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GAO REPORT ON TRIBAL ACCESS TO SPECTRUM: PROMOTING COMMUNICATIONS SERVICES IN INDIAN COUNTRY

HEARING

BEFORE THE

COMMITTEE ON INDIAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED SIXTEENTH CONGRESS

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WEDNESDAY, SEPTEMBER 18, 2019

U.S. SENATE,
COMMITTEE ON INDIAN AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 2:30 p.m. in room 124, U.S. Capitol Building, Hon. John Hoeven, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. JOHN HOEVEN, U.S. SENATOR FROM NORTH DAKOTA

The CHAIRMAN. Good afternoon. I will call this hearing to order.

Good afternoon. Thank you to our witnesses for being here.

Today we will examine the last of three reports from the Government Accountability Office regarding broadband, internet and other telecommunications access on tribal land. Having the ability to readily access broadband furthers economic development, educational achievement and public health and safety. Unfortunately, tribal populations have lower levels of broadband access relative to others in the United States.

Recognizing the need to address this problem, in 2016, Senators on this Committee sent a letter to the GAO Comptroller General seeking research and analysis in response to questions on the availability of high-speed internet access and other advanced telecommunications services on tribal lands. In particular, Senators asked for an analysis of three main topics.

First, examine how the Federal Communications Commission collects, validates and uses information on broadband availability to create mapping data which is used to inform Federal agencies on locations where the need for improvement is the greatest.

Second, analyze the experience tribes have had with public-private partnerships that increase high-speed internet availability as well as funding barriers for programs administered by Rural Utilities Service within the Department of Agriculture.

And, third, research the availability of wireless spectrum in Indian Country and the barriers tribes face in accessing licensed spectrum across Indian Country.

The GAO has responded to the 2016 request letter in three separate reports. Today, the Committee will receive testimony on the content and recommendations in the third report on tribal access

to spectrum. This report, entitled FCC Should Undertake Efforts to Better Promote Tribal Access to Spectrum, discusses, among other things, the lack of availability of licensed spectrum across Indian lands.

The Committee is interested to hear from the GAO on what actions the FCC may take to prioritize tribal needs for licensed spectrum across tribal lands. More specifically, the Committee is eager to learn how the FCC can improve its training, technical assistance and consultation with tribal governments and organizations on spectrum-related matters.

Further, the Committee is concerned about the availability of FCC data regarding unused licensed spectrum that exists over tribal lands. Making this information public and readily available would eliminate unnecessary steps tribes must take to obtain spectrum licenses. And that is a key piece we want to focus in on today.

With that, I want to say to the witnesses, welcome, thanks for being here, thanks for testifying today. I want to thank the FCC for working with the Committee to schedule so we can have a meaningful hearing.

I will now turn to our Vice Chairman, Senator Udall.

STATEMENT OF HON. TOM UDALL,
U.S. SENATOR FROM NEW MEXICO

Senator UDALL. Thank you so much, Chairman Hoeven, and thank you for calling today's hearing on tribal access to spectrum. I want to thank all the witnesses for being here and give a special welcome to Kimball Sekaquaptewa, Chief Technology Director at Santa Fe Indian School in my home State of New Mexico. Welcome, Kimball, and I am pleased you were able to join us today.

Telecommunications is at the heart of many changes our Nation has seen in the last decade and access to fast, reliable and affordable broadband has changed the way people live, work and communicate. But too many tribal governments and their communities lack access to affordable, reliable broadband service, creating a barrier to participating in our modern economy, a barrier to harnessing their economic development potential.

For instance, this tribal digital divide hinders tribal communities from developing online businesses, accessing telemedicine services, and using online educational tools. So I ask all of us today, are we doing enough? Let's start with some data provided by the FCC.

In 2018, the FCC reported an estimated 35 percent of Americans living in tribal lands lacked access to broadband services. This compared to 8 percent of all Americans. In May of this year, the FCC reported that just 46 percent of housing units on rural tribal lands have access to fixed broadband service. And in New Mexico, as of 2016, only about 24 percent of residents living on tribal lands had broadband access.

These statistics, as concerning as they are, likely do not capture the full scope of the tribal digital divide. We know this because the FCC itself has acknowledged that it relies on insufficient data, and is currently undergoing reforms to its data collection process.

So it is inexplicable that the FCC's own broadband deployment report issued in May of this year found that broadband service is being provided to all Americans, including residents located on

tribal lands in a "reasonable and timely fashion." This finding not only closely misrepresents the well-documented digital divide facing tribal communities, it provides cover for the FCC to skirt its statutory obligation to take immediate action to accelerate deployment of advanced telecommunications capability in rural areas like much of Indian Country.

Like many fellow members on this Committee, I co-sponsored the Broadband Data Act, a bipartisan bill that requires the FCC to improve its data collection relating to broadband. Because, simply put, better data equals better access. And for Indian Country in particular, that will result in better opportunities to pursue economic development on tribal lands.

This Committee has examined the unique challenges to economic development on tribal trust lands. With today's hearing, we acknowledge that access to broadband is among those challenges.

So in addressing the tribal digital divide, the FCC must view Indian tribes as partners, not constituents or customers. Yet, it appears, by its latest order scaling back tribal access that the agency is not doing enough, even though its own guidance expresses a commitment to promote a government-to-government relationship with Indian tribes and engage in meaningful tribal consultation.

After these orders were overturned on appeal, I am hopeful that the FCC has started to reevaluate not only how it interacts with Indian Tribes, but also how it listens to them.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Vice Chairman Udall.

Do other members have an opening statement? All right, then we will proceed to our witnesses.

First, we will hear from Mr. Andrew Von Ah, Director of physical Infrastructure Issues for the GAO. Thank you for being here. Mr. Don Stockdale will be next, Chief, Wireless Telecommunications Bureau, FCC. We appreciate your being here. Then Ms. Belinda Nelson, Chairperson Gila River Telecommunications, Chandler, Arizona. And Ms. Kimball Sekaquaptewa. She is the Chief Technology Director, Santa Fe Indian School, in Santa Fe, in the great State of New Mexico.

Senator UDALL. That is very good.

The CHAIRMAN. Did I get that right?

Senator UDALL. Yes, absolutely.

Mr. Von Ah, thanks for being here. Please go ahead.

STATEMENT OF ANDREW VON AH, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. VON AH. Chairman Hoeven, Vice Chairman Udall, members of the Committee, thank you for having me, and thank you for the opportunity to discuss our recent work on access to spectrum to deliver wireless broadband service in tribal lands.

We have previously reported and testified on the difficulties of bringing broadband service to tribal lands. Where there is challenging terrain and low population densities, there are increased costs and reducing census for deployment of high-speed internet, particularly wireline technologies, which can be costly to install.

Wireless technologies, however, can be cost effective in such areas, but access to spectrum and in particular, licensed spectrum, is key for tribal entities to be able to provide such service.

My remarks today are based on our 2018 report for this Committee, which examined tribal entities' ability to obtain access to spectrum to provide broadband services, and FCC's efforts to promote and support their efforts in doing so. With respect to tribal entities' ability to obtain and access licensed spectrum, we have found that very few have been able to do so. A number of barriers hamper their efforts.

In our analysis, we identified just 18 tribal entities that held active spectrum licenses and bands that can be used for broadband. While several tribal entities also provide broadband over unlicensed spectrum, there are limitations to using that spectrum in terms of interference and speed, and such spectrum is not an option for some tribal lands.

Licensed spectrum offers better technical performance, as well as enhanced ability to deliver additional internet service, the ability to sell or lease spectrum for profit, additional opportunities to obtain Federal funding through the Universal Service Fund, which requires carriers to have access to licensed spectrum.

Barriers for tribal entities to obtain licensed spectrum include the general lack of available licenses, the high cost of acquiring such spectrum at auction, which can cost millions of dollars, and difficulties obtaining license for unused spectrum over tribal lands through the secondary market. Specific challenges in access the secondary market include a lack of willing sellers, trouble identifying existing license holders, and a lack of clarity in how to pursue those transactions.

To promote and support tribal access to licensed spectrum, we have found that the effectiveness of FCCs' actions has been somewhat limited. In particular, our report focused on information that FCC could make available to tribal entities to address some of the challenges associated with accessing those secondary markets. We found that, for example, FCC does not analyze the extent that unused licensed spectrum exists over tribal lands, or communicate information to tribes that could be beneficial to them in their efforts to obtain spectrum in the secondary market, such as, quite simply, who owns the unused spectrum.

Accordingly, we made recommendations to FCC to analyze data to better understand the need for spectrum on tribal lands, and the extent that unused spectrum license exists. We also recommended that FCC make information on spectrum license holders more accessible and easier to understand, to promote tribal entities' ability to purchase or lease spectrum licenses from other providers.

FCC agreed with our recommendations. In terms of collecting data, FCC said they would take and analyze a sample of spectrum licenses on tribal lands to inform its policies. FCC indicated that this analysis would be completed by the end of this year. FCC also pointed to a multi-year update of its universal licensing system, which, if any of you have used it, can be a little bit user unfriendly, that would provide easier access to information on spectrum license holders to interested parties. They have also highlighted recent and

planned outreach to tribes where access to licensed spectrum was discussed.

Also, in July of this year, as you well know, FCC finalized an order changing the use of the 2.5 gigahertz band of spectrum, which included a priority firing window for tribal entities to obtain licenses for unused portions of the band. While providing this priority access to the spectrum is certainly a step forward, this spectrum may not be available across some tribal lands, and there can be technical and other limitations in using this band to provide broadband services.

Therefore, providing robust information to help enable secondary market transactions and greater access to unused spectrum over tribal lands remains a key challenge.

Chairman Hoeven, Vice Chairman Udall, members of the Committee, thank you for this opportunity. I would be happy to address any questions you may have.

[The prepared statement of Mr. Von Ah follows:]

PREPARED STATEMENT OF ANDREW VON AH, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Chairman Hoeven, Vice Chairman Udall, and Members of the Committee:

Thank you for the opportunity to discuss our November 2018 report on tribal access to and use of spectrum for broadband services.[1] Broadband service on tribal lands continues to lag behind the rest of the country, especially on rural tribal lands.[2] According to the Federal Communications Commission (FCC), this gap could hinder tribal efforts to promote self-governance, economic opportunity, education, public safety, and cultural preservation. In prior work, we found that one barrier to increasing broadband access on tribal lands is the cost of deploying infrastructure in areas with challenging terrain.[3] However, broadband service can be delivered through wireless technologies using radio frequency spectrum, and according to FCC, such wireless technologies are more cost-effective for some remote and sparsely populated areas, such as tribal lands.[4] In 2010, FCC reported that increasing tribal access to and use of spectrum would create additional opportunities to expand broadband service on tribal lands.[5]

My remarks today are based on the November 2018 report and selected updates and address (1) the ability of tribal governments and telecommunications providers, which we refer to as "tribal entities," to obtain and access spectrum to provide broadband services on tribal lands and the reported barriers that may exist, and (2) the extent to which FCC promotes and supports tribal efforts to obtain and access spectrum for broadband services. For our report, we reviewed relevant statutes and regulations, FCC documents,[6] and academic and government publications on spectrum-related issues on tribal lands. We analyzed FCC data on spectrum auction applicants and license holders as of September 6, 2018 and reviewed the list of fed-

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[1] GAO, *Tribal Broadband: FCC Should Undertake Efforts to Better Promote Tribal Access to Spectrum*, GAO–19–75 (Washington, D.C.: Nov. 14, 2018).

[2] In this testimony, the term "tribal lands" refers to any federally recognized Indian tribe's reservation, off-reservation trust lands, pueblo, or colony; land held in trust by the federal government for Indian(s); and Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act, but do not include Oklahoma Tribal Statistical Areas.

[3] GAO, *Telecommunications: Challenges to Assessing and Improving Telecommunications for Native Americans on Tribal Lands*, GAO–06–189 (Washington, D.C.: Jan. 11, 2006) and GAO, *Telecommunications: Additional Coordination and Performance Measurement Needed for High-Speed Internet Access Programs on Tribal Lands*, GAO–16–222 (Washington, D.C.: Jan. 29, 2016).

[4] Congress has delegated responsibility for regulating commercial and other nonfederal spectrum use to FCC, and as part of its responsibilities, FCC assigns spectrum licenses, such as through auctions; oversees secondary market transactions; and promulgates regulations for the use of licensed and unlicensed spectrum. Regarding the secondary market, FCC's rules permit licensees to lease portions of their licensed spectrum rights to others.

[5] In March 2010, an FCC task force issued the *National Broadband Plan* that included a centralized vision for achieving affordability and maximizing use of high-speed Internet. See FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: 2010).

[6] These documents included the *Statement of Policy on Establishing a Government-to-Government Relationships with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

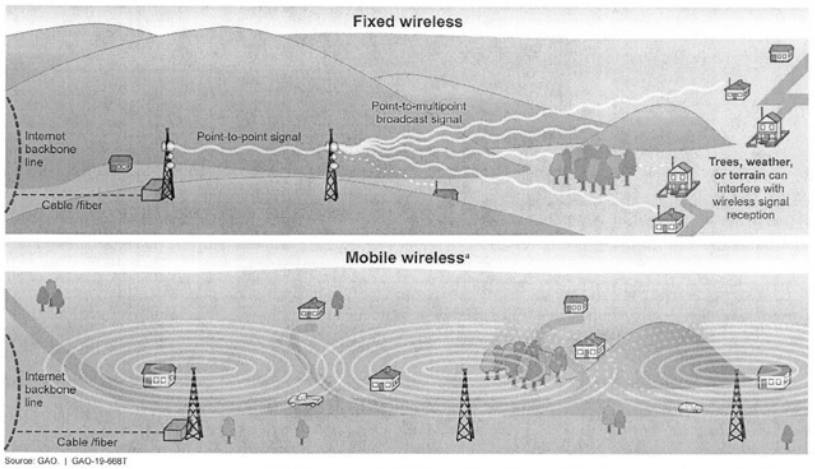
erally recognized tribes published in the *Federal Register*. To obtain stakeholder views, we interviewed stakeholders, such as tribal associations, regional consortiums, private providers that deliver Internet services to tribal lands, industry associations, and companies that work with tribal entities. In addition, we interviewed 24 tribal entities—16 of which were using wireless technologies to provide Internet services—that we selected to include variation in terms of geographic location, level of broadband deployment, population size and density, and urban or rural distinction. Stakeholders were selected to represent a range of views and experience working with tribes and broadband service; their views are not generalizable. To assess FCC's efforts, we interviewed FCC officials and reviewed relevant FCC-rulemaking proceedings and related public comments, and compared FCC's actions against recommendations made in FCC's *National Broadband Plan*,[7] FCC's current strategic plan,[8] and federal internal control standards related to using quality information.[9] For this testimony, we reviewed the status of related FCC rulemakings and contacted FCC about action FCC has taken in response to our recommendations. Further details on our scope and methodology are included in our report.

We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Wireless broadband connects users to the Internet using spectrum to transmit data between the customer's location and the service provider's facility, and can be transmitted using fixed wireless and mobile technologies, as shown in figure 1.

Figure 1: Fixed and Mobile Wireless Broadband



Source: GAO. | GAO-19-668T

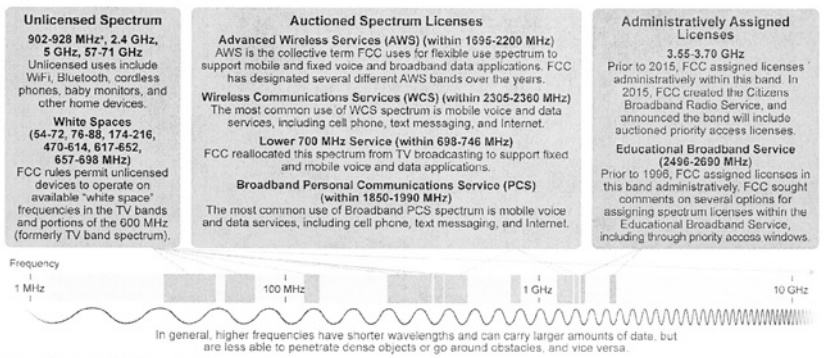
[a]Satellite communication is also a wireless technology that exchanges data using a satellite in the sky and a dish on earth.

Fixed wireless broadband technologies establish an Internet connection between fixed points—such as from a radio or antenna that may be mounted on a tower, to a stationary wireless device located at a home—and generally requires a direct line of sight. Mobile wireless broadband technologies also establish an Internet connection that requires the installation of antennas, but this technology provides connectivity to customers wherever they are covered by service, including while on the move, such as with a cell phone. Spectrum is the resource that makes wireless broadband connections possible. Spectrum frequency bands each have different characteristics that result in different levels of ability to cover distances, penetrate phys-

[7] FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: 2010).
[8] FCC, *Strategic Plan 2018–2022* (Washington, D.C.).
[9] GAO, *Standards for Internal Control in the Federal Government*, GAO–14–704G (Washington, D.C.: September 2014).

ical objects, and carry large amounts of information. Examples of some of the frequency bands that can be used by commercial and nonfederal entities for broadband services are shown in figure 2.

Figure 2: Examples of Frequency Bands Available for Commercial and Nonfederal Broadband Services



Source: GAO analysis of Federal Communications Commission (FCC) data. | GAO-19-668T

[a]Radio frequencies are grouped into bands and are measured in units of Hertz, or cycles per second. The term megahertz (MHz) refers to millions of Hertz and gigahertz (GHz) to billions of Hertz.

The frequency bands that can be used for broadband services are either licensed or unlicensed. For licensed spectrum, FCC can assign licenses through auctions, in which prospective users bid for the exclusive rights to transmit on a specific frequency band within geographic areas. Having exclusive rights ensures there will be no interference from other spectrum users in that band. License holders may sell or lease their license, in whole or in part, to another provider, a process that is known as a secondary market transaction, with FCC's approval. FCC has assigned licenses administratively in two frequency bands that can be used for broadband services. [10]

FCC also authorizes the use of unlicensed spectrum, where an unlimited number of users can share frequencies without a license, such as wireless microphones, baby monitors, and garage door openers. In contrast to users of licensed spectrum, unlicensed users have no regulatory protection from interference by other licensed or unlicensed users in the bands. [11]

In March 2010, FCC issued the National Broadband Plan that included a centralized vision for achieving affordability and maximizing use of high-speed Internet. [12] The plan made recommendations to FCC, including that FCC should take into account the unique spectrum needs of tribal communities when implementing spectrum policies and evaluate its policies and rules to address obstacles to spectrum access by tribal communities. With regard to tribal lands, the plan recommended that FCC increase its commitment to government-to-government consultation with tribal leaders and consider increasing tribal representation in telecommunications planning. FCC established the Office of Native Affairs and Policy in July 2010 to promote the deployment and adoption of communication services and technologies to all native communities, by, among other things, ensuring consultation with tribal governments pursuant to FCC policy.

Few Tribal Entities Had Obtained Licensed Spectrum and Face Barriers Doing So

For our November 2018 report, we identified 18 tribal entities from FCC's license data that held active spectrum licenses in bands that can be used to provide

[10] Prior to 1996, FCC assigned licenses for exclusive use in the Educational Broadband Service (2496–2690 MHz), which FCC allocated to qualifying educational institutions and government organizations for the transmission of educational materials. In addition, from 2005 to 2015, FCC assigned non-exclusive nationwide licenses in the 3650–3700 MHz band, where use of the band may be shared by other license holders.

[11] While there are no regulatory protections against interference for users of unlicensed spectrum, FCC has certification rules and standardized protocols that help to mitigate interference, and users must accept any interference caused by all compliant devices in these bands.

[12] FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: 2010).

broadband services as of September 2018.[13] Of those 18, 4 obtained the spectrum through a secondary market transaction and 2 from an FCC spectrum auction.[14]

We interviewed 16 tribal entities that were using wireless technologies at the time to provide service, and 14 told us that they were accessing unlicensed spectrum to do so. While representatives from most of the 16 tribal entities reported some advantages of unlicensed spectrum, such as the spectrum is available at no cost, they also discussed their experiences with the limitations of unlicensed spectrum, including issues with interference and speed or capacity. Some of the stakeholders we contacted and FCC have highlighted the importance of exclusive-use licensed spectrum for tribal entities. For example, FCC's Office of Native Affairs and Policy reported in 2012 that unlicensed spectrum is not an option across all tribal lands and that tribal access to robust licensed spectrum is a critical need.[15] In addition, representatives from the stakeholders we interviewed told us that there are non-technological benefits for tribal entities to obtain greater access to licensed spectrum, including:

- enhanced ability to deliver additional Internet services,
- enhanced ability to sell or lease spectrum for profit, and
- additional opportunities to obtain federal funding that requires entities to hold or have access to licensed spectrum.

Furthermore, two tribal stakeholders and representatives from several tribal entities told us that having access to licensed spectrum would enable tribes to exercise their rights to sovereignty and self-determination. For example, representatives from four of the tribal entities told us that having access to licensed spectrum would ensure that spectrum is being used in a way that aligns with tribal goals and community needs, further supporting their rights to self-determination.

In our November 2018 report, we described barriers tribal entities reported facing in accessing licensed spectrum. First, representatives from tribal entities we contacted said that obtaining a spectrum license through an auction was too expensive for many tribal entities. Indeed, over 60 percent (983 of 1,611) of the winning bids from a 2015 spectrum auction were more than $1 million. Representatives from some tribal entities told us they were unable to obtain financing to participate in auctions because tribal governments cannot use tribal lands as collateral to obtain loans and that participating in spectrum auctions requires auction-specific expertise that tribal entities may not have.

Second, tribal entities reported facing barriers obtaining spectrum through secondary market transactions. Most of the spectrum allocated for commercial use has already been assigned through spectrum auctions and other mechanisms to private providers that may not be providing service on tribal lands. As such, there may be tribal areas where providers hold licenses for bands but are not using the spectrum to provide Internet service. All three of the tribal associations we contacted confirmed that there were unused spectrum licenses over tribal lands, and representatives from a nationwide provider indicated that they only deploy services if there is a business case to support doing so. Accordingly, the secondary market is one of few avenues available to tribal entities that would like to access licensed spectrum. However, representatives from tribal entities we contacted told us it could be challenging to participate in the secondary market because there is a lack of willing sellers, license holders are not easily identified, and tribal entities may not be aware of how to pursue secondary market transactions. For example, representatives from a tribal entity that had been successful in obtaining a license through the secondary market told us that an Indian-owned telecommunications consulting company was pivotal in identifying the license holder and facilitating the transaction, and without such assistance, the transaction would not have occurred.

FCC Had Taken Some Actions to Increase Access, but Does Not Collect or Communicate Key Spectrum-Related Information to Tribal Entities

At the time of our November 2018 report, we found that FCC had taken some actions to increase tribal access to spectrum. In particular:

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[13] To identify tribal entities, we reviewed the list of federally recognized tribes published in the *Federal Register*, identified search terms related to these tribes, and manually matched these search terms and FCC data on license holders. Because tribal entities may hold spectrum licenses under names that did not include the search terms we identified, there may be additional tribal entities that we did not include in our analysis. As of September 2018, there were over 27,000 active spectrum licenses held by over 4,400 licensees.

[14] We found 13 tribal entities had obtained a license through FCC administrative assignment, which, as described above, FCC also has the authority to do. One of these 13 tribal entities also held a license obtained through a secondary market transaction.

[15] FCC's Office of Native Affairs and Policy, 2012 *Annual Report*, (Washington, D.C.).

- FCC issued a proposed rulemaking in March 2011 that sought comments on three proposals to create new spectrum access opportunities for tribal entities (see fig. 3).[16] As of July 12, 2019, FCC had not adopted new rules or taken further action on the 2011 rulemaking.

Figure 3: Proposals Made in the Federal Communication Commission's (FCC) 2011 Notice of Proposed Rulemaking (NPRM) to Promote Tribal Access to Spectrum

Proposal	Description
Tribal licensing priority 	Establish a licensing priority for tribal entities to obtain not-yet-assigned licenses, such as at future auctions for fixed and mobile wireless services, for unserved or underserved tribal lands. The NPRM proposed two ways to provide tribal entities with priority access, including (1) provide a tribal priority application window after FCC has announced a spectrum auction but before the window for filling auction applications opens or (2) provide a tribal priority application window before FCC has announced a spectrum auction.
Good faith negotiations 	Establish a process to help tribal entities secure access to spectrum over tribal lands through secondary market opportunities. The NPRM proposed creating a formal negotiation process that would enable a tribal entity to require a license holder to enter into good faith negotiations regarding a secondary market transaction for any geographic portion of the license that is covered by unserved or underserved tribal lands.
Build-or-divest process 	Establish a process where a tribal entity could require a licensee to build or divest a geographic area covering unserved or underserved tribal lands within its license area. The NPRM proposed initiating such a process where an existing licensee has satisfied the applicable construction requirements for the license yet tribal land areas remain unserved or underserved.

Source: GAO analysis of FCC information. | GAO-19-668T

- FCC issued a proposed rulemaking in May 2018[17] that sought comment on establishing a priority window for tribal nations located in rural areas to obtain a license in the Educational Broadband Service spectrum band (also known as the 2.5 GHz band).[18] In the proposed rulemaking, FCC had found that significant portions of this band were not being used, primarily in rural areas. FCC had not finalized this rule at the time of our November 2018 report, but published a draft order in June 2019 that would establish a priority filing window so that tribal entities could get access to unassigned spectrum in the 2.5 GHz band on rural tribal lands prior to an FCC auction. FCC adopted this order on July 10, 2019.[19]
- FCC's Office of Native Affairs and Policy conducts training, consultation, and outreach to tribal entities on spectrum-related issues, such as communicating with tribal entities prior to FCC auctions or when FCC regulatory actions or policies would affect tribal governments and spectrum over their lands.

FCC's 2010 *National Broadband Plan* stated that ongoing measurement of spectrum utilization should be developed to better understand how spectrum resources are being used because some studies indicated that spectrum goes unused in many places much of the time. The plan stated that any spectrum utilization studies that FCC conducts should identify tribal lands as distinct entities. The plan also stated that FCC should make data available that would promote a robust secondary market for spectrum licenses, such as information on how and to whom spectrum is allocated on tribal lands.[20] In FCC's 2018 strategic plan, FCC stated that it will implement ongoing initiatives that will assist in spectrum policy planning and decisionmaking, promote a robust secondary market in spectrum, and improve communications services in all areas of the United States, including tribal areas.[21] Additionally, federal internal control standards state that agencies should use quality information, including information that is complete, to inform the decisionmaking proc-

[16] *In the Matter of Improving Communications Services for Native Nations by Promoting Greater Utilization of Spectrum over Tribal Lands*, Notice of Proposed Rulemaking 26 FCC Rcd 2623 (2011). The 2011 proposed rulemaking included other proposals not related to enhancing tribal access to spectrum but rather to incentivize build-out in tribal areas by license holders, such as making modifications to the Tribal Lands Bidding Credit Program and creating Construction Safe Harbor provisions.

[17] *In the Matter of Transforming the 2.5 GHz Band*, Notice of Proposed Rulemaking, WT Docket No. 18–120 (2018).

[18] According to FCC, the tribal priority window will enable tribal entities an opportunity to obtain unassigned 2.5 GHz licenses to provide service on rural tribal lands; this window will be followed immediately by a system of competitive bidding. As described above, FCC previously assigned licenses for exclusive use in the Educational Broadband Service band (2496–2690 MHz).

[19] *In the Matter of Transforming the 2.5 GHz Band*, Report and Order, FCC 19–62 (2019).

[20] FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: 2010).

[21] FCC, *Strategic Plan 2018–2022* (Washington, D.C.).

esses and communicate with external entities.[22] Tribal governments are an example of such external entities.

However, in our 2018 report, we found that FCC had not consistently collected data related to tribal access to spectrum or communicated important information to tribes. In particular:

- FCC did not collect data on whether spectrum license-holders or auction applicants are tribal entities. Without this information, FCC did not have a comprehensive understanding of the extent that tribal entities are attempting to obtain or access licensed spectrum or have been successful at obtaining and accessing it.
- FCC did not analyze the extent that unused licensed spectrum exists over tribal lands, even though FCC had the information—broadband availability data from providers and information on geographic areas covered by spectrum licenses—needed for such an analysis. Although FCC officials told us evaluating the effectiveness of FCC's secondary market policies is a way to increase the use of unused spectrum, FCC's approach did not include an analysis of unused spectrum licenses on tribal lands. As a result, FCC's evaluations of the secondary market may not have accurately reflected how its policies affect tribal entities. Because the secondary market is one of few ways for tribal entities to access licensed spectrum, such an assessment would enable FCC to better promote a robust secondary market that provides opportunities for tribes to access spectrum.
- FCC did not communicate information to tribes that could benefit them in their efforts to obtain spectrum in the secondary market. As described earlier, the secondary market is a significant mechanism for tribal entities to obtain spectrum licenses, but representatives from the tribal entities we interviewed reported challenges related to participating in the secondary market, such as not knowing whom to contact should they wish to engage in a secondary market transaction to obtain a spectrum license.

We concluded that FCC's efforts to promote and support tribal entities' access to spectrum had done little to increase tribal use of spectrum. In particular, FCC lacked information that could help inform its decision-making processes related to spectrum policy planning, which is intended to improve communications services in all areas of the United States, including tribal lands. By collecting data on the extent that tribal entities are obtaining and accessing spectrum, FCC could better understand tribal spectrum issues and use this information as it implements ongoing spectrum initiatives. Furthermore, the ability of tribal governments to make informed spectrum planning decisions and to participate in secondary market transactions is diminished without information from FCC on the spectrum transactions that occur over tribal lands. Providing this information directly to tribal entities could enable them to enter into leasing, partnership, or other arrangements to obtain spectrum. In our November 2018 report, we recommended that FCC (1) collect data on the extent that tribal entities are obtaining and accessing spectrum and use this information as FCC implements ongoing spectrum initiatives; (2) analyze data to better understand the extent that unused spectrum licenses exist over tribal lands, such as by analyzing the data for a sample of tribal lands, and as appropriate use this information to inform its oversight of the secondary market; and (3) make information on spectrum-license holders more accessible and easy to understand for interested parties, including tribal entities, to promote their ability to purchase or lease spectrum licenses from other providers. FCC agreed with these recommendations and described the actions it plans to take to implement them. For example, according to FCC, it will consider ways to collect data on the extent to which tribal entities are obtaining and accessing spectrum; analyze data from a sample of spectrum licenses on tribal lands to inform FCC's spectrum policies; and transition to a more user-friendly system for its licensing data.

Chairman Hoeven, Vice Chairman Udall, and Members of the Committee, this concludes my prepared statement. I would be pleased to respond to any questions that you may have.

The CHAIRMAN. Thank you. Mr. Stockdale?

[22] GAO, *Standards for Internal Control in the Federal Government*, GAO–14–704G (Washington, D.C.: September 2014).

STATEMENT OF DONALD K. STOCKDALE, JR., CHIEF, WIRELESS TELECOMMUNICATIONS BUREAU, FEDERAL COMMUNICATIONS COMMISSION

Mr. STOCKDALE. Chairman Hoeven, Vice Chairman Udall, and members of the Committee, thank you for the opportunity to testify today regarding the GAO report on the FCC's efforts to promote tribal access to spectrum.

Chairman Pai's top priority has been to close the digital divide and bring the benefits of the internet to all Americans, particularly those in rural areas and on rural tribal lands. Because spectrum is critical those efforts, Chairman Pai has made access to low-, mid-, and high-frequency spectrum a key element of his 5G FAST Plan.

Tribal nations face unique and significant obstacles to offering service in rural tribal areas. The commission recognizes that it needs to work in close collaboration and consultation with tribal nations to overcome these obstacles.

Making mid-band spectrum available for advanced wireless services, including 5G, provides a critical opportunity to address those challenges, because of its good coverage and capacity characteristics. Chairman Pai has sought not only to make mid-band spectrum available for advanced wireless services generally, but also to identify specific opportunities for rural tribal nations to obtain access to this spectrum.

That is why the commission recently took the unprecedented action to prioritize access to the 2.5 gigahertz band for tribal nations. In July, the commission adopted rules to make this spectrum available for wireless use across the Country, and particularly in rural tribal areas.

Specifically, the commission established its first ever priority window for rural tribal nations to obtain flexible use spectrum for free, before any auction takes place. We expect to open the rural tribal priority window early next year and we are planning a number of outreach efforts over the coming months.

The commission also has adopted a novel dynamic sharing framework for the 3.5 gigahertz band that will offer a key opportunity for deployment on rural tribal lands. That framework will provide tribal entities with two ways to access the spectrum. They can bid on licenses at auction, or they can rely on opportunistic access in areas where there is limited commercial interest.

The commission additionally promotes deployment in tribal areas by adopting tribal land bidding credits in its auction rules, such as in its recent auctions of 24 and 28 gigahertz bands, and its upcoming auctions of the 37, 39 and 47 gigahertz bands and 2.5 and 3.5 gigahertz bands.

Yet, despite these efforts, the commission recognizes there is more to be done. The commission is trying to respond to the recommendations of the GAO report. First, the GAO recommended that the FCC collect date on the extent to which tribal entities are accessing spectrum, and to use this information in its ongoing spectrum initiatives. The commission is analyzing the extent to which bidding credit information provides insight into tribal entities' access, and it also plans to use data generated by the 2.5 gigahertz priority window.

Second, the GAO recommended the FCC analyze data to better understand the extent that that unused spectrum licenses exist over tribal lands. FCC staff, pursuant to the GAO recommendation, are currently developing a sample of spectrum licenses on tribal lands, which will then be analyzed to inform ongoing spectrum policies. This report should be completed by the end of the year.

Third, the GAO recommended that the FCC make information on spectrum license holders more accessible and easier to understand. The FCC's universal licensing system is currently available to tribal entities and other members of the public, but as the GAO noted, it may not be the most user-friendly. The commission therefore is currently engaged in a multi-year project to modernize its complex licensing systems which, among other things, should make it more user-friendly. In the meantime, commission staff are ready to help tribal nations access and navigate ULS.

Chairman Hoeven, Vice Chairman Udall and members of the Committee, thank you once again for the opportunity to testify, and I look forward to the opportunity to answer your questions.

[The prepared statement of Mr. Stockdale follows:]

PREPARED STATEMENT OF DONALD K. STOCKDALE, JR., CHIEF, WIRELESS TELECOMMUNICATIONS BUREAU, FEDERAL COMMUNICATIONS COMMISSION

Chairman Hoeven, Vice Chairman Udall, and Members of the Committee, thank you for the opportunity to testify today regarding the GAO report on the Federal Communication Commission's (Commission or FCC) efforts to promote Tribal access to spectrum.

Chairman Pai's top priority has been to close the digital divide and bring the benefits of the Internet to all Americans, particularly those in rural areas and on rural Tribal Lands. Radiofrequency (RF) spectrum is crucial to narrowing the digital divide on Tribal Lands. That's why a key component of the Chairman's 5G FAST Plan—a comprehensive strategy to Facilitate America's Superiority in 5G Technology—is making spectrum available in low-, mid-, and high-frequency bands to facilitate deployment of advanced wireless services to all Americans.

Tribal Nations face unique and significant obstacles to offering service in rural Tribal areas, even when compared to rural non-Tribal lands. Many Tribal areas have characteristics that increase the cost of deployment and of providing service, including challenging terrain, low population density, jurisdictional issues involving states and sovereign Tribal governments, and the absence of necessary infrastructure. At the same time, the expected revenues in Tribal areas tend to be lower, in part due to a smaller number of business customers. The Commission recognizes the need to work in close collaboration with Tribal Nations as well as non-Tribal stakeholders, to overcome these barriers and ensure that no one who lives in Indian country is on the wrong side of the digital divide.

Making mid-band spectrum available for advanced wireless services, including 5G, provides a critical opportunity to address the need for wireless broadband in rural and Tribal areas. Mid-band spectrum offers a desirable combination of coverage and capacity for wireless services. In recent years, the demand for mid-band spectrum has increased dramatically worldwide, as more countries have realized that this spectrum has characteristics that will be useful for 5G deployments. Under Chairman Pai's leadership, the Commission has sought not only to make mid-band spectrum available for 5G generally, but also to identify specific opportunities for rural Tribal Nations to obtain access to this spectrum.

For example, the Commission recently took action to prioritize access to the 2.5 GHz band for Tribal Nations to provide advanced wireless services, including 5G, to rural Tribal Lands. The 2.5 GHz band, the largest contiguous block of spectrum below 3 GHz, is dramatically underused today, particularly in rural and Tribal areas. Existing licenses cover only about half of the geography of the United States, and much of the band is not even assigned across swaths of the country west of the Mississippi River. The Commission, at its July 10, 2019 meeting, acted to change that by replacing an outdated regulatory framework governing this band with new rules and procedures that will make this spectrum available for advanced wireless services across the country, and particularly in Tribal areas. Specifically,

the Commission, for the first time ever, established a priority window for flexible-use licenses for rural Tribal Nations to obtain spectrum for free—before any auction of the spectrum—to enable Tribal Nations to address communication needs on rural Tribal Lands. This is a groundbreaking measure that demonstrates the Commission's commitment to expanding Tribal Nations' ability to access spectrum. The Commission will open the priority window for 2.5 GHz spectrum early next year, and Commission staff outreach to Tribes is already underway, including an August 20 workshop in Billings, Montana and an upcoming panel at the Department of the Interior's National Tribal Broadband Summit.

The Commission also has established a framework to access additional mid-band spectrum, specifically in the 3.5 GHz band, which should provide opportunities for a variety of rural and remote communities, as well as wireless providers that seek to serve them. The Citizens Broadband Radio Service is a novel, three-tiered access and authorization framework to accommodate shared federal and non-federal use of the 3550–3700 MHz band. Access and operations are managed by automated frequency coordinators, known as Spectrum Access Systems. The Commission will vote later this month to seek comment on bidding procedures for an auction of Priority Access Licenses (PALs) in the 3550–3650 MHz band. PALs are 10-year, county-based licenses of 10-megahertz channel blocks that receive protection from General Authorized Access (GAA) users. The GAA tier, in turn, is licensed-by-rule to permit access to the 3550–3700 MHz band, with at least 80 megahertz in any given license area available to potential GAA users and not available to PAL users. The 3.5 GHz band's opportunistic access regime and smaller geographic license areas provide low-cost entry points to mid-band spectrum and another key opportunity for deployment of advanced wireless services to Tribal entities.

Under this framework, Tribal entities will have two ways to access this spectrum. They can gain GAA access to spectrum in areas where there is no commercial build-out, or they can seek PAL licenses in the auction, utilizing Tribal Land bidding credits and other bidding credits.

Tribal Land bidding credits are another example of how the Commission promotes the deployment of spectrum-based services to Tribal Lands through its auction rules. The Commission has adopted Tribal Land bidding credits for many spectrum auctions. For example, the Commission awarded credits for 20 licenses in the 600 MHz auction, and winning bidders have applied for Tribal Land bidding credits in the recent 24 GHz and 28 GHz auctions, in a total of 13 pending license applications. Also, the Commission has adopted Tribal Land bidding credits in the upcoming mid-band spectrum auctions of the 2.5 GHz and 3.5 GHz bands and the high-band spectrum auction of 37 GHz, 39 GHz, and 47 GHz bands. The Tribal Land bidding credit program provides the opportunity for spectrum auction winners to obtain a discount (in the form of a refund) for providing service to qualifying Tribal Lands. To qualify for the credit, the winning bidder must demonstrate that it will serve qualifying Tribal Lands, provide certifications from the applicable Tribal government, and attest that it will construct and operate a system capable of serving 75 percent of the qualifying Tribal Land population within three years of license grant.

The Commission recognizes that many Tribal entities can benefit from additional information, outreach, coordination, and assistance in meeting the communications needs of their communities. The Commission's Office of Native Affairs and Policy (ONAP) provides a home for dedicated Commission staff with specialized experience to serve as official Commission liaisons for ongoing consultation, engagement, and outreach to the American Indian, Alaska Native Village, Hawaiian Homelands, and other Native communities. Most importantly, ONAP fosters Commission dialogue and engagement with Tribes, Tribal governments, and inter-Tribal organizations, furthers the Commission's trust relationship with Tribal Nations, and demonstrates the Commission's ongoing commitment to its 2000 *Tribal Policy Statement*.[1] In addition to emails and calls to provide technical assistance to individual Tribes, ONAP participated in 23 events and gatherings with tribes since 2018, with several more planned before the end of this year. Finally, last year the FCC renewed its Native Nations Communications Task Force. The Task Force is comprised of elected or appointed leaders from federally recognized Tribal governments and senior Commission staff. It provides the Commission with guidance on such matters as identifying barriers to broadband deployment unique to Tribal Lands and ensuring that Tribal

[1] *Establishing a Government-to-Government Relationship with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

concerns are considered in all Commission proceedings related to broadband and other Commission undertakings that affect Tribal interests. [2]

Yet, despite our best efforts, we recognize there is more work to be done. In November 2018, the GAO released a report on spectrum use by Tribal entities. Even before the Commission's decision to adopt a Tribal priority window for 2.5 GHz spectrum, that report noted that the "FCC has taken steps to promote and support Tribal access to spectrum," but nevertheless offered three recommendations to improve access to spectrum on Tribal Lands. The Commission continues to work to implement the report's recommendations.

First, GAO recommended that the FCC should collect data on the extent to which Tribal entities are obtaining and accessing spectrum and use this information as the FCC implements ongoing spectrum initiatives. The FCC collects information on licensees to determine eligibility to hold a particular license, but because eligibility generally is not based on Tribal entity status, the FCC has not required reporting of Tribal entity status for every license. The Commission is analyzing the extent to which bidding credit information provides insight into Tribal entities' access to, and use of, spectrum. And, of course, the Commission will collect information on rural Tribal entities in the context of the 2.5 GHz priority window. Further, as the Commission creates new application forms or revises existing forms, it will consider whether to add the option for the applicant to voluntarily identify itself as a "tribal entity."

Second, GAO recommended that the FCC "should analyze data to better understand the extent that unused spectrum licenses exist over Tribal Lands, such as by analyzing the data for a sample of Tribal Lands, and as appropriate use this information to inform its oversight of the secondary market." Staff from the FCC's Office of Economics and Analytics and Wireless Telecommunications Bureau (WTB) are currently developing a sample of spectrum licenses on Tribal Lands, which will then be analyzed to inform ongoing spectrum policies.

Third, GAO recommended that the FCC make information on spectrum license holders more accessible and easier to understand for interested parties, including Tribal entities, to promote their ability to purchase or lease spectrum licenses from other providers. The FCC's Universal Licensing System (ULS) is available to Tribal entities and other members of the public. The Commission is currently engaged in a multi-year project to modernize ULS, transitioning to a new platform that will provide more consistent performance, easier access to information, and enhanced functionality. This modernization work will take time, as ULS is a complex system that issues and maintains over 2.2 million wireless licenses and processes over 400,000 applications annually. GAO's recommendation that the Commission make information on spectrum license holders more accessible and understandable is in alignment with the Commission's goals for a modernized ULS.

In the meantime, the Commission has provided Tribes with information about, and assistance in, accessing ULS. The Commission provided information about opportunities to access spectrum through new licenses as well as through partitioning, disaggregating, and leasing existing licenses. The Commission has provided this information at FCC Tribal Workshops, and in presentations at inter-Tribal events. Examples include inter-Tribal meetings and FCC workshops in Washington, DC in February and March of 2019, in Mescalero, New Mexico in April 2019, in Ada and Norman, Oklahoma in May and June 2019, respectively, in Spokane, Washington in May 2019, and in Billings, Montana in August 2019. ONAP and WTB staff are also planning and conducting extensive outreach regarding the Tribal Priority Window for access to 2.5 GHz spectrum, including holding several Tribal workshops, proving on-line tutorials, and providing assistance on how to complete the forms necessary to apply for spectrum during the priority window. Both ONAP and WTB staff are always available to assist any individual Tribe that has questions or requests assistance accessing information through ULS.

Chairman Hoeven, Vice Chairman Udall, and the Members of the Committee, thank you once again for the opportunity to testify this afternoon, and I look forward to the opportunity to answer your questions.

The CHAIRMAN. Thank you. I would like to turn to Senator McSally for purposes of an introduction.

Senator MCSALLY. Thank you, Chairman Hoeven. Our third witness is Ms. Belinda Nelson, who is the Chairperson for the Gila

[2] Public Notice, *FCC Seeks Nominations for Tribal Government Representatives to Serve on Renewed FCC Native Nations Communications Task Force* (DA 18-127) (rel. Feb. 8, 2018).

River Telecommunications, Inc., out of Arizona. It was great to meet with her yesterday and visit with her a little bit, and we are honored to have you here representing Arizona, and representing Gila River.

The CHAIRMAN. Senator McSally, if you wouldn't mind, because of the votes, the Vice Chairman is going to have to go vote, and he would like to hear his New Mexico constituent testify. Ms. Nelson, would you be willing to defer?

Ms. NELSON. Yes, Mr. Chairman.

The CHAIRMAN. Okay, you can proceed, with your indulgence, thank you.

STATEMENT OF KIMBALL SEKAQUAPTEWA, CHIEF TECHNOLOGY DIRECTOR, SANTA FE INDIAN SCHOOL

Ms. SEKAQUAPTEWA. My name is Kimball Sekaquaptewa. I come here today from the Santa Fe Indian School, which is owned and operated by the 19 Pueblos of New Mexico. As an off reservation boarding school, maintaining community connections is essential. How perfect would video conferencing be to connect our students with their native language instructors back at home? We thought so five years ago after we solved the digital divide in Santa Fe by bringing high-speed internet to our campus in the State capital.

However, we were quickly put in place when we realized that the tribes were too slow to talk back, to communicate using two-way video conferencing technology. In fact, at that time, at Pueblo Cochiti, the entire government and the public library were sharing a single copper T–1 line, a 1.5-megabit connection, which is a fraction of my phone .

In the past four years, we have worked with six of our Pueblo tribes to be their own solution to the digital divide. Through the use of the FCC Schools and Libraries program, we built two middle mile fiber optic networks, connecting two tribal schools and six tribal libraries. The libraries serve as computing centers in our communities, when the homes don't have computers and when those computers don't have internet connections.

Through our efforts, we cracked the code to connectivity by learning how to construct a fiber optic network. Since then the tribes have self-invested to build a second network that can connect beyond schools and libraries. We have begun to construct tribally owned cell towers. In the past, the tribes were paid a small fee for the land lease. By owning the cell tower, tribes can work directly with the carriers to realize the profit from the device traffic and the fiber back-call, resulting in a new income stream that has minimal environmental impact on our natural resources.

Adding to new Native capabilities, tribally controlled towers can result in access to the FirstNet public safety network, which utilizes AT&T, which unfortunately is very limited in the Pueblos. I give the shout-out to FirstNet to come to us and to work with the tribes.

But the primary goal of the towers is to increase cell phone coverage for tribal members. We can do this by providing more choices of carriers, but we can also hang our own wireless infrastructure, whether through traditional fixed wireless, or as we have tested lately, the use of spectrum.

At the Santa Fe Indian School, seniors are assigned tablets. We use an online portal to submit homework. However, when those students return to their home communities, these internet-dependent devices become paperweights. In fact, in a meeting with graduating seniors this spring, we learned that despite having a tablet, the number one choice for essay writing was to use the notes app on their phone and essentially text out a paper. They prefer their cell phones because they have the internet to upload the assignments. And they are less filtering from the school.

If we want our graduates to be on part with mainstream America, there is an expectation to write a research paper replete with citations. That is not possible when they are writing with their thumbs. We must address home connectivity to help our students, learn, grow and compete.

SFIS has been working with our tribes to test different technologies. First, we set up the 4G LTE network in one of our pueblos with the help of a non-profit and a higher education institution, who agreed to let us use their EBS license to test the viability of the spectrum. Our challenge is that almost all of the EBS spectrum near Albuquerque and Santa Fe is already licensed. We set up the LTE network from de-boxing to connectivity in just a few hours. We spent the last 14 months since then navigating the regulatory process.

Presently there are six attorneys working to license, sub-lease or partner for connectivity. The network is currently offline while we work through the legal. We appreciate the strong education partners, but the institutions themselves have long ago sub-leased to a national carrier and a spectrum speculator who are not using it.

We will continue to try to use the EBS spectrum that is within our reach. But it feels like drops from a faucet instead of the opening of a floodgate.

Without the day to day support of the non-profit, we would likely not be in the fight. They have provided financial support for specialized EBS attorneys, engineers, and all that is involved to navigate the FCC ULS data set.

Through those efforts, they provided maps, the short list of license holders, and their holdings. It is only at that point that we could pick up the telephone and know who to call to gain access to the airwaves over our land.

We also learned that in addition to EBS, we need CBRS, also a mid-range frequency. With the goal to serve every tribal home, the multi-pronged strategy is required because of the limitations of the different frequency types with respect to range, speed and penetration.

The draft rules were proposed last week. Do we have the bank to win against the highest bidder? Or might a different tribal priority help us to serve on our own lands? Thus participating in the FCC rulemaking, ideally through government-to-government relations, will add to our work effort.

Acquiring access to spectrum also brings ancillary challenges with new opportunities with respect to the reconnect. Because a provider bid on our census tracts under the CAF II auction and was awarded our lands without our knowledge, then as tribes we are not able to apply for reconnect on our own. This winter, when

we contacted them, they told us that they plan to use CBRS but that our lands weren't even on their scheduled network upgrade schedule. So while they are not planning to build out, we are ready to build out, and we are ready to use the same technology as them, yet the rules prohibit us from doing so.

My question would be, and what I really want to know is, why don't tribes have access, sovereign access, to the airwaves over our lands, just as we do for other natural resources, such as water? In the global digital economy, the airwaves are essential elements to communicate, and frankly, to survive.

I come today as a newcomer to the spectrum landscape. The pueblos that we worked with to build the LTE networks are not gaming tribes, they are small, rural communities trying to do a solid. And despite not having an IT department, we successfully deployed a 4G LTE network. Our growing pains exist, but do not negate the fact that we are crossing the digital divide through our own capabilities that we have developed to self-govern in the digital age.

Our people are students, nieces and nephews, traditional ways of life, and the ability to thrive in our rural lands are our return on investment.

Thank you, Chairman, Vice Chairman and members.

[The prepared statement of Ms. Sekaquaptewa follows:]

PREPARED STATEMENT OF KIMBALL SEKAQUAPTEWA, CHIEF TECHNOLOGY DIRECTOR, SANTA FE INDIAN SCHOOL

I come here today from the Santa Fe Indian School, which is owned and operated by the 19 Pueblos of New Mexico. As an off-reservation boarding school, maintaining community connections and providing culturally-relevant curriculum requires close and constant contact with our communities. How perfect is video-conferencing for distance learning to connect students with their native language instructors back at home? We thought so five years ago after SFIS was finally able to bring fiber optic Internet to our campus in downtown Santa Fe, the state capitol. However, we were quickly put in place, when we reached out to the Pueblos and realized that the majority of their Internet connections were too slow to talk back. At this time, the entire government of Cochiti and the public library shared a 1.5 Mbps copper T–1 line. And when you called the service provider for more slow expensive Internet, we were told that all the copper was used up and that there were no options. Five years later the copper is still exhausted in our area—there is no change. Further challenging our situation, is the fact that not all of the tribes have IT Departments to install and maintain network equipment. Expensive managed service contracts provide help desk but not strategic management. With the epiphany that we are always stronger together, we rolled up our sleeves to get to work.

For the past four years, we have worked with six of our Pueblo tribes to be their own solution to the digital divide. Through the use of the FCC Schools and Libraries E-rate program, we built two middle mile fiber optic networks, connecting two tribal schools and six tribal libraries. The tribal libraries are located in the heart of the community and when most homes don't have computers and those computers don't have Internet connections, the libraries serve as computing centers for the community. So much so that after the library closes, cars pull up in the parking lot to connect to the Wi-Fi that bleeds out of the building. Post E-rate special construction, our schools and libraries connect at speeds over 3000 percent faster and over 90 percent cheaper than before. These two projects were the largest E-rate awards in New Mexico in 2016 and the only tribal projects of their kind since the E-rate Modernization order.

Through our efforts, we cracked the code to connectivity by learning how to construct a fiber optic network. To complete this project, we were supported by our Governors and Tribal Councils, who were educated along the way. Since then the tribes have self-invested to build a second network that can connect beyond schools and libraries. Admittedly, the learning curve was steep but now when we meet, tribal leadership brings new ideas. For instance, we are constructing tribally owned cell

towers. In the past, the tribes were paid a small fee for a land lease. By owning the cell tower, tribes can work directly with the carriers to realize the profit from the device traffic and fiber backhaul, resulting in a new income stream that has minimal environmental impact on our natural resources. But the primary goal of the towers is to first increase cell phone coverage for tribal members given the poor service in heart of some communities. We can do this by providing more choices from carriers but we also have the potential to hang our own wireless infrastructure to provide Internet access off our fiber optic backbone, whether through traditional fixed wireless, or as we have tested lately—spectrum.

Adding new native capabilities, tribally controlled towers will also result in increased access to the FirstNet public safety network, which utilizes the AT&T network. Unfortunately, at this time AT&T coverage is extremely limited in the Pueblos and thus it is unknown how FirstNet can improve first responder communication—or our health in an emergency. I give this shout out to FirstNet to reach out and work with tribes.

Tribal leadership has also expressed a priority need to provide residential Internet access. At the Santa Fe Indian School, seniors are assigned tablets. We use an online portal for student email, group collaborations, and to submit homework. However, when the students return to their home communities, these Internet-dependent devices become paperweights. At best, students can tether the Internet from their cell phones but those are expensive connections with limited data—and as much as we'd like to report that they save their data for their homework, entertainment and social networking often win. In fact, in a meeting with graduating seniors in the spring we learned that despite having the tablets, the number one choice for essay writing was to use the Notes application on their phones to essentially text out a paper. The reason for cell phone preference has a lot to due to with the availability of Internet access. They uploaded their assignments from their phones. If we want our graduates to be on par with mainstream America, the expectation to write a research paper replete with citations is an important skill—that is not possible when they are writing their papers with their thumbs! Our solution is provide home or bus Internet, and fill the Homework Gap as we have learned to know it, to help our student learn, grow and compete. And while we want them to go to college, we also want them back. We want them to return as professionals and skilled workers to bring economic security for themselves, improve overall community well-being as participating tribal members, and to retain vitality in the Pueblos and all rural America. Skilled American workers with proud rural roots with a commitment to stay, make small towns thrive. Instead of the urban centers taking our talent resulting in a brain drain, let's bring the digital economy to our hometowns.

To do this, the Santa Fe Indian School has been working with our tribes to test ways to provide broadband connectivity for students. And that brings me to what I can share about spectrum. We did it- we set up a 4G LTE network in one of our Pueblos with the help of a non-profit and the higher education institution who agreed to let us use their EBS license to test the viability of the spectrum for educational access. Our challenge is that almost of all the EBS spectrum near Albuquerque and Santa Fe is already licensed. We set up the LTE network from de-boxing to connectivity in a few hours. We have since spent fourteen months, navigating the regulatory process. Presently, there are six attorneys working to license, sublease, or partner for connectivity. Today the network is down while work through legal issues. While we appreciate the strong higher education partnerships willing to work towards quid pro quo broadband benefits, our results utilizing EBS in the 2.5 Mhz frequency will always be limited in our region. The higher education institutions have long ago subleased to a national carrier and a spectrum speculator. We continue to increase our access to the EBS spectrum within our reach but it feels like drops from a faucet instead of the opening of a flood gate.

In my experience deploying an 4G LTE network, the technology is not the hard part. The hardest part to navigate the spectrum use. We do have choice spectrum above us but it sub-leased to outside entities who are not using it. So we work through the legal processes for rights of use. Additionally, without the day-to-day support of the non-profit, we would likely not still be in the fight. They have provided financial support for specialized EBS attorneys, engineers, and all that is involved to navigate the FCC ULS data set. Through those efforts, they provided maps and the short list of license holder names, along with their holdings. Only at that point could we pick up the phone and know who to call. It should not be this hard to find out who is in control of the airwaves over our own land.

I am happy that the FCC created the EBS Tribal Priority Window for tribal governments and organizations to claim unlicensed EBS spectrum. The use of spectrum for rural deployments offers great potential. I worry that without the technical assistance to educate and help navigate the licensing process that not enough tribes

will succeed. The Tribal Priority window, whose start date is not yet announced will only provide sixty days to apply. And despite the priority window, tribes have faster network buildout requirements than an auction winner. And if we can't meet these buildout requirements? Perhaps they go back to auction. Why do tribes have half the time to build out more of the network than the carriers? I have to wonder if this is an oversight or a system that is set up for tribal failure?

I come to you today as newcomer to the spectrum landscape. The Pueblos that we work with to build LTE networks are not gaming tribes. They are small rural communities trying to do a solid. And despite not having an IT Department, we successfully deployed a 4G LTE network. In this limited experience, I have learned that we need more than EBS to meet our bandwidth goals. So then our plans shift to is to also use CBRS, also a mid-range frequency. To do so we'll need to learn a new set of complex rules—and work with a new set of specialized attorneys. Draft rules were proposed last week for a 2020 auction for CBRS Priority Access Licenses. Do we have the bank to win against higher bidders or might a different tribal priority help us serve our own lands? Thus, participating in FCC rulemaking, ideally in through Government-to-Government relations is also added to the work effort.

With the goal to serve every tribal home, the multi-prong strategy is required because of the limitations of the different frequency types. Mid-range frequencies such as EBS and CBRS offer a balance between total bandwidth throughput (speed), increased range, and the ability do a better job penetrating walls or trees. The TV Whitespace is a lower frequency technology and is often proposed in the most rural of locations because it can travel long distance with high penetration but only delivers limited speeds. The 5G revolution promises faster speeds but currently requires fiber transport and small cell antennas that are very close together—which can exacerbate the permitting challenges to build on tribal land.

Acquiring access to spectrum also brings ancillary challenges with FCC and USDA program rules. The USDA released the ReConnect opportunity for rural connectivity. However, some of our tribes were not able to apply for the USDA Reconnect program because there is a rule that if the census tract was awarded in the FCC CAF II auction, then it is not eligible for ReConnect support. Unfortunately, a provider was awarded CAF II funding in many of the Pueblos but did so without consulting the tribes. In communication with the provider, the future and yet unscheduled deployment would utilize CBRS spectrum. I mentioned that we built a fiber optic transport network. We are ready to deploy last mile services but the ineligibility of our census tracts limits our tribal efforts to build out the network. How can a third party get financial support to connect tribal lands without ever consulting the tribal government? Where is the integrity in the tribal engagement process? I stress tribal engagement as the key to working in Indian Country. Instead of making tribal lands barriers to long haul fiber routes, engage the tribe to create partnerships to provide local access.

But what I really want to know why tribes don't have sovereign access to the airwaves, just as we do for other natural resources on our lands, such as water? In the global digital economy, the airwaves are essential elements to communicate and frankly, to survive. Among other things public safety, or lack thereof, transpires over the availability of reliable, real-time communication. If tribes had authority or safe harbor from legal suit to use the not used but licensed by third party EBS spectrum on our lands, instead of fourteen months in legal, we could be delivering enhanced public safety capabilities, instead of still setting up the network.

If we speak are talking about real time, as I was writing these comments, I receive a text from my sister-in-law in the Pueblo, "Haleigh as swamped with homework but the Internet has been down here at the house. Is it possible for her to use your Internet to get this work done? Not sure what else to do besides dropping her off at McDonald's to use WiFi". We live forty minutes from a McDonalds. We told our niece to seek a college degree, which she is trying to do in Nursing. And then to encouraged her to bring those skills back to serve the community. But without appropriate Internet access, why does she become optional? An acceptable casualty on an inaccurate coverage map that alleges that we are served when we are not? As we have learned through our efforts, broadband connectivity is too big to solve as a school, as a tribe, or as a rural community but that working as collaborators, we can and have built the networks that the market said didn't have the return on investment. Our growing pains exist but do not negate the fact that we are crossing the digital divide through the capacities that we have developed to self-govern in the digital age. Our people, our students, our children, nieces and nephews, traditional ways of life, and the ability to thrive in our rural lands is our return on investment. Thank you.

The CHAIRMAN. Thank you, Ms. Sekaquaptewa.

Ms. Nelson, again, thanks for waiting.

STATEMENT OF BELINDA NELSON, CHAIRPERSON, GILA RIVER TELECOMMUNICATIONS, INC.

Ms. NELSON. Chairman Hoeven, Vice Chairman Udall, we would like to let the Vice Chairman know and members of the Committee know that we appreciate the opportunity to testify on behalf of Gila River Telecommunications on promoting better access to spectrum on tribal lands.

I also want to thank, again, Vice Chairman Udall for his work over the last 11 years to promote broadband access on tribal lands. He has been a great advocate for us.

I want to focus today on a few areas GRTI believes could help tribal residents gain greater access to wireless broadband. These include greater access to licensed spectrum, auctioning spectrum with smaller geographic license areas, secondary market licensing, reforms to the Tribal Bidding Credit, "build or divest" mechanisms, and tribal consultation. All of these proposals demonstrate a need for policy makers to redouble their efforts.

I have the honor of serving as the chairperson for GRTI, which is wholly owned by the Gila River Indian Community, home to the Akimel O'otham and the Pee-Posh Tribes. Our reservation is approximately 372,000 acres and is home to almost 12,000 of our more than 20,000 members.

When we first purchased the exchange from Mountain Bell in 1988, only 10 percent of our residents had access to basic phone service. Those looking to get connected had to pay tens of thousands of dollars for a party line connection.

Today, GRTI offers phone service to 100 percent of our residents and 84 percent subscribe. We offer high quality broadband service and continue to deploy our fixed network.

As this Committee is well aware, tribal lands are the least served areas in our Country. The FCC is in the process of updating the data collection use to understand where broadband is not available. But current data shows that approximately 54 percent of tribal lands lack access to broadband speeds of 25/3, compared to only 27 percent of non-tribal lands. More accurate numbers would likely reveal an even greater gap.

The problems that make tribal lands generally uneconomic to serve, such as low population density, high poverty, and rugged terrain, are well-known by this Committee. These issues present challenges regardless of the technology used, which is why it is important for policy makers to consider tribal lands' unique challenges when crafting policies.

Unlicensed spectrum is an essential part of the mix of spectrum options. But given some of its limitations, such as interference requirements, licensed spectrum must be made more readily available to tribal entities. The GAO report demonstrates there are very few tribal entities that currently hold such licensed spectrum.

GRTI commends the FCC's decision to open a Tribal Priority window in the 2.5 gigahertz spectrum band, though we believe the opportunity could be better publicized. We also hope the FCC considers this a pilot program and considers opening tribal priority window and feature options.

Regarding geographic license, GRTI supports auctioning spectrum with more discrete geographic areas, so more tribal entities can participate. As it did in the 2.5 gigahertz proceeding, the commission should identify service areas, like reservations, as the licensed area. This encourages participation by tribes and other tribal entities.

Secondary market opportunities could greatly enhance access to licensed spectrum. Allowing for a more structured process by which tribal areas are partitioned from the licensee service area would allow underserved tribes an opportunity to meet their broadband needs. This is currently allowed under the FCC's rules, but as the GAO report demonstrates, the current rules are not sufficient.

Another step the FCC could take is reforming its Tribal Lands Bidding Credit policy, which provides a credit to the amount bid if the winning bidder commits to building out on tribal lands. Better coordination up front between the entity bidding and the tribal government could help make this a more utilized credit.

While it may seem radical at first, a build or divest proposal is consistent with the longstanding FCC practice. Licensees can often meet build-out obligations without serving tribal lands within their licensed area. Instead of leaving these lands stranded without service, the FCC should, as it would with a failure to build out under any license, require the licensee to either build our or begin a divestment proceeding.

The FCC has authority to pursue all of these proposals right now, but it seems to lack the will to pursue them. GAO notes, "FCC officials told us they have reviewed public comments to the proposed rulemaking, but have no current plans to take further action." This is a very disappointing dose of reality.

Finally, consultation remains vital in getting policies for tribal areas right. Over the years, GRTI has worked with the FCC to address many concerns with its policies. At times, this dialogue has been meaningful and engaging. At other times, it has been after the fact and harmful.

I commend Chairman Pai and many of his fellow commissioners who have taken steps to address our concerns. Congress charged the agency with ensuring access to communication services for all people. And robust consultation can help us all work together to achieve that directive.

I appreciate the opportunity to speak with you today, and look forward to your questions. Thank you.

[The prepared statement of Ms. Nelson follows:]

PREPARED STATEMENT OF BELINDA NELSON, CHAIRPERSON, GILA RIVER TELECOMMUNICATIONS, INC.

Chairman Hoeven, Vice Chairman Udall and members of the Committee thank you for the opportunity to testify on behalf of the Gila River Telecommunications on the important topic of promoting better access to spectrum on Tribal lands by the FCC. Before I start, I also want to thank Vice Chairman Udall for his work over the last 11 years to promote broadband access on Tribal lands through his work on this Committee and the Commerce Committee. You have been a great advocate for addressing the needs of Indian Country and we very much appreciate all you have done and continue to do. Chairman Hoeven and Vice Chairman Udall and all members of the Committee, I also want to thank you for requesting that the Government Accountability Office provide the spectrum report that is the subject of this hearing.

In my testimony today, I want to focus on a few areas that GRTI believes could help Tribal residents gain greater access to wireless broadband. These include:

1. Greater access to licensed spectrum;
2. Auctioning spectrum with smaller geographic license areas;
3. Secondary market licensing;
4. Reforms to the Tribal Bidding Credit; and
5. "Build or divest" mechanisms.

There are other reforms that the FCC, the National Broadband Plan, the GAO and others have acknowledged over the years that could be helpful in closing the broadband canyon that exists on Tribal lands. Underlying all of these proposals is a need for policymakers to re-double their efforts, perform meaningful Tribal consultation, and adopt changes.

GRTI

I want to briefly provide an overview of Gila River Telecommunications, which we refer to as GRTI. I have the honor of serving as the Chairperson for GRTI, which was founded in 1988 and is wholly owned by the Gila River Indian Community. Our reservation is approximately 372,000 acres. We have more than 20,000 members, and almost 12,000 people living on our reservation. When we first purchased the exchange from Mountain Bell in 1988, only 10 percent of our residents had access to basic phone service and those looking to get "connected" had to pay tens of thousands of dollars before Mountain Bell would install a party line connection.

Today, GRTI offers phone service to 100 percent of our residents and 84 percent of the residents subscribe. We also offer high quality broadband service and are continuing to deploy our fixed network. That fixed network also offers backhaul connectivity for wireless services that are available in the Community. We are very proud of GRTI's success and work everyday to ensure it continues.

Challenges to Broadband Deployment on Tribal Lands

As this Committee is well aware, Tribal lands are the least served areas in the country. How severe is the gap? That is currently unclear as the Commission is in the process of updating that data collection used to understand where broadband is not available. With that caveat, what the FCC data shows is that approximately 54 percent of Tribal lands lack access to broadband at speeds of 25/3, whereas only 27 percent of non-Tribal lands lack such access to broadband at those speeds. That is a significant difference and more accurate numbers would likely reveal an even greater gap.

The problems that make tribal lands generally "uneconomic to serve" are well-known by this Committee: low population density, low median income, high rates of poverty, rugged and difficult terrains, and regulatory obstacles such as multi agency approval for constructing communications facilities. These issues present challenges regardless of the technology used, which is why it is important for policymakers to consider the unique challenges on tribal lands when they are crafting policies. And that is what I will now turn to.

Licensed Spectrum Opportunities

As the GAO rightly identifies, there is a difference between licensed and unlicensed spectrum. Unlicensed spectrum is an essential part of the mix of spectrum options, but given some of its limitations, such as interference requirements, licensed spectrum must be made more readily available to tribal entities. The GAO reports demonstrates there are very few tribal entities that currently hold such licensed spectrum. Based on their search of the FCC's licensing database, only 18 tribal entities hold such licenses, of which the Gila River Indian Community is one. The data is shocking as there are 573 federally-recognized tribes in the U.S. Even more staggering is the fact that that there are 4,400 licensees, meaning tribal entities represent 0.4 percent of all licensees. These data point to a clear problem and evidence that more must be done.

GRTI commends the FCC's decision this past summer to open a "Tribal Priority" window in the 2.5 GHz spectrum band. That decision should provide a broad array of tribal entities an opportunity to acquire licensed spectrum that can be used to provide their communities 5G broadband services. We look forward to the Commission providing additional details on this opportunity in the coming months and we hope that the FCC considers this a "pilot program" and gives consideration to opening Tribal Priority windows in future auctions as well. But more remains to be done.

Geographic License. Specifically, GRTI supports auctioning spectrum with more discrete geographic areas so more tribal entities can participate. As it did in the 2.5 GHz proceeding, the Commission should identify service areas, like reservations, as the licensed area. This will encourage greater participation as it will allow Tribes

and other tribal entities a more-tailored license area focused on meeting the needs of their tribal community.

Secondary Markets. Additionally, GAO noted in its report that respondents stated secondary market opportunities could greatly enhance access to licensed spectrum. Allowing for a more structured process by which tribal areas are partitioned from the licensee's service area would allow unserved and underserved Tribes an opportunity to meet their broadband needs. This is currently allowed under the FCC's rules, but as the GAO Report demonstrates, the rules are not sufficient. GAO reports that only four (4) tribal entities have entered into secondary market agreements. This market-based solution needs rigorous backing by the FCC to move forward and we would urge this Committee to encourage the FCC to takes steps to promote and encourage negotiations between licensees and tribal entities in unserved/underserved to advance these agreements.

Tribal Lands Bidding Credit. Another step the FCC could take would be reforming its Tribal Lands Bidding Credit policy. That policy provides a credit to the amount bid if the winning bidder commits to building out on tribal lands. The amount of the credits is tied to the amount of the winning bid and the winning bidder must buildout to 75 percent of the tribal population within three years. Better coordination upfront between the entity bidding and the tribal government could help make this a more utilized credit.

Build or Divest. Another proposal that may at first seem radical but is consistent with longstanding FCC practice is a "build or divest" proposal. This proposal would require licensees to either build out their network to serve the tribal communities within their licensed area or divest that portion of their license. At the root of this problem is the fact that licensees can often meet their buildout obligations without serving the tribal lands within their licensed area. Instead of leaving these tribal lands stranded without service because the licensee has no need, no economic incentive, and no interest in building out to the tribal area, the FCC should, as it would with a failure to build out under any license, require the licensee to either buildout or begin a divestment proceeding. The FCC could establish safeguards to ensure the intent of the licensee is fully understood, but those safeguards should also ensure that the needs of the tribal community are met.

All of these proposals are ones that the FCC has the authority to pursue right now. What seems lacking is a will to pursue them. In fact, most of the above proposals are the subject of an open proceeding initiated by the FCC in 2011. As GAO notes in its report on page 21 "FCC officials told us they have reviewed public comments to the proposed rulemaking, but have no current plans to take further action." This is a very disappointing dose of reality for our communities and one this committee should take notice of, as it will lead to tribal communities across the nation falling further behind in achieving broadband, which only further exacerbates the economic and cultural hardships we face.

Tribal Consultation. One final note on an always important component of addressing tribal needs—consultation. Over the years GRTI has worked with the FCC at all levels of the agency, including meeting with the Chairman, the commissioners, the bureaus and with ONAP to address many concerns it has had with Commission policies. At times the dialogue with the agency has been meaningful and engaging. At other times, it has been after-the-fact and harmful to our efforts to bring communications services to our tribal community. I would say that Chairman Pai and many of his fellow commissioners have heard our concerns and have taken concrete steps to address them. We very much appreciate their willingness to hear us, but consultation with tribes, which the FCC committed to in 2001, remains vital to getting the policies for tribal areas right. We trust the FCC will continue to engage with all tribal communities to fix the broadband access canyons that exist on tribal lands. Congress charged the agency with ensuring access to communications services for all people. Robust consultation can help us all work together to achieve that Congressional directive.

Conclusion

I appreciate the opportunity to speak with you today, and hope to be an ongoing resource for the Committee. Thank you.

The CHAIRMAN. Thank you, Ms. Nelson.

We will start with questions. My first question to you, Mr. Von Ah, is what is the number one thing that the FCC can do to help tribes, help Indian Country with access to spectrum? What is the number one thing they can do?

Mr. VON AH. According to our report, we really focused on the access to secondary markets. There is a lot of unused spectrum out there. There is maybe unwilling sellers, there are transaction costs, there are other things that hinder that market from functioning well. Just simply knowing who has the unused spectrum, how to go about those kinds of transactions.

So I think that is one area where more incentives for use of the secondary markets, information about those markets, can be a big help.

The CHAIRMAN. Mr. Stockdale, how do you accomplish that?

Mr. STOCKDALE. Mr. Chairman, one of the ways that we can improve access to the secondary market is to improve information. In that regard, we are currently in the process of trying to modernize our universal licensing system, that is the system that currently contains over 4 million licenses, and we process about 400,000 licenses each year.

This is going to be a multi-year effort to modernize it, but the goal is to come up with a more robust, more flexible and more user-friendly system that will permit both tribal nations and other members of the public to access the system and identify who holds spectrum licenses.

The CHAIRMAN. That is good. That is to the benefit of everybody, right?

Mr. STOCKDALE. It is.

The CHAIRMAN. What specifically are you doing in Indian Country?

Mr. STOCKDALE. With respect to Indian Country, we have in the past and continue to have a series of workshops and meetings with tribal nations to help them navigate the ULS system. And we have one to one contacts ready to answer any questions they have concerning how to access the system and how to identify current spectrum holders.

The CHAIRMAN. So I would ask Ms. Nelson, first, how can FCC specifically help accomplish what they just described, enabling you to understand how to access more spectrum? In simple terms.

Ms. NELSON. Senator, I believe first of all tribal consultation and outreach is key. Because many tribes across the Country do not receive this information in advance, in order to know what opportunities are presented to them.

As I mentioned earlier, notification to tribes would allow them to decide on their particular reservation what resources they have, what training they have, sacred sites, there needs to be consultation to that effect.

The CHAIRMAN. Mr. Stockdale, are you engaging in ways to do that?

Mr. STOCKDALE. Through ONAP and with staff in our own Wireless Bureau, we have consulted with and we are setting up consultations with various tribal nations through workshops and other means, in which we are trying to first, help them navigate ULS, but also, and I think this is very important, we are trying to prepare them for the upcoming tribal window for 2.5 gigahertz. We believe this provides a great opportunity for tribal nations to gain access to mid-band spectrum, which is particularly well-suited for advanced wireless services, including 5G. We want to make sure that

any tribe that is interested in gaining some access knows how to do so.

The CHAIRMAN. Ms. SK, same question. Simple terms. How can FCC be most helpful in accessing spectrum in Indian Country?

Ms. SEKAQUAPTEWA. I go back to the information to give us a report, maps, visualization, rather than the complicated spreadsheet that we have to parse, showing us who owns it and what they own, so then we can talk to them and seek a sublease or access the secondary market.

However, I don't know that that that is the end of the story, just in terms of what we would need to do then. With the secondary market, what we found in our experience is, the carrier will let us have it conditionally. The school let us use it, if it doesn't infringe too much on what their educational programs are. So then we take this big risk of building out these networks or making these investments with these terms that are uncertain for our future and for the sustainability of the service or the sustainability of the network.

The CHAIRMAN. Right. So, Mr. Von Ah, how much longer can unlicensed spectrum continue to be used in Indian Country with reliability, and do you have recommendations how to fix that or address that, that goes to exactly what she just said?

Mr. VON AH. I think unlicensed spectrum has limitations. Certainly, we heard that from all of the tribal entities that we spoke with. But they use what they can. Whatever is available, if there is equipment available, we are going to try to use it to create the best service that we can.

The CHAIRMAN. How can the FCC, in simple, direct terms, get them the understanding so they know how to try to access spectrum? What is the clearest path to get that done?

Mr. VON AH. Part of it is perhaps some of the requirements around using some of that unlicensed spectrum could be made clear. Again, it is difficult to say exactly what they can do. We have talked about a number of things.

The CHAIRMAN. So information on what is available, and then maybe some information on how to access it, is that a fair statement?

Mr. VON AH. That would be a fair statement.

The CHAIRMAN. Mr. Stockdale, could you respond to that?

Mr. STOCKDALE. Mr. Chairman, as I indicated, we are trying to modernize ULS so as to make it easier for tribal nations and others to determine what is available. In the meantime, we have staff ready to assist tribal nations and the public to identify and learn who possesses licenses with respect to particular bands in particular areas.

We also have staff ready to assist tribal nations in trying to gain access to spectrum, whether it is through new licenses or assisting them in learning the possibilities to obtain licenses through the secondary market, through partitioning or disaggregation, or through leasing.

The CHAIRMAN. Thank you. Senator Cortez Masto.

STATEMENT OF HON. CATHERINE CORTEZ MASTO,
U.S. SENATOR FROM NEVADA

Senator CORTEZ MASTO. Thank you. Thank you all for being here. This is such an important topic for all of us, including in Nevada. We have many rural communities, particularly our tribal communities, that are challenged just to get broadband to our communities.

So let me open this up to the panel, because here is what I am hearing and what I have seen. So there are various government programs that are designed to bring broadband to our underserved communities. There is the USDA programs, there is the universal service program at the FCC. According to the GAO report, USF has programs such as the mobility fund and the tribal mobility fund.

Given that these opportunities are connected, I think it is important that all of these resources are being effectively coordinated by the Federal Government. That is why in April, I introduced the Access Broadband Act. The Act itself will establish a coordinating office at the NTIA for all Federal broadband programs, because I think it is important, we are here just for that reason, that we are not only recording it at the Federal level, but we are getting that information into the communities that need it most.

So can you talk about issues or any issues with current levels of coordination that you see between spectrum allocation in existing broadband programs and how do these issues play into the broader broadband mapping issues we have? We are hearing some of that. And also let me finally say, do you think that type of coordination that I just talked about is necessary and will be helpful to address all of the concerns that you have identified? And then more of the concerns that we are hearing today.

So let me open it up to the panel.

Mr. VON AH. Also, we do have some ongoing work where we are looking at those programs specifically, all of the programs that are designed to get broadband out to rural and underserved areas. We will be commenting on some of those coordination issues in our forthcoming report.

As far as those funds that you mentioned related to tribal lands, one thing I will mention is that tribal entities that are trying to provide service on their lands are often not able to access those funds, for particularly, the tribal mobility fund. They need to be an eligible communications carrier. There are only 11 tribes as of the time of our report that have that designation. And even so, they may not actually get the bid. I think there were two of the ETCs that were tribal entities who bid for the tribal mobility fund phase one, and neither one of them got the actual bid.

So there are challenges simply for the tribal entities to access the funds that you mentioned.

Senator CORTEZ MASTO. Thank you.

Mr. STOCKDALE. Senator, I think the idea of coordinating information about various funds is extremely useful and important. At the FCC, we recognize that one of the most important roles is in terms of trying to consult with tribal nations, so that they have the information they need to gain access to spectrum, or alternatively, to seek support where additional support is needed to construct deployment.

In that regard, I would like to mention that while there have been, unlicensed spectrum has been mentioned today, and some of the disadvantages identified, there is also the 3.5 gigahertz band, which is a licensed by rural band, which in rural areas may provide significant opportunities to tribal nations in part because it can be utilized at higher power levels than unlicensed bands.

So this is one of the bands we also think that we need to try to inform tribal nations about, so that they are aware of the opportunities and can take advantage of it.

Senator CORTEZ MASTO. And let me ask you, when you were talking about that new band, the 3.5, are there going to be barriers or challenges for tribal communities to access and be able to utilize it? Because the concerns we are hearing are there are still barriers.

Mr. STOCKDALE. Thank you for that question, Senator, it is a very good one. The 3.5 gigahertz band is somewhat unique in the sense that the commission adopted a hierarchical licensing scheme in which there are three levels of priority.

The highest level is for the incumbent licensees, which are primarily military radars. Then there will be priority access licenses which will be auctioned off at county levels. And then there is general authorized access, which can operate whenever any of the higher priorities aren't operating, and moreover, there will be 50 megahertz reserved for this GAA use at all times.

Senator CORTEZ MASTO. So where do our tribal communities come in in all those categories you just identified?

Mr. STOCKDALE. They could come in and bid for a PAL license, in which case they will be able to take advantage of the tribal land bidding credit. And if they also qualify for either the rural provider credit or the small entity provider credit, they can get credit for that. Or alternatively, they can try to provide service under GAA. And in rural, tribal areas, where there is no commercial use, that might be a very useful way to enter.

Senator CORTEZ MASTO. So for purposes of our representatives in tribal community, does that even make sense to you? Is that helpful? I mean, what I am hearing now is just that the user-friendliness is not there, and that is the biggest challenge to access and knowing that the funds are even available and accessing them.

I am just curious.

Ms. NELSON. Senator, thank you for the question, your initial comment about some coordination among seemingly these silos of Federal agencies and regulatory barriers that are created as a result of the silos that tribes must navigate to even get information. With regard to user-friendly websites, that is a good start. I think tribes are faced with just even getting basic information from any agency.

Working with the FCC, I believe that the Office of Native Affairs and Policy, ONAP, is doing the best they can to outreach to tribes. I would encourage them to go out to actual Indian Country, rather than at conferences, where tribes travel to them. But I know they are doing the best they can.

But regulatory barriers are something that is a tremendous task to undertake, for tribes to even understand, much less on the perspective of 573 federally recognized tribes. We have approximately 11 tribal telcos. So that speaks to itself, that there are tribes out

there that are creating ways to provide for their own. There are many tribes that are deploying fiber to create broadband. By any means they can, they are very creative and they are getting the job done. Not necessarily becoming a recognized ETC through the Federal Communications Commission.

So tribes are resourceful and they work with what information they can. But it is very frustrating for them to try to work within the regulatory barriers that are created by agencies, and then the silos of agencies. So I think some type of coordination, perhaps this Committee, other committees, some statute to relieve some of those silos for better coordination.

Senator CORTEZ MASTO. Thank you.

Senator UDALL. [Presiding.] Thank you. Senator Daines?

STATEMENT OF HON. STEVE DAINES,
U.S. SENATOR FROM MONTANA

Senator DAINES. Thank you, Ranking Member Udall.

Mr. Von Ah, I first want to thank you for including the Fort Belknap Indian Community as part of the GAO report that we are discussing here today. The FCC estimates that 45 percent of Montana's tribal areas still lack broadband access. That is unacceptable. Montana is often overlooked out here in a place like D.C., and it is especially true of our rural areas and tribal communities like Fort Belknap. We must take actionable steps to improve opportunity for these very underserved areas that are hamstrung by substandard wireless as well as broadband connections.

I spent 12 years in the technology sector in Montana; saw firsthand the ability, the power of technology to remove geography as a constraint to opportunity. Access to broadband is not a luxury anymore. It is essential for accessing, whether it is a good-paying job, whether it is health care, whether it is just tying into this global economy.

That is why I joined my colleagues here to urge GAO to study this problem and identify solutions, so Congress can act, and act in the right manner. While much work remains to be done, these findings have identified areas for improvement, so we can better connect to Indian Country.

According to this report, tribes are often excluded during spectrum auctions because license sizes are too large, too expensive for them to participate and to buy the spectrum. This is an issue I have been very active on, including securing smaller licenses for the 3.5 gigahertz spectrum auction. This spectrum will be prime for 5G, and I hope that with the smaller sizes, our rural and tribal carriers can buy spectrum, and importantly, better connect Montana.

Mr. Von Ah and Mr. Stockdale, how do we continue promoting small licenses for spectrum auctions, so that tribal entities can participate in the 5G economy?

Mr. VON AH. Well, certainly, smaller license sizes can help get tribal entities into the game. And I just would reference the 2.5 gigahertz order did have the tribal priority window. I don't know if the 3.5 gigahertz will or not. That is yet to be determined. But that is another sort of consideration, when you are thinking of the ability for tribal entities to access the spectrum.

I would also just mention that it is not just the size of the area, but it is also the costs, what will the costs of those licenses be. Will they be, when a tribal entity is trying to figure out what to do, they need to build out, they need to meet build-out requirements when they have that license, are there radios or other things, is there other off the shelf technology, what is the cost of that.

So there are a number of things that have to be considered when you are making, when you are going to go in and say, yes, I want that license, I want to put a bid in for it. So there are a number of considerations, but certainly the size, and a smaller size, like a county, is going to help them get in the game.

Senator DAINES. Thank you. Mr. Stockdale?

Mr. STOCKDALE. Senator, thank you for the question. Let me start my answer by noting that while certain spectrum bands are auctioned and are required to be under the statute, the commission has tried to make available other bands that are not subject to auction. The two that I mentioned earlier, the 2.5 gigahertz band, in which we are providing a tribal window, and the possibility of gaining GAA access with respect to the 3.5 gigahertz band.

Now, with respect to auctioned bands, with respect to each band, the commission tries to determine an efficient geographic licensing size. That depends in part on the specific characteristics of the band, but it involves such considerations as the geographic complementarities between different areas. And also, the sort of practical difficulty of designing an auction software that can simultaneously auction off all these bands.

I should note that for both the 2.5 gigahertz auction and the 3.5 gigahertz auctions, we will be auctioning them off at a smaller size than any other previous spectrum auction. We will be auctioning it off at the county size.

Finally, I note that with respect to auctions of spectrum, you still have the tribal lands bidding credit, which can encourage bidders to actually try to build out on tribal lands, so that they can gain access to that spectrum.

Senator DAINES. Thank you.

Senator UDALL. Senator Schatz.

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

Senator SCHATZ. Thank you very much.

Mr. Stockdale, how did the FCC determine whether the new spectrum rules would be helpful to tribes?

Mr. STOCKDALE. Well, Senator, as we do in all our rulemakings, we put out NPRMs in which we solicit comment and then we review all the comments submitted by interested parties, including by tribal nations.

Senator SCHATZ. Right, I get what the Administrative Procedures Act calls for. I guess the question is, at the commonsense level, on the ground, in tribal communities, did you do any economic analysis, did you do any tribal consultation? Did you have any conversations about what was practicable, what was doable, what would actually help?

Mr. STOCKDALE. I think what we did in the 2.5 gigahertz band, where we created the tribal window, was intended specifically to help tribal nations. This was an issue that was —

Senator SCHATZ. I get your intent. I get the public policy here. We are all on the same page in terms of what we want to accomplish. But the question is not, how does the Administrative Procedure Act run. The question is, who did you talk to to land at this process that seems so labyrinthine as to be unworkable?

Mr. STOCKDALE. Well, we did conduct several tribal workshops over the past year. I think we conducted seven in which we discussed a number of different policies that were before the commission, including spectrum policies. I am not sure that I would agree with your characterization that our orders resulted in labyrinthine policies. Spectrum policy is complex. We do try to consider the comments of all interested parties and come up with something that will work.

Senator SCHATZ. So, how many of the federally recognized tribal nations are eligible currently to receive spectrum under these new rules?

Mr. STOCKDALE. So, I believe that under the rules for the —

Senator SCHATZ. Let's do it this way. You need a license, right?

Mr. STOCKDALE. Well, no, not necessarily. So for the 3.5 gigahertz band, it is licensed by rule. So tribes could go in as a GAA operator, build a network and start providing wireless broadband service.

Senator SCHATZ. Is that a simple process, to become a GAA operator?

Mr. STOCKDALE. Well, we just, this past week, issued a public notice indicating that five SASs had passed their laboratory testing and were starting initial commercial deployments. These will be the systems that——

Senator SCHATZ. I am sorry, what was that word you used?

Mr. STOCKDALE. Spectrum Administrative Systems, SASs. And these are the sort of dynamic spectrum coordinators that will coordinate spectrum use between the incumbent users, priority access licensees and GAA users.

In rural areas, such as rural tribal areas, where there may be little interest in sort of commercial use of the spectrum, the GAA access may——

Senator SCHATZ. So out of the 573 federally recognized nations, how many are actively participating in this process?

Mr. STOCKDALE. We are just beginning a process for outreach to these nations.

Senator SCHATZ. Do you think it would have made sense to do the outreach before the NPRM?

Mr. STOCKDALE. Well, I think that, Senator, we have a better idea now of exactly what is involved, and we are, we, and by that I mean ONAP and the wireless staff, are planning a number of workshops, we are beefing up our person to person advisors, so that tribes can reach us.

The only qualification I would note is, any of those tribes that have tribal lands that are qualified as rural are eligible to participate.

Senator SCHATZ. Right, but this kind of goes, and there are a couple of points to be made. First of all, tribal consultation is not just a requirement of the law. It is not just a requirement pursuant to our collective trust responsibility. It is also just a smart way to do it, if you actually want tribal lands to get access to this.

And so if you are a nation, and you find out about this FCC process, but even GAO experts can't operate the online portal, and then you are thinking, well, we have our schools and we have our hospitals, and we have our roads, and we have community service needs, and we have this need for additional connectivity, but I have to get a license for that.

So the question becomes whether you are taking seriously the proposition that you as a representative of the Federal Government have a special trust responsibility to treat this not just as rural broadband or a subset of rural broadband, but an obligation that you have pursuant to a nation to nation relationship.

Mr. STOCKDALE. Senator, you are absolutely correct that the commission recognizes its special trust relationship we have with tribal nations. And we recognize the importance of consultation with the tribal nations.

One of the things that we try to do, with the 2.5 gigahertz band, and the tribal window, is to target this relief to rural tribal nations. We are expending significant resources trying to set up outreach, so that all tribes will have the information necessary to participate.

We are also trying to modify some of our software in our ULS system to make it easier for tribes to participate in 2.5 gigahertz band.

Senator SCHATZ. Thank you.

Senator UDALL. Thank you, Senator Schatz.

Senator McSally.

STATEMENT OF HON. MARTHA MCSALLY,
U.S. SENATOR FROM ARIZONA

Senator MCSALLY. Thank you, and I want to thank Chairman Hoeven and Vice Chairman Udall for holding this really important hearing today. I appreciate Belinda Nelson being here representing the Gila River Indian Community, for your testimony as well as the other witnesses.

In Arizona, we have 21 federally recognized tribes, more than a quarter of the State covered by tribal land. This topic is really important to my constituents. As the FCC has estimated, about 65 percent of Native Americans on tribal land have access to high speed internet, that probably is a little too generous. A 2018 study by the Census Bureau said that just 53 percent of households on tribal lands with a computer have access to high speed internet, compared to 82 percent nationwide.

So what has been clear from this testimony, and what we know in the facts that tribal lands are lagging way behind, and this deficit has far-reaching effects. This isn't just about being able to watch your favorite movie. Where we see technology is now making such a difference for economic opportunities, for entrepreneurship, for better health outcomes and health care access using technology.

So it is across the board, education, you name it, impacting negatively our tribal entities. So we have to do more in order to address this issue. That is why I really appreciate the hearing.

Ms. Nelson, it was great to see you yesterday and hear a little bit about what is going on with the Gila River Telecommunications, or GRTI, right, that is your acronym? So I want to talk a little bit more about some of the topics in your testimony and what we talked about yesterday. You mentioned the recent decision to open up a tribal priority window in the 2.5 gigahertz band, and its ability to help tribal entities acquire licensed spectrum.

Can you talk a little bit more about what practical effects this has had? Do you think there is enough awareness about this program among tribal entities? What else can be done to increase awareness?

Ms. NELSON. Thank you for the question, Senator. A new proceeding, a new opening was just ruled on in July. But the effect will be very positive in Indian Country once the word gets out. I think publicity from the tops of buildings yelling to Indian Country, hey, this is available for you to apply for, and let the citizens of Native America know that this is an opportunity for them. A little more publicity on the opportunity would be very helpful.

I think even navigating through the application process, tribes in general don't have the technical education, the basic knowledge on how to decipher or analyze what a particular band of spectrum would do for them and what it would allow them to do. Just general, basic information is needed for them to learn how to use, take advantage of the 2.5 gigahertz spectrum.

I think to that end, GRTI and other tribal telcos can assist the FCC, assist this Committee to get the word out of how to use the spectrum and the opportunities that are available, since we do have some knowledge of telecommunications. I think that with us tribal telcos, when we visited the FCC yesterday, we were asking questions about the parameters and the application process for this 2.5 gigahertz spectrum, and that information is not quite readily available.

We did ask for an extension of the application process, because it is going to take tribes some time to know what the application process will be, and to get their tribe applying for this. In fact, it wouldn't be too crazy for every single tribe in this Nation to apply for this and then just see how they can use it. But they don't know about it right now, and GRTI can assist in spreading that information.

Senator MCSALLY. One thing about this hearing is maybe we can pass the word as well, to provide more awareness of it.

Mr. Stockdale, what else could you do in order to make sure that the tribes do know about this opportunity, and is there an opening for an extension to the deadline in order to allow them to navigate the process?

Mr. STOCKDALE. First of all, Senator, I agree with you that it is important that we make tribes aware of this opportunity and help them navigate ULS and make the applications. That is the reason that we are launching an extensive outreach program with multiple workshops. We will be also developing online tutorials and online tools to help them identify whether spectrum is available on

their tribal lands. We will be ready to answer any questions about how to apply.

With respect to the sort of timeline for the tribal window, the commission delegated that decision to the Bureau, which has not, I believe, decided that yet. What we are doing right now is trying to get out the word as quickly as possible, so that as many tribes as possible can take advantage of this opportunity.

Senator MCSALLY. Great. I would ask you both to keep us informed on the timeline issue, and we will do whatever we can in order to make sure that there is enough time available for tribes to take advantage of this. Thank you.

Senator UDALL. Thank you, Senator McSally.

Senator Smith.

STATEMENT OF HON. TINA SMITH,
U.S. SENATOR FROM MINNESOTA

Senator SMITH. Thank you very much, and thanks to our panel for being here today.

I have been working on broadband and expanding, especially into rural areas, for quite a while. So I am used to being confused. I am not a technical person, but I have come to understand that this is incredibly complicated. I think about the complexities, first, the special trust relationship that the Federal Government has with our tribal nations, 11 in Minnesota. Then I think about what it is like for some of the more rural tribal nations in Minnesota that are small governments, and with not a lot of resources. It just sort of blows my mind, how you would ever figure out how to navigate all this.

But one thing I have figured out, is that money matters. You have to have money to do this. So I want to just start with Mr. Stockdale. The FCC has proposed a cap on the Universal Service Fund and the programs that it supports, like high costs and lifeline and rural health care and schools and libraries. It all provides fundamental resources for expanding broadband.

This is especially an issue, I would argue, on tribal lands, that really depend on this funding to provide services where it is, frankly, not economic, there is not a good business model for providing broadband in such a dispersed area.

So would you talk to me about this proposed cap on the Universal Service Fund and what impact you think—I am going to ask you and I would be interested in hearing from the rest of the panel—on what impact you think this might have on the money that we need in order to build this out?

Mr. STOCKDALE. Senator, I should note at the outset that is the Wire Line Bureau, not mine, that is responsible for the Universal Service Fund. So I don't claim to be an expert here.

Senator SMITH. Yes, I am aware, and I am sorry that we don't have somebody who could answer that question here today.

Mr. STOCKDALE. Well, I just don't want to end up overstating my knowledge. But in any case, I do think that the chairman has made clear that his top priority is to close the digital divide, and to bring the benefits of the internet age to all citizens in both rural and rural-tribal areas. At the same time, there are problems with

waste, fraud, and abuse in certain USF programs. And the commission has been trying to weed out and target those.

So I think what we are trying to do is achieve a balance, to try to keep the fund at a reasonable size, but make it used most effectively.

Would the other members of the panel like to comment on what impact you think it would have if this cap were to take place?

Ms. NELSON. Thank you, Senator, for that really important question. This is currently on our minds as a tribal carrier serving Indian Country. We are known as a legacy rate of return carrier under the funding mechanisms of the FCC. The proposed cap for the Universal Service Fund that you mentioned is going to have a very negative effect on the way that we are serving our communities.

Tribal rate of return carriers experience higher operational costs, as you know, because we serve generally larger areas with less population or low-density population. And we have to deploy our networks through rugged terrain, mountains, what have you, it is higher costs right then and there. Any cap on high cost funding will be detrimental to our ability to operate and much less maintain the networks that we currently have deployed.

Also, because we are operating under Federal jurisdiction as reservations, we have to comply with Federal mandates like environmental mandates, NEPA, our archeological monitoring and clearances of any dig that we might have. So we have to comply with those, and that is additional cost.

So generally speaking, tribal carriers carry those costs. So a cap to high costs or any of the other programs would be very detrimental to us.

I do want to mention that we have been petitioning the FCC for the last five years or so for an increased support for that very reason. In recent offering of the Alternative-Connect America Funding through the Universal Service Fund, additional support was given to carriers but not to legacy rate of return carriers, such as GRTI and other tribal carriers.

So we would like to have the recognition of receiving additional support for legacy rate of return carriers that was not offered to us, and it was offered to a different category of carriers, which we don't understand.

Senator SMITH. I am out of time, so I should probably not pursue this. Let me just say, or do you want to answer quickly?

Ms. SEKAQUAPTEWA. Just really quickly. In New Mexico, the Universal Service Fund is doing amazing things for the tribal telcos to expand their service and increase their speeds. Even the small carriers, we can see the difference in the field, you can tell they are spending money to upgrade their cabinet, bring in new services and bring in new infrastructure.

But then you can also where, in my community, where we have been trying, I told you we had one copper T–1 line five years ago. And when you try to order another slow, expensive copper T–1, you can't, because there is no copper. So we have also seen that the investment is not happening. So if we talk about waste, fraud, and abuse in these programs, we might also consider the, not just life-

line, not just e-rate, but look at the efficient use of the CAF and those funds as well.

Senator SMITH. All right, thank you. I think this is really, really important, and I think that it is not the time to be talking about capping the Universal Service Fund when we have such unmet need and such challenges in areas where you might have two households per square mile versus whatever, 50 or 60. I realize, Mr. Stockdale, this is not in your specific range of responsibility, but Mr. Chair, I would like to have this question answered by the folks at the FCC who can answer it, because I think it is really important. Thank you.

Mr. STOCKDALE. I am happy to take the question back.

Senator UDALL. Thank you, and get an answer for us. Thank you very much.

Thank you, Senator Smith. Senator Lankford.

STATEMENT OF HON. JAMES LANKFORD,
U.S. SENATOR FROM OKLAHOMA

Senator LANKFORD. Thank you. Thank you to all of you being here. This is always extra preparation and things that have to go on to prepare for this, so thanks for investing your time to prepare beforehand and during this time period as well.

Mr. Stockdale, I have some questions for FCC. Do you have a good estimate at this point, is the FCC able to figure out how many tribes they expect to participate in the priority windows? Just give me a ballpark guess.

Mr. STOCKDALE. I don't believe we have developed any estimates yet. We are trying to develop our research project.

What I think is important is that any tribal nation whose tribal lands lie in rural areas is eligible to participate. We hope that as many as want to will do so.

Senator LANKFORD. But do you expect that to be 500, or do you expect that to be 50, or 10? You have to have some kind of ballpark on it.

Mr. STOCKDALE. I would not want to speculate at this point.

Senator LANKFORD. Okay. So give me a ballpark on the number of licenses at the end of it, so not just participants in it, but as far as how many licenses do you think will be actually completed at the end?

Mr. STOCKDALE. I think that these licenses could occur wherever a tribal nation that has rural-tribal lands seeks it. So we could be talking in the hundreds, if this program is successful.

Senator LANKFORD. Okay. So as I look at the program and try to be able to figure out the outline of it, some tribes are in extremely remote areas where there is a very low density of population and it is exceptionally expensive to be able to get to that area, and it is exceptionally important that there is a good vehicle to be able to get good coverage in that area.

There are other tribes that there are multiple communities that are either right around their reservation area or their traditional areas, or they cover multiple towns that in that area. If you are in Oklahoma, there are tribal areas that have multiple communities that are there. Some under 25,000, some over 50,000, some of all different sizes.

When you are trying to be able to balance out the threshold of what rural area means, how do you hit that balance of what is a rural area, what is not a rural area, and the effect of other communities immediately around that could also be affected as well? I am trying to give you just simple questions today.

Mr. STOCKDALE. Well, you are testing my memory here as to what we said in the order. I believe we defined a rural area as an area that is not an urban area or an urban cluster with greater than 50,000 people.

Senator LANKFORD. And that cluster being 50,000 total, or 50,000 in that immediate area?

Mr. STOCKDALE. I believe in that immediate area, but it was a census definition and I have not personally gone back and read the definition myself.

Let me just add one other point, Senator, though, which is, you are absolutely right that there are going to be some areas that are going to be extremely remote with very low population density. One of the advantages and promises of this mid-band spectrum is that it may make it more cost-effective to deploy high-speed broadband in these areas where, for example, deploying fiber would not be. And in fact where we have seen already that tribes and others who have gotten STAs in these band have been able to buy equipment, which is readily available, deploy it quickly and then provide high speed service to their customers or their citizens.

Senator LANKFORD. Could a, and this is the balance of whether the tribe owns the company that is actually going to do the communications, or is going to work with a secondary market, has FCC made any kind of stipulation if a tribe gets spectrum, purchases that spectrum, what they do with it there? Can they sell it in a secondary market to anyone they choose? Can they choose to use it in their own telecom companies?

Once you are the owner of spectrum, obviously, that is an exceptionally valuable resource for many areas as well. While there is not high competition for some of that space in exceptionally rural areas, and more urban areas, or areas where there are communities and towns that are nearby in close proximity, that is a very high demand item, to be able to have ownership of that spectrum.

Is there an FCC guidance for if they have to, if they are buying spectrum, they have to use it with their own telecom company, or if they can then sell it in a secondary market?

Mr. STOCKDALE. I guess there are a couple parts to your question, Senator, and let me try to separate them out.

With respect to the 2.5, it won't be buying spectrum, this would be spectrum they could obtain for free, but they would have to meet the buildout requirements. With respect that they obtain at auction, there will be buildout requirements associated with that. We developed different buildout requirements with respect to each band.

That doesn't prevent tribal nations from entering into arrangements and partnerships with other entities to help them build out that spectrum. The only thing they cannot do is, they cannot particularly sell the spectrum before any buildout to a third party. So we expect, particularly if they have taken advantage of any of the bidding credits that are available to tribal nations.

Senator LANKFORD. How long would they have to own that then? How long would they have to keep possession of that? There are separate concerns about buildout. What kind of time period would you expect that would be?

Mr. STOCKDALE. Buildout requirements vary. In the case of the 2.5, we have seen examples where carriers or tribes that have received authorizations have built out LTE networks within a matter of months. One of the reasons is because the equipment for that spectrum band is readily available.

Now, I will make the point that was made by Belinda that, in some case, there is technical expertise that is required. But the point I am making is that the deployments can be quickly made in many cases.

Senator LANKFORD. And then at that point, it could be sold?

Mr. STOCKDALE. Yes.

Senator LANKFORD. Okay. All right, thank you, Mr. Chairman.

Senator UDALL. Thank you, Senator Lankford.

Mr. Stockdale, the FCC's May 2019 report on broadband deployment in Indian Country notes that just 46.6 percent of housing units on rural tribal lands have access to fixed broadband service, a nearly 27-point gap compared to non-tribal rural communities. Yet the same report concluded that advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. That is a critical finding there.

How did the FCC arrive at that conclusion, particularly in light of the agency's own statistics that reveal tribal communities are not being fully served, especially in rural areas?

Mr. STOCKDALE. Senator, I will note, as you noted, the figure you cited was for fixed broadband. The same report also noted that for tribal lands, I believe that it is 96 point some percent of households on tribal lands have access to LTE of 5.1. We don't think, I mean, certainly broadband can be improved, but we think that we have made significant strides.

Senator UDALL. The way I read this statute is that when they are talking about deploying to all Americans in a reasonable and timely fashion, your statute says if that determination is negative, the FCC should take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.

So they want you, if that isn't the case, tribal nations, rural areas aren't getting the service, they want you to aggressively move to correct that. And by making this finding, you have then obviated your need to do that. I think you are shirking your responsibility in terms of what you should be doing for these tribal nations.

Mr. STOCKDALE. Senator, I take your point. I will note, however, that Chairman Pai's top priority is to close the digital divide, and he has made aggressive policy moves to do so. I think particularly in the wireless context, we have made significant progress. I also note that particularly for rural high-cost areas, it may be wireless technology that proves a cost-effective solution that enables us to connect all Americans.

Senator UDALL. Thank you.

Mr. VON AH. the GAO report notes that having access to licensed spectrum is one factor that would enable a tribe to establish its own telecommunications company. But according to the GAO, tribal service providers must hold, lease, or show they have access to licensed spectrum to receive Federal funding through two Universal Service Fund programs, the Mobility Fund and the Tribal Mobility Fund.

FCC testified that its new tribal priority window would provide opportunities for access to spectrum. In GAO's view, is this new authority enough, particularly for tribes who may not have the resources and expertise to stand up their own telecom company?

Mr. VON AH. Thank you, Senator, for the question. Whether it is enough is certainly going to depend on the specific tribe we are talking about. I would first of all point out that to access that tribal priority window, they don't need to be a telco, an eligible telecommunication carrier, an ETC, to access the funds that they do. So certainly, for those that do not have the expertise or the knowledge or if they don't have the knowledge of how to build a telecommunications network, it is going to be very difficult to access that spectrum. There is going to be a priority window, it is going to be relatively short, you need to build out, there may be equipment ready for you to do so, but you do need the expertise and the capital money available to pursue that opportunity.

Senator UDALL. Thank you.

Kimball, the GAO report indicated that the FCC does not analyze information on unused licensed spectrum over tribal lands, even though the FCC has access to this data. The report also indicated that tribes reported that unused spectrum licenses over tribal lands could present opportunities through the secondary market for tribal entities to obtain spectrum.

Do you have any recommendations on what the FCC should do to ensure unused, assigned spectrum that covers tribal lands is utilized to bridge the tribal digital divide?

Ms. SEKAQUAPTEWA. They use it or lose it, if they are not using it and they agreed to some rules, then they should give it back so that somebody else can make better use of it.

Senator UDALL. And you said earlier, in terms of you being a tribal nation, and this is over your territory, you should have access to it.

Ms. SEKAQUAPTEWA. We should have access to it, and at the very minimum, some protections that defend us in a legal situation for us to use it, if it is not being used. There is a great risk on us to try to move forward outside the parameters of the regulatory framework.

I know we have been talking a lot about the tribal opportunity and the 2.5 and the 3.5. I would just stress again that the rules for tribes seem, I don't know what the word would be, our opportunities, that we have to scrounge a little bit more.

Like with the 2.5, where there is unused, unlicensed opportunity, the tribal buildout is, they require that you build out more of a network in a faster time. So, what if you don't? Do you lose it, and then there is an auction and the auction winner comes in? And why do they get more time to build out less of a network? So I ask that.

Then with the 3.5, I appreciate the general access license, the GALs, or general authorization, excuse me. And we are probably going to participate in that space. We would like to try to go for the PAL licenses. In Sandoval County, the bidding credits are at 26,000, but it is a huge county, so that speaks to the Senator's concern that our buildout requirement would be more daunting, just because of the size of our territory.

So if we find ourselves just competing or setting up a network where we don't have to have the license and we don't have that protection, then we are going to be with everybody else that is popping up and trying to put up towers on mountains and bleeding from here or there to service our territories, so interference is going to be a problem.

So again, where we put our money to invest in those networks is at a smart play with the interference, where the next person just coming in setting up shop next to us has as much opportunity to fight for those airwaves, reducing the performance of our networks.

Senator UDALL. Thank you very much.

In February of this year, the D.C. Circuit struck down the FCC's order limiting the tribal lifeline subsidy. The court determined that the order's limitations were arbitrary and capricious, citing a lack of reasoned explanation for this change in policy. In August of this year, the same court vacated the commission's order exempting most small cell construction from historic preservation and environmental review, again determining that the order was arbitrary and capricious.

Notably, not a single tribe supported either final order, which were split decisions. Belinda, FCC Commissioner Rosenworcel noted in her dissent to one of the vacated orders that the agency failed to uphold its longstanding duty to consult with tribes in its own consultation policy. Do you agree with Commissioner Rosenworcel and the D.C. Court of Appeals that the FCC has fallen short on its tribal consultation obligations?

Ms. NELSON. Thank you, Senator, Mr. Vice Chairman. I do agree with Commissioner Rosenworcel's comment and sentiments. I attended a lot of the hearings for what we call Section 106 topic in Indian Country, where discussion of placing towers on sacred sites or not consulting with tribes for placement of towers, in fact seemingly preferring to accelerate wireless deployment for wireless carriers, seemed to be the order of the day.

The FCC also held a meeting with many tribes at their headquarters where many tribes spoke out against it, not consulting with tribes. So with the Federal trust obligation, I think that in that particular respect, the FCC did not adhere to its trust responsibility, and now for GRTI, we filed comments many times on the proceedings. We filed reply comments. We are never told or given any response to our concerns in the filings. So there is no dialogue from the FCC or the agency itself as to our concerns.

So we would greatly appreciate even some acknowledgement or some recognition of our concerns in our filings, as we adhere to those administrative processes.

Senator UDALL. Thank you so much for that answer. I want to thank all of the witnesses for being here.

Mr. STOCKDALE. Mr. Chairman, make I make one comment?

Senator UDALL. Mr. Stockdale, please.

Mr. STOCKDALE. I have one comment on the issue of consultation. The FCC takes very seriously the trust relationship that we have with tribal nations. We do try to consult.

With respect to the small cell order, the commission in their order listed all the instances in which the FCC staff met, including the chairman and commissioners, met with and consulted with tribes. That appeal, I would note that tribal appellants claimed as one of the deficiencies of the order that it was insufficient consultation and the D.C. Circuit Court of Appeals rejected that claim.

Senator UDALL. Thank you. Let me just thank all of the witnesses today. You all realize what a very important subject this is, and you have come, some of you have come from very long distances to testify, and we very, very much appreciate your input on this subject.

If there are no more questions for today, members may also submit follow-up questions, written questions for the record. We hope that you will answer those promptly when you get them. The hearing record will remain open for two weeks. And once again, I want to thank the witnesses for their time and testimony.

The hearing is adjourned.

[Whereupon, at 4:07 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF LORIS TAYLOR, PRESIDENT/CEO, NATIVE PUBLIC MEDIA

Good afternoon Chairman Hoeven, Vice-Chairman Udall, and Members of the Senate Committee on Indian Affairs. Thank you for allowing me to submit the following statement on behalf of Native Public Media, an organization I am proud to serve as its President and CEO, in today's oversight hearing on the GAO Report on Tribal Access to Spectrum: Promoting Communications Services in Indian Country. We are honored and privileged by the opportunity to address you on this urgent and vital topic. First, a word about who we are. Established in 2004, Native Public Media (NPM) is a non-profit organization dedicated to serving Tribal communities seeking to develop communications networks. NPM's mission is to promote healthy, engaged, and independent Native communities by expanding communications capacity on Tribal lands and by empowering a strong, proud Native voice in the media. By applying the spirit, law, and exercise of Tribal sovereignty to the development and implementation of media and communications, NPM provides leadership, designs programming, and engages on a proactive level in securing and maintaining Tribal radio, television, and communications systems for Indian Country. NPM currently serves as a coordinating entity for 57 Tribal radio stations, and 4 Tribal television stations, and for one Tribal Educational Broadband Service licensee, providing centralized resources and strategic services to assist in developing communications systems in Indian Country that is, in part, dependent on spectrum resources. We respectfully request this Committee and its Honorable members, to consider the following:

I. FCC Has Long Recognized That Tribal Lands are Grossly Underserved in Broadband Access and That Reliance on Market Forces is Ineffective to Increase Access

The Federal Communications Commission (FCC) is charged by Congress in the Communications Act with allocating and administering electromagnetic spectrum in the public interest, convenience, and necessity.[1] Congress also specifically charged the FCC to accelerate the availability of affordable high speed broadband Internet service to all Americans, including those living on rural and Tribal lands, and since 2010 that mandate has been enshrined in formal FCC policy.[2] Within its broad mandate, the FCC recognizes a special responsibility to Tribal communities to implement policies and regulations promoting their self-sufficiency and economic development,[3] and that access to quality broadband service is critical to achieve those goals.[4]

The FCC concedes that Tribal lands have been and are grossly underserved. According to the Commission's *2018 Broadband Deployment Report*, an estimated 35 percent of residents of Tribal lands lacked access to broadband speeds at 25 Mbps download and 3 Mbps upload (25 Mbps/3 Mbps), which is the U.S. standard.[5] Comparatively, the majority of the U.S. population has access to high-speed broadband at or above the standard with just 8 percent without a broadband connection. Since the early 2000's, Tribes have lagged behind the rest of the U.S. in access to telecommunications services, both telephone and Internet. The digital divide on Tribal lands is but the latest example of that historic disparity.

It has long been recognized that reliance on private sector market forces alone will not bring the benefits of affordable high-quality broadband service to Tribal

[1] Communications Act of 1934, Pub. L. No. 73–416, 48 Stat. 1064 (1934), *as amended by Telecommunications Act of 1996*, Pub. L. No. 104–104, § 706, 110 Stat. 53, 153 (1996) (codified as amended at 47 U.S.C. § 151, *et seq.*).

[2] 47 U.S.C. § 1302(b); FCC, *Connecting America: The National Broadband Plan* (Washington, D.C.: 2010).

[3] *Statement of Policy on Establishing a Government-to-Government Relationship with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

[4] FCC, *Connecting America: The National Broadband Plan* (2010).

[5] FCC, *2018 Broadband Deployment Report*, FCC No. 18–10 (Feb. 2, 2018).

lands. Low population density, isolation, poor roads and transportation infrastructure, lack of first responder services and conventional physical addresses, and the difficult terrain of Tribal lands contribute to unattractive private sector market conditions for utilities or commercial broadband service providers to build and operate systems there.[6] Ironically, each and every one of these same conditions also supports and makes the need for fast reliable broadband service critical for the well-being, safety, self-sufficiency and happiness of people living on Tribal lands in this day and age, in which the Internet is the dominant and transformational engine of communication and commerce. Compounding the failure of private market forces, most Tribes, especially in rural areas, lack sufficient resources to fund development and deployment on their own. The reality of most tribes is that no broadband infrastructure will get built in Indian country without some form of federal assistance to support it.

But at the end of the day, bridging the Tribal digital divide is not just about infrastructure. It is about bringing the same affordable high speed broadband resources most Americans enjoy to people living on Tribal lands. It's about the child that is required to complete homework using the Internet, about the individual who wants to apply for a loan online, about the student who wants to access library resources around the globe, or an app developer who wants to create a way to sustain tribal language use among his peers. This is a story about 573 diverse nations, rich in culture, history, and experience to dream and innovate answers to challenges of broadband disparities on their own terms, and to participate fully in self-determined Internet governance that addresses how technology can benefit and sustain strong, healthy, and robust tribal communities in new and innovative ways. This is not only a quality of life issue, but an issue that gives life to the spirit of the law that mandates a right of all Americans to connect and to communicate. Real lives are at stake.

II. September 2018 GAO Reports: Regulatory Barriers Restrict Tribes' Access to Federal Broadband Development Funding; and FCC Underreporting, Market Failure and Lack of Meaningful Engagement Among FCC, Tribes and Service Providers Contribute to Those Barriers and Failures

In September 2018, the GAO issued a report finding what Tribes already know from bitter experience—few have been successful in obtaining federal funding under the FCC's Universal Service Fund and the Rural Utilities Service broadband development grant programs, which purport to be designed to improve access in underserved areas where deployment costs are high.[7] The GAO also found limited opportunities for Tribes to partner with various non-Tribal entities, including federal grant and subsidy recipients, to improve broadband access on Tribal lands, and that such partnerships (where they exist) enjoyed uneven success. These findings are accurate in NPM's experience.

The GAO also found that significant regulatory barriers inhibit Tribes' ability to take advantage of federal broadband development funding to provide broadband systems and service in their own communities, without depending on others. These barriers include federal statutory and FCC regulatory requirements that Tribal applicants must qualify as "eligible telecommunications carriers" (ETCs) to obtain FCC USF Connect America Funding (CAF). A criteria designed for massive telephone companies that dominated the telecommunications industry decades ago, is exacerbated by the FCC's glacial pace in ruling on the ETC eligibility of the few Tribes who have applied for that designation.[8]

Further, the FCC's grants of billions of dollars in CAF funding did not stimulate non-Tribal ETCs to improve broadband access on Tribal lands. As the GAO found, non-tribal ETCs given CAF funding to improve broadband access in underserved areas simply do not deploy service in the Tribal parts of those areas. In our view, this is the result of the FCC's failed quasi-market-based approach to administering USF grants and subsidies. Further, the complexity and up-front expense of navigating the RUS grant application process and difficulty meeting eligibility require-

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[6] GAO, *Telecommunications: Additional Coordination and Performance Measurement Needed for High-Speed Internet Access Programs on Tribal Lands*, GAO–16–222 (Jan. 29, 2016).

[7] GAO, *Tribal Broadband: Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address Any Funding Barriers Tribes Face*, GAO–18–682, Sept., 2018 ("2018 GAO, *Few Partnerships*").

[8] For example, the Leech Lake Band of Ojibwe applied to FCC for ETC status in 2013, and incurred massive costs to stand up a broadband service through its own tribally-charted telecommunications company, on the assumption that CAF funding would be available to offset those costs. Five years later, the band was still awaiting FCC action, and is in danger of having to shut down the service. *2018 GAO, Few Partnerships*, at 19.

ments deters many Tribes from obtaining funding from that source. Specifically, as the GAO found, the RUS grant process requires: preparing complex existing and planned network design documents; demonstrating financial sustainability (essentially, a return on investment) within 5 years, a very unrealistic expectation for the Tribal areas in question; and matching funding from non-federal sources, which cannot be in the form of in-kind contributions of equipment or services. As a practical matter, these requirements make RUS funding unattainable for many Tribes.

In its other September 2018 report, the GAO found that the FCC continues to overstate the actual level of broadband access on Tribal lands, in reliance on incomplete and inaccurate penetration data.[9] The primary method the FCC uses to collect availability data across the U.S. is through its Form 477. ETC funding recipients are required to submit data annually to the FCC on Census blocks to which they provide service. However, the GAO found ETC-reported Form 477 data "[d]oes not accurately or completely capture broadband access on tribal lands because it (1) captures nationwide broadband *availability* data—areas where providers may have broadband infrastructure—but does so in a way that leads to overstatements of availability, and (2) does not capture information on factors that the FCC and tribal stakeholders have stated can affect broadband *access* on tribal lands, such as affordability, service quality, and denials of service." In reporting Form 477 data, a carrier reporting coverage in a Census block may base that report on only a single household in that block actually receiving such service.

These overstatements of service availability could lead to Census blocks on Tribal lands being deemed ineligible for federal broadband infrastructure funds. They also contribute to the FCC's apparent false sense that its policies and regulations to improve Tribal broadband access are effective. For instance, the GAO found that some of the Tribes interviewed specifically stated that they were unable to obtain federal funds to deploy broadband infrastructure due to their reservation lands being listed as 'served' by other broadband providers. The GAO also found that there was no formal process at the FCC for Tribes to challenge broadband availability data on Tribal lands. Additionally, when Tribes attempt to dispute reported data, they are often unsuccessful. This systemic "bad data" problem exacerbates other problems that all converge to obstruct real progress toward closing the Tribal digital divide.

Better and more meaningful Tribal engagement, consultation, and accurate information-sharing between and among FCC service providers and Tribes might improve broadband access data, but existing FCC regulations and policies do little to encourage either. In fairness, some providers have actively engaged with Tribes to develop needs assessments and deployment, feasibility, and sustainability planning for infrastructure deployment, and there have been some success stories. However, many Tribes experience a general lack of engagement from non-Tribal service providers and report that they simply receive a template letter once a year as a way for the provider to 'check the box' on reporting they've engaged with Tribal governments in their service area. Moreover, information provided by providers to Tribes is often heavily redacted or withheld unless the Tribe signs a restrictive non-disclosure agreement. There are no FCC rules that regulate or prohibit this practice. Lack of access to detailed and accurate information about broadband availability inhibits the practical ability of Tribes to challenge before the FCC data reported by the providers, upon which the Tribes eligibility for federal grant funding may depend. Under existing rules and policies, service providers have no reason or incentive to report richer, accurate Tribal area broadband access data than the inaccurate and incomplete data the FCC collects, and every reason not to.

The two September 2018 GAO reports culminated in an Oversight Hearing before this Committee in October 2018. Those studies and testimony from Tribal stakeholders before this Committee last Fall chronicle the barriers discussed in our testimony today, and the utter failure of market forces and the FCC to meaningfully address those barriers documented by GAO and multiple witnesses. We refer the Committee to that record. Very little has changed for the better since then.

III. November 2018 GAO Report: Tribes Lack the Ability to Obtain Licensed Wireless Spectrum in Competitive Auctions; Market Failure and FCC's Policies Inhibit Expansion of Broadband Services on Tribal Land by Non-Tribal Wireless Licensees

Since the Committee's last oversight hearing, GAO released in November 2018 yet another report, this one highlighting issues with Tribal access to wireless spec-

[9] GAO, *Tribal Broadband: FCC's Data Overstate Access, and Tribes Face Barriers Accessing Funding*, GAO–19–134T (Sept. 2018).

trum.[10] We agree that the difficulty Tribes face in obtaining licensed wireless spectrum suitable for affordable broadband service is a major barrier to progress in improving Tribal broadband access. The November 2018 GAO Report identified the FCC's current auction-based method of assigning and licensing wireless spectrum to the highest bidder, and Tribes' lack of access to capital, as factors that converge to deny Tribes' the ability to establish their own primary broadband services and infrastructure as licensees.[11]

In the face of those obstacles, some Tribes try to muddle through by cobbling together systems relying on unlicensed wireless spectrum never intended and technically unsuitable for broadband use. Unlicensed spectrum generally does not support reliably the bandwidth and low latency needed to stream and exchange the volume of data and content typically used in the modern Internet environment. Moreover, use of unlicensed spectrum can be a crowded field, and subject to interference from other users, with no legal or practical recourse. As the GAO correctly concluded, unlicensed spectrum is no substitute for interference-protected, exclusively licensed wireless spectrum in building and deploying sustainable networks providing universal broadband service.

But, as GAO also notes, although the Commission has proposed adopting a Tribal priority for licensed broadband spectrum in Indian country to promote primary interference-protected licensure to Tribal entities,[12] it has largely failed to follow through in most frequency bands used for wireless broadband, and, where it has done so, it has imposed unrealistically short deadlines on Tribal priority applicants.[13] The GAO also identified secondary market failures that make Tribes' reliance on engagement and arrangements with other wireless spectrum licensees and service providers, such as service contracts or leases, an unreliable pathway to meaningful rapid progress in bridging the Tribal digital divide. These failures are promoted by the FCC's failure to collect and mandate sharing with Tribes accurate and complete data as to the true state of broadband access on Tribal lands and possible availability of unused spectrum over such lands that would put Tribal entities in a far better and fairer bargaining position with providers than they are now.

IV. National Lifeline Assoc. v. FCC: FCC'S Policies are Sometimes Worse Than Ineffective

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[10] GAO, *Tribal Broadband: FCC Should Undertake Efforts to Better Promote Tribal Access to Spectrum*, GAO–19–75 (November 2018) (*"2018 GAO-Tribal Access to Spectrum"*).

[11] The experience of the most isolated tribe in America and the traditional guardians of the Grand Canyon, the Havasupai, is instructive. For that Tribe, the primary bottleneck in deploying wireless broadband was not infrastructure cost. Rather, regulatory obstructions caused by FCC policy were the primary source of delay and costs. It took lawyers, and four months to get special temporary authority, and then, over another year for the FCC to grant a waiver of its long-standing "freeze" on applications for assignment of unlicensed 2.5 GHz spectrum (which was specifically set aside for educational not-profit and tribal use), and a permanent license. Now, the Havasupai report that their desire to expand and upgrade the power on its modest wireless network to bring service to the entire village, and the bandwidth needed to offer 911 service, tele-learning, and telemedicine, may be frustrated because a non-Tribal provider in 2015 proposed service in the area through the FCC's "prior coordination notification" process, which may give the provider's later-filed application for 6 GHz spectrum priority over the Tribe's partner's earlier-filed application. The Tribe apparently must now fight yet another battle with the FCC. NPM urges the Committee to consider and place in the record the following article and the July 16, 2019, House testimony of Ms. Mariel Triggs: *https://www.npr.org/2019/09/16/759908026/most-isolated-tribe-in-continental-u-s-gets-broadband* *https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/2__Testimony__Triggs%20%28update%29__0.pdf*

[12] *In the Matter of Improving Communications Services for Native Nations by Promoting Greater Utilization of Spectrum over Tribal Lands*, Notice of Proposed Rulemaking 26 FCC Rcd 2623 (2011).

[13] *2018 GAO —Tribal Access to Spectrum*, at 20–22. One exception is that in the 2.5 GHz rulemaking, the FCC adopted in July 2019 a Tribal priority filing window for currently unlicensed 2.5 GHz spectrum on rural tribal lands in which the applicant tribe has a substantial local presence. FCC, Report & Order, *Transforming the 2.5 GHz Band*, FCC No. 19–62, Paragraphs 47–65 (July 11, 2019). That order also eliminated restrictions limiting licensees of that spectrum only to educational and tribal entities, and the "educational use" restrictions that formerly applied, effectively "commercializing" the band. The Commission will soon hold an "overlay" auction where currently unlicensed EBS spectrum not assigned via a Tribal priority application will be auctioned to the highest bidder on a county-by-county basis. Id. Paragraphs 75–99. As a practical matter, underserved Tribes will not be able to take advantage of the 2.5 GHz filing priority. NPM believes that the short Tribal priority "outreach" and filing "windows" prescribed by the FCC, and its inexplicable decision to require Tribal priority licensees to build out systems twice as fast as non-Tribal auction-winner licensees, will limit Tribes' practical abilities to solve complex technical challenges, obtain necessary grant and other funding, form partnerships, and devise and implement solutions in sufficient time to leverage the 2.5 GHz Tribal priority. *See also* note 11 and references.

We, Tribes and Tribal citizens alike, have reached the point where a *laissez-faire* approach to enforcing meaningful engagement and information-sharing by broadband service providers is just not good enough. That approach has done little to incentivize or require non-Tribal wireless licensees and USF funding recipients to deploy quality broadband service in underserved Tribal areas. We are also past the point where we can tolerate indifference to the known problem of inadequate Tribal broadband access as not being "bad enough" to galvanize real action. Further, the FCC can no longer take actions that defy the "facts on the ground," and make the problems worse.

For example, in 2017 the FCC altered its "Tribal Lifeline program regulations to limit the availability of subsidies only to services provided by telecommunications carriers that utilize their own fixed or mobile wireless facilities, excluding carriers that resell the service of others, and to limit the subsidies only to persons residing on "rural" Tribal lands. These restrictions had the perverse effect of discouraging, not promoting, greater broadband service availability in Tribal communities.

Earlier this year, the U.S. Court of Appeals for the District of Columbia struck down these rules, holding that they were arbitrary and capricious, in that the FCC failed to offer any reasoned explanation for the policy change supported by evidence in the rulemaking record.[14] The Court explained that the FCC decision simply ignored evidence of real-world market conditions facing Tribal broadband users:

> The Commission's decision evinces no consideration of the exodus of facilities-based providers from the Tribal Lifeline program. Neither does it point to evidence that banning resellers from the Tribal Lifeline program would promote network buildout. Nor does it analyze the impact of the facilities requirement on Tribal residents who currently rely on wireless resellers. Further, the Commission ignored that its decision is a fundamental change that adversely affects the access and affordability of service for residents of Tribal lands. Similarly, in adopting the Tribal Rural Limitation, the Commission's decision evinces no consideration of the impact on service access and affordability. Its decision does not examine wireless deployment data related to services to which most Tribal Lifeline recipients subscribe.[15]

V. The Way Forward—The Coming 5G Revoluton and Urgent Need for Legislation

Currently, as a primary focus, the FCC is plunging headlong in a race to free up and auction to the highest bidders, spectrum suitable for next-generation 5G mobile telecommunications services.[16] 5G promises bandwidth and latency rates far superior to existing technologies, and widespread deployment of mobile 5G service in Tribal lands and communities would certainly help close the digital divide. But unless the barriers and obstacles already recognized by this Committee, GAO, and the FCC itself are addressed, Tribal communities are unlikely to enjoy the benefits of this promising technology, and the gap in availability and quality of service will only grow ever wider. If the FCC's pattern of footdragging and neglect continues, it is almost certain that Tribal communities will simply be left behind in the rapidly-approaching 5G revolution. The FCC has displayed scant regard for the interests of Tribes and Native peoples in its rush to deploy 5G thus far, and there is little reason to think this will change absent Congressional action.[17]

For these reasons, NPM strongly supports the efforts of Senator Udall and other members of this Committee to introduce and press for adoption of legislation to remove the barriers caused by broadband service market failure and the FCC's inadequate efforts to mandate and promote meaningful solutions. Such legislation should reflect and implement GAO's recommendations in its 2018 reports. It should:

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[14] National Lifeline Association v. FCC, No. 18–1026 (D.C. Cir. Feb. 1, 2019) *https://www.cadc.uscourts.gov/Internet/opinions.nsf/8E6B91FC5437D2D9852583940053BC87/$file/18-1026.pdf.*

[15] *Id.*, at 3.

[16] *https://www.fcc.gov/5G.*

[17] On August 9, 2019, in *United Keetoowha Bands of Cherokee Indians in Oklahoma v. FCC*, No. 18–1129 (D.C. Cir. Aug. 9, 2019) the U.S. Court of Appeals overturned a 2018 FCC order designed to accelerate wireless 5G broadband deployments by eliminating National Historic Preservation Act and National Environmental Policy Act review of proposed wireless broadband construction projects' impacts on sites of environmental, religious and cultural importance to federally-recognized Indian tribes. The Court found that FCC acted arbitrarily and capriciously in failing to justify its conclusion that small cell deployments pose little to no cognizable religious, cultural, or environmental risk. *https://www.narf.org/nill/documents/20190809fcc-decision.pdf.*

- Mandate a dedicated Tribal Broadband Fund within the USF, eliminate the ETC eligibility requirement for Tribal applications and require the FCC to create a streamlined application process;
- Mandate dedicated Tribal Broadband funding within the RUS, and require USDA to eliminate or reduce for Tribal entities burdensome and impractical application and eligibility requirements for RUS funding;
- Require the FCC to improve data collection on Tribal lands, develop a formal process for Tribal challenges to and review of carrier reported data, and review and improve its Tribal Government Engagement policies to remove existing barriers and disincentives to meaningful engagement and information-sharing;
- Require the FCC to implement Tribal priority application filing windows for Tribal lands in all wireless spectrum license auctions, with realistic application and build-out deadlines;
- Mandate a National Broadband Advisory Council designed to set an agenda that ensures effective communication and coordination among Federal agencies and to promote Tribal participation in federal decisions and policies regarding broadband deployment and adoption across Indian Country, including (without limitation) in connection with:

  —Proceedings related to the FCC National Broadband Plan and the nation's digital divide;

  —Identifying relevant federal funding information and mechanisms in order to maximize Tribal opportunities for broadband deployment and adoption;

  —Taking actions necessary to fully implement Tribal recommendations in the FCC National Broadband Plan and those stemming from relevant GAO Reports;

  —Identifying opportunities for Federal agencies, Tribes, broadband service providers (tribal/non-tribal) to share resources related to affordable broadband deployment and adoption; and

  —Strengthening, supporting and liaising with the continued outreach and work of the FCC Office of Native Affairs and Policy and the FCC's Native Nations Communications Task Force. [18]

PREPARED STATEMENT OF RAYMOND V. ORTIZ, BOARD MEMBER/LEAD TECH, REDINET

REDINET VS INCUMBENTS—A JOURNEY OF SELF DETERMINATION

From the onset of the BTOP Grant applications, the local incumbents showed quite a bit of reticence against what would later become RediNet.

The tact they undertook is now familiar to many Community Owned Broadband organizations across the United States. In the beginning, it largely took the form of lobbying local law makers with the end goal being to have them speak to the Senate and Congressional delegations in order to discourage support for RediNet BTOP/ARA application. In addition, they have tried with moderate success to have laws enacted which prohibit competition from a Community Broadband Network. In New Mexico this took the form of introduction of bills which outright attempted to create this prohibition and others in which the language was couched to create disadvantages for entities such as RediNet affecting funding availability.

On the federal level, they have lobbied the FCC and curried favor via false reporting of service delivery and coverage. This affects funding for smaller community owned broadband entities which do not have the budget to lobby or have such small areas of coverage that they are largely ignored in funding opportunities. This practice is starting to finally be looked at more closely by lawmakers however, many of these folks often lack the understanding of terminology and business practices which are used to deceive both the end user and the lawmakers. It is necessary to explain this process in a little more detail so these statements make sense to the reader.

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[18] NPM does not believe that the proposed National Broadband Advisory Council would duplicate or be redundant of the work of the FCC's OPNA or Native Nations Communications Task Force. The scope of the new advisory body is different—focused on multiple federal agencies and collaboration with Tribes to find solutions; with an invitation to service providers to join the circle. Indian Country is diverse and advisory bodies must embrace that this is not a one size fits all approach to addressing the digital divide. This is also an issue about affordability, not just infrastructure. The conversation needs to bring into the circle all stakeholders, public and private, that have the power to help close the digital divide in a substantive and meaningful way.

Provisioning is the term used for the fastest connection possibility to an end user based on equipment configuration. This term is deceiving because the end user thinks that what they are buying is broadband service at those speeds. What they are actually paying for is access to those speeds, not necessarily delivery of that speed, particularly under load. The fine print in the service agreement indicates "up to" the provisioned speed not sustained delivery of those speeds. In essence the equipment can handle those speeds but the final delivery depends on many factors such as backhaul speeds, oversubscription rates and physical plant capability. The discrepancy between provisioning and service delivery allows service providers to maximize profit while minimizing expenses to the detriment of the consumer who is paying for something they aren't getting. Incumbents bait the offering by indicating a low price for a certain speed which they cannot or do not deliver.

In our area this has historically been a chronic problem. So much so that some communities have united and tried to sue the incumbent for lack of or poor service.

Another long term problem is that the incumbents have made it extremely difficult for organizations other than their own to access the fiber paid for by federal and state dollars. This allows them to monetize the asset and maximize profits. If the federal government is investing in infrastructure, state and local governments should be given priority access for transport of internal noncommercial traffic on dark fiber. This would provide cost effective solutions for critical traffic. Why should state and local governments pay for transport on fiber paid for by tax dollars?

By keeping second party entities off the fiber networks, the incumbents have in effect privatized public resources. This slows the progress of fiber rollouts or stops new builds altogether in large geographical areas which are rural in nature. This is contrary to the national goal of fiberizing the nation.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JON TESTER TO ANDREW VON AH

Question 1. According to the GAO report, participating in the secondary market is one of the few ways Tribes can access licensed spectrum. How do we make sure that Tribes know about the licensed and unlicensed spectrum on their lands? Who should be responsible for educating Tribes about ways they can access spectrum?

Answer. In our November 2018 report, we recommended that the Federal Communications Commission (FCC) should make information on spectrum-license holders more accessible and easy to understand for interested parties, including tribal entities, to promote their ability to purchase or lease spectrum licenses from other providers.[1] Given that most of the spectrum allocated for commercial use has already been assigned through spectrum auctions and other mechanisms to private providers, it is important for tribes to know who owns the spectrum licenses over their lands. All of the tribal associations we contacted for our review confirmed that there are unused spectrum licenses over tribal lands that could present opportunities for tribal entities to obtain spectrum through the secondary market. However, the tribal entities we contacted stated that it is difficult to determine who holds spectrum licenses and many tribal entities were unaware of the possibility of accessing licensed spectrum through a secondary market transaction prior to our contacting them. In response to our recommendation, FCC's Chairman noted that FCC is currently engaged in a multi-year project to modernize the Universal Licensing System (ULS), transitioning to a new platform that will provide more consistent performance, easier access to information, and enhanced functionality. The Chairman said the Office of Native Affairs and Policy will continue its outreach and educational efforts with tribal entities.

As the expert agency for commercial and nonfederal spectrum use, FCC should be responsible for educating tribes about ways they can access spectrum. Congress has delegated responsibility for regulating commercial and nonfederal spectrum use to FCC, and FCC has asserted that its authority to regulate nonfederal spectrum use applies to the spectrum over tribal lands. Furthermore, FCC has recognized its own general responsibility to tribes. In FCC's policy statement on establishing its relationship with tribes, FCC stated that it recognizes that the federal government has a fiduciary responsibility in its dealings with tribes and has a longstanding policy of promoting tribal self-sufficiency and economic development.[2]

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[1] GAO, *Tribal Broadband: FCC Should Undertake Efforts to Better Promote Tribal Access to Spectrum*, GAO–19–75 (Washington, D.C.: Nov. 14, 2018).

[2] *Statement of Policy on Establishing a Government-to-Government Relationship with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

Question 2. Is the Office of Native Affairs and Policy adequately staffed to track and communicate data on spectrum to Tribes?

Answer. Although we did not assess the adequacy of the Office of Native Affairs and Policy's (ONAP) staffing, we did review ONAP's efforts and ask tribal representatives about their views of ONAP. At the time of our review in November 2018, ONAP officials told us that they had conducted 21 training and consultation workshops for tribal entities on broadband and telecommunications issues since 2012, where spectrum had been discussed. These officials also told us that they communicate with tribal entities prior to when FCC holds auctions or when implementing regulatory actions or policies that will affect tribal governments and spectrum over their lands. However, it is not clear that ONAP has a systematic approach for tracking and communicating spectrum data to tribes. We found that only 9 of the 16 tribal entities we interviewed that were using wireless technologies had received outreach from FCC on spectrum-related issues. Furthermore, 10 of the 16 tribal entities said that more outreach or training would be useful and 2 told us they had not received any outreach from FCC.

We also found that ONAP issued a report in 2012 to provide FCC with a review of its work with tribal governments and organizations, including information on its tribal broadband efforts, priorities, and tribal consultations. Among other things, the report included case-study information on tribal entities' efforts to access spectrum. Although the report stated that this would be the first of such annual reporting, this is the only report that ONAP has issued on tribal issues.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. STEVE DAINES TO ANDREW VON AH

Question 1. Mr. Von Ah your report mentions that unlicensed spectrum can be effectively used by tribes to connect their community members, but because they are unlicensed there can be drawbacks, including interference. I recently helped secure a pilot program with the Microsoft Airband Initiative for TV White Space technology in Montana, and last year they announced they will be using this new tech to connect the CSKT of the Flathead Nation in northwest Montana. How can we better use this unlicensed spectrum to connect tribal areas while also reducing interference?

Answer. The TV white space spectrum adds to the spectrum available to tribal entities and has some technical advantages over other unlicensed spectrum bands. For example, signals can travel greater distance with less power and do not require direct line-of-sight. However, TV white space spectrum is still unlicensed spectrum and presents limitations that we noted in our November 2018 report, including potential for interference and limited bandwidth capacity, which causes lower speeds, high latency, and limits the number of households that can be served. [1] In addition, stakeholders we spoke with said that equipment needed to access TV whitespace spectrum is expensive and less available, which may prevent many tribal entities from using the white space spectrum. At the time of our review, none of the entities we interviewed said that they used TV white space spectrum.

Although we did not assess actions taken by FCC after our report was issued in November 2018, we understand that FCC has adopted an order in March 2019, to improve the accuracy and reliability of the fixed white space device data recorded in its databases and to assure that the potential for these devices to cause interference to protected services is minimized. [2] In the order, FCC increased the allowable above ground antenna height and power for fixed white space devices in less congested areas to help improve wireless broadband service in rural and other underserved areas. In May 2019, Microsoft requested that FCC make further improvements to its TV white space rules, such as increasing the allowable power limits and antenna heights for fixed white space devices in rural areas, to address what Microsoft called "real-world barriers" that companies face in trying to use white space technologies in rural areas.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO DONALD K STOCKDALE

Question 1. The FCC maintains the Universal Licensing System (ULS) to identify spectrum-license holders on Tribal lands for the public. The GAO found, and the

[1] GAO, *Tribal Broadband: FCC Should Undertake Efforts to Better Promote Tribal Access to Spectrum*, GAO–19–75 (Washington, D.C.: Nov. 14, 2018).

[2] FCC 19–24.

FCC agreed, that the ULS is ineffective and the FCC needs to do more to help Tribes identify unused spectrum. The FCC noted it is embarking on a multi-year project to modernize the ULS. Tribes will be reliant on this ineffective system to identify unused spectrum, while ensuring it meets the requirements of the Tribal priority window for 2.5 GHz spectrum. Did the ineffectiveness of the ULS tool factor into the FCC's planned time-line for accepting applications for unlicensed 2.5 GHz spectrum?

Answer. I agree that the Universal Licensing System (ULS) could be more user-friendly, and Chairman Pai has made modernization of the ULS a priority. The FCC currently is engaged in a multi-year project to modernize the ULS and make it more flexible, capable, reliable, and user-friendly. Indeed, we have taken into account the challenges Tribal entities identified in navigating the existing ULS tool and are developing new Tribal entity-specific tools to assist Tribal entities in navigating the application process, including mapping tools to help Tribal entities in determining where there is available spectrum over Rural Tribal Lands.

Question 2. In the "Transforming the 2.5 GHz Band Report and Order (FCC 19–62)", the FCC noted that, "most Tribal entities favor a geographic license area that tracks reservation boundaries". Several Tribes also advocated for including off-reservation land in the Tribal priority window. Ultimately, FCC rejected these recommendations and instead opted to utilize the existing process because it "would be efficient and facilitate prompt processing of Tribal priority applications". Given the recognized Tribal digital divide, how did FCC determine that the expediency of processing applications outweighed the need to ensure greater broadband participation and access for Tribal communities?

Answer. The Commission did not reject the recommendation to allow Tribal entities to apply for licenses tracking reservation boundaries, nor did the Commission reject the call for including off-reservation land in the Tribal priority window. In the Report and Order, the Commission adopted the broad definition of Tribal lands contained in Part 54 of its rules and agreed with commenters to include off-reservation lands in the Tribal priority window under certain circumstances. (R&O para. 54). In fact, the Commission stated that it will include in the Tribal priority window Rural Tribal Lands on-reservation in all situations and off-reservation lands in certain situations. (R&O para. 52). Moreover, under the Commission's decision, the available license areas available in the Tribal window will track the boundaries of individual Tribal lands that otherwise meet the requirements of the Commission's rules. We note that the Commission acknowledged the issue that licensing reservation-based Tribal lands will, in some cases, result in irregularly shaped licenses that will complicate the geographic landscape for other 2.5 GHz licensees. (R&O para. 55). Nevertheless, the Commission stated, "we do not see this potential complication as a reason not to make all reservation lands available for the Tribal Priority Window." (R&O para. 55).

Question 3. Please outline the Tribal consultation steps the FCC has taken to determine what types of documentation Tribes must submit in order to be granted 2.5 GHz spectrum under the Tribal priority window.

Answer. The Commission conducted a robust notice and comment process—including comments from 22 Tribal entities or organizations associated with Tribes—and consulted with interested Tribal Entities and stakeholders, such as Chairman Pai's May 28, 2019 meeting with Governor Bill Anoatubby, Secretary of Commerce Bill Lance, and Under Secretary Subsidiary Services and Support Clifford Agee at the Chickasaw Nation Headquarters in Ada, Oklahoma. As a result, the Commission adopted simplified documentation requirements for applicants under the Tribal Priority Window. Under the Commission's rules, applicants for the Tribal Priority Window must demonstrate: (1) that the applicant is a federally recognized American Indian Tribe or Alaska Native Village or an entity that is owned and controlled by a federally recognized Tribal entity or a consortium of federally recognized Tribal entities; (2) that the applicant is applying for a license on Rural Tribal Land; and (3) that the applicant has a local presence on the Rural Tribal Land for which it is applying.

Much of the information required to show that a Tribal entity is eligible to participate in the Tribal Priority Window is readily available to them. For instance, a Tribal entity must show that it is on the list of Tribal entities recognized by and eligible for funding and services from the U.S Bureau of Indian Affairs most recently published in the Federal Register. Tribal entities that apply for a license on their own Rural Tribal Land will be able to demonstrate both that the land is Tribal Land and that they have a local presence in that area. To show that the Tribal Land for which it seeks a license is Rural, a Tribal entity may use U.S. Census Bureau data that can be found at *https://www2.census.gov/geo/maps.*

Commission staff are engaged currently in nationwide outreach regarding the Tribal Priority Window and the application process. Staff also are developing tools to assist Tribal entities with both identifying available spectrum and navigating the application process. Commission staff also will be available to work with applicants individually to ensure that they have submitted documentation necessary to meet all of the required elements.

Question 4. Will Tribes be required to provide documentation about their ability to meet substantial service requirements in order to be granted 2.5 GHz spectrum under the Tribal priority window? If so, please summarize the information FCC will require and outline steps the FCC has taken to consult with Tribes.

Answer. No, Tribal entities will not be required to provide documentation that they will be able to meet the performance requirements when they apply for a license in the Tribal Priority Window. Consistent with the Commission's normal practice, the Commission will require Tribal licensees to demonstrate compliance with the buildout requirements at the applicable deadlines.

Question 5. Please articulate the rationale the FCC used to justify requesting the Office of Management and Budget grant an emergency approval of the Paperwork Reduction Act, specifically in adherence to written determination requirement of 5 CFR § 1320.13.

Answer. The Commission requested expedited review to make valuable mid-band spectrum available for the mobile services on which consumers increasingly rely and which is critical to maintain American leadership in the next generation of wireless connectivity. The Commission stated that the spectrum will be available to members of federally recognized American Indian Tribes and Alaska Native Villages on Rural Tribal Lands, many of which have lacked meaningful access to wireless communications services. The Commission indicated that it wanted to auction spectrum in the 2.5 GHz band in 2020. Requiring the Commission to seek OMB's approval for this collection under the regular PRA processing procedures would significantly delay the provision of service on Tribal lands. The Commission requested that OMB approve only one public notice comment period of 30 days instead of the standard two comment periods of 60 and 30 days for OMB Control Number 3060–1094. The intent was to allow more time for the Tribal Priority Window.

Question 6. The FCC estimates that only eight Tribal entities will file for access to 2.5 GHz EBS spectrum under the Tribal priority window. This estimate is low and will not address the digital divide within Indian Country. The FCC has stated on multiple occasions that Tribal Nations and bridging that gap are a priority. How did FCC come up with this number? Will FCC take this estimate in to consideration and take aggressive steps to ensure greater Tribal participation?

Answer. In its Paperwork Reduction Act request, the Commission estimated that 24 Tribal entities or consortia of Tribal entities would apply during the Tribal Priority Window based on the number of Tribal entities that commented in the rulemaking proceeding. In calculating the number of "annual" filings, PRA rules require that federal agencies divide the estimate over three years, for an estimate of eight annual filings. The Commission is taking aggressive steps to encourage greater participation in the Tribal Priority Window.

Question 7. Does the FCC have any plans, besides the multi-year effort to update ULS, to produce easily accessible and understandable maps of available 2.5 GHz spectrum?

Answer. Yes; the FCC is developing a Tribal Mapping Tool specifically for the 2.5 GHz Tribal Priority Window application process; this tool will present easily accessible and understandable maps of Rural Tribal Lands and existing spectrum holdings over those lands. The tool will include the ability to link to ULS records to obtain more detailed information on any incumbent licensees over those lands.

Question 7a. If so, will this be completed before the Tribal priority window closes? If not, is FCC considering extending the Tribal priority window?

Answer. The Tribal Mapping Tool will be completed before the Tribal Priority Window OPENS, and FCC will provide training, tutorials, and support for Tribal entities using this tool before and during the application window.

Question 8. How many Tribes currently have 2.5 GHz spectrum available over their lands? How did the FCC conduct its analysis?

Answer. 347 Tribes have some 2.5 GHz white space spectrum available over the entire eligible area; 314 have at least 50 megahertz of contiguous spectrum available over the entire eligible area. Our initial analysis is part of the current development of a Tribal Mapping Tool that will provide each of these Tribal entities with a view of whether and to what extent spectrum is available in each of the three channel bands over their respective Rural Tribal Land. This tool should be available in early November, roughly 60 days before the opening of the application window,

and will remain available, along with other information, support, tutorials, and tools being developed to assist Tribal entities, throughout the application window.

Question 9. FCC 19–62 outlines a 90-day Tribal education process and a 60-day window for applications. How will the FCC communicate with the hundreds of Tribal Nations that may be eligible to apply, especially those with limited or no Internet access?

How will the Commission ensure that all eligible rural Tribal Nations are made aware of this opportunity? Please provide the specific dates and locations of upcoming workshops.

Answer. In paragraph 62 of the *Report and Order* (FCC 19–62), the Commission noted that it had received comments proposing a 90-day notice period prior to the opening of the priority filing window with a 60-day window for the filing of applications. Rather than adopting the suggestion of the commenters and limit the window to 60 days, the Commission directed its Wireless Telecommunications Bureau to announce procedures for the Tribal Priority Window through one or more Public Notices and other appropriate outreach to potentially eligible Tribal applicants. As noted above, emergency PRA approval was sought to lengthen the period of the Tribal Priority Window.

WTB, in partnership with the FCC's Office of Native Affairs and Policy (ONAP), currently is conducting outreach to Tribal entities and is providing notice of the upcoming window. WTB and ONAP also are working on the IT development necessary to provide Tribal entities with additional tools to assist with navigating the Tribal Priority Window. While the application window, which should open in early 2020, will be announced via Public Notice, the FCC also will use a variety of methods—email, phone calls, and/or direct mail—to contact Rural Tribal Nations about this opportunity, to ensure that all eligible Tribal entities receive this information, including those with limited or no Internet access.

Commission staff also have participated in a number of workshops recently to inform Tribal entities of this opportunity, including:

- July 18—Midwest Alliance of Sovereign Tribes Conference (Mt. Pleasant, MI)
- July 31—Native American Development Corp. Annual Conference (Billings, MT)
- Aug. 21—22—Tribal Communications Workshop (Billings, MT)
- Sept 23—FCC Intergovernmental Advisory Committee
- Sept. 28—Department of the Interior Tribal Broadband Summit (Washington D.C.)
- Oct. 8—Affiliated Tribes of Northwest Indians Annual Convention (Suquamish, WA)
- Oct 9—Internet Society Indigenous Connectivity Webinar
- Oct. 17–19—Alaska Federation of Natives
- Oct. 20–FCC Tribal Communications Workshop (Albuquerque, NM)
- Oct. 22—National Congress of American Indians Conference (Albuquerque, NM)
- Oct. 23—Alaska Telecom Association Tech Showcase—Board Meeting (Anchorage, AK)

As of October 24, 2019, Commission staff are scheduled to participate in the following upcoming workshops, and are actively working with Tribal entities to schedule additional events:

- Nov. 5—FCC Native Nations Communications Task Force
- Nov. 12—TribalNet Conference (Nashville, TN)
- Nov. 19–20—FCC Tribal Workshop (Blue Lake, CA)
- Early December—Tribal focus groups on Tribal Mapping Tool performance
- December—Online webinar

In addition, Commission staff have also set up a special mailbox for inquiries about the Tribal Priority window: *RuralTribalWindow@fcc.gov,* and they have developed the attached informational handout with references to helpful information and contacts with the Commission to assist Tribal Entities. Commission staff intend to update this handout periodically as new information and tools become available.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. STEVE DAINES TO DONALD K STOCKDALE

Question 1. Chairman Pai has made it a priority to close the digital divide and I share that passion with him. One way he can continue making a major impact is having strong buildout requirements on carriers. Recently, I helped secure unused spectrum for a large national carrier with their promise that they will build a robust network on the Fort Peck Reservation. According to recent maps, they are honoring that commitment and I look forward to seeing Fort Peck and Montana's other tribal areas continue to grow in 4G and 5G coverage. How can the FCC better use buildout requirement to connect rural and tribal communities in Montana?

Answer. Construction obligations have functioned as a core part of the Commission's wireless policy for decades. The FCC's construction obligations serve the important purpose of ensuring that scarce spectrum resources are put to use and deployed in a manner that serves all communities. Indeed, the Commission's construction obligations promote the Commission's goal of making spectrum "available, so far as possible, to all the people of the United States" regardless of where they live. 47 U.S.C. § 151.

As the Commission's rules specify, absent a specific provision in our rules to the contrary, "if a licensee fails to commence service or operations by the expiration of its construction period or to meet its coverage or substantial service obligations by the expiration of its coverage period, its authorization terminates automatically (in whole or in part as set forth in the service rules), without specific Commission action, on the date the construction or coverage period expires." 47 CFR § 1.946(c).

The FCC has been clear that requests to extend construction obligations will not be routinely granted. The Commission's rules and case law impose limits on the types of arguments and factual circumstances that would qualify a licensee for an extension. For example, the Commission's rules do not contemplate extensions of construction deadlines for licensees that fail to meet construction obligations because of miscalculations or erroneous predictions about such factors as costs, demand, developments in the market, or timing and success in obtaining permissions that may be necessary for construction. Rather, the Commission has always expected licensees to factor in these considerations from the start because construction obligations are the building blocks to making available service that puts scarce spectrum resources to use. When a licensee fails to deploy on a timely basis, the Commission holds the licensee accountable in accordance with its rules. Specifically, under Section 1.946(e) of the Commission's rules, extensions of the time period for meeting these construction and service requirements are permitted only in two situations—either "involuntary loss of site" or "other causes beyond [a licensee's] control." 47 CFR § 1.946(e)(1).

Question 2. The FCC's Office of Native Affairs and Policy, or ONAP (oh-nap) is supposed to be a resource for tribal nations, but I have heard the FCC could be using the office in a much more effective way. What is the FCC doing to better promote ONAP and how can this position be better utilized to connect with tribes in Montana?

Answer. ONAP, together with the Wireless Telecommunications and Wireline Competition Bureaus, have developed best practices regarding the Tribal engagement process. Last updated in 2012, the Commission anticipated that its Tribal engagement obligation and guidance would evolve over time based on initial implementation experiences and feedback of both Tribal governments and communications providers. On October 21, the Commission's Consumer and Governmental Affairs Bureau (CGB) released a Public Notice requesting comment on the effectiveness of its Tribal engagement guidance. (DA 19–1055). CGB seeks to assess the effectiveness of its Tribal engagement guidance based on the practical experiences of Tribes and carriers, to ensure the effective exchange of information that will lead to a common understanding between Tribal governments and communications providers on issues such as the deployment and improvement of communications services on Tribal lands. The Commission recognized in the Public Notice that Commission staff has heard of anecdotal problems with providers' efforts to initiate engagement with Tribal leaders, and it sought comment on specific steps the Commission can take or recommend, to assist parties with their engagement efforts. Comments in response to the Public Notice are due December 5, and reply comments are due January 6, 2020.

Moreover, WTB and ONAP currently are conducting outreach to Tribal entities and providing notice not only of the upcoming Tribal Priority Window for 2.5 GHz spectrum but also opportunities to use 3.5 GHz spectrum. WTB and ONAP also are working on the IT development necessary to provide Tribal entities with additional tools to assist with navigating the 2.5 GHz Tribal Priority Window. While the appli-

cation window, which should open in early 2020, will be announced via Public Notice, the FCC also will use a variety of methods—email, phone calls, and/or direct mail—to contact Tribal entities about these opportunities, in particular to ensure that all eligible Tribal entities receive information about the 2.5 GHz Tribal Priority window, including those with limited or no Internet access.

Commission staff also have participated in a number of workshops recently to inform Tribal entities of this opportunity, including:

- July 18—Midwest Alliance of Sovereign Tribes Conference (Mt. Pleasant, MI)
- July 31—Native American Development Corp. Annual Conference (Billings, MT)
- Aug. 21–22—Tribal Communications Workshop (Billings, MT)
- Sept 23—FCC Intergovernmental Advisory Committee
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- Oct. 17–19—Alaska Federation of Natives
- Oct. 20—FCC Tribal Communications Workshop (Albuquerque, NM)
- Oct. 22—National Congress of American Indians Conference (Albuquerque, NM)
- Oct. 23—Alaska Telecom Association Tech Showcase—Board Meeting (Anchorage, AK)

As of October 24, 2019, Commission staff are scheduled to participate in the following upcoming workshops during the remainder of 2019, and they are actively working with Tribal entities to schedule additional events:

- Nov. 5—FCC Native Nations Communications Task Force
- Nov. 12—TribalNet Conference (Nashville, TN)
- Nov. 19–20—FCC Tribal Workshop (Blue Lake, CA)
- Early December—Tribal focus groups on Tribal Mapping Tool performance
- December—Online webinar

In addition, Commission staff have also set up a special mailbox for inquiries about the Tribal Priority window: *RuralTribalWindow@fcc.gov,* and they have developed the attached informational handout with references to helpful information and contacts with the Commission to assist Tribal Entities. Commission staff intend to update this handout periodically as new information and tools become available.

Commission staff is designing and developing a dedicated webpage specifically to assist Tribal entities in applying for licenses in the Tribal Priority Window; this webpage will provide information as well as access to tools, including an interactive map to assist Tribal entities in determining whether there is spectrum available over their Rural Tribal Lands.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JON TESTER TO DONALD K. STOCKDALE, JR.

Question 1. In 2011, the FCC issued a proposed rulemaking that would improve Tribal Access to spectrum and was supported by Tribal stakeholders. Yet, the FCC still hasn't taken any steps to adopt this rulemaking. Why hasn't any further action been taken?

Answer. A key proposal in the 2011 NPRM was for the FCC to create a Tribal licensing priority for unassigned spectrum. Earlier this year, the FCC established a priority filing window for Tribal Nations to obtain licenses for unassigned 2.5 GHz spectrum on rural tribal lands. This priority filing window will offer an opportunity for many Tribal Nations to provide advanced wireless and broadband services in their communities. Recently, the Wireless Telecommunications Bureau announced that the priority window will be open from February 3, 2020, to August 3, 2020. The agency continues to work with Tribal Nations to facilitate their participation in this 2.5 GHz priority window, as well as to develop other opportunities for access to communications services.

Question 2. Is the Office of the Native Affairs and Policy adequately staffed to track and communicate data on spectrum to Tribes?

Answer. Yes, we have sufficient staff within ONAP to handle tribal consultations, as well as to coordinate agency-wide on a range of issues central to our work in this

area. ONAP has five full-time staff working on Tribal consultations and related issues. In addition, ONAP receives substantial daily support from an experienced Deputy Bureau Chief charged with primary responsibility for overseeing the office, as well as additional support from other Bureau-level legal advisors. Within the Bureau, ONAP greatly benefits from the synergies with other CGB offices, including routine coordination with intergovernmental staff in the Office of Intergovernmental Affairs and other bureau-level specialists. In addition, like other offices in a small agency of 1,448 FTEs, ONAP does not work in isolation, but rather coordinates on a regular basis with subject-matter experts in WTB, WCB and MB, as well as OET, OEA and OMD on items of significant Tribal interest. These experts not only advise ONAP on an ongoing basis, they also partner with ONAP to address and conduct Tribal consultations and related matters. As currently structured, the office has the ability to be flexible in its approach and work cross-agency to obtain the best results for stakeholders. For example, ONAP and WTB subject-matter experts jointly conducted consultations related to the Commission proceeding that is transforming the way Educational Broadband Service spectrum in the 2.5 GHz band is used, resulting in the creation of a rural Tribal Priority Window for new licenses in this band.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JON TESTER TO KIMBALL SEKAQUAPTEWA

Question 1. How has the FCC consulted with Tribes and how is their feedback incorporated into improving spectrum availability on Tribal lands?

Answer. To my knowledge, the FCC consults with tribes through Notices of Proposed Rulemakings (NPRM) and has assigned the Office of Native Affairs Policy, guided by the Native Nations Communications Task Force (NNCTF), to advise on policy matters. If financially able, tribes travel to Washington, D.C. to visit the FCC offices and submit ex parte filings. There are annual, regional, FCC tribal consultations that can be many states away. On occasion, the FCC Chairman and Commissioners travel to Indian Country to listen to tribal experiences and experience the landscape, which is an extremely powerful engagement for both parties. While not an FCC communication directly, tribes are supposed to hear about FCC subsidized deployments on their lands through the obligation of Eligible Telecommunication Carriers to engage with the Tribes they serve on an annual basis.

The FCC recently demonstrated positive Tribal engagement when it established a Tribal Priority Window for licensing Educational Broadband Service spectrum in the 2.5 GHz band. This has included a substantial tribal training schedule in advance of the opening of the Tribal Priority Window and an attempt to build useful data mining tools. Additionally, the six-month window length reflects FCC responsiveness to the tribes' recommendation for a longer window to encourage increased tribal participation and success. My hope is that this precedent permanently sets the norm for all future spectrum auctions. Perhaps this could be codified through the rulemaking process to include a Tribal Priority Window, tribal input on window lengths and other process mechanics, custom data tools development, and tribal outreach specifications.

Question 1a. What are ways you think this relationship can be improved and more collaborative?

Answer. The FCC-Tribal relationship can be improved through a long and consistent track record. To further develop this path, the FCC can build on the positive engagement of the 2.5 GHz Tribal Priority Window and to implement the recommendations issued on September 18, 2019 in the NNCTF report titled, "Improving and Increasing Broadband Deployment on Tribal Land". The report includes unique challenges and nuanced approaches to working with tribes to deploy advanced communication infrastructure.

Additionally, the FCC can demonstrate that the Office of Native Affairs and Policy is fully staffed and financially supported to complete the scope of its duties to develop policies to address the lack of adequate communication services on tribal lands, plan and lead outreach to increase awareness of, and participation in Commission initiatives, and most importantly, ensuring that native voices are included in the decisionmaking processes. Question the placement of ONAP within the FCC to ascertain whether its current placement under the Consumer and Governmental Affairs Bureau warrants enough authority to complete its mission, or whether it should be elevated within the FCC organizational chart.

In light of the fact that spectrum acquisition is a complex regulatory process, it appears to me that success is greatly increased with access to specialized attorneys, consultants, and knowledgeable internal staff. This is an extremely high bar, and barrier to entry, for Tribes with limited staff and financial resources. In lieu of a

one-time 'trainings' perhaps a FCC program could be developed for Tribal staff at various levels, policy for Tribal leaders and attorneys, managing subsidies/reporting for Tribal accountants, business development for Tribal planners and IT departments, etc.

The recommendations cited by the NNCTF in "Improving and Increasing Broadband Deployment of Tribal Land" provide expert Tribal feedback on many FCC matters. Several of the recommendations hinge on tribal collaboration and engagement to resolve or prevent issues with carriers that impinge on a tribe's ability to adequately self-govern or to deploy their own communication services. FCC responsive to implement the following recommendations acknowledge and affirm the Tribal effort to work with Commission to improve outcomes on Tribal lands.

Recommendations: Spectrum

"Spectrum auctions are costly and, as discussed above, access to a Line of Credit is extremely difficult for Tribes because a Tribe cannot collateralize federal assets. Tribes want access to spectrum over their lands, but simply cannot compete with commercial carriers in spectrum auctions. Consistent with our recommendations about broader use of Tribal Priorities, we recommend use of Tribal Priority windows in future spectrum allocation decisions."

"Partitioning licensed service areas through secondary markets could also provide an opportunity for Tribes to gain access to spectrum. Commission encouragement of negotiations between spectrum license holders and Tribes would also be highly beneficial. Tribes also have difficulty gaining information on who owns spectrum licenses, which presents an obvious barrier to even beginning discussions. A process needs to be established for federal oversight of spectrum disaggregation and partitioning discussions or negotiations for subleasing. There also should be a fair leasing option when spectrum holders are not interested in building out but want to continue holding the license or other approaches such as build-or-divest."

"We also support establishment of Tribal Lands Bidding Credits for use where spectrum is auctioned to encourage wireless carriers to serve Tribal lands, and giving a credit to the bid amount during auctions as an incentive to build out of a wireless network to underserved or unserved Tribal lands. Going forward, we recommend that the Commission include in any Tribal Bidding Credits specific, enforceable requirements for the scale and timing of buildout on Tribal lands, including giving Tribal entities more say in these matters."

NNCTF Recommendations: Statutory Obstacles

ETC Status

- Section 214 of the Communications Act should be amended to open the role for designation of eligible telecommunications carrier (ETC) status to include Tribes to better reflect the sovereignty of the Tribe over Tribal lands. At the very least, the ETC designation process should include consultation with Tribal Nations regarding any plans to serve Tribal lands.

NNCTF Recommendations: Regulatory Barriers

Build-Out Requirements

- Regulatory build-out requirements should be modified so that Tribes are served earlier in the process rather than at the end of the build-out period and build out to Tribal lands is required.
- The Commission should consider explicitly linking receipt of Tribal bidding credits in USF reverse auctions by providers serving Tribal lands to meeting deployment obligations on Those Tribal lands.

Bidding Credits

- Receipt of bidding credits in USF reverse auctions by all providers serving Tribal lands should be explicitly linked to meeting deployment obligations on those Tribal lands.
- Going forward, we recommend that the Commission include in any Tribal Bidding Credits specific, enforceable requirements for the scale and timing of buildout on Tribal lands, including giving Tribal entities more say in these matters. Consistent with our earlier recommendation, we support equal treatment of future build-out requirements for those who have held spectrum for more than 10 years and have failed to build out.

Finally, the FCC can proactively address on-going, lingering, or non-action on issues that perpetuates notions of mistrust or neglect by carriers receiving FCC subsides without noticeable network upgrades or service improvements on Tribal lands. For instance, the FCC can strengthen the integrity of the annual ETC tribal meet-

ing obligation. Enforcement should not allow an ETC to send a form letter to a tribe or to send a 400-page retracted document that can only be fullyviewed by signing a non-disclosure agreement. A subsidy period could begin with a joint plan submitted by the Tribe and carrier that includes network buildout timeframes and benchmarks. The annual meeting can review and monitor the plan. As true partners, we can design better solutions together.

As a relative newcomer to FCC spectrum acquisition, I am grateful to have proven success and look forward to growing the number of Tribal deployments that utilize spectrum. I have also seen success broadband deployments on Tribal lands through FCC School and Libraries E-rate programs. I believe that these are opportunities for Tribes and that despite regulatory complexities forge ahead. Thank you for your attention to this important topic and I hope that the dialogue continues and the partnerships continue to grow.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JON TESTER TO BELINDA NELSON

Question. Consultation with Tribes is critical to improving our processes, and ultimately ensuring they are driving the bus on this issue. This empowers tribes to engage in solutions that work best for their communities. How has the FCC consulted with Tribes and how is their feedback incorporated into improving spectrum availability on Tribal lands? What are ways you think this relationship can be improved and more collaborative?

Answer.

The Federal Communications Commission's Current Consultation with Tribes

Native American tribes know their ancestral lands like the back of their hands. Tribes have great affinity for certain areas that hold sacredness in their history. Sacredness to tribes is loosely based on or defined as "where something happened". If modern America could define a piece of land as sacred, it might be the land where the Twin Towers stood in New York City, or it could be the hallowed ground where the plane crashed in Pennsylvania during the Sept. 11th attack on America. Emotions are tied to these sites. For tribes, these sites are held in reverence and are not removed from their memories over any period of time. In the lives of Native Americans, events that made an area sacred, remain very much alive today.

In practical terms, Native American tribes know the issues pertaining to their respective tribes. They know their geographical landscape and their economic conditions. They know what health issues afflict them, they know the social ills affecting their citizens and they know what methods they used to overcome their challenges and what successes they had.

The consultation of the Federal Communications Commission, (FCC) consists of outreach by the Office of Native Affairs and Policy, (ONAP), to tribes on a regional basis. Information is presented on various policies and programs, i.e., Lifeline, E-Rate, and Rural Healthcare. Telecom 101 classes are usually part of the information shared at the outreach. The format of the outreach is usually a monologue and not a dialogue.

During the Accelerated Wireless Broadband Deployment NPRM, Chairman Pai visited a minimal number of tribes and sought feedback on the subject. During this consultation, tribes informed him of their concerns of deployment over their respective lands, concern of trespass of sacred sites, the lack of carriers for providing information on deployment projects and the general lack of consultation by the FCC on policy for tribal lands. The format of these meetings appeared to be more in line with the true meaning of consultation. A dialogue was established and information was exchanged, however it is unknown how this was documented and incorporated into policy for the betterment of tribes.

Establishing a Collaborative and Structured Process

The FCC has oversight of the policies over tribal lands and a more structured process should be in place. In the case, where tribes were "consulted" by the FCC during the subject of accelerating wireless broadband deployment over tribal lands, if an oversight structure was in place, perhaps the broadband deployment would have been successful. Carriers would have met their deployment objective and more importantly, tribes may have obtained access to wireless broadband.

Currently, meaningful consultation does not appear to be the practice of the FCC. Merely going through the motion to meet with tribes has not served the FCC as the agency with regulatory oversight nor has it served the tribes with meeting their

needs for broadband deployment. A meaningful dialogue with tribes is necessary to establish a business relationship. This can be accomplished by utilizing ONAP. Establishing a separate budget for ONAP will enable them to work with carriers and tribes and coordinate with the Bureaus of the Federal Communications Commission. ONAP can be mandated to produce annual reports on their work with tribes on various issues. The report can be derived from documentation of meetings with carriers and tribes, based on a structured process.

My points are that tribes know firsthand of their respective issues facing their citizens. Currently, there does not seem to be a dialogue between the FCC and tribes. If there were a structured consultation policy in place, that tribes' input could be put to productive use, (within policies).

