

Response to Written Questions Submitted by Hon.
John Thune
Written Questions for the Record to
Chris Sambar

Question 1. Mr. Sambar, the American people have entrusted FirstNet and AT&T with a tremendous resource—20 MHz of 700 MHz spectrum. How does AT&T intend to make sure that first responders serving America’s rural communities can have access to state-of-the-art communications technology at affordable prices?

Response. Rural coverage has always been a priority in the development of the state plans. FirstNet and AT&T worked hard to cover more than 99% of the population and, by combining our wireless LTE network with rural telecommunications networks, deployables and additional satellite technology, we will also cover more than 99% of the U.S. geography. We have published FirstNet contract rates that are very attractive and intended to ensure that all first responders, regardless of size or location, can take advantage of these services, customized for their needs. The contract between AT&T and FirstNet also has device connection targets in every state, which will help ensure that no area is left behind.

Question 2. Mr. Sambar, how does AT&T define rural areas? At the hearing you often mentioned using “deployables” to provide coverage in rural areas. What other means will AT&T use to provide coverage in rural areas?

Response. FirstNet defines “rural” for purposes of the Public Safety Spectrum Act to have the same meaning as “rural area” in section 601(b)(3) of the Rural Electrification Act of 1936, as amended. FirstNet and AT&T worked hard to cover more than 99% of the population and will have the ability to also cover more than 99% of the U.S. geography with AT&T’s commercial LTE network, agreements with rural telecommunications providers, deployables and satellite technologies.

Question 3. Mr. Sambar, in what ways will FirstNet bring dynamic new technology to the network over the duration of the contract? How can AT&T encourage startups and entrepreneurs to bring the latest technology and greatest technology to our first responders?

Response. FirstNet and AT&T will develop an ecosystem that will help modernize public safety communications. This includes: (i) an application development program that fosters interoperability and facilitates access to new public safety applications – all of which are reviewed via the FirstNet certification process; (ii) a dedicated public safety home page that provides wireless network status, local command and control for wireless accounts, devices, applications, and user groups; (iii) a robust and highly secure device ecosystem for FirstNet; and (v) a contractually mandated roadmap to deliver a wide range of next-generation public safety features, including mission critical push-to-talk, voice, data, messaging, and video, broadcast technology, and z-Axis location based services. Potential enhanced capabilities, such as wearable sensors and cameras for police and firefighters, can deliver near real-time images of events, such as fires, floods or crimes. Imagine camera equipped drones and robots delivering these images. AT&T – which stands at the forefront of IoT advances and Smart Cities

technology – will work to identify and encourage cutting-edge technologies that benefit first responders.

Response to Written Questions Submitted by Hon.
Roger Wicker
Written Questions for the Record to
Chris Sambar

Question 1. Mr. Sambar, what percentage of rural areas across the continental United States will FirstNet and AT&T cover using deployable devices? What percentage of rural areas across the continental United States will FirstNet and AT&T cover rural network providers?

Response. AT&T's National Disaster Recovery (NDR) team combines network infrastructure and support trailers, recovery engineering software applications and a response team with more than 130,000 working hours on field exercise and deployments over the last two decades. We will increase our fleet with 72 new deployables to support FirstNet. With these combined assets, we will stand ready to deploy to all rural areas of the country.

Regarding AT&T's work with rural network providers, FirstNet set a benchmark whereby AT&T uses rural telecommunications providers to provide at least 15% of its rural coverage. AT&T is working to meet or exceed that benchmark. With AT&T's wireless LTE network, our agreements with rural telecommunications providers, deployables and additional satellite technology, we will cover over 99% of both the population and U.S. geography.

Question 2. Mr. Sambar, during the July 20 hearing, it was suggested that "deployables" may be the primary answer to rural coverage for FirstNet. What is the specific commitment for FirstNet and AT&T to provide continuous coverage for public safety in rural areas? Please explain.

Response. To be clear, even without deployables, we will cover over 99% of the population using our commercial LTE network combined with Band Class 14 and agreements with other rural telecommunications providers to augment network capacity. We would therefore consider this overall coverage as the "primary" means to provide rural coverage to first responders. That said, to reach remote rural areas, deployables, such as Cells on Wheels or Cells on Light Trucks, will provide an important enhancement to the coverage reach for FirstNet users. As noted in our response to Question 1, by combining our wireless LTE network, our agreements with the rural telecommunications providers, deployables and additional satellite technology, we will have the ability to cover over 99% of the U.S. geography.

Question 3. Mr. Sambar, you testified that AT&T will provide "primary users" with preemption on the FirstNet network. Who is considered a "primary user" and are medical providers considered primary users?

Response. FirstNet has defined "primary users" as police, fire and rescue personnel, as well as emergency management and 911 personnel. Medical providers that fall into those categories will be primary users. Medical providers who do not fall into those categories would be extended primary users. During an event, medical providers who are extended primary users can be "uplifted" to primary user status by the local incident commander for a designated period. Once uplifted, they will have priority and preemption until that time ends.

Question 4. Mr. Sambar, please provide additional information on the subscription pricing plans for first responders' use of the FirstNet network. Have AT&T and FirstNet set pricing or user fees for the 25-year life of the contract? Does AT&T have discretion to change user fees for access to the core and for first responder usage over the 25-year contract period?

Response. Our FirstNet offerings will be unlike anything currently in the market. Together with FirstNet, we are working to deliver to first responders effective and competitively priced services which first responders demand. While FirstNet and AT&T have not set user fees for the 25-year life of the contract, FirstNet structured this private/public partnership such that AT&T must provide an effective and competitively priced service to first responders. We have an obligation to FirstNet to obtain a significant number of device connections in every state. If we do not provide this unique service at an affordable price point, first responders will not subscribe, and we will face significant financial penalties. We are committed to deliver this unique service at price points that (initially and over time) work for all first responders. We will work with each public safety entity to provide the combination of pricing, features and overall value necessary to earn their business.

Question 5. Mr. Sambar, can you provide the Committee AT&T's plan for the buildout of Band Class 14, state-by-state, showing how much of each state's land mass will be covered by a dedicated first responder radio access network in Band Class 14 and when?

Response. Each state or territory has received this information along with its state plan and may access it, on a confidential basis, via the state portal. The detailed FirstNet buildout and coverage information provided to the states is confidential, for both security and competitive reasons. For network security purposes, it is important that AT&T's network and the FirstNet build plans are kept confidential and not publicly available to those seeking to harm the network, which will be relied upon by our first responders in times of emergency. We would be happy to further discuss this question with your office in a private setting.

Of course, focusing on Band Class 14 would not capture AT&T's commitment to open all of its commercial spectrum bands to FirstNet. Because of this commitment, FirstNet users will have immediate access to AT&T's nationwide, commercial LTE network and will benefit tremendously from prioritization. Primary users also will benefit from preemption, which AT&T anticipates will be available later this year. AT&T will use Band Class 14 to supplement coverage where needed and will thus increase overall coverage.

That said, we expect to deploy a significant percentage of Band Class 14 over the next five years and the vast majority over the 25-year length of our contract with FirstNet. Moreover, if AT&T is tasked to build all 56 RANS in the states and territories, we estimate that by combining our commercial LTE network with rural telecommunications networks, deployables and additional satellite technology, we will cover over 99% of both the U.S. population and its geography.

Question 6. Mr. Sambar, if local public safety agencies now have cellular service from a provider other than AT&T, can they keep that provider or must they drop their current provider and replace it with AT&T in order to access a radio access network built by AT&T?

Response. Agencies will need to subscribe to AT&T FirstNet service to have access to AT&T's FirstNet network services, which are supported by the nationwide core that we are building for FirstNet traffic, as well as the radio access networks that we will build in each of the 56 states and territories that opt-in.

Question 7. Mr. Sambar, AT&T and FirstNet have entered into a 25-year agreement, and explained that states should rely on FirstNet to protect the states' interests. How many former FirstNet employees are now employed by, or consult for, AT&T? How many SPOC's (single point of contact) or other state employees involved in this process are now employed by, or consult for, AT&T? Do you believe that this is a conflict of interest?

Response. AT&T has not hired any former employees of the First Responder Network Authority. In July of this year, we hired Harlin McEwen as a consultant. Mr. McEwen previously served as chairman of FirstNet's Public Safety Advisory Committee (PSAC). He served in that role as a volunteer. Mr. McEwen's position on the PSAC did not involve FirstNet's vendor selection process and his work for AT&T does not violate any applicable conflicts of interest rules. AT&T continues to bolster its public safety expertise. We have hired one former state point of contact and another individual that previously worked in a state office of Homeland Security. These individuals were unemployed at the time of their hiring by AT&T. AT&T remains committed to identifying and managing any potential or actual conflicts of interest that may arise with any of the employees on AT&T's FirstNet team.

Question 8. Mr. Sambar, do you believe that employment at AT&T be prohibited, or delayed, for former FirstNet employees? Should employment at FirstNet be prohibited, or delayed, for former state employees?

Response. AT&T will comply with all applicable federal or state statutes or rules, as well as any obligations in the contract between FirstNet and AT&T, concerning employment of former FirstNet or state employees. There are safeguards in place to address organizational conflicts of interest and we intend to abide by them.

Question 9. Mr. Sambar, does AT&T have the ability to terminate its contractual agreement with FirstNet? If yes, under what circumstances can AT&T terminate its contractual agreement with FirstNet?

Response. No.

Question 10. Mr. Sambar, AT&T says it expects to spend \$40 billion over the life of the contract. Please breakdown these expected costs between cash and in-kind expenses.

Response. AT&T expects to spend about \$40 billion over the life of the contract on items such as buildout of the public safety network, operation of that network, equipment, marketing, sales, support, etc. There are many variables that affect how and where that spend will occur over the next 25 years, including completion of the opt-in process. AT&T is committed to bringing to bear all the necessary resources to successfully deliver the FirstNet services to first responders, just as Congress envisioned it.

Question 11. Mr. Sambar, how much will AT&T spend in cash during the contract's first five years?

Response. Again, AT&T expects to spend about \$40 billion over the life of the contract on items such as buildout of the public safety network, operation of that network, equipment, marketing, sales, support, etc. There are many variables that affect how and where that spend will occur over the next 5 years, including completion of the opt-in process. AT&T is committed to bringing to bear all the necessary resources to successfully deliver the FirstNet services to first responders, just as Congress envisioned it.

Question 12. Mr. Sambar, how much of AT&T's \$40 billion investment is projected to come from payments from states for using the core or from first responders for using the network?

Response. There are no payments from opt-in states to AT&T for using the FirstNet core. First responders pay service fees to AT&T for the service and we have established rates that are aggressively priced. AT&T's commitment to spend \$40 billion over the life of the contract is not tied to any source of FirstNet-related revenue.

Question 13. Mr. Sambar, what value does AT&T believe the Band Class 14 spectrum would be worth in a private market transaction?

Response. I have not done an analysis to answer your question. I am focused on delivering on our FirstNet commitments.

Question 14. Mr. Sambar, AT&T has said, "If we build it, the states will come." What happens if they do not come? How many states (and what percentage of the population) could opt-out before FirstNet is no longer viable for AT&T?

Response. Right now, we are focused on getting as many states and territories as possible to opt in. AT&T is committed to demonstrating to states the value of its solution and the resources that AT&T will use to deliver a superior solution for first responders. We have a great value proposition for the states and are looking forward to their decisions. Our approach to FirstNet is designed for states and for first responders, alleviating long-term risks associated with funding, building and maintaining a network for 25 years that interoperates with the FirstNet network. FirstNet and AT&T will work with states to help them get the network they are looking for – and which Congress envisioned – all without the financial and operational burdens of going it alone. We have had great success so far, with 19 states already announcing their opt in as of August 31, 2017. We will continue these efforts.

Question 15. Mr. Sambar, do wireless signals propagate the same way on all AT&T's bands? How might Band Class 14 differ? Are there specific qualities regarding Band Class 14 that make it optimal for a First Responders' network? Please explain.

Response. AT&T will rely on its other spectrum bands, including its near-nationwide 700 MHz spectrum, cellular (850 MHz), PCS, AWS-1 and AWS-3 and WCS to optimize coverage,

capacity and FirstNet users' experience. Different spectrum bands have different characteristics that can make them relatively more or less optimal for a particular provider in a particular location. For example, spectrum below 1 GHz, such as Band Class 14 spectrum, may have some advantages for network deployment over long distances given its propagation characteristics. At the same time, those same characteristics can cause greater inter-cell interference as cell size decreases. For this reason, higher band spectrum can be superior to low band spectrum for network densification. First responders will benefit from AT&T's plan to use a variety of bands to best meet their needs, not just Band Class 14. All of AT&T's spectrum bands are suitable to provide mobile wireless services, and all of them have the propagation characteristics suitable for providing such service. Band Class 14 is no different in that respect.

Question 16. Mr. Sambar, during the hearing, AT&T expressed its desire to buildout Band Class 14 "when capacity calls for it." Does that mean only more populated areas will have Band Class 14 built out? Please explain.

Response. No. We plan to deploy Band Class 14 nationwide, on over 40,000 sites, including in many rural areas. In some of these rural areas, AT&T's existing spectrum is at or near capacity. For example, when North Dakota experienced its natural gas boom, our network was pushed to capacity in rural areas of the state. But AT&T also will deploy Band Class 14 on new sites to cover rural areas that are today unserved or underserved, in addition to deploying Band Class 14 on most of our existing sites. As we noted in response to Question 15, AT&T also will rely on its other spectrum bands, including 700 MHz, cellular (850 MHz), PCS, AWS-1 and AWS-3 and WCS to optimize coverage, capacity and FirstNet users' experience.

Question 17. Mr. Sambar, it was stated by AT&T and FirstNet that location based technology to solve the Z-axis (vertical) challenge would be delivered by 2020. This is a top priority for firefighters. Please provide a specific timelines for IOC and FOC of this capability.

Response. AT&T has contractually committed to delivering z-Axis enhanced location services as part of the FirstNet network prior to FOC. Location accuracy enhancements, including z-axis, will follow commercial availability. We are evaluating solutions as they become available to determine if they meet the rigorous needs of first responders. To date, they do not.

Question 18. Mr. Sambar, FirstNet and AT&T have indicated that their "pricing" will be competitive. With the potential to monetize Band 14 through shared usage, do you expect revenue to be sufficient to offer free services to first responders?

Response. We have published contract rates in the state plans that are attractive for public safety entities. And we intend to aggressively price our services for first responders. If we do not provide this unique service at an affordable price point, first responders will not subscribe and we will face significant financial penalties under our contract with FirstNet – which includes device connection commitments in every state.

While there are benefits to AT&T in the form of spectrum, those benefits come with significant and important obligations that we must and will fulfill over the next 25 years – to the benefit of

public safety. The spectrum is provided for the primary purpose of building and supporting the FirstNet network – again, to the benefit of the public safety community.

Response to Written Questions Submitted by Hon.
Roy Blunt
Written Questions for the Record to
Chris Sambar

Question 1. What percentage of Missouri will be covered by Band 14 when AT&T's FirstNet build-out is complete?

Response. Each state or territory has received this information along with its state plan and may access it, on a confidential basis, via the state portal. The detailed FirstNet buildout and coverage information provided to the states is confidential, for both security and competitive reasons. For network security purposes, it is important that AT&T's network and the FirstNet build plans are kept confidential and not publicly available to those seeking to harm the network, which will be used by first responders in times of emergency. We would be happy to further discuss this question with your office in a private setting.

Of course, focusing on Band Class 14 would not capture AT&T's commitment to open all of its commercial LTE spectrum bands to FirstNet. Because of this commitment, FirstNet users will have immediate access to AT&T's nationwide, commercial LTE network and will benefit tremendously from prioritization. Primary users also will benefit from preemption, which AT&T anticipates will be available later this year. AT&T will use Band Class 14 to supplement coverage where needed and will thus increase overall coverage.

That said, we expect to deploy a significant percent of Band 14 over the next five years and the vast majority over the 25-year length of our contract with FirstNet. Moreover, if AT&T is tasked to build all 56 RANS in the states and territories, we estimate that by combining our wireless LTE network with rural telecommunications networks, deployables and additional satellite technology, we will cover over 99% of both the U.S. population and its geography.

Question 2. To the extent that AT&T's final state plan will not include Band 14 coverage for parts of rural Missouri, does AT&T think that its non-Band 14 networks are sufficient to meet the needs of first responders in rural Missouri?

Response. Absolutely. First responders will benefit from AT&T's plan to use a variety of bands to best meet their needs, not just Band Class 14. In addition to Band 14, AT&T will rely on its other spectrum bands, including its near-nationwide 700 MHz spectrum, cellular (850 MHz), PCS, AWS-1 and AWS-3 and WCS to optimize coverage, capacity and FirstNet users' experience. FirstNet and AT&T worked very closely with states on the state plans to address each states' coverage concerns and priorities – and we will continue to do so as these plans are finalized.

Question 3. In light of the value of the bandwidth given to AT&T through FirstNet, what is AT&T doing to ensure that its FirstNet offerings are affordable, particularly to smaller law enforcement departments and volunteer emergency services personnel, who are often the first to respond to natural disasters?

Response. We have published contract rates in the state plans that are attractive for public safety entities. And we intend to aggressively price our services for first responders, no matter their size or location. If we do not provide this unique service at an affordable price point, first responders will not subscribe and we will face significant financial penalties under our contract with FirstNet – which includes device connection commitments in every state. We have every incentive to ensure that no area is left behind.