.

With respect to connectivity to unmanned aircraft, at the Albuquerque International Balloon Fiesta in New Mexico, public safety agencies employed a drone detection system to monitor restricted airspace above the event and surrounding areas. FirstNet provided the critical connection needed to support the system as well as on-the-ground operations. This is illustrative of the kind of connectivity to unmanned aircraft that FirstNet can provide. And FirstNet capabilities can be harnessed and are being harnessed for use with body cams and other solutions, including mobile apps from FirstNet's highly secure app ecosystem.

Response to Written Questions Submitted by Hon. Jacky Rosen to Jason Porter

DEPLOYMENT IN NEVADA: According to my state's Department of Public Safety, AT&T plans to build out about 30 cell sites in Nevada in the next 6 months.

Question 1. Do you have an idea of how soon those towers can be used to bring connectivity to rural areas? And how will this help the overall broadband connectivity in the state of Nevada?

Answer. AT&T has five years, until 2023, to build out the FirstNet Band 14 coverage as agreed to by the Nevada Governor, the Federal government, and AT&T in

[1] Preempts all traffic other than mandated emergency calling.

the FirstNet State Plan for Nevada. For the next 20-plus years, continuous improvements, expansions, and upgrades will be made and the FirstNet network in Nevada will adapt and evolve to meet changing needs. AT&T is on target to meet or exceed its contractual obligations to the FirstNet Authority with respect to the completion of Nevada's FirstNet State Plan deployment, including the deployment of new, purpose-built FirstNet towers and collaboration with rural wireless providers to extend the reach of LTE coverage. As a result of the FirstNet Band 14 buildout, new tower sites are now on air in Reno and Storey counties and more are on their way. In addition, Band 14 has been deployed in the Las Vegas and Storey cellular markets.

Examples of FirstNet Response Operations Group (ROG) deployable responses in Nevada include:

- Four deployable assets were deployed to boost connectivity for public safety communication and coordination during the Area 51 event in Alamo, Crystal Springs, Hiko, and Amargosa Valley, NV in September, 2019. The FirstNet ROG had several members of its team on the ground to support public safety at the event.
- A FirstNet satellite cell on light truck (SatCOLT) augmented connectivity for first responders at Burning Man in Gerlach, NV in August, 2019.
- In December, 2019, a FirstNet SatCOLT supported the command center in preparation for and during the city's New Year's Eve celebration in Las Vegas, NV.
- A FirstNet deployable asset augmented connectivity for first responders on FirstNet during an event at the Las Vegas Speedway in May, 2019.
- A FirstNet deployable asset supported firefighters and provided connectivity at the command camp in response to the Goshute Cave Fire near Ely, NV in September, 2018.

In response to the quality FirstNet performance and the unique support that is provided to first responders on FirstNet—ensuring they have connectivity when and where they need it—FirstNet adoption is progressing in rural, urban and tribal areas in Nevada. There are thousands of FirstNet users from across public safety disciplines in Nevada, including the Las Vegas Fire Department. The specific FirstNet buildout information available to state leaders in each state, including Nevada, is confidential for both security and competitive reasons. We would be happy to further discuss this question with your office in a private setting.

As new FirstNet towers are built in the state and Band 14 spectrum is deployed, including in rural areas, commercial cellular coverage and speeds on AT&T's wireless network will improve as well because AT&T's commercial spectrum bands will be added to the FirstNet towers and deployed at the same time as Band 14 spectrum.

LOCAL, STATE, AND TRIBAL ENGAGEMENT: The January GAO report on FirstNet described comments from some local, state, and Tribal stakeholders about a perceived lack of engagement. These stakeholders claimed that they initially had extensive consultations with FirstNet, but later were not receiving much information or transparency on broadband deployment and FirstNet oversight. GAO made several recommendations to FirstNet on improving information-sharing and collaboration with shareholders.

Question 2. I know that the cost of upgrading equipment can be a barrier for our state and local agencies. Do you know of any available grant funding to help state and local agencies transition to FirstNet?

Answer. There are a host of grant funding programs available to state, tribal and local agencies that can provide additional resources to help agencies expand their use of FirstNet, including the U.S. Department of Homeland Security's State, Tribal and Urban Area Homeland Security Grant Program and other grant programs available through the U.S. Department of Justice, U.S. Health and Human Services, and other Federal agencies. And there is an opportunity for the Federal government to recalibrate some of these grant programs, so that they can better help state, tribal and local agencies transition to FirstNet.

Across the country, state, local and tribal governments are at a crossroads and considering how best to support the communications needs of their first responders, while planning and budgeting to maintain aging legacy systems and looking to implement the advanced, LTE-enabled communications solutions that ride upon FirstNet. As decision makers look to modernize their jurisdictions' radio networks and other legacy systems, as well as improve redundancy, reliability and extend the reach of these systems, FirstNet can help to reduce both upfront costs and the recurring costs related to maintenance, operation and upgrades. FirstNet enables

state, tribal and local government agencies to begin shifting from a capital expenditure (CapEx) model to an operating expense (OPEX) model. This means they subscribe for service, instead of bearing the enormous financial responsibility of building and maintaining a network. In addition, FirstNet's mobile device ecosystem provides a suitable and cost-effective alternative to costly two-way radios.

However, many of the existing grant programs are oriented to CapEx grants, rather than OPEX funding. These grant programs were originally developed to help defray the high CapEx costs associated with legacy communications systems, such as LMR and customer premise equipment (CPE) technology, but many do not support the monthly recurring costs commonly associated with subscribing to a wireless network, such as FirstNet. Even with the assistance of CapEx oriented grants, proprietary, closed architecture platforms can result in higher costs for the state, tribal and local jurisdictions to bear with fewer advanced capabilities for first responders. In comparison, FirstNet is built upon open standards, including 3GPP international wireless standards. FirstNet is driving innovation through a robust device and application ecosystem that is lowering costs, increasing choice and boosting capabilities for first responders.

Finally, AT&T is doing its part to ensure that first responders have the equipment to do their jobs using their dedicated Nationwide Public Safety Broadband Network, FirstNet. AT&T has made efforts to address this dynamic in the context of the first responder community through such innovative offerings as the Free Smartphones for Life initiative launched at the outset of the COVID–19 pandemic. Under this initiative, FirstNet-subscribed public safety agencies can get premium FirstNet Ready™ smartphone devices for free for their agency-paid users. This offer helps agencies equip their first responders with the latest technology and cost effectively connect them to critical communications when and where they need it most and ensures that they are able to upgrade their devices every 2 years at no cost, keeping them up to date with the latest technology at no charge. The Free Smartphones for Life offer is available to agencies that commit to a new FirstNet Mobile—Unlimited for Smartphone line of service or eligible upgrade with either a 2-year service agreement or a new AT&T Installment 30-month agreement, among other conditions.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JACKY ROSEN TO CAPTAIN TONY HARRISON

LOCAL, STATE, AND TRIBAL ENGAGEMENT: The January GAO report on FirstNet described comments from some local, state, and Tribal stakeholders about a perceived lack of engagement. These stakeholders claimed that they initially had extensive consultations with FirstNet, but later were not receiving much information or transparency on broadband deployment and FirstNet oversight. GAO made several recommendations to FirstNet on improving information-sharing and collaboration with shareholders.

Question 1. How does FirstNet partner with local communities, especially when selecting locations of new cell sites or other infrastructure.

Answer. It has been my experience that FirstNet staff is very responsive to our requests, no matter those requests. I was not in on that "ground level" conversation when FirstNet was initially setting up the logistics on their infrastructure and service. My only experience has been moving from one carrier to the FirstNet plan and the request for deployables on three or four different events. South Dakota is a smaller state so there are not as many of us (Law Enforcement type) so the FirstNet folks know me well and I know them well and we have a good relationship.

Question 2. I know that the cost of upgrading equipment can be a barrier for our state and local agencies. Do you know of any available grant funding to help state and local agencies transition to FirstNet?

Answer. Again, I was not in on the ground level, so I am not 100 percent of any grant funding available to transition. Our agency did not receive any grant funding to make the transition to FirstNet. I do know FirstNet provided us with substantial discounts not only for our office plans but also those deputies who moved their personal plans could do so at a discount under the FirstNet plan. We are grateful for that as any costs we can pass onto the taxpayer is a good thing.

To avoid any conflict of interest, Karima Holmes asked Chief Information Officer Teddy Kavaleri to respond to questions submitted for the record to her by Members of the Committee.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO KARIMA HOLMES

FirstNet plays a vital role ensuring public safety by enabling connectivity, especially in areas without reliable broadband. The COVID–19 pandemic underscores it importance. However, in conducting oversight of FirstNet, the Government Accountability Office ("GAO") found local, state, and tribal stakeholders felt a lack of engagement by FirstNet and AT&T. The stakeholders described minimal contact and insufficient information from FirstNet and AT&T. At the hearing, Mr. Parkinson and Mr. Porter introduced firstnet.gov, explaining that public safety officials in each state could use this website to locate the name, phone number, and e-mail for the FirstNet point of contact in their state. While a start, this falls short of addressing the greater transparency and information sharing recommended by the GAO report. I seek additional information about FirstNet and AT&T's accountability to stakeholders like you and any improvements they made in light of the GAO report.

Question 1. In accordance with GAO's recommendations, has FirstNet and AT&T made DC-specific commitments and metrics available to you?

Answer. Yes, FirstNet has made DC-specific commitments and metrics available to us. Specifically, in December 2017 FirstNet submitted a letter to Washington, DC Mayor Muriel Bowser outlining all the commitments related to network build and offer elements they were prepared to make upon the city's opt-in. These commitments include building ten (10) new sites to provide additional coverage within the District of Columbia within 5 years of opt in, a 3 million dollar investment to enhance in-building coverage, consideration of the city's specific requirements in their National Disaster Recovery Plan, support with locating and establishing a highly secure site for the FirstNet Satellite Colt, access to deployable assets and the NDR team and its assets, as well as LTE connectivity on five (5) command vehicles for first responders.

FirstNet has honored its commitment to provide all these resources.

Question 2. FirstNet recently launched their website, firstnet.gov, to provide contact information for the FirstNet Authority representative in each state. Have you used this website? Are there other primary methods you use to contact and communicate with FirstNet and AT&T?

Answer. When the Office of Unified Communications, the city's 911/311 center, signed on we were provided with points of contact who have been consistently accessible and available. In addition to this primary method of contact, the agency is also aware of FirstNet's user help desk, which is available 24 hours a day, 7 days a week. The agency receives an extremely informative bi-weekly newsletter as well.

The Office of Unified Communications has not needed to use the recently launched website to obtain contact information for FirstNet Authority representatives.

Question 3. Have you had any issues with transparency or information sharing from FirstNet and AT&T?

Answer. Shortly after opt in the District of Columbia's Statewide Interoperability Coordinator (SWIC) and the Office of Unified Communications supported a user performance and reliability test of the FirstNet system during a large-scale event. Official requests for the test results were not honored immediately and the city was engaged in a protracted exchange in order to obtain the test data. Several months later, the results, which were favorable, were released.

Since that time several other similar tests have been conducted and the results of each have been released immediately upon request.

Question 4. The GAO report recommended increased transparency and sharing of deployment and oversight information with stakeholders. Since this recommendation, have you noticed any change in quantity or quality of communications from FirstNet and AT&T?

Answer. Since the challenges described in the response to Question 3, the Office of Unified Communications has experienced greatly improved transparency and responsiveness. In addition, representatives from FirstNet and AT&T consistently participate and contribute to the District's monthly Interoperability Communications Committee (ICC) meetings and also on bi-weekly in-building coverage project status meetings.

Question 5. Do you have any recommendations for how FirstNet and AT&T can better support public safety officials like you?

Answer. As public safety officials we are concerned about FirstNet's seeming non-response to Verizon's competitive campaign and efforts to maintain their presence in the public safety market. We believe that this may be causing confusion for other public safety organizations and could be a factor in their delay in opting in. Further we are concerned that if many of these organizations do not sign on with FirstNet, the result will be contrary to the objective of creating a true nationwide network.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JACKY ROSEN TO KARIMA HOLMES

LOCAL, STATE, AND TRIBAL ENGAGEMENT: The January GAO report on FirstNet described comments from some local, state, and Tribal stakeholders about a perceived lack of engagement. These stakeholders claimed that they initially had extensive consultations with FirstNet, but later were not receiving much information or transparency on broadband deployment and FirstNet oversight. GAO made several recommendations to FirstNet on improving information-sharing and collaboration with shareholders.

Question. I know that the cost of upgrading equipment can be a barrier for our state and local agencies. Do you know of any available grant funding to help state and local agencies transition to FirstNet?

Answer. The Office of Unified Communications (OUC) is not aware of any available grant funding to support transitions to FirstNet. Fortunately, however, the cost for the OUC to transition was not prohibitive.

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