Attachment—Additional Questions for the Record

Subcommittee on Communications and Technology
Hearing on
"Legislating to Secure America's Wireless Future"
September 27, 2019

Mr. John Nettles, President, Pine Belt Wireless

The Honorable Robert E. Latta (R-OH)

1. **Mr. Nettles: We've heard from several smaller, rural providers who won Universal Service Funding who are concerned about accepting their award. In some cases, they won competitive bids using underpriced, potentially vulnerable equipment. H.R. 4459 attempts to allow an "out" for those who know they won't be able to comply with the law and still meet buildout obligations with secure, but potentially more expensive equipment. How critical is this "hold harmless" provision, and how important is clarity from the FCC on what vendors are acceptable to use in the future without risk of unintended consequences?**

Response: Clarity with respect to the question of a vendor's acceptability is absolutely critical. Carriers need certainty when making purchasing decisions for network deployments, maintenance and upgrades, and services and support. Equipment and software purchases are investments in our networks that have long term implications. To say only who we are not allowed to purchase from could be likened to sending someone to navigate a maze with the lights out and eyes blindfolded. To the extent there is a "black list' of equipment providers, it is essential for all carriers to have necessary information regarding what providers are deemed secure.

Regarding the "hold harmless" provision, for the build-out requirements, Pine Belt's wireline operation is already built-out with vendor equipment that is not a subject of the supply chain security debates. As such, I can only speculate as to its importance but I believe that too is very high. It is almost a certainty that those who bid on the funds for broadband buildout did so using known costs from their current infrastructure base. If their current vendor is deemed a security risk and prohibited, bid winners would need to replace their base equipment first before moving into the service buildout stage. This would most assuredly have an impact on both the operators financial and time estimates. Carriers should not be held in default and penalized for no longer being able to meet the terms of a bid because of changed circumstances regarding allowed equipment providers.

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Mr. John Nettles, President, Pine Belt Wireless

The Honorable Susan W. Brooks (R-IN)

1. **How long do you believe it would take you to replace the Huawei equipment in your network, provided you had all the replacement equipment you needed on hand?**

Response: To clarify, we have ZTE equipment in our wireless network. Notwithstanding that detail, reflecting on our Mobility Phase I buildout requirements and experience, it took us approximately 28 months to move through a very deliberate vendor selection process, install a new core, construct 13 new tower sites and retrofit another 40 plus sites. Given that our site count has grown since then and assuming the replacement would involve both the core and the radio access network, I would estimate that the replacement work could be completed in a 36 to 42 month timeframe. This estimate is subject to change based on what network components must be replaced; if only core equipment or equipment capable of switching packets must be replaced, the timeframe could be shorter.

2. **How long does it typically take to fulfill an order when you purchase network equipment from a supplier?**

Response: Depending on the type and quantities, it can be anywhere from a few weeks to several months. For small quantities of items that had been previously deployed and for which a configuration template or example exists for the specifics of our network requirements, ZTE always quoted us no less than a twelve-week delivery window. For something like a core replacement, the delivery window will often be 90 to 120 days. However, the "long pole in the tent" is a sequence of events that starts with what is generally called "rack, stack and powering," something that can take two to four weeks, followed by initial commissioning, configuration and translations, integration with connecting network segments and culminating with data migration and service conversion. These steps can take anywhere from three to nine months or longer. The point being that the physical order fulfilment is only one element of the time requirement. Likewise, for a core replacement, the work is generally done at a single physical location with the majority of the time being spent on software tasks. When one moves to the radio access network, given that each site is a unique physical location, staging and transport of items from site to site becomes a time impacting factor as well.

Further, smaller carriers serving rural areas lack the economies of scale of the largest wireless providers, and could be subject to delays based on availability constraints flowing from equipment purchasing decisions of the nationwide carriers. In other words, if I order 40 units of a component from Preferred Vendor A and one of the nationwide carriers orders 400 at or about the same time with 400 more expected in the near term, my order will likely suffer in terms of delivery time.

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Mr. John Nettles, President, Pine Belt Wireless

The Honorable Tim Walberg (R-MI)

1. **We recognize the concerns that rural carriers like Pine Belt, with their limited budgets, have when it comes to complying with the reimbursement program while also trying to deploy new, or upgrade existing, networks.**

    a. **If this program is enacted into law, how would Pine Belt manage the need to remove suspect equipment while also trying to maintain network buildout and upgrades?**

Response: With only a few exceptions, our network expansion and upgrades have been on hold for the past 12 months pending resolution of this issue. So, it will be essential for us to select our replacement vendor first and then order, receive, install, commission, integrate and convert to the replacement equipment. Once these steps are complete, we would then resume network expansion and upgrade efforts. Decommissioning and removal of the suspect equipment could and most likely would be done in parallel with resumption of our expansion and upgrade activities. Overall, to prevent cutting off service to customers in rural America, we must focus on "replace then rip" instead of "rip and replace."

    b. **Are there certain types of network equipment or services that are particularly vulnerable that should be prioritized for removal?**

Response: If you segment the network into the four linear elements of user equipment, radio access, backhaul and core, it seems to me that the two outer segments, user equipment and the core, would be those most susceptible to security vulnerabilities.

2. **You mentioned that small carriers lack economies of scale, making it difficult for trustworthy network suppliers to be competitive in price. What are your thoughts on allowing several small carriers to join together in placing orders to help achieve scale replacement?**

Response: This is something that sounds like a good idea. As with nearly anything, however, the devil will be within the details and I am struggling to see how, when it comes to network gear, something of this sort would be managed from a practical matter. A system could be developed that provided for sanctioned pricing from preferred vendors with the carriers having the option of purchasing from "the list" or trying to negotiate outside the system. One of the challenges I see in something like this would be that of confidentiality between vendors.

    a. **Is this something Pine Belt would consider participating in?**

Response: If it created a real equipment cost advantage with minimal administrative cost and limited contingent liabilities and other risks, absolutely.