GAO REPORTS RELATING TO BROADBAND INTERNET AVAILABILITY ON TRIBAL LANDS

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WEDNESDAY, OCTOBER 3, 2018

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

The Committee met, pursuant to notice, at 2:51 p.m. in room 628, Dirksen Senate Office 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 call this oversight hearing to order. We do have a vote at 3:30, and what we will plan to do is just kind of work through that. So we will keep going, or at least at this point we plan to keep going until we're completed, and then we will just hand off the gavel so that we can continue the hearing.

Today we will examine two of the three reports from the U.S. Government Accountability Office that address broadband internet and other telecommunications access issues on tribal lands. All three GAO reports are in response to a July 2016 letter from Senators Barrasso, McCain, Daines, Schatz, Tester, Cantwell, Heitkamp and Heinrich.

The first report, released September 7th, 2018, is entitled Broadband Internet: FCC's Data Overstates Access on Tribal Lands. Among other recommendations in this report, the GAO recommended the FCC improve data collection methods to more accurately measure broadband access on tribal lands.

The second report, released on September 28th, 2018, is entitled Tribal Broadband: Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address Any Funding Barriers Tribes Face. In this report, GAO recommends that the Rural Utilities Services, RUS, within the U.S. Department of Agriculture, identify and address regulatory barriers that impede tribal entities from obtaining Rural Utilities Service funding for broadband deployment.

The third report, not addressed today, will involve research and information regarding the acquisition of spectrum by Indian tribes. I look forward to its release.

As the Committee is aware, access to broadband communications furthers economic development, educational opportunities and public health and safety. Unfortunately, broadband access is lower on tribal lands than in any other part of the United States. According

to the Federal Communications Commission, as of December 2016, 35.4 percent of tribal residents lacked access to fixed broadband services, compared to 7.7 percent for the rest of the U.S. population. We must work to ensure that tribes have equal access to high-speed internet and other advanced telecommunications infrastructure. We look forward to exploring ways in which Congress may help close the digital divide between Indian Country and the rest of the Nation.

With that, I want to welcome our witnesses. Thank you for being with us this afternoon and for your willingness to testify. With that, I will turn to Vice Chairman Udall for his opening comments.

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

Senator UDALL. Thank you, Chairman Hoeven, for calling this hearing today on the very important topic of the digital divide in Indian Country. I want to thank all the witnesses for being here and introduce two of them that are on the panel today.

Described by many as the cyber warrior, Geoff Blackwell was the first tribal member to work at the Federal Communications Commission. He now works with Indian tribes across the Country to secure Federal funding for broadband projects.

I am also pleased to welcome Mr. Godfrey Enjady, from Mescalero Apache. He will also testify before the Senate Commerce Committee tomorrow about tribal broadband. Godfrey's tireless work ethic is on display here in the Senate, and is exactly why we have been so successful in tackling the digital divide back home in New Mexico.

Back home, that digital divide is something tribal communities know all too well. Eighty percent of those living on tribal lands in New Mexico do not have access to broadband. Just think about that for a moment. Four out of five people without broadband access, without access to a tool that is now a basic necessity for school, for health care, for economic development and for public safety.

The findings of the Government Accountability Office are troubling. They suggest that the chasm between those with internet and those without may actually be even larger than previously reported. Without good, reliable and verifiable data, the FCC and the Rural Utilities Service are just flying blind. Bad data makes for bad decisions and there are tens of billions of Federal dollars at stake for tribal communities.

I am concerned that much of this bad data results from a failure to include Indian tribes in the process. I have said it before and I will say it again, tribal consultation is not just a check the box exercise. Tribal consultation is about government-to-government relationships, but consultation is also about good governance. Robust consultation where the FCC doesn't just show up and listen, but actually learns from tribes, will make for better data, better decisions and better outcomes for everyone.

For example, in New Mexico, the Pueblo of Pojoaque, Santa Clara Pueblo, Tesuque Pueblo and Ohkay Owingeh joined together to form REDINet, a community-owned broadband network. With Federal grant funds, they were able to deploy 136 miles of fiber optic cables. That means that folks in the area can now connect in

life-changing ways, from telemedicine to distance learning. It also means first responders have the necessary communications equipment, a potentially life-saving difference. Despite the progress in some parts of Indian Country, GAO reports that the FCC and the RUS must do far more to get funding to tribes for shovel-ready projects.

We now have four reports from the GAO on this topic, and another on the way. That is going to be five reports in a little over ten years. During that time, the FCC and the RUS sent to Indian tribes only 0.7 percent of their total Federal funds available. You heard those numbers right: a little less than $241 million of $34.6 billion made available.

While these GAO reports are extremely helpful, I urge my colleagues not to fall prey to paralysis by analysis. We know there is a digital divide. Whether it is 80 percent of the tribal population or 40 percent of the population left without broadband access, it is wholly unacceptable in this day and age when the internet is an absolute necessity.

Now is the time to do something. I hope this hearing serves as a call to action and an opportunity to find out about what we can actually do today to start taking steps to close this divide.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Daines.

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

Senator DAINES. Mr. Chairman, thank you.

High-speed internet is essential to any economy or community looking to succeed in the 21st century. I spent 12 years in the technology sector in Montana. I clearly see how technology removes geography as a constraint.

Unfortunately, the GAO reports we are looking at today, which, as the Chairman referenced, a bi-partisan group of my colleagues and I, asked for detailed significant barriers to tribes' access to broadband and the need for the Federal Government to work with tribes more closely to change that reality. One report finds that the Federal Communications Commission continues to lack accurate data on broadband availability on tribal lands, which we know has been a longstanding challenge.

To tribes' detriment, and as the report notes, the FCC's overstatements of access limit the agency and tribes' ability to target broadband funding to undeserved areas. So not only are tribal lands some of the most in need of better access to high-speed internet service, it's like adding insult to injury here, but the Federal Government's lack of accurate data about availability further impedes broadband deployment on tribal lands. This just becomes a self-perpetuating cycle.

Lack of broadband service also hinders economic growth. It has the potential to create safety hazards. Anybody who lives out in Montana and other rural areas knows this. You get out your phone, you need to make an emergency, like a 911 call, and you can't get a signal. Especially for tribes in the far reaches of our State, where many of them currently live. For example, during last year's crip-

pling snowstorms, it was difficult at times to get in contact with tribal elders at Fort Belknap who were snowed in.

Broadband is also essential to other key aspects of civic life on and off Indian lands, including health care, education, two other areas where tribes need support, rather than continued obstacles. I know the FCC has been working on improving this arena, as Mr. Webre is going to discuss in his testimony. I thank the agency for some of its recent steps that are heading in the right direction.

I would urge the FCC to continue its efforts to work more closely with tribes. If they want to be heard, sit down at the table, have back and forth conversations, so that we more accurately reflect broadband availability in tribal lands, especially in Montana. And more practically, to work more closely with tribes to support broadband deployment where it is needed most.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Cantwell?

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

Senator CANTWELL. Thank you, Mr. Chairman. I too want to thank you for holding the hearing, and the fact that our colleagues sent this letter requesting these reports are so important to us. I know we are going to hear from our witnesses that the GAO report includes that tribal land in its coverages, inaccurate and incomplete, and that we need to do more about the affordability of services.

We have had our own experience being successful at actually delivering broadband to Neah Bay to the Makah Tribe, and working together in partnership with various resources to do that. The fact that we were able to partner with existing resources I think shows the fact that a lot of coordination is needed if we are going to pull off access in some of these areas.

So the fact that the report on broadband land reports locations where providers could potentially provide service but aren't, I think we need to get this data and information to understand the difference between those. And that the GAO criticizes the FCC for not having a process to obtain formal, specific input, as my colleague from New Mexico mentioned, is also important.

These are government-to-government relations. And we need to honor them. It is one of the reasons I will be drafting a broadband bill on Indian Country, specifically updating the Communications Act to clarify that the FCC's mandate to promote universal service in the advanced communications across the Nation includes tribal lands. It will also include other provisions.

Thank you, Mr. Chairman, for this hearing today.

The CHAIRMAN. Thank you, Senator Cantwell.

Are there any other opening statements? All right, hearing none, we will proceed with our witnesses.

First, we have Mr. Mark Goldstein, Director, the Government Accountability Office, Washington, D.C., then we will hear from Mr. Patrick Webre, who is the Chief of Consumer and Governmental Affairs Bureau, Federal Communications Commission. Then Mr. Godfrey Enjady, President, National Tribal Telecommunications Association, Mescalero, New Mexico, and then Mr. Geoffrey

Blackwell, Chief Strategy Officer and General Counsel, Amerind Risk, Santa Ana Pueblo, New Mexico.

I want to remind witnesses that your full written testimony will be made part of the official hearing record, so if you will please keep your opening statements to five minutes so that we have time for questions. We will start with you, Mr. Goldstein.

STATEMENT OF MARK GOLDSTEIN, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. GOLDSTEIN. Mr. Chairman, and members of the Committee, good afternoon and thank you for the opportunity to discuss GAO's recent work on issues related to tribal telecommunications.

In September, 2018, GAO issued two reports examining challenges regarding broadband access on tribal lands. GAO examined broadband data mapping issues as well as partnerships and Federal funding issues. My testimony today is based on our issued reports.

GAO's findings are as follows: The FCC collects data on broadband availability from providers. But these data do not accurately capture broadband access on tribal lands. Specifically, FCC collects data on broadband availability. These data capture where providers may have broadband infrastructure. However, FCC considers broadband to be available for an entire census block if the provider could serve at least one location in the census block. This leads to over-statements of service for specific locations like tribal lands.

FCC, tribal stakeholders and providers have noted that this approach leads to overstatements of broadband availability. Because FCC uses these data to measure broadband access, it also over-states broadband access, the ability to obtain service on tribal lands.

Additionally, FCC does not collect information on several factors such as affordability, quality and denials of service that FCC and tribal stakeholders stated can affect the extent to which Americans living on tribal lands can access broadband services. Overstatements of access limit efforts to target broadband funding and some tribal officials stated that inaccurate data have affected their ability to plan broadband networks, and obtain funding to address broadband gaps.

Third, FCC does not have a formal process to obtain tribal input on the accuracy of broadband data. About half of the tribal stakeholders GAO interviewed raised concerns that FCC relies solely on data from providers, and most stated that FCC should work with tribes to improve the data accuracy.

GAO identified some partnership arrangements between tribes and other entities to increase broadband access on tribal lands. Among the seven examples GAO identified, tribes partnered with different types of entities, including private broadband providers, a community access network provider, an electric cooperative, a regional consortium, and tribally-owned broadband providers. Almost all the partnerships improved broadband service on tribal lands.

FCC and the Rural Utilities Service are the primary sources of Federal funding to deploy broadband infrastructure where the cost

of providing service is high, including on tribal lands. GAO reviewed funding for four programs, three in FCC and one grant program in RUS, and found that in total less than 1 percent has gone directly to tribes or tribally-owned broadband providers. GAO found that only 14 tribal entities received Federal funding from FCC and RUS to increase broadband deployment from 2010 to 2017.

Finally, GAO noted several barriers that the tribes face in obtaining Federal funding for broadband. Tribes face regulatory barriers in applying for RUS grant funding, including preparing existing proposed network designs, demonstrating financial sustainability of the broadband project within five years, and obtaining matching funds. Although RUS conducts some outreach with tribes, it has not undertaken a formal assessment to identify and address the regulatory barriers that tribes may face in obtaining funds for broadband.

GAO made several recommendations to the FCC regarding broadband data mapping and a recommendation to RUS regarding challenges that tribes face in obtaining Federal funds to support broadband for unserved areas.

Mr. Chairman, this completes my oral statement. I am happy to respond to questions from the Committee. Thank you.

[The prepared statement of Mr. Goldstein follows:]

PREPARED STATEMENT OF MARK GOLDSTEIN, DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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

I am pleased to be here today to discuss our September 2018 reports on the Federal Communications Commission's (FCC) data regarding broadband access on tribal lands [1] and barriers tribes face in obtaining federal funding for broadband deployment. [2] Broadband infrastructure is critical for economic development, educational and job opportunities, and public health and safety. [3] However, residents of tribal lands continue to have lower levels of broadband access than other Americans. [4]

Policy-makers have noted the need for accurate information in order to target funding to areas lacking broadband access, and FCC has identified the need to work with tribes to ensure such information is accurate for tribal lands. Currently, the primary source of information regarding where broadband is and is not available is the FCC, which collects this information from broadband providers. FCC collects this data by requiring that fixed and mobile broadband providers report on their broadband deployment by filing a form twice a year (Form 477). FCC uses data from this form to determine which areas qualify for broadband funding.

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[1] GAO, *Broadband Internet: FCC's Data Overstate Access on Tribal Lands*, GAO–18–630 (Washington D.C.: Sept. 7, 2018).

[2] GAO, *Tribal Broadband: Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address Any Funding Barriers Tribes Face*, GAO–18–682 (Washington D.C.: Sept. 28, 2018). GAO also has ongoing work related to spectrum use on tribal lands for this Committee, which will be issued later in 2018.

[3] Broadband service may be "fixed"—that is, providing service to a single location, such as a customer's home—or "mobile," that is, providing service wherever a customer has access to a mobile wireless network, including while on the move, through a mobile device, such as a smartphone.

[4] For the purposes of this testimony, we use the definition of "tribal lands" from FCC's 2018 Broadband Deployment Report. That report uses the following definition of tribal lands: (1) Joint Use Areas; (2) legal federally recognized American Indian area consisting of reservation and associated off-reservation trust land; (3) legal federally recognized American Indian area consisting of reservation only; (4) legal federally recognized American Indian area consisting of off-reservation trust land only; (5) Statistical American Indian area defined for a federally recognized tribe that does not have reservation or off-reservation trust land, specifically a Tribal Designated Statistical Area (TDSA) or Oklahoma Tribal Statistical Area (OTSA); (6) Alaskan Native village statistical area; and (7) Hawaiian Home Lands established by the Hawaiian Homes Commission Act of 1921. See 33 FCC Rcd 1660 (2018).

One barrier to increasing access to broadband on tribal lands is the cost to providers of deploying infrastructure to tribal lands located in rugged, sparsely populated areas. In an attempt to address this and other issues, the federal government administers a number of programs to subsidize broadband deployment in areas in which the return on investment has not attracted private investment. For example, FCC administers the Connect America Fund-a Universal Service Fund program-which provides subsidies to fixed and mobile providers of telecommunications and broadband services in rural, insular, and other remote areas where the cost of providing service is high. To be eligible to receive subsidies under the Connect America Fund, a provider must be designated an eligible telecommunications carrier. In addition, the Rural Utilities Service (RUS) has a current program and had a prior program and the National Telecommunications and Information Administration (NTIA) had a prior program that provided funding to improve broadband service in unserved or underserved areas.[5] The RUS and NTIA prior programs were authorized by the American Recovery and Reinvestment Act of 2009 (Recovery Act) to expand high-speed Internet service in unserved areas, and there is no current funding for these programs.[6]

My statement today discusses: (1) the extent to which FCC's approach to collecting broadband availability data accurately captures the ability of Americans living on tribal lands to access broadband Internet services; (2) the extent to which FCC obtains tribal input on the data; (3) examples of partnership arrangements that tribal entities have used to increase broadband deployment on tribal lands; and (4) barriers that tribal entities face in obtaining federal funding for broadband deployment. This statement is based on two reports that we issued in September 2018.[7] To perform the work for our report on FCC's broadband data, we analyzed FCC's broadband availability data for tribal lands as well as FCC's processes for collecting and using those data. We interviewed FCC officials as well as a non-generalizable sample of tribal and industry stakeholders and reviewed relevant FCC rulemaking proceedings.[8] To perform the work for our report on tribal partnerships and barriers to federal funding, we reviewed program documentation from FCC, RUS, and NTIA. We also interviewed FCC, RUS, and NTIA officials and a non-generalizable sample of representatives from tribal governments, tribally owned broadband providers, and tribal associations. More detailed information about our scope and methodology can be found in our reports.

The work upon which this testimony is based was conducted in accordance with generally accepted government auditing standards.

FCC's Data Overstate Broadband Access on Tribal Lands

In our September 2018 report on broadband access on tribal lands, we found that FCC collects broadband availability data from broadband providers, but its method for collecting the data does not accurately or completely capture broadband access—the ability to obtain service—on tribal lands.[9] Specifically, FCC directs fixed broadband providers to submit a list of census blocks where service is available on their Form 477 filings. In the Form 477 instructions, FCC defines "available"[10] as whether the provider does—or could, within a typical service interval or without an extraordinary commitment of resources—provide service to at least one end-user premises in a census block.[11] Thus, in its annual reports and maps of fixed broadband service, FCC considers an entire block to be served if a provider reports that it does, or could offer, service to at least one household in the census block. As shown in figure 1, FCC's definition of availability leads to overstatements of fixed broadband availability on tribal lands by: (1) counting an entire census block as served if only one location has broadband, and (2) allowing providers to report

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[5] Other federal programs can also be used to fund broadband deployment, including additional RUS programs. A list of funding resources is available at: *https://broadbandusa.ntia.doc.gov/funding-list.*

[6] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111–5, 123 Stat. 115, 118–119 (2009).

[7] GAO–18–630 and GAO–18–682.

[8] These interviews included representatives from 25 tribal governments or tribally owned providers, including visits to 9 tribal lands, and 10 organizations that include tribal entities or work with tribes on broadband issues.

[9] GAO–18–630

[10] We use the term broadband availability to refer to broadband deployment. FCC officials noted that the data collected by the Form 477 reflect broadband deployment. We use the term broadband availability because FCC's Form 477 instructs fixed broadband providers to report fixed broadband deployment by submitting a list of census blocks in which the filer makes broadband connections available.

[11] A "typical service interval" refers to the amount of time between when a customer requests service, and when a provider is able to begin providing service.

availability in blocks where they do not have any infrastructure connecting homes to their networks if the providers determine they could offer service to at least one household. FCC has noted that overstatements of availability can be particularly problematic in rural areas, where census blocks cover larger areas.

Figure 1: Overstatement of Broadband Availability in FCC's Form 477 Data

FCC reports broadband availability because at least one house has service

FCC reports broadband availability because provider reports it could extend service
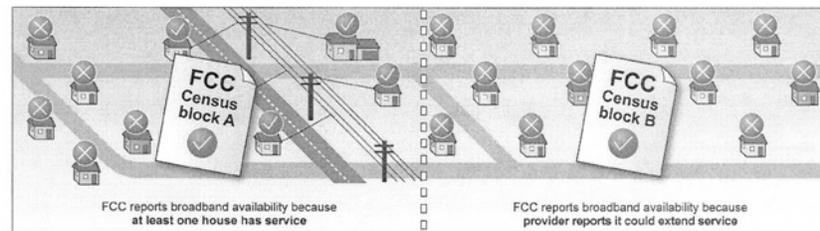
Source: GAO analysis of Federal Communications Commission (FCC) documents. | GAO-19-134T

According to FCC officials, FCC requires providers to report fixed broadband availability where they could provide service to: (1) ensure that it captures instances in which a provider has a network nearby but has not installed the last connection to the homes, and (2) identify where service is connected to homes, but homes have not subscribed. FCC officials also told us that FCC measures availability at the census block level because sub-census block data may be costly to collect. However, FCC acknowledged that by requiring a provider to report where it could provide service, it is not possible to tell whether the provider would be unable or unwilling to take on additional subscribers in a census block it lists as served.[12] In addition, when reporting on broadband access in tribal lands,[13] FCC uses the broadband availability data described above, and does not collect information on factors that FCC and tribal stakeholders have stated can affect broadband access.[14] These factors include affordability, service quality, and service denials.

By developing and implementing methods for collecting and reporting accurate and complete data on broadband access specific to tribal lands, FCC would be better able to target federal broadband funding to tribal areas that need it the most. We recommended FCC develop and implement methods for collecting and reporting accurate and complete data on broadband access specific to tribal lands. FCC agreed with this recommendation and stated that it is exploring methods to collect more granular broadband deployment data.

FCC Does Not Have a Formal Process to Obtain Tribal Input on its Broadband Data

As we reported in September 2018, FCC does not have a formal process to obtain input from tribes on the accuracy of the data and tribal stakeholders can face difficulties obtaining information from providers.[15] FCC's 2010 *National Broadband Plan* noted the need for the federal government to improve the quality of data regarding broadband on tribal lands and recommended that FCC work with tribes to ensure that any information collected is accurate and useful.[16] Although the Plan also noted that tribal representatives should have the opportunity to review mapping data and offer supplemental data or corrections, FCC lacks a formal process to obtain tribal input on its broadband data. FCC officials told us that they address questions and concerns regarding providers' coverage claims submitted to FCC's Office of Native Affairs and Policy. However, about half of the tribal representatives we spoke to stated that they were not aware of the Form 477 data or corresponding

[12] *Modernizing the FCC Form 477 Data Program*, Further Notice of Proposed Rulemaking, 32 FCC Rcd 6329 (2017).
[13] *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 2018 Broadband Deployment Report, 33 FCC Rcd 1660 (2018).
[14] FCC officials we interviewed stated that FCC has not defined the term "broadband access," and noted that the use of the term may vary across FCC documents. However, FCC and tribal stakeholders have noted that broadband access can be affected by factors such as the affordability and quality of the broadband services being offered and the extent to which providers deny service to those who request it. For example, see 2016 Broadband Progress Report 31 FCC Rcd 699 §62 (2016); FCC, National Broadband Plan; FCC, Strategic Plan 2018–2022. FCC officials also identified the cost of deployment and regulatory barriers as important factors when determining whether an area has access to broadband.
[15] GAO–18–630.
[16] FCC, *Connecting America: The National Broadband Plan* (Mar. 16, 2010).

maps, or raised concerns about a lack of outreach from FCC to inform tribes about the data. Most of the tribal stakeholders we interviewed told us that FCC should work more directly with tribes to obtain information from them to improve the accuracy of FCC's broadband deployment data for tribal lands. These stakeholders identified several ways in which FCC could work with tribes on this issue, including on-site visits, increased outreach and technical training, and opportunities for tribes to collect their own data or submit feedback regarding the accuracy of FCC's data.

FCC's *National Broadband Plan* also noted the importance of supporting tribal efforts to build technical expertise with respect to broadband issues. A few of the stakeholders we interviewed noted that tribes have faced difficulties when they attempt to challenge FCC's broadband availability data. For example, in 2013, all of the tribal entities that challenged FCC's data on mobile service availability were unsuccessful in increasing the number of eligible areas. A few tribal stakeholders provided varying reasons for this, one of which was the need for more technical expertise to help the tribes meet FCC's requirements regarding the information needed to support a challenge. Because FCC lacks a formal process to obtain tribal input on its broadband data, FCC is missing an important source of information regarding areas in which the data may overstate broadband service on tribal lands.

By establishing a process to obtain input from tribal governments on the accuracy of provider-submitted broadband data as recommended in the *National Broadband Plan*, FCC could help tribes develop and share locally-specific information on broadband access and improve FCC's data for tribal lands. However, the success of such an effort may rely on the tribes' knowledge of, and technical ability to participate in, the process. Thus, we recommended FCC develop a formal process to obtain tribal input on the accuracy of provider-submitted broadband data that includes outreach and technical assistance to help tribes participate in the process. FCC agreed with this recommendation and stated that it will work with stakeholders to explore options for implementing such a process.

Finally, some tribes face challenges accessing data from providers. In 2011, FCC required that providers receiving funds to serve tribal lands meaningfully engage with the tribes and discuss broadband deployment planning.[17] In 2012, FCC issued guidance on meeting this requirement and stated that the guidance would evolve over time based on the feedback of both tribal governments and broadband providers.[18] However, FCC has taken limited steps to obtain such feedback and has not updated the guidance. About half of the tribal stakeholders we interviewed raised concerns about difficulties accessing information from providers regarding broadband deployment on their tribe's lands (which providers may consider proprietary), and some providers told us that they attempt to engage with tribes, but the level of responsiveness they receive from tribes varies. Thus, we recommended, and FCC agreed, that FCC obtain feedback from tribal stakeholders and providers to determine whether it needs to clarify its tribal engagement guidance.

Few Tribal Broadband Partnerships Exist

In our September 2018 report on tribal partnerships, we found that partnership arrangements between tribes and other entities to increase broadband deployment on tribal lands are not widespread.[19] Because of the greater costs associated with deploying broadband on unserved tribal lands that are generally rural, with possibly rugged terrain, there may be little to no private sector incentive to deploy broadband or enter into a partnership arrangement to do so. The partnership examples we identified were ones that obtained federal funding under past programs funded by the Recovery Act. Among these examples, tribes partnered with several different types of entities, including private providers, a community access network provider, an electric cooperative, a regional consortium, and tribally owned providers.

Tribes Face Barriers to Obtain Federal Funding for Broadband Deployment

We also reported in September 2018 that FCC and RUS are the primary sources of federal funding to deploy broadband infrastructure in rural and remote areas where the cost of providing service is high, including tribal lands.[20] Based on our

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[17] *In the Matter of Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011).

[18] *Office of Native Affairs and Policy, Wireless Telecommunications Bureau, and Wireline Competition Bureau Issue Further Guidance on Tribal Government Engagement Obligation Provisions of the Connect America Fund*, Public Notice, 27 FCC Rcd 8176 (2012).

[19] GAO–18–682.

[20] GAO–18–682.

review of the funding provided by four federal programs targeted to increase deployment in unserved areas, very little has gone directly to tribes or to tribally owned broadband providers. Specifically, we found that from 2010 to 2017, less than 1 percent of FCC funding and about 14 percent of RUS funding went directly to tribes and tribally owned providers. Combined, FCC and RUS funding totaled $34.6 billion during that time period and tribes and tribally owned providers received $235 million, or about 0.7 percent.

FCC's 2010 *National Broadband Plan* stated that tribes needed substantially greater financial support than was available to them at the time and that accelerating tribal broadband deployment would require increased funding. Furthermore, the National Congress of American Indians expressed concerns that the needs for federally funded broadband projects are greater on tribal lands but tribes do not receive the appropriate share of federal funding aimed at increasing broadband deployment.[21] Several of the tribes we visited told us they were trying to deploy broadband infrastructure or offer service because the private providers were not building out on their lands.

Through our analysis, we found that from 2010 to 2017, 14 tribal entities received federal funding from FCC and RUS to increase broadband deployment (see fig. 2).

Figure 2: Percentage of Tribal Entities and Non-Tribal Broadband Providers Receiving Funds from Ongoing FCC and RUS Programs to Increase Broadband Deployment, 2010-2017
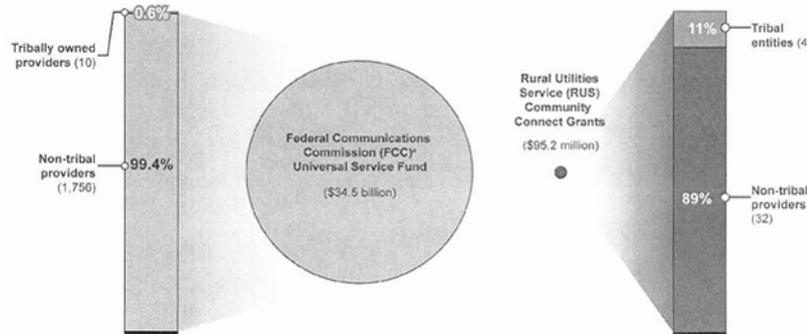
Sources: GAO analysis of FCC and RUS data | GAO-19-134T

*FCC funding includes the Mobility Fund Phase I, Tribal Mobility Fund Phase I, and Connect America Fund.

The tribal officials, tribal associations, and tribally owned broadband providers we interviewed cited several barriers that tribes may face when seeking federal funding for broadband deployment. The two primary barriers these interviewees cited were (1) the statutory requirement for the eligible telecommunications carrier (ETC) designation and (2) grant application requirements. Regarding the statutory requirement for ETC designation, FCC officials told us there were 11 tribes that have providers designated as ETCs and therefore would be eligible to receive support from FCC's Connect America Fund (CAF)—the largest source of federal funding for broadband deployment in unserved and underserved areas. Although FCC adopted rules in 2011 to create CAF and modernize the program so that it could support broadband capable networks, FCC officials told us that most ETCs are the telephone companies that were in existence when the Telecommunications Act of 1996 was enacted into law.[22] According to FCC officials, FCC has explored whether it has authority to allow non-ETC providers to receive CAF support payments but determined that the statute is clear that only ETCs can receive program support. Between 2012 and 2017, FCC officials said FCC received nine ETC applications, four of which were from tribally owned providers. Of those four, only one tribally owned provider was designated as an ETC.

According to representatives from a tribal association we contacted, FCC has provided ETCs with billions of dollars to deploy service to unserved areas, but FCC's efforts have not always been successful in the hardest to reach areas, particularly

[21] According to its website, the National Congress of American Indians is the oldest, largest, and most representative American Indian and Alaska Native organization serving the broad interests of tribal governments and communities.
[22] Telecommunications Act of 1996, Pub. L. No. 104–104, § 706, 110 Stat. 56, 153 (1996).

tribal lands. The representatives stated that FCC's competitive market approach does not work where competition cannot be supported and that there needs to be a different approach. Similarly, tribal officials from Idaho told us that although the provider in their area has received millions of dollars in CAF subsidies, it has not deployed broadband on the tribal lands. Other tribal officials from Idaho told us that although private providers received CAF subsidies to deploy broadband service to their reservation, the private providers told the tribe it would be years before they offer service on tribal lands.

Additionally, the tribal officials, tribal associations, and tribally owned broadband providers we interviewed said tribes may face barriers completing federal grant applications to obtain funding for broadband deployment. For example, they said tribes face regulatory barriers in applying for RUS's grant funding, including preparing existing and proposed network design, demonstrating financial sustainability of the broadband project within 5 years, and obtaining matching funds.

The *National Broadband Plan* recommended that federal agencies facilitate tribal access to broadband funding opportunities. Furthermore, recognizing the need to reduce barriers to expand broadband deployment, the Broadband Opportunity Council, established in March 2015, issued a memorandum stating that federal agencies should use all available and appropriate authorities to identify and address regulatory barriers that may unduly impede either broadband deployment or the infrastructure to augment broadband deployment.[23] However, according to RUS officials, RUS has not taken steps to identify or address the barriers tribes face when applying for RUS grant funding due to limited resources and multiple competing priorities for those resources. We recommended that RUS identify any regulatory barriers that may unduly impede efforts by tribes to obtain RUS grant funds for broadband deployment on tribal lands and implement any steps necessary to address the identified barriers. By doing so, RUS could help tribes obtain funding to expand broadband deployment on tribal lands. RUS neither agreed nor disagreed with this recommendation.

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

The CHAIRMAN. Thank you, Mr. Goldstein. Now we will hear from Mr. Webre.

STATEMENT OF PATRICK WEBRE, CHIEF, CONSUMER AND GOVERNMENT AFFAIRS BUREAU, FEDERAL COMMUNICATIONS COMMISSION

Mr. WEBRE. Thank you, Mr. Chairman.

Chairman Hoeven, Vice Chairman Udall, and members of the Committee, thank you for the opportunity to testify today. I am Patrick Webre, Chief of the FCC's Consumer and Governmental Affairs Bureau, or CGB. CGB oversees the FCC's rulemaking efforts regarding consumer policy issues, including disability rights, and administers the FCC's consumer information, education and outreach programs.

CGB also directs the FCC's collaborative partnerships with an outreach to State, local and tribal governments and organizations.

In 2010, the Commission established the Office of Native Affairs and Policy, ONAP, within CGB, to develop and implement policies for assisting Native communities and to ensure that Native concerns and voices are considered in all relevant Commission proceedings and initiatives. ONAP was also created to address the troubling and persistent digital divide keeping residents on tribal lands from accessing the benefits of broadband.

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[23] The Broadband Opportunity Council was tasked with producing specific recommendations to increase broadband deployment, competition, and adoption through executive actions within the scope of agency programs, mission, and budgets.

Establishment of ONAP within CGB has promoted administrative efficiencies, management oversight and synergies within the Bureau's intergovernmental responsibilities, while providing a home for dedicated Commission staff with specialized experience to serve as official Commission liaisons for ongoing consultation, engagement and outreach to American Indian, Alaska Native village, Hawaiian Homelands and other Native communities.

Most importantly, the creation of ONAP has fostered Commission dialogue and robust engagement with tribes, tribal governments and inter-tribal organizations. It has furthered the Commission's trust relationship with tribal nations and demonstrated its ongoing commitment to its 2000 tribal policy statement.

In 2018 alone, ONAP has facilitated over 90 forms of tribal outreach and engagement. Bringing the benefits of broadband to all Americans, and closing the digital divide, is the Commission's top priority. The digital divide is all too real, especially in Indian Country, with more than 35 percent of tribal residents lacking any access to fixed broadband.

That is why the Commission has taking several recent steps to promote USF high-cost support to these areas most in need, so that they can enjoy the same benefits as Americans with broadband connectivity. The Commission has long recognized the vexing challenges associated with deploying broadband infrastructure and providing services on tribal lands, and believes that accurate, comprehensive data are vital to the Commission's efforts to bridge the digital divide. That is why the Commission has primarily relied on Form 477 data for a limited purpose: identifying the too-many census blocks where no internet service provider has deployed fixed broadband infrastructure, and thus the areas that unambiguously need Federal funding through the Connect American Fund to get broadband.

The Commission is committed to helping those residents on tribal lands. Efforts are underway to ensure that we collect the best possible broadband data so that we can target support where it is needed most. First and foremost, to unserved areas, and next, to partially served areas. Chief among these is a rulemaking opened last year to explore ways to collect more granular data through Form 477 without unnecessarily burdening those deploying broadband on tribal lands who often have few resources to spare.

The agency sought comment on many complex issues associate with revising its methodology. Staff are actively analyzing the various options for providing a more precise picture of broadband deployment on tribal lands. Relatedly, the Commission has also been charged by the Consolidated Appropriations Act of 2018 to conduct an assessment and report on the availability of broadband services in Indian Country. The Commission is further directed to conduct a rulemaking to address the unserved areas identified in the report. We have begun work on that effort and will work with tribal officials and stakeholders to develop a clear picture of broadband deployment on tribal lands and address unserved areas.

The Commission also believes that tribal input on the accuracy of provider-submitted data is important. The Commission has a formal challenge process in place, for example, regarding the Mobility Fund Two option that allows tribes to challenge the results of the

initial data collection. While we also have informal processes in place, we agree, more can be done to obtain tribal feedback.

To this end, earlier this year, the Commission announced the renewal of the Native Nations Communications Task Force, comprised of elected or appointed leaders from federally-recognized tribal governments and senior Commission staff. The Commission is currently selecting tribal members and hopes to announce the membership in its first meeting shortly.

Among other things, the task force would provide the Commission guidance on identifying barriers to broadband deployment unique to tribal lands. We also plan to task the task force to recommend a process for obtaining tribal input on provider-submitted broadband data, as well as assisting the Commission in gathering tribal feedback on the effectiveness of the Commission's tribal engagement guidance.

Thank you again for this opportunity to testify, and I look forward to your questions.

[The prepared statement of Mr. Webre follows:]

PREPARED STATEMENT OF PATRICK WEBRE, CHIEF, CONSUMER AND GOVERNMENT AFFAIRS BUREAU, FEDERAL COMMUNICATIONS COMMISSION

Chairman Hoeven, Vice Chairman Udall, and Members of the Committee, thank you for the opportunity to testify today about the recently released GAO report on the Federal Communication Commission's (FCC's) collection and reporting of broadband data for Tribal lands. I'm Patrick Webre, Chief of the FCC's Consumer and Governmental Affairs Bureau (CGB).

Before addressing the report, I'd like to provide the Committee with a brief background on CGB and its work on Tribal matters. CGB oversees the FCC's rulemaking efforts regarding consumer policy issues, including disability rights, and administers the FCC's consumer information, education, and outreach programs to enhance the public's understanding of telecommunications matters and compliance with the FCC's regulatory requirements. CGB also directs the FCC's collaborative partnerships with and outreach to state, local, and Tribal governments and organizations. CGB further manages the agency's consumer complaints, inquiry processes, and call center operations.

In 2010, the Commission established the Office of Native Affairs and Policy (ONAP) within CGB. In so doing, the Commission stated its expectation that ONAP would bring "the benefits of a modern communications infrastructure to all Native communities by, among other things, ensuring robust government-to-government consultation with Federally-recognized Tribal governments and other Native organizations; working with Commissioners, Bureaus, and Offices, as well as with other governmental agencies and private organizations, to develop and implement policies for assisting Native communities; and ensuring that Native concerns and voices are considered in all relevant Commission proceedings and initiatives." [1]

Establishment of ONAP within CGB has promoted administrative efficiencies, management oversight, and synergies with the Bureau's intergovernmental responsibilities, while providing 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, the creation of ONAP has fostered Commission dialogue and engagement with Tribes, Tribal governments, and inter-Tribal organizations, furthered the Commission's trust relationship with Tribal Nations, and demonstrated its ongoing commitment to its 2000 *Tribal Policy Statement*. [2] In 2018 alone, ONAP has already facilitated over 90 forms of Tribal outreach and engagement.

Also this year, the FCC announced the renewal of the Native Nations Communications Task Force. The Task Force will be comprised of elected or appointed lead-

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[1] *Establishment of the Office of Native Affairs and Policy in the Consumer and Governmental Affairs Bureau*, Order, 25 FCC Rcd 11104 (2010).
[2] *Establishing a Government-to-Government Relationship with Indian Tribes*, Policy Statement, 16 FCC Rcd 4078 (2000).

ers from federally recognized Tribal governments and senior Commission staff. It is intended to provide the Commission guidance on such matters as identifying barriers to broadband deployment unique to Tribal lands and ensuring that Tribal concerns are considered in all Commission proceedings related to broadband and other Commission undertakings that affect Tribal interests.[3] The Commission is currently selecting Tribal members and hopes to announce its membership and first meeting in the near future.

GAO Reports and FCC Response. The GAO released two reports on Tribal broadband last month. The first report, titled FCC's *Data Overstate Access on Tribal Lands*, examined the FCC's approach to collecting broadband availability data and obtaining Tribal input on the accuracy of that data for Tribal lands. This report, to which the FCC responded, contains three recommendations for the Commission, which I will address in this testimony. The GAO released a second report late last week entitled *Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address Any Funding Barriers Tribes Face*. That report examined the use of partnership arrangements between Tribal entities and other entities and contains a recommendation for the Rural Utilities Service. The second report has no recommendations for the Commission.

Bringing the benefits of broadband to all Americans is the Commission's top priority. But that is not an easy task in many parts of this country, particularly Tribal lands. The Commission has long recognized the particular challenges associated with deploying broadband infrastructure and providing services on Tribal lands, and agrees with GAO that accurate, comprehensive data are vital to the Commission's efforts to bridge the digital divide, including on Tribal lands. The digital divide is all too real, especially in Indian Country. That is why the Commission has primarily relied on Form 477 data for a limited purpose—identifying the too-many census blocks where "no" Internet service provider has deployed fixed broadband infrastructure, and thus the areas that unambiguously need federal funding through the Connect America Fund to get broadband. This divide is especially stark on Tribal lands, as GAO recognizes, with more than 35 percent of Tribal residents lacking "any" access to fixed broadband.

The Commission already has efforts underway to ensure that we collect the best possible data and is working to address each of the three recommendations advanced by the GAO.

Methods to Collect and Report Data on Broadband Access to Specific Tribal Lands. GAO's first recommendation is that the FCC Chairman "develop and implement methods—such as targeted data collection—for collecting and reporting accurate and complete data on broadband access to specific tribal lands." The Commission agrees with the importance of having access to quality data and has efforts underway to enhance its understanding of unserved Tribal areas through better data. More granular data will be needed in the future. As our policies help deliver broadband to wholly unserved blocks, it will be more important to understand availability in partially served blocks.

For this reason, the Commission last year opened a rulemaking on this issue[4] and remains dedicated to moving forward with this proceeding, including exploring ways to collect more granular data without unnecessarily burdening those who are deploying on Tribal lands and often have few resources to spare. In that proceeding, the Commission sought comment on a wide variety of issues related to making the Form 477 collection as efficient and effective as possible. Recognizing the potential benefits of increasing the granularity of deployment data the Commission collects, the agency sought public input on many issues associated with revising its methodology. The Commission is currently analyzing the potential efficiencies, usefulness, and burdens associated with various options. If an appropriate method for such a collection can be identified, this may address many of the concerns GAO raises in its report by providing the Commission with a more precise picture of broadband deployment on Tribal lands.

Also relevant to GAO's first recommendation is the requirement in the *Consolidated Appropriations Act of 2018* that the Commission conduct an assessment regarding the availability of broadband services in Indian Country and report on the results by March 23, 2019.[5] Based on the results of that assessment, the legislation directs the Commission to conduct a rulemaking proceeding to address the unserved

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[3] 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).

[4] *Modernizing the FCC Form 477 Data Program*; Further Notice of Proposed Rulemaking; WC Docket 11–10 (2017).

[5] Consolidated Appropriations Act, 2018, H.R. 1625, 115th Cong., Division P, RAY BAUM'S Act, § 508 (2018).

areas identified in the report. We have begun work on that effort and will work with Tribal officials and stakeholders to develop a clear picture of broadband deployment on Tribal lands and address unserved areas.

Process to Obtain Tribal Input on Provider-Submitted Broadband Data. The report's second recommendation is that the Chairman of the FCC "develop a process to obtain tribal input on the accuracy of provider-submitted broadband data that includes outreach and technical assistance to help tribes participate in the process." The Commission agrees that Tribal input on the accuracy of provider-submitted broadband data is important. Indeed, the FCC currently has in place a number of informal means by which Tribal officials and stakeholders can raise any concerns. For example, Tribal officials can, and do, raise concerns and questions about the data to the Commission's ONAP, which shares them with the relevant agency bureaus.

In addition, the Commission has given Tribes a direct role in evaluating and challenging providers' claims of service coverage in the ongoing Mobility Fund Phase II (MF–II) proceeding. ONAP and the Commission's Rural Broadband Auctions Task Force have cooperated on a number of initiatives to make Tribal leaders and others aware of the challenge process for the Mobility Fund II auction eligible areas and the importance of participating in that process. These efforts have included sending information in emails to the leaders and IT managers of all 573 federally recognized Tribes; conducting outreach, including conference calls and webinars open to all Tribes; formal presentations at multiple inter-Tribal conferences around the country; and a session at a July 31 Tribal workshop conducted at the Lac du Flambeau Reservation in Wisconsin that was open to all Tribes.

The Commission agrees that, in addition to these mechanisms, implementing a formal process for continuing Tribal engagement could have significant value in helping the FCC understand both the extent of, and the specific issues that drive or hinder, broadband deployment on Tribal lands. We plan on tasking the Native Nations Communications Task Force with recommending a process on this very issue. Our efforts to improve Tribal engagement will include doing even more to help Tribes participate in existing processes, through technical and other outreach, as well as looking for additional avenues and methods for receiving Tribal input on deployment issues.

Feedback from Tribal Officials and Providers on Providers' Tribal Engagement Requirements. Finally, the report recommends that the FCC Chairman "obtain feedback from tribal stakeholders and providers on the effectiveness of the FCC's 2012 statement to providers on how to fulfill their tribal engagement requirements to determine whether the Commission needs to clarify its tribal engagement statement." We agree that seeking additional feedback on the overall effectiveness of the 2012 Tribal Engagement Further Guidance Public Notice is desirable.

We note that ONAP solicits and receives feedback from Tribes on whether and how providers are fulfilling the requirements of the rule, the effectiveness of the Commission's guidance, and any problems encountered in the engagement process. ONAP regularly includes presentations on the Tribal engagement obligation at its Tribal workshops, which it conducts at different locations around the country throughout the year. Additionally, ONAP solicits and receives feedback on the engagement requirements from Tribes and other participants at inter-Tribal conferences and similar events. As a result of feedback concerning the availability of compliance reporting, the Commission has made changes to its filing requirements, and Tribal Nations will soon be able to obtain providers' reports on their Tribal engagement efforts directly through a Universal Service Administrative Company online portal. We will continue to seek additional informal and formal feedback from Tribal officials, as well as feedback from providers, regarding the effectiveness of the guidance provided by the Commission thus far on how providers may fulfill their Tribal engagement requirements. We also plan on asking the Native Nations Communications Task Force to assist the Commission in gathering Tribal feedback.

In addition to these efforts, the Commission has been taking other important actions to help bring broadband to Tribal lands. In August, the Commission concluded the Connect America Phase II auction to allocate support for fixed broadband deployment to certain eligible rural areas across the United States. Our preliminary review shows that about 80,000 winning locations are in Tribal areas. In addition, we are currently planning for the Tribal Mobility Fund II auction, in which a portion of the Mobility Fund Phase II auction's $4.5 billion budget will be dedicated to funding mobile coverage in Tribal lands. And earlier this year, in recognition of the unique challenges carriers on Tribal lands face, the Commission raised the limits on operational expenditures for carriers serving these areas. It is also my understanding that staff is considering a petition for reconsideration from Mescalero

Apache Telecom, Inc. related to this action which, if granted, would bring even more support to Tribal areas.

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, Mr. Webre. Mr. Enjady?

STATEMENT OF GODFREY ENJADY, PRESIDENT, NATIONAL TRIBAL TELECOMMUNICATIONS ASSOCIATION

Mr. ENJADY. Thank you, Chairman Hoeven and Ranking Member Udall, and members of the Committee. Thank you very much for this opportunity to testify to you today.

I am Godfrey Enjady, General Manager of the Mescalero Apache Telecom, Incorporated, MATI, located in Mescalero, New Mexico. Today I testify as the President of the National Tribal Telecommunications Association, NTTA, which is comprised of nine tribally-owned and operated telecommunications companies that provide voice, broadband and other communications services to their communities.

Members of NTTA represent only a small portion of the 573 tribes recognized by the Federal Government today. While areas served by NTTA members may have better broadband access than much of Indian Country, we agree with the study's conclusion that a vast majority of the tribal areas are lacking in or overstating broadband coverage.

NTTA members provide services in what is considered rural and high-cost. This situation causes the average cost permit to substantially exceed the national average.

NTTA members have a high percentage of its consumer base that qualifies for a life-long program, a very important element in affordability and adoption of broadband services. We support the adoption of an enhanced Lifeline credit for Native communities.

The difficulties in serving remote, dispersed communities situated in hard to serve, tough terrain areas has been thoroughly highlighted in Congressional testimony and on the record at the FCC and RUS. They are also highlighted in the recent GAO study that we are discussing today.

The GAO study acknowledges many of the barriers to access to broadband services on tribal lands. The main source of information regarding broadband availability is the National Broadband Map. As the GAO points out, this data has not been updated since 2015.

NTTA members, as providers of broadband and telecom services to their communities, report access information to the FCC by filing a form 477. We do this twice a year. The form 477 filings are the FCC's main tool for evaluating broadband coverage and performance throughout the United States, by using census blocks for fixed broadband providers and shapefiles for mobile providers. On one level, as a snapshot, it provides very useful information. However, all parties interested in robust broadband access need more granular and detailed information. The reliance on census block data is inadequate.

I must emphasize a point made in the GAO study: the collection of more granular data or information will require more resources. Whether it be the FCC, the NTIA, or the RUS, more funding and

personnel will be needed. Congress has recently acknowledged this by providing NTIA with some additional funding for maps. As you know, tribes are in need of a lot of that.

NTTA members also know that the need for more detailed data-gathering and analysis will fall on us to provide these services. This is something that is needed desperately by tribes. I have first-hand experience that this takes many staff hours and stretches our funding even further.

My company is currently working through the FCC process to dig deeper into the data that the form 477 provides for purposes of gathering and getting information and funding relief regarding operational expenses. The FCC's Chairman Ajit Pai has questioned the wisdom of operational expense caps, and I encourage him and the rest of the Commission to continue to work with us to get a positive outcome in this current matter.

The GAO study mentions two areas of data the FCC does not collect: affordability and quality of service. These are two very important aspects to the take rate of broadband service, especially in remote tribal communities. In many instances, the price of broadband access for many consumers is simply out of reach. Broadband accessibility is not a luxury, it is a necessity in today's modern world. Low quality of service, experienced in many tribal communities, leads to frustration and less take rate by consumers. Outages, slow speed and high latency results in inefficiency and low productivity. This form of data collection must be addressed.

The GAO study looks into the lack of engagement between tribal communities and the broadband providers that serve them. NTTA's tribally-owned and operated communications providers are a part of their Native community. However, we do not see the need to improvement engagement between tribal entities, Federal, State and local governments and private business on many far-ranging issues. NTTA agrees with the study's three recommendations: more targeted data collection, a formal process to obtain tribal input, and better engagement by all involved entities.

In reference to the just-released GAO study regarding partnerships that states that, from 2010 to 2017, less than 1 percent of FCC funding and about 14 percent of RUS funding went directly to tribes and tribally-owned providers. Thank you, Senator Udall, for stating that earlier in his opening statement. This illustrates the need for funds that are targeted for use on tribal lands.

More work needs to be done by all parties interested in this issue. We all share the worthy goal that consumers, no matter where they live or work, need accessible, robust and affordable broadband services to prosper and thrive in the modern and ever-evolving world economy.

Thank you, sir, and I will be available for questions.

[The prepared statement of Mr. Enjady follows:]

PREPARED STATEMENT OF GODFREY ENJADY, PRESIDENT, NATIONAL TRIBAL TELECOMMUNICATIONS ASSOCIATION

Chairman Hoeven, Ranking Member Udall and members of the Committee, thank you for this opportunity to testify today. I am Godfrey Enjady, General Manager of Mescalero Apache Telecom, Inc. (MATI) located in Mescalero, New Mexico. Today I testify as President of the National Tribal Telecommunications Association (NTTA), which is comprised of the nine Tribally-owned and operated telecommuni-

cations companies that provide voice, broadband and other communications services to their communities. Those companies are Cheyenne River Sioux Telephone Authority, Fort Mojave Telecommunications, Inc., Gila River Telecommunications, Inc., Hopi Telecommunications, Inc., Mescalero Apache Telecom, Inc., Saddleback Communications, San Carlos Apache Telecommunications Utility, Inc., Tohono O'odham Utility Authority, and Warm Springs Telecom. The Nez Perce Tribe and Sacred Wind Communications are associate members.

Members of NTTA represent only a small portion of the 573 Tribes recognized by the federal government. While areas served by NTTA members may have better broadband access than much of Indian Country, we agree with this study's conclusion that a vast majority of Tribal areas are lacking in or overstating broadband coverage.

Mescalero Apache Telecom serves the entirety of the Mescalero Apache Reservation located in the remote South Central Mountains of New Mexico. Prior to MATI purchasing its service area and building its network in 2001, 52 percent of the Mescalero Apache Tribe received no service, and 48 percent received only basic voice service. MATI provides services in what is considered a rural, high-cost area and serves an average population density of two customers per square mile. This situation causes the average cost per loop to substantially exceed the national average. MATI, like all NTTA members, has a high percentage of its consumer base that qualifies for the Lifeline program, a very important element in the affordability and adoption of broadband service. We support the adoption of an enhanced Lifeline credit for Native communities.

I want thank members of this committee for your leadership on this issue. I also want to thank the staff at GAO for their knowledge and professionalism. I, along with other NTTA members, participated in interviews with GAO. We appreciate their work.

The difficulties in serving remote, dispersed communities situated in hard to serve, rough terrain has been thoroughly illuminated in Congressional testimony and on the record at the Federal Communications Commission (FCC), and with USDA's Rural Utilities Service (RUS). They are also highlighted in the recent GAO study that we are discussing today (GAO–18–630).

The September 2018 GAO study acknowledges many of the barriers to access to broadband services on Tribal lands that are primarily located in rugged, sparsely populated areas. The main source of information regarding broadband availability is the National Broadband Map. As the GAO points out, this data has not been updated since 2015.

NTTA members, as providers of broadband and telecommunications services to their communities, report access information to the Federal Communications Commission (FCC) by filing a Form 477. We do this twice a year. The Form 477 filings are the FCC's main tool for evaluating broadband coverage and performance throughout the United States by using census blocks for fixed broadband providers and shapefiles for mobile providers. On one level, as a snapshot, it provides very useful information. However, all parties interested in robust broadband access need more granular and detailed information to decide policy issues, subsidization and investment levels, and the use of various technologies.

I must emphasize a point made in the GAO study—the collection of more granular information will require more resources. Whether it be the Federal Communications Commission, the National Telecommunications and Information Administration (NTIA) or the USDA's Rural Utilities Service, more funding and personnel will be needed. Congress has recently acknowledged this by providing NTIA with some additional funds for mapping. NTTA members also know that the need for more detailed data gathering and analysis will fall on us to provide. I have firsthand experience that this takes many staff hours and stretches our funding even further. In response to an Order released by the Commission earlier this year, my company is currently working through the FCC process to dig deeper into the data than the Form 477 provides for the purpose of getting funding relief regarding operational expenses (which are currently capped). FCC Chairman Ajit Pai has questioned the wisdom of the operational expense caps and I encourage him and the rest of the Commission to continue to work with us to get a positive outcome in this current matter.

The GAO study mentions two areas of data the FCC does not collect, affordability and quality of service. These are two very important aspects to the take rate of broadband service, especially in remote Tribal communities. In many instances, the price for broadband access for many consumers is simply out of reach. Broadband accessibility is not a luxury; it is a necessity in today's modern world. Low quality of service, experienced in many Tribal communities, leads to frustration and less

take rate by consumers. Outages, slow speeds and high latency results in inefficiency and lower productivity. This form of data collection must be addressed.

The FCC is considering proposals to modify the Form 477 data collection. NTTA encourages the Commission to work quickly to formulate a final rule.

The GAO study looks into the lack of engagement between Tribal communities and the broadband providers that serve them. That is not a problem in the communities served by NTTA members. NTTA's Tribally-owned and operated communications providers are a part of their Native community. However, we do see the need to improve engagement between Tribal entities, federal, state and local governments, and private businesses on many far ranging issues (rights-of-way, easements, pole and tower siting, etc.).

NTTA agrees with the study's three recommendations: more targeted data collection, a formal process to obtain Tribal input (including outreach and technical assistance), and better engagement by all involved entities.

In reference to the just released GAO study (GAO–18–682) regarding partnerships, NTTA wants to stress the information on page 16 of the document—"Specifically, from 2010 to 2017, we found that less than 1 percent of FCC funding and about 14 percent of RUS funding went directly to tribes and tribally owned providers. Combined, FCC and RUS funding totaled $34.6 billion during that time period and tribes and tribally owned providers received $235 million, or about 0.7 percent." This illustrates the need for funds that are targeted for use on Tribal lands.

More work needs to be done by all parties interested in this issue. We all share the worthy goal that consumers, no matter where they live or work, need accessible, robust and affordable broadband services to prosper and thrive in the modern and ever evolving world economy.

Once again, thank you for the opportunity to appear before you today.

The CHAIRMAN. Thank you. Mr. Blackwell.

STATEMENT OF GEOFFREY C. BLACKWELL, CHIEF STRATEGY OFFICER/GENERAL COUNSEL, AMERIND RISK MANAGEMENT CORPORATION

Mr. BLACKWELL. Chairman Hoeven, Vice Chairman Udall and members of the Committee, [greeting in Native tongue], and thank you for the opportunity to testify today about the recently-released GAO reports.

As you know, I testified before this Committee twice, as the first chief of the FCC's Office of Native Affairs and Policy. Having returned to work in Indian Country, it is my honor to appear again today in the spirit of the trust relationship.

AMERIND is located on the Pueblo of Santa Ana, and it is a 32-year old tribally-owned and federally-chartered Section 17 corporation. AMERIND is one of the few multi-tribal financial institutions. We support economic opportunity across Indian Country by protecting tribal housing, tribal governments, businesses, and work forces. We even provide cyber security protection.

With the vision of tribes protecting tribes, AMERIND protects almost $14 billion in tribal properties. We serve hundreds of tribes, and we know Indian Country. Because we know a vast majority of Indian Country lacks broadband, almost three years ago our board of directors created AMERIND Critical Infrastructure, our division that provides strategic planning for tribal broadband deployment, subsidy grant and loan application management, and regulatory compliance.

In the context of these GAO studies, I am here today with thoughts on three topics: tribal broadband data, tribal government engagement and broadband partnerships. First, the data. Developing data-driven solutions has long been the mantra of government to solve the digital divide. With this in mind and in the con-

text of these GAO reports, the FCC's most recent numbers are alarming in how they overstate the levels of broadband on tribal lands. The accuracy of the data is questionable and does not reflect reality.

Furthermore, the manner in which deployment is measured is not based on actual deployment, but on potential deployment, which is meaningless if it cannot be achieved. And broadband deployment on tribal lands is affected by additional factors not currently taken into account, such as affordability.

I have been fortunate to set foot in over 200 Indian reservations, many Alaska Native villages and many Hawaiian Homesteads. My experience tells me that the data is not the reality. While there have been incremental and important improvements, we still have much work to do.

Polices and rules should not be created in a vacuum, but must be rooted in the real world experience and analysis. Indian Country stands ready to work with the FCC to determine a process that will collect and clarify the data, and create a reliable path forward for mapping legislative and regulatory solutions.

Second, tribal government engagement. The best approach to developing comprehensive broadband solutions is to work together to remove barriers and build models with tribal nations that engage their core community and anchor institutions. Data will paint a picture, but the parties need to genuinely discuss what is happening on the ground.

It was upon this foundation that the FCC adopted a tribal government engagement obligation in 2011. However, it has not met its intended potential. Tribal leaders relay that the data that carriers provide is often heavily redacted or comes with the unforeseen requirement of a non-disclosure agreement. As a result, tribes do not have the opportunity afforded them in the rules to review data about their own lands before it is used to make decisions regarding Federal funding and policy priorities.

Several years of data and experience is now available, and Indian Country is ready to work with the FCC to evaluate compliance and develop best practices. This will require a deep commitment to substantive consultation with tribal nations. The FCC's Office of Native Affairs and Policy is the vehicle designed to drive this effort to bring the parties together, evaluate challenges and needs, and help develop regulatory solutions.

Third, broadband partnerships in Indian Country. Regulatory solutions that have seen success in the past two decades have necessarily created more recalcitrant streams of the digital divide, where those regulations have not driven deployment. The thesis here is simple: put more of those precious dollars where they are truly needed, and make them more effective. We should stop doing things that are antithetical.

Many tribal nations recognize that they may be the only ones willing to take on the debt to bring partnerships and robust broadband to their communities. There are few but important examples of tribally-provided networks, including tribal telcos, wireless networks and the two tribally-owned fiber networks in New Mexico that provide hope, a foundation and potential models upon which to build.

In conclusion, the pervasive lack of broadband access prevents residents of tribal lands from accessing information and services critical in the 21st century. The FCC is obligated to open the door for every citizen to become part of the digital future of our Country, and to ensure that tribal nations enjoy a secure and enduring place in that future. Tribal nations need digital equity, and want to work together as trust partners to make broadband deployment a reality. Because however precious Federal funds are targeted, rules are developed and definitions are created, they must be rooted in the reality of Indian Country.

Mvto, thank you, and I look forward to whatever questions you may have.

[The prepared statement of Mr. Blackwell follows:]

PREPARED STATEMENT OF GEOFFREY C. BLACKWELL, CHIEF STRATEGY OFFICER/ GENERAL COUNSEL, AMERIND RISK MANAGEMENT CORPORATION

Chairman Hoeven, Vice Chairman Udall, and Members of the Committee, thank you for the opportunity to testify today about the recently released GAO reports on the state of broadband on Tribal lands.

As you know, I testified before this Committee twice during my tenure as the founding Chief of the Federal Communications Commission's (FCC) Office of Native Affairs and Policy. Having returned to work in Indian Country, it is my pleasure to appear before you again today. I am here again in the spirit of the unique trust relationship that Tribal Nations share with the United States federal government, and again from the Tribal side of that important relationship.

I work as the Chief Strategy Officer and General Counsel of AMERIND Risk Management Corporation ("AMERIND Risk"). AMERIND Risk, located on the Pueblo of Santa Ana, is a federally chartered and Tribally-owned corporation, organized and incorporated by the United States Department of Interior under Section 17 of the Indian Reorganization Act, 25 U.S.C. § 5124, as amended, and has certain powers, privileges, and immunities granted by that statute.

AMERIND was created in 1986 to address the housing crisis and the inability of Tribal Nations to secure insurance for their housing on the open market. Today, AMERIND Risk does business across seven business lines, with hundreds of Tribes and Tribal businesses, in 38 states. AMERIND Risk generates and supports economic development across Indian Country by offering insurance products for Tribal housing, Tribal governments and businesses, and Tribal workers compensation, for example, and living up to its motto of *Tribes Protecting Tribes*.

AMERIND Risk now protects almost $14 billion in Tribal physical infrastructures—homes, headquarters buildings, and other structures. A vast majority of these structures are on the wrong side of the digital divide. So, almost three years ago, in an effort both to diversify business and to "give back" to Indian Country, the AMERIND Risk Board of Directors created AMERIND Critical Infrastructure ("ACI"). With ACI's motto of *Tribes Bringing Tribes Broadband*, this groundbreaking division provides a wide range of services across Indian Country, including strategic planning for sovereign Tribal broadband deployment; broadband subsidy, grant, and loan application management; regulatory management and compliance; and social impact funding.

AMERIND Risk is also making investments in Indian Country. In 2018, our Board of Directors made a multi-million dollar loan to the First Nations Oweesta Corporation ("Oweesta") for Tribal projects. The Board's investment will allow Oweesta to leverage larger amounts of lending capital for Native Community Development Financial Institutions, or CDFIs. Our intention with this investment is to see it magnified many times to fund housing and all manners of infrastructure in Indian Country.

I also serve as Chairman of the Board of Directors of Native Public Media; Co-Chair of the National Congress of American Indians' (NCAI) Economic, Finance and Community Development Committee; Co-Chair of NCAI's Telecommunications and Technology Subcommittee; and Vice Chairman of the Board of Directors of Arizona State University's American Indian Policy Institute.

While there has been incremental improvement in recent years, residents of Tribal lands continue to disproportionately lack access to broadband. Beginning in 2015, the FCC defined a benchmark speed of 25 Mbps downstream/3 Mbps upstream (25/

3) as necessary to support the "advanced telecommunications capability" that Congress identified in Section 706 of the Telecommunications Act of 1996. Yet, according to the Commission's 2018 *Broadband Deployment Report*,[1] released in February, Tribal lands continue to be left far behind from receiving these advanced services envisioned by Congress. For example, 36 percent of residents on Tribal lands lack access to fixed broadband service at the benchmark speed of 25/3, as compared to 7 percent nationwide. And the disparity grows even more striking on Tribal lands in rural areas, where 59 percent of residents lack access to what has become the high-speed Internet lifeblood of our 21st century economy, educational opportunities, health care, and public safety.

A more detailed breakdown of the FCC's most recent data on the state of broadband access in different regions of Indian Country is provided below.

Deployment (Ten Thousands) on Tribal Lands with Access to Fixed Terrestrial 25 Mbps/3 Mbps Services and Mobile LTE with a Speed of 5 Mbps/1 Mbps

	2012 Pop. and %	2013 Pop. and %	2014 Pop. and %	2015 Pop. and %	2016 Pop. and %
All Tribal Lands	111.653—28.8%	138.505—35.5%	221.177—56.2%	225.788—57.0%	254.954—63.9%
Rural Areas	14.228—7.2	28.306—14.1	59.658—29.5	61.377—30.1	84.452—40.9
Urban Areas	97.425—51.5	110.198—57.9	161.519—84.5	164.412—85.6	170.502—88.5
Alaskan Villages	0.022—0.1%	7.126—28.2%	11.329—44.4%	11.027—42.7%	13.483—51.5%
Rural Areas	0.013—0.1	2.113—13.1	4.214—25.8	3.920—23.7	6.096—36.2
Urban Areas	0.010—0.1	5.013—54.9	7.115—77.4	7.107—76.7	7.387—79.0
Hawaiian Home-lands	2.850—89.8%	2.924—90.6%	3.169—96.9%	2.955—88.9%	2.961—88.6%
Rural Areas	0.250—50.9	0.235—45.0	0.455—83.0	0.246—43.9	0.250—43.5
Urban Areas	2.600—96.9	2.688—99.4	2.715—99.8	2.709—98.0	2.711—98.0
Lower 48 States	21.111—19.9%	32.069—30.0%	41.861—38.8%	45.187—41.5%	49.278—44.6%
Rural Areas	5.680—8.1	13.364—18.9	18.512—25.8	20.668—28.4	23.360—31.6
Urban Areas	15.432—43.0	18.705—51.9	23.349—64.8	24.519—67.8	25.918—71.2
Tribal Statistical Areas	87.669—34.6%	96.386—37.8%	164.818—64.2%	166.619—64.5%	189.232—73.0%
Rural Areas	8.285—7.4	12.594—11.2	36.477—32.1	36.542—32.0	54.746—47.6
Urban Areas	79.384—56.1	83.793—58.8	128.341—89.7	130.077—90.3	134.486—93.3
Pop. Evaluated	387.603—100%	390.508—100%	393.310—100%	396.401—100%	399.114—100%

Source: 2018 Broadband Deployment Report, Table 5

While these numbers are alarming, taking into account the most recent GAO study on the matter, they grossly overstate the levels of broadband access on Tribal lands. The accuracy and reliability of the data itself is questionable. The FCC Form 477 data, from which these statistics were generated, is carrier-reported data that receives some review by the FCC and no review by Tribal governments. Moreover, the manner in which deployment is measured is not necessarily based on actual deployment but, in many instances, on potential deployment. That potential is meaningless if it cannot be achieved, and the achievement of broadband deployment on Tribal lands is importantly related to additional factors not currently taken into account. This current approach results in a skewed and overstated depiction of broadband deployment in Indian Country.

And these statistics paint only part of the picture—behind them lurks a stark reality. In my life and career, I have been fortunate to set foot on over 200 federal Indian reservations nationwide, on dozens of Alaska Native Villages, and on Hawai'ian Homesteads throughout the Hawai'ian Islands—and my experiences are that the data simply does not reflect the reality. A potential service offering to as little

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[1] *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 17-199, 2018 Broadband Deployment Report, 33 FCC Rcd 1660 (2018) (2018 Broadband Deployment Report).

as one household within a census block or tract does not equate to deployment, and therefore does not reflect the reality of the digital divide in Indian Country. Plain and simple. The data must be improved and Tribal Nations are more than willing to help.

Tribal lands continue to suffer from the historical negative impacts of how, when, and where they were created. Aspects of this history resulted in an endemic lack of critical infrastructures, which persists today. In fact, almost no critical infrastructure has come to Tribal lands without federal investment, oversight, and regulation. Broadband opportunities can do much to overcome this negative history by bringing health care, education, jobs, and the opportunities of hope to Indian Country. But broadband must be available, accessible, and affordable to meet its promise.

It was in the context of the persistent disparity in communications services on Tribal lands that GAO initiated a series of engagements on the persistent challenges facing broadband deployment across Indian Country. The first GAO report, entitled "Broadband Internet: FCC's Data Overstate Access on Tribal Lands," was released on September 7, 2018, and examines issues associated with carrier-provided data measuring broadband access on Tribal lands and its impact on broadband deployment across Indian Country. The second GAO report, entitled "Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address and Funding Barriers Tribes Face," was released on September 28th and examines the use of partnership arrangements between Tribal entities—Tribal governments and telecommunications providers owned by Tribes—and other entities, and their impact on broadband funding and deployment across Indian Country.

Broadband Deployment Data on Tribal Lands

Again, the current FCC data on broadband availability on Tribal lands does not reflect the reality of Indian Country. While there has been incremental improvement in broadband access in Indian Country, we still have much to do. Indian Country stands ready to help all those that will be involved in a process that will collect and clarify the data, and create a reliable path forward for mapping legislative, regulatory, and on the ground projects. Data driven solutions have been the mantra of governments—federal, state, and Tribal—throughout the enduring lifespan of the digital divide.

This is as true today as it was in 2011, when this Committee articulated this same concern and when I had the privilege of testifying before you in my previous role as Chief of the FCC's Office of Native Affairs and Policy. I relayed at that time that a major concern of Tribal leaders involved the accurate measurement of the actual state of broadband availability on Tribal lands—specifically, the depth and accuracy of the data on the state of services on their lands. I described the 2011 Native American Summit in Salt Lake City, during which my staff and I witnessed representatives of the Goshute Confederated Tribes explain to the Utah broadband mapping manager that the gross overestimation of wireless broadband coverage on the Goshute Reservation actually precluded the Tribe from applying for federal grants and loans for a Tribal project that would address their lack of services.

And this was not an isolated incident, but rather stands as but one example of many about which I learned first-hand during my tenure at the FCC and continue to learn now that I have returned to work in Indian Country. This is a cycle that can—and must—be changed if the goal of universal broadband across Tribal lands is to be realized. Comprehensive Tribal-specific, quantifiable, accurate, and reliable data is the predicate upon which investment—be it federal, Tribal, state, or private—depends. And it is also the foundation upon which universal broadband deployment across Tribal lands will be realized.

How will this be accomplished? As this Committee understands so well, there is no "one size fits all" approach in Indian Country. Rather, "one size fits none" is a more accurate characterization, which is why data specific to individual Tribal lands is so very critical. And, as reflected in GAO's Tribal broadband data recommendations, this will require both a dedicated process to collect broadband data specific to Tribal lands and a dedicated process to substantively involve Tribal Nations in the review of carrier-reported data. These processes are two sides of the same coin and, in many ways, interrelated. That is, both processes share the same goal—the collection of comprehensive and accurate data reflecting the actual state of broadband on Tribal lands. They are also inherent in the FCC's trust relationship with Tribal Nations and are a critical component of the agency's *2000 Tribal Policy*

Statement.[2] And both processes will require substantive Tribal government involvement and the full support, cooperation, and partnership of the federal government.

This is not an easy task—but bridging the digital divide in Indian Country has certainly proven to be far from an easy task. Partnerships, policies, and rules are not created in a vacuum, but instead are rooted in real world experience and analysis. Indian Country stands ready to work in partnership with the FCC to determine the best approaches, the best vehicles, and the most culturally appropriate ways in which to collect this critical data.

And there is something important here to understand about the data, to ensure that it is meaningful. Data on the digital divide in Indian Country must take into account everything—every condition—that contributes to it. In addition to the census blocks that take into account remoteness or terrain, Indian Country data must also account for the factors that contribute to adoption, such as affordability and availability. The thesis here is simple—get more broadband deployment where it is needed. Make resources effective and available, so that broadband offerings are affordable and available. We all need to coordinate on things that comport with that thesis—and stop doing things that are antithetical.

I would like to share with you two examples of comprehensive quantitative and qualitative Tribal broadband studies produced in recent years. Both studies focused on deployment (accessibility) and adoption (uses) of broadband in Indian Country. The first study, released in 2009, is entitled "New Media, Technology and Internet Use: Qualitative and Quantitative Analyses" and was produced by Native Public Media and the New America Foundation.[3] It was the first study of its kind, and contained groundbreaking data on the state of broadband in Indian County. The second study, due to be released shortly, is entitled "Tribal Technology Assessment: The State of Internet Service on Tribal Lands" and is produced by the American Indian Policy Institute of Arizona State University.[4] This is an update on the 2009 study, and both studies are Tribal-centric and contain compelling data on the deployment and adoption of broadband in Tribal communities. Both studies confirm that quantifiable, accurate, and reliable Tribal-specific broadband data can be collected, compiled, and analyzed—in other words, it can be done. Improving Indian Country's broadband data can be done, and it must be done.

The FCC's Tribal Government Engagement Obligation

As I stated when I testified before this Committee in 2011, Tribal engagement is a critical component of broadband deployment. That concept is as true today as it was in 2011. The best approach to developing and coordinating well thought-out solutions is to work together to identify and remove barriers to solutions and build models with Tribal Nations that engage their core community or anchor institutions. As Tribes govern with a unique understanding of their communities, their vested and active involvement is critically important to finding lasting solutions in their communities. Tribal Nations need to be at the center of those solutions, whether it is through self-provisioning or through other new "Tribal-centric" methods of engagement and deployment with industry, public, or private partners. These models must respect the cultural values and sovereign priorities of Tribal Nations and be infused with the local knowledge that will lead to better opportunities for successful deployment in Tribal communities.

It was upon this foundation that the FCC adopted a Tribal government engagement obligation in 2011, as part of the reform of the universal service High-Cost program and the transition to the Connect America Fund (CAF).[5] The FCC agreed with commenters that engagement between Tribal governments and communications providers is vitally important to the successful deployment and provision of service on Tribal lands. The FCC therefore required, at a minimum, that eligible telecommunications carriers ("ETC") demonstrate on an annual basis that they have meaningfully engaged with Tribal governments in their universal service supported areas, and that such discussions must include, at a minimum:

[2] *See Establishing a Government-to-Government Relationship with Indian Tribes,* Policy Statement, 16 FCC Rcd 4078 (2000) (Tribal Policy Statement).
[3] TRACI L. MORRIS, NATIVE PUBLIC MEDIA, & SASCHA D. MEINRATH, NEW AMERICA FOUNDATION, NEW MEDIA, TECHNOLOGY AND INTERNET USE IN INDIAN COUNTRY (2009) (NPM/NAF New Media Study).
[4] TRACI MORRIS & BRIAN HOWARD, ARIZONA STATE UNIVERSITY, AMERICAN INDIAN POLICY INSTITUTE, TRIBAL TECHOLOGY ASSESSMENT: THE STATE OF INTERNET SERVICES ON TRIBAL LANDS (release pending) (Tribal Technology Assessment).
[5] *See Connect America Fund*, WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663,17868-69, para. 637 (2011) (USF/ICC Transformation Order), aff'd sub nom. In re: FCC 11-161, 753 F.3d 1015 (10th Cir. 2014).

- A needs assessment and deployment planning with a focus on Tribal community anchor institutions;
- Feasibility and sustainability planning;
- Marketing services in a culturally sensitive manner;
- Rights of way processes, land use permitting, facilities siting, and environmental and cultural preservation processes; and
- Compliance with Tribal business and licensing requirements.

In addition, also in the context of High-Cost/CAF reform, the FCC required ETCs to provide a wide range of data on telecommunications and broadband services and deployment to the FCC, state commissions, the Universal Service Administrative Company (USAC), and Tribal governments.

It is fair to say that the Tribal government engagement obligation has not lived up to its intended potential. While some providers have taken the obligation seriously, many more have viewed it as a "check the box" requirement for the receipt of millions of dollars in universal service funding. Both during and since my tenure at the FCC, Tribal leaders have relayed innumerable situations in which they simply receive a template letter once a year from their providers as their sole effort to comply with the Tribal government engagement obligation.

Perhaps even more disturbing, Tribal leaders have relayed that the data ETCs are required to provide to them annually more often than not is heavily redacted and, as a result, unintelligible. This is data about service on their own Tribal lands. In other instances, Tribal leaders are presented with non-disclosure agreements with the demand that they be signed if the Tribes want access to their own broadband data. There is no provision in the FCC's rules that allows these practices, yet they continue nonetheless. As a result, not only do Tribes not have the opportunity to substantively review data before it is used to make decisions with respect to federal funding and policy priorities, they are, in many instances, not even given the opportunity afforded them in the FCC's rules to review data about service on their own lands.

Now that several years' worth of data and experience is available, it is time to seriously evaluate compliance and develop best practices going forward. These processes will require substantive consultation with Tribal Nations pursuant to the FCC's trust relationship with Tribes. They will also require a deep commitment from all parties involved, including providers, Tribal Nations, inter-Tribal organizations, and the FCC—all with the shared goal of making broadband universally available across Indian Country.

Partnerships

Regulatory investment solutions that have seen incremental success in the past two decades have also created more recalcitrant strains of the digital divide in areas where those regulatory solutions have not driven deployment and adoption. Many Tribal Nations recognize the reality that they are part of the solution not only for achieving good data on broadband access, but also part of the solution in Tribally-driven projects that will bring connectivity to their communities. In an environment where few outside and non-Tribal entities are willing to make the investment and confront the potential debts of deploying on Tribal lands, Tribes themselves are confronting the challenges and opportunities of becoming their own providers—in whatever form that may take.

Tribal Nations are having to analyze the "ownership economics" of their own projects that would bring broadband to their own corners of Indian Country. Those who are willing to take on the challenge and face the debts as de facto providers of last resort need help. They need all of our help. It is high time that everyone involved in this challenge acknowledge this reality and the potential of Tribal projects developed by Tribal Nations.

AMERIND is located on the Pueblo of Santa Ana, in north central New Mexico about 30 miles from Albuquerque, the state's largest city. We only received broadband service within the last couple of years when a water project nearby brought fiber down the road adjacent to our building. This is an all too common occurrence on Tribal lands, and is exacerbated in the most remote parts of Indian Country. Often the incumbent's fiber is just across the road from Tribal lands—or is even running across Tribal lands—and yet the incumbent will not provide service to the Tribe.

This is the very situation facing many of the Tribes in New Mexico. Knowing that there was strength in numbers and that incumbents and other providers would never provide the level of service that the Tribes both wanted and needed, two separate consortia formed to leverage the federal E-rate program and finally bring broadband to Tribal schools and libraries on six Pueblos. With the expertise, guid-

ance, and advocacy of the ACI team, the two Tribal consortia secured almost $8 million in federal E-rate subsidy dollars to bring Tribally-owned fiber networks to their Pueblo communities.

Together, the Middle Rio Grande E-rate Consortium—comprised of the Santa Ana, San Felipe, Santo Domingo, and Cochiti Pueblos—and the Jemez-Zia E-rate Consortium—comprised of the Jemez and Zia Pueblos—built 60 miles of Tribally owned and controlled fiber at a 95 percent discount afforded by the E-rate program. These networks are now providing a dramatic increase in broadband speeds (from 3 Mbps to 100 Mbps and beyond) and an equally dramatic decrease in cost (from over $100 per megabit per month to less than $7 per megabit per month)—all for the benefit of Tribal schools and libraries. Both networks were "lit," or operational, in the summer of 2018.

These two first of their kind Tribal projects represent what can be done to bring broadband to communities in Indian Country through effective partnerships. Such efforts are few and far between now, but these partnerships provide hope, a foundation, and a potential model upon which to build.

In conclusion, the ubiquitous lack of access to broadband services over Tribal lands continues to create a divide preventing residents of Tribal lands from accessing information and services critical to our 21st century economy. Community-oriented and truly effective deployment of communications technologies within Indian Country, however, has the potential to level the negative social, cultural, and economic impacts that history has caused Tribal Nations to endure. New commercial, educational, and health care opportunities, as well as social stability and quality of life issues, can genuinely be improved through broadband. And most importantly, extending broadband across Indian Country will achieve a more equal opportunity for all Americans—opening the door for every citizen to become a part of the digital future of our country and ensuring that Tribal Nations enjoy a secure and enduring place in that future.

The FCC is obligated to undertake this effort pursuant to its mandate in the Communications Act that "access to advanced telecommunications and advanced services should be provided to all regions of the Nation." They are also obligated to undertake this effort pursuant to the trust relationship and trust responsibility they share with Tribal Nations. They owe this effort to consumers nationwide, who pay for the universal service subsidy programs. But most of all, they owe it to Tribal Nations, who have waited so very long for digital equity and stand ready to work together as equal partners, pursuant to their trust relationship with the federal government, to finally make it a reality. Because, however precious federal funds are targeted, rules are developed, and definitions are created, they must be rooted in the reality of Indian Country.

Mvto, and thank you again for the opportunity to testify this afternoon. I look forward to answering any questions you may have.

The CHAIRMAN. I would like to thank all our witnesses. I will start with the first five-minute round of questions.

Director Goldstein, in both reports, the GAO recommends improvements to data collection. For example, the GAO suggests the Chairman of the FCC develop a formal process to obtain tribal input on the accuracy of provider-submitted broadband data and provide outreach and technical assistance to help tribes participate in that evaluation.

Can you talk to us about how this lack of information has had a negative impact on the tribal communities?

Mr. GOLDSTEIN. Yes, Mr. Chairman. In our discussion with providers as well as the tribes, we found that the lack of, and FCC agrees to some extent as well, that the lack of data has several implications that are negative for tribal lands. The first is, of course, that there is no assurance that there is any accuracy or completeness in the information itself, that maps tribal broadband. So it is impossible to know with any assurance whether tribes have full access to broadband.

In our discussions with tribes to complete these reports, almost every single tribe we talked with said that the FCC data and the maps did not at all reflect what they believe the experience and re-

ality to be on their land. This is equally important, not just to understand progress being made in Indian Country to improve broadband and to close the digital divide, it is also important because much of the funding that comes from the Federal Government, from the FCC and RUS and others, is based on the accuracy of these maps and whether or not there are funds that would be made available. Those are based in large part on these maps as well, and tribes have found that they cannot get funding in many instances, because the data is inaccurate and therefore, their ability to obtain funding is rejected.

The CHAIRMAN. Thank you. Mr. Webre, the GAO report on mapping and data questions shows that the FCC's method for collecting data collection results is an overstatement of broadband service and access in both rural and tribal communities. This inaccuracy prevents the Commission from directing Federal funding opportunities to places that need it most. So how does the FCC plan to revise the process to collect more accurate and detailed data?

Mr. WEBRE. Thank you, Senator. We understand that there is room for improvement. We have an ongoing proceeding that's currently ongoing, it's been going on for a year now. Chairman Pai announced it last year, in an attempt to get better, more accurate data, more comprehensive data, so that we can do a better job of funding areas that are truly unserved.

There are some technical issues that we would have to overcome to get more granular data, sub-census raw data, incur some technical issues that we have to work through. There are also some burdens, additional burdens that may be put on the providers who are providing this service, some of whom are very small providers and who have limited resources.

So we have to take all of those things into account. But the Chairman is very focused on this proceeding, and also on the fact that we do need better data.

The CHAIRMAN. And that includes engagement with tribal government?

Mr. WEBRE. Absolutely. Yes.

The CHAIRMAN. Mr. Enjady, as a provider how would the National Tribal Telecommunications Association modify the provider data collection process to obtain more detailed broadband access data? So how do we make sure we get that better data?

Mr. ENJADY. Well, obviously we are going through a proceeding at the FCC on some op-ex relief. So we have been going out into the field and actually taking the data itself. So we have done it by ourselves, we are hoping through the process that the FCC eventually will come up with a process to do this, so that in the future, we hope, working together with the FCC, they can actually see exactly how this data is collected and how it works for us.

It is something that tribes do need, especially more funding for these areas, to make sure tribe get online. Obviously you need to get it for Social Security, you need to get in, and they say, go to the web. Well, some of these guys don't know any of this stuff. But they do need more access, and hopefully we can do that with the FCC. I am sure, the office of ONAP and everybody else over there have been great to work with. So I want to make sure that, Chair-

man Pai, too, has been very good to work with us. Hopefully they can support us in Indian Country.

The CHAIRMAN. Thank you. Vice Chairman Udall?

Senator UDALL. Thank you, Mr. Chairman. Let me just, a quick aside. Today I received a letter from Chairman Pai, and I would like to extend a quick thank you to the Chairman and his staff for responding to my request to fix issues in the tribal operations expense order that harmed both MATI and Sacred Winds' ability to serve their communities. Today the Chairman responded to these, directed to staff, to provide relief to these carriers.

Mr. Webre, the FCC issued guidance in 2012 about tribal engagement. The GAO reports that that guidance is now stale. In fact, the GAO observed the "The FCC has limited information regarding whether its tribal engagement requirement is fulfilling its intended purpose." When can we expect the FCC to update its 2012 guidance on what tribal engagement should include?

Mr. WEBRE. Thank you for the question, Senator. On an informal basis, the Commission, through ONAP, has received feedback from tribes on how the engagement obligation has been going over the years. We understand that is not enough. We do share that internally with other members of the Commission, other bureaus and offices, to let them know what we are hearing, the feedback we are hearing.

But we do understand we need to do more. Earlier this year, the Chairman announced the reconstitution of the Native Nations Communications Task Force. This, we think, will be an excellent topic for them to handle, for them to discuss. Then as we go forward, we will look at ways that we can put best practices in or something to update that guidance, that as you mentioned, was first instituted in 2012.

Senator UDALL. Do you have a timeline for us?

Mr. WEBRE. Well, we're hoping to announce the membership of the Native Nations Communications Task Force in a week or so. So we will also announce a date of their first meeting, and we expect that to be one of the topics of their first meeting.

Senator UDALL. And I expect your intention is to try to really get this updated so that we know what we are dealing with.

Mr. WEBRE. Absolutely. We would like to get the feedback from them first, make sure we understand what the issues are, and then socialize what can be done with them to better improve the process.

Senator UDALL. Mr. Enjady, your written testimony highlights the importance of tribal consultation, and tribal partnerships to shrink the digital divided in Indian Country. You also noted the need to improve engagement between tribal entities, Federal, State, local governments and private businesses regarding various issues such as water rights of way, easements and so on. Can you provide recommendations on how to improve the consultation process between all entities?

Mr. ENJADY. Thank you, Senator Udall, Vice Chairman. Recommendations, I think New Mexico, the State PRC and us, and everybody else, has shown a good example of how we can work together and provide best services for New Mexico. We were one of the first providers in New Mexico to be able to do that. I want to

thank some of the commissioners from New Mexico that have really helped us in this area.

Engagement with tribes and allowing us to voluntarily come to them and ask them, can you help us to be able to start this process of providing services to our tribal nation, and that was one of the things that really helped us a lot. And your help in New Mexico has been monumental in getting this started here for a lot of places.

Examples for this can be seen through New Mexico and to all the other tribal players, as well as in other areas, where there are a lot of tribal carriers providing these types of services. I think, if we can get some movement in the future from ILECs, Tribal Nations and with ONAP, that we are working together, one thing that we are working together on is hopefully a conference down in Mescalero to save, to keep the tires of the telecom, see how we provide these services. I think that can be a shining example, especially if we can get more people out in the field to be able to see exactly what rough terrain that we provide these services in, how we need four-wheel drive just to get up some of these mountains and peaks to provide these services through microwave or fiber optic.

So these are some of the things that we can look at, and hopefully we can recommend that. Just going out into the field and being able to see this first-hand, then you can see the examples of what's really happening out in Indian Country. Thank you, sir.

Senator UDALL. [Presiding] Mr. Enjady, I think you ae absolutely right, seeing it first-hand is tremendously important. I am going to come back to the rest of the panel on this same question about recommendations, but I am going to ask Senator Schatz to take his turn at this point. Thank you.

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

Senator SCHATZ. Thank you, Ranking Member Udall.

Mr. Webre, how do you think the FCC is doing mapping generally and on mapping in tribal lands? In plain English, how do you think you are doing?

Mr. WEBRE. I think there is certainly room for improvement, Senator, and I think that is what we are doing in the ongoing proceeding. We are looking to make improvements on the availability of data and the accuracy of data and the comprehensiveness of the data.

Senator SCHATZ. I want to make one observation. I listened very carefully to your five minutes of testimony. I know this space. It is true, that sometimes Senators only pay passing attention to testimony and just wait for their turn to talk. I listened to every word you said. And I don't understand what you said. And I don't hear a sense of urgency at all as it relates to this issue.

What I don't understand, specifically, is why the burden is on tribal governments, and why, outside of tribal lands, the burden is on individual communities and municipalities to say, these maps are wrong. Why is it not the Federal Communication Commission's job, plenty of funding, and plenty of expertise—to get it right the first time. As opposed to saying, here are maps, and you may avail yourselves of an appeals process. And, well, I am on a tribal gov-

ernment, or on a county some place, and I am supposed to go back
to the FCC, fill out forms, get smart on broadband mapping and
the burden of proof is on the people not covered, not on the Federal
Communications Commission.

So tell me why the burden shouldn't be on you to get it right the
first time?

Mr. WEBRE. Well, I believe the burden is on us to get it right.

Senator SCHATZ. Are you getting it right the first time?

Mr. WEBRE. With regard to the——

Senator SCHATZ. Are you getting it right the first time?

Mr. WEBRE. We are attempting to get it right. We know we can
do better. And that is why we have an ongoing proceeding.

Senator SCHATZ. Yes or no question. Are you getting it right the
first time?

Mr. WEBRE. Yes, we—no, we are not getting it right in the way
that we would like, but we are working on getting it right by this
open proceeding.

Senator SCHATZ. But the way you talk right now is, what is mad-
dening for communities who are not covered. Because you are act-
ing as though the question is some kind of compliance with a rule
or statute or a process. And I respect rules, statutes and processes.
But if you're sitting there and you look at a map and you know
your community, I looked at Senator Udall, I was sitting next to
Senators Tester and Heitkamp, who say, I can look at this map
and tell you off the top of my head how flawed this map is.

So it is not just that there is some kind of corner or topographic
idiosyncrasy or whatever it may be that you can't get a cell tower
or you can't get broadband. It is not that. It is that on its face these
maps are ridiculous.

And to the extent that it is a problem generally, and you know
it is, it is a huge problem on tribal land. And then I was also struck
by what you said, that you don't want to overburden the providers,
you are going to overburden the providers in collecting the data.
And you want to open up a challenge process. And this goes back
to whose job is this. Whose job is this? I am asking you a question.

Mr. WEBRE. It is certainly the FCC's job to find out where it is,
where deployment is needed. And we do have to take that into ac-
count. We have to take into account various things, including bur-
dens that would be placed on providers, as well as technical chal-
lenges with getting more granular data.

Senator SCHATZ. When I heard Mr. Goldstein's testimony from
GAO, I hadn't looked at the fact that he was from GAO. And it was
such a takedown of the way you guys operate, that I was actually
shocked that it was GAO, because FCC overstates broadband ac-
cess on tribal lands, does not have a formal process to obtain tribal
input and broadband data, few tribal broadband partnerships exist
and tribes face barriers to obtain Federal funding for broadband
deployment.

Then I hear from you, and I am not sure that you answered any
one of those questions, other than, we are entering into a pro-
ceeding. So can you tell us, and we have 36 seconds left, I would
just like to hear, first of all, for the record, how you are going to
deal with all of this on a timeframe that makes a regular person

living in tribal lands satisfied that you understand how urgent this is. That is for the record.

But in the remaining 20 seconds, can I just at least hear from you that you feel, as an agency, a sense of urgency?

Mr. WEBRE. I agree, we do as an agency feel a sense of urgency. As you may know, this proceeding is taking place in the Wireline Competition Bureau. I am the Chief of the Consumer and Governmental Affairs Bureau. So I don't have the expertise in order to provide you with a valid response.

But I can certainly go back to the Commission, and we can have a more fulsome answer for you.

Senator SCHATZ. Thank you.

Senator UDALL. Senator Schatz, if you want to get a full answer from your question, that would be fine.

Senator SCHATZ. I don't think I am going to get a full answer, but I appreciate that. Thank you.

Senator UDALL. Okay, thank you. I couldn't agree with Senator Schatz more, Mr. Webre, I think it is important that you take these questions back and you answer them seriously, and you indicate to all the folks who are interested here that you really intend to solve this. I think the GAO has laid it out in a pretty dramatic way.

The FCC's process of data collection is skewed. We don't have any doubt about that, do we, Mr. Goldstein? I mean, it is a skewed process?

Mr. GOLDSTEIN. That is correct, sir. Two years ago when I appeared before the Committee, I mentioned that we believe that that was the case, and these reports certainly show that it is so.

Senator UDALL. This is one where the industry controls the data, and has all the power. And when tribes do challenge the data, it is costly, it is time-consuming, and Indian Tribes don't often win.

Mr. GOLDSTEIN. They almost never win, sir. In fact, from our information, they do not.

Senator UDALL. Your report mentions needing a formal tribal engagement process that allows for meaningful tribal input as part of the FCC's data collection. Can you expand on that suggestion and what you think ought to be happening?

Mr. GOLDSTEIN. Yes, sir. I think it is a three-pronged process. I think that the FCC does need to be more involved in understanding exactly where the maps are not accurate. They do not verify the information that is provided by providers. They do some logic checks and the like to see if previous 477 submissions are similar to what they have now and make sure there are no large gaps.

But it is really left up to the provider to, as you said, sir, to be able to provide information. The FCC pretty much takes it at face value. Tribes really do not have an opportunity to submit information to that process. And when they do try to challenge the information, they are rarely, if ever, successful.

Senator UDALL. You said three parts, right?

Mr. GOLDSTEIN. Being the FCC, the providers and the tribes. They all need to work more closely. There does need to be a more formal process to engage all the groups. It may be that some kind of, there is a discussion about proceedings, but proceedings take years to, typically, for FCC, to complete. I'm saying there is no time

frame or time limit, goals to when this particular proceeding is to be completed.

Senator UDALL. Yes. And Mr. Webre, there is no doubt that the maps are not accurate?

Mr. WEBRE. We feel that the maps are accurate in that they show where it is clear that there is no broadband availability, in those census blocks. So we know it is clear in that regard. We know we can do better on the other part of it, where there is partial deployment in census blocks.

Senator UDALL. Mr. Enjady and Mr. Blackwell, what are the two most important components necessary for the FCC to develop a successful formal tribal engagement process?

Mr. ENJADY. Thank you, Senator Udall. One of those processes would be to designate a, find a person that actually will engage the company that they're getting data from, or working with some of the larger companies. I know one time when they sent a letter, it goes to a tribal nation and they check off a box and it is done. But nothing comes back, because sometimes the tribes are kind of wondering exactly what is going on there.

I know a lot of tribes, we were just at an NTTA meeting Monday. I was talking to the folks at REDINet, and I said, have you guys seen any tribal engagement, were you asked these questions? Have you seen that at Pojoaque, have you seen that at San I, or any of these other pueblos there? And they said no, we haven't really seen it. That shows to me clearly that the companies that are larger are just throwing a letter, and if they get word back, it's check the box, we made engagement.

And that is true, that is something that we talked about yesterday in Pojoaque, at our NTTA meeting. So these are some of the issues that we need to do a little bit better job, some kind of self-certification from the tribes, showing that there was engagement, showing a letter saying that the tribes are working together.

I think more communication is needed. Instead of just checking a box, we need to be able to talk, just like we are today, to make things be made aware. I know some people are trying to do the best they can, but like I said, at times like we are, we are short-staffed, less funding means less smaller companies. We are not able to do all these things. With Lifeline and all these other issues, we have become social workers. We have had to go out and hunt these guys down.

And it helps me out to get these Lifeline people, get them on Lifeline to get more customers, to be able to provide the broadband services. But it is just—we are small, so we are trying to do the best we can. And I hope that clarifies a little bit of what the tribes need to be able to get to do this.

Senator UDALL. I think it does. I think you are talking about a really meaningful step and meaningful engagement with the tribe for the provider to try to really understand what is going on on the ground.

Mr. Blackwell?

Mr. BLACKWELL. Thank you for the question. If I may, I would like to take some time to be able to supplement the record and follow up.

Senator UDALL. Please do.

Mr. BLACKWELL. But off the top of my head, there are two things that jump immediately to mind. The first is, as a part of an overall effort to dedicate a tribal budget, a consultation budget at the FCC for these efforts. That would be sort of an overarching thought. More granular at this point in time, I think clarification, the need for the raw data. Tribal nations need the raw data, so clarify that there shouldn't be redactions, or NDAs that need to be signed.

Beyond that, I do believe that there is, to create a mechanism within the FCC, so that the data, as it comes and can be analyzed by the FCC, to create sort of a map of issues on a tribe-by-tribe, region-by-region basis. I testified that the digital divide now is very different from 20 years ago. Where things have worked, it has necessarily created greater challenges in other areas.

So if there are issues here that have to do with terrain or affordability, or if there are issues here that have to do with spectrum opportunities and other things, that the Commission can have the tools to start addressing those at a granular level. Thank you.

Senator UDALL. And when you say the tribes need the raw data, Mr. Enjady, do you agree with that?

Mr. ENJADY. It does. But when they get the raw data, is there anybody at the tribe that can decipher this information? What does it really mean to them? What do we need?

All they know is that tribes need better broadband services. And it is up to everybody else to hopefully help them with that. That is why we are in trust. I mean, we have been in trust for so long. So these are some of the things that we need help with.

I, myself, fortunately, was able to go and work for the larger phone companies. I came up through the ranks and I was able to leave the company and come back to the tribe and help them out. I used to work for a large corporation that gave me the skills I needed to be able to build a telephone company for our tribe. And that is one thing that, there is not a lot of me out there. If you look at it, there is only nine recognized telephone companies in the United States. There are 573 recognized tribes. All of them should have telephone companies, but they don't.

So it is a hard thing, it is very difficult. There are a lot of barriers in the way that keep tribes from having the broadband service they need. It is something that needs to be developed, and I think if we work with the tribes together, I think we can help them out. I think the FCC, if we work with them together, I think they can understand both of us and how we can provide information.

One thing I was always told when I worked with the phone company, we are a communication company, but we are the worst at communicating with each other. And that has been true, it is tough. Thank you, sir.

Senator UDALL. Thank you. Mr. Goldstein, did you have a comment on the raw data? I saw you nodding your head, about the tribes being entitled to get the raw data?

Mr. GOLDSTEIN. I do think, as Mr. Enjady said, that some tribes would be able to, I think effectively use that information. Some may not. They may not have all the resources and skills they would need. I think it is incumbent, however, on the providers, to engage with the tribes on a more regular basis, not just checking a box. Some of them we have found almost never meet with the tribes and

are not really willing to not just engage with them but even to provide services where they said they were going to provide them. And tribes are understandingly frustrated by that.

Senator UDALL. Yes. The first question I asked earlier had to do with tribal consultation and it being very important to shrinking the digital divide. I really only focused on one witness, so I want to expand that to the rest of the panel. Does anyone else have any other recommendations on how to improve the consultation process, the tribal consultation? Mr. Blackwell?

Mr. BLACKWELL. Mr. Vice Chairman, as a former regulatory attorney, I love this stuff. Godfrey is right, it is complex. So one of the key recommendations I would make is that as a predicate to consultation that there be trainings, that generally that before the Commission asks a question that the Commission get out into the field and explain the rules, explain the processes. I know the Commission has had success in this before.

The other recommendation that I would make is something else that the Commission has done before, is get the senior leadership from the bureaus, the decision makers, face to face with tribal leaders. That is something the Commission has done before with its task force and we look forward to seeing that again. Thank you.

Senator UDALL. Great. Mr. Webre, do those sound reasonable to you, reasonable suggestions?

Mr. WEBRE. Yes, I do think that sounds reasonable, Senator. And we do, just to let you know, ONAP does have very close relationships with tribal members, as Mr. Enjady had mentioned before. We reach out to them on a regular basis. They have our direct phone numbers and our email addresses. Any time they have questions for us, we are happy to answer them.

We also go out into the field a lot during the course of a year. We do tribal workshops, where we explain the tribal engagement obligation to the tribes. Also, if they are interested in becoming eligible to become telecommunications carriers, we can also provide training on how to do that. We are always looking for ways to help the tribes.

Senator UDALL. Thank you.

Senator Murkowski, if you are ready, I am happy to have you go.

STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. Thank you, Mr. Chairman. I apologize to our panel of witnesses, I watched you, Mr. Goldstein and you, Mr. Webre, on the TV, so I got some of it. But I didn't receive the benefit from you.

But I want to thank you and the Chairman for having this hearing today. It is so incredibly important, as we know. As I travel out to rural Alaska and visit with kids, it is really great, everyone has a cell phone. But you know what, I would venture to say that not only the vast majority but maybe 95 percent of those kids are not on any plan. It is their camera. But their ability to really utilize the technology that other children around the Country might have access to is limited.

I think about the direct impact on how you educate a child. Our State has moved to a testing system where you do your tests on-

line. I think it was Sand Point, out in the Aleutians, remote fishing village out there. And mostly, probably Aleut families. System can't maintain itself during the time of testing, the system crashes. So okay, we are just going to test one grade at a time. System still crashes. What they ended up doing, one kid at a time takes the standardized exam until they get through every one in the school.

The impact for us on access to health care, as you know, in Alaska, we have been extremely innovative when it comes to tele-health. And we make up for the lack of providers in these rural communities with our tele-health carts. You can have a community health aide on the line with somebody in Anchorage, and it is all beautiful, it is all fabulous, except when you need it most and everything freezes. When I was out in Unalaska and they were demonstrating to me the new infrastructure that they have, they said, we have everything except for the piece that connects it all together.

So you don't have reliable health care. You don't have reliable education. I was out in the Bering Straits region, and we were out in the community of Savoonga, out on St. Lawrence Island. There is a lot of maritime traffic that we are seeing, as more and more ships are coming through the straits, as we are seeing ice freed up. Shipping has increased by nearly 60 percent in the last eight years.

But what happens is you don't have the ability to communicate with these vessels that are coming through, who are trying to basically ensure that there is ship to shore communications. In the meantime, what you have are walrus hunters, hunters who are out in a 20-foot skiff in open water, and you have some big vessel, some big tanker bearing down on you. If you don't know what is coming and what is going, some of the hunting groups are literally forced to call someone on land. They have their sat phone in the boat, they call someone on land and then that person calls a vessel tracking service provider to find the contact information for the ship before they can directly communicate with that vessel to let them know, you have whalers in the area, you have walrus hunters in the area. So we are talking about some life and death situations.

Let me ask my question, now that I have consumed practically my full five minutes. And I think this is for you, Mr. Webre, with the FCC. Satellite technology, capable of download and upload speeds, but what we are seeing, the latency is still too high for deployment and use of critical technology that is needed out in many of these villages. Latency over the satellite connections, which is what most of our rural villages use, is four times higher than the maximum threshold standards that are defined by the International Telecommunications Union.

So the question is, whether or not the FCC is looking at revising this official broadband definition, and include the latency and packet loss as a broadband benchmark, versus just upload, download speeds. I guess the broader question, what do you intend to do to address the latency issue?

Mr. WEBRE. Senator, thank you for the question. It is a very important one. Unfortunately, as Chief of the Consumer and Governmental Affairs Bureau, that is not within my area of expertise.

Senator MURKOWSKI. Who would do that, then?

Mr. WEBRE. It depends on the technology. It could be our Wireless Competition Bureau. It could be our Wireless Telecommunications Bureau. It could be our Wireline Competition Bureau, or it could be our International Bureau if it deals with satellite service.

Senator MURKOWSKI. I think it is a conversation we would certainly like to know, understand a little bit better. Because again, we have some issues there where we are not quite sure what may be coming. So if we can have some discussion, I think that would be helpful.

Mr. WEBRE. Absolutely.

Senator MURKOWSKI. And Mr. Chairman, this may have already been asked and answered, and I apologize. But when, and I think Mr. Goldstein, I will direct this to you, you had stated in your testimony that one of the barriers to increasing access on tribal lands is the cost of providers that are deploying infrastructure onto tribal lands and that there are a number of Federal programs that subsidize broadband deployment in these areas.

But you have expressed concern that the return on investment hasn't attracted that private investment. We certainly see that. Any suggestions that you can provide in terms of what more can be done to encourage these public-private partnerships for the broadband deployment? We have some things that are going on in Alaska that we are excited about, but access to capital is a challenge.

Mr. GOLDSTEIN. Thank you, Senator. I think it is no coincidence that all of the partnerships that we identified, and there were only seven that we were able to identify, there may be others out there. But we looked at grants and all the Federal funds to try and discern what the partnerships were. All of the partnerships that we found, the funds that they received came from ARRA, the Recovery Act funds. They did not come from current funds.

So I think you are right in saying that this is an issue of capital, and the amount of funding that is going to Indian Country may not be sufficient to entice providers. As we indicated earlier in our testimony, of all the funds that are provided by the FCC and by RUS, just a very small fraction of those funds have actually gone to tribal lands.

Senator MURKOWSKI. It just seems like it's such a challenge because in so many of these areas, you're remote, so you are truly, in Alaska, we are literally at the end of the line. Of course, we know how expensive that is.

But the areas that you're serving, the population base is so small. So how is that attractive to anybody from an investment perspective? So you recognize the challenge but you don't have a super-duper great answers on how we can attract it.

Mr. GOLDSTEIN. I would probably be in a different line of business if I knew that.

Senator MURKOWSKI. Yes, we all would.

[Laughter.]

Senator MURKOWSKI. I thank you. Mr. Chairman, I have well-consumed my time. I appreciate the Committee working on these issues, because it does make a big difference in terms of how we can help to provide opportunities around Indian Country. If you are

not in the same field, it is really pretty tough to play the game. So thank you, sir.

Senator UDALL. You are absolutely right.

Mr. Webre, are you happy to take her question back to the proper bureau and get an answer for us on the one she asked?

Mr. WEBRE. Yes, Senator, I would be happy to do that.

Senator UDALL. That would be great.

Mr. WEBRE. And if I could make a distinction, a point.

Senator UDALL. Yes, please do.

Mr. WEBRE. We have heard today about the GAO's second report on partnerships and how less than 1 percent of the FCC's funding has gone to tribes. I think what that really means is less than 1 percent of the funding has gone to tribally-owned entities. There are plenty of privately-owned entities that aren't affiliated with the tribes that are serving broadband in these tribal communities.

So I do think that number is much higher. Thank you.

Senator UDALL. Will you get us a proper answer under the criteria you are laying out?

Mr. WEBRE. We can certainly look into that data for you, sir, yes.

Senator UDALL. Senator Murkowski, if you have any additional questions, please, go ahead.

Senator MURKOWSKI. I was just looking at some of the information that I have here. It says that, as you mentioned, GAO found that less than 1 percent of FCC funding, about 14 percent of RUS funding, went directly to tribes and tribally-owned providers. Combined, FCC and RUS funding totaled $34.6 billion during that time period, and tribes and tribally-owned providers received $235 million, or about .7 percent.

So I think it does speak to the real challenge that we face here.

Mr. WEBRE. To be clear, again, that is tribally-owned.

Senator MURKOWSKI. Tribally-owned, right.

Mr. WEBRE. There are plenty of private providers who are out there providing service.

As a matter of fact, the Connect America Fund Phase Two option just took place and the preliminary numbers are in. Over 80,000 of those bidders, 80,000 tribal areas, will be covered by Connect America Fund Two funding. And some are going to be serviced by tribally-owned entities, and we will work with them to get ETC status, so they can provide those broadband deployment funds to their areas.

Senator MURKOWSKI. Mr. Chairman, Mr. Enjady had something.

Mr. ENJADY. One thing I wanted to add to that, on the portion of funding that you are talking about, especially grant money, there is a lot of money out there for grants and the ARRA is one of the things that you guys talked about.

But the biggest thing that I have seen come back to us from our NTTA members is that when they took that ARRA money they lost a lot of their sustainable funding come from the FCC. So that's the biggest thing is, once you build it, you have to maintain it. Most tribes don't have that ability to do that. The high cost fund is one of the mechanisms that was used to provide funding for that to keep sustainability moving forward.

But a lot of that has been reduced, and we have a hard cap on us, for small ILECs like us. There is also a budget control mecha-

nism that is involved in that, that keeps us from getting all the funds that we need. There has been a catch-up fund that the FCC has instituted to kind of get us caught up. But moving forward, that still has to be in play for us to be able to provide the services that we need. We build these networks, but we have to maintain it, make sure the fiber is maintained. Today I had a fiber cut in Mescalero. So I have to roll people out there, have to get things fixed. These are some of the things that we have to pay for as we keep moving forward. We hope they will keep that funding up and cumulative for us who use it and take the needs that we need out of it.

Senator MURKOWSKI. Thank you, Mr. Chairman.

Senator UDALL. Thank you, Senator Murkowski, for your excellent engagement here.

Among the many obstacles to closing the digital divide in Indian Country is the FCC's Eligible Telecommunications Carrier, or ETC designation. Tribes must receive this designation to be eligible for FCC funds. Mr. Goldstein, the GAO report makes clear that ETC designation is not just a burden, but has prevented many tribes from acquiring FCC funding.

Would you say the requirement of being designated an ETC is having a disparate impact on tribes to receive more Federal funding?

Mr. GOLDSTEIN. Yes, Senator, it is. And I know that FCC has looked at this issue in the past, to try to determine whether they could provide tribes with this kind of a distinction, and if you could provide universal service funds without it. They pretty much found that they could not. So this is really a statutory impediment in many ways. It may be something that Congress wants to look at over time to see if the 1996 Act perhaps could be changed so that there would be more tribes that could be involved in this way.

Senator UDALL. And as a policy matter, do you think that might be a good idea?

Mr. GOLDSTEIN. I think that Congress should look at it. We have not actually made it as a specific recommendation in terms of doing the work. But I do think that we are looking at a fairly antiquated process at this point. The 1996 Act really, it was mainly telephone companies that got the ETC designations. And of course, today, the high-cost program now involves broadband. So the landscape has changed radically since the Act was passed.

Senator UDALL. Mr. Webre, how can the FCC improve the process for tribes applying to become an ETC?

Mr. WEBRE. We always, through ONAP, work with the tribes, if they are interested in becoming eligible telecommunications carriers. We have a training program, we do outreach to them. We go out into the tribal areas and do workshops. So we talk about how you can become an ETC.

What Mr. Goldstein said is correct, it is a statutory obligation. There are rules that we can't really change in order to help the tribes become ETCs. So that is kind of where we are in the process.

Senator UDALL. Now, for the overall panel, what practical recommendations are needed to help tribes access this Federal funding? I don't know if, Mr. Enjady, or Mr. Blackwell, you want to weigh in?

Mr. ENJADY. I couldn't hear that.

Senator UDALL. What practical recommendations are needed to help tribes access this Federal funding, the Federal funding that comes through the ETC?

Mr. ENJADY. Mescalero Apache Telecom is probably one of the last tribal telecoms to become an ETC. And that was back in 2001. Other than that, I don't think there's any other tribal nations that have applied formally, like I did. I think there are two right now that are pending. One is the Warm Springs Tribe, and they are trying to become an ILEC with ETC.

Now, there are certain levels of the ETC, if you didn't know that. There is one that is a competitive ETC, CETC and a regular ETC. That keeps you from getting the funding that you need for your area.

This is the sustainability portion that I was talking about earlier. This is what keeps the funding coming to us to be able to provide the services in the rural areas. Because we have no customers out there. For every mile of cable that we throw out there, or fiber, it costs us anywhere from $40,000 to $60,000 a mile. And with that in place, and I have two customers on that mile, how long will it take me to recover that funding?

So there is a mechanism at the FCC that helps me borrow that money and be able to get the money back, that return on investment, the ROI. So it is very difficult. So we need to be able to get the funding needed for us.

But again, CETC, you don't get all that funding, and you don't get the full funding. But with the new CAFE II funding, that is a ten-year program, that funding will be made available even if you are just a CETC or ETC, it doesn't matter. So that is a process that is happening right now. I am sure there is a few of our providers that have gotten awards for that. So we are looking to see how that is going to work out.

Senator UDALL. Mr. Blackwell, any thoughts on this?

Mr. BLACKWELL. Yes. This is a very important area of the regulations. It was one of the first areas I really dove into in 2000, when I first went to work at the FCC. In fact, I worked on Godfrey's and MATI's ETC designation.

Recently, the Commission has done ETC designations, in the last 10 years, Hopi Telecom, Standing Rock, Navajo Tribal Utility Authority Wireless. But as far as practical considerations, as long as the applications are complete, I think one could ask for a stream-lined process at the FCC. There are many priorities at the FCC. One could ask the FCC to make this a top priority, ETCs on tribal lands, and ask the Commission to dedicate staff to the effort. The Bureau is very busy at all times, the Wire and Competition Bureau.

Perhaps another thought is developing a template for ETC designations, almost as a technical training method.

But I do want to make a point, I want to be respectful of your time. My experience tells me I need to be bold here. I do agree with what Mr. Goldstein said, there is a statutory question here. We are talking about access to, Godfrey mentioned the high-cost fund. Well, the high-cost fund, for 20 years, has been pumping $4 billion into this situation, and we have only come this far.

This is a question of capital. And no critical infrastructure has come to Indian Country without significant Federal investment and oversight and regulation. So it is time for a new authority for the Commission, a new direction, new authorities. It is time for a tribal broadband fund. This has been a recommendation that has been coming from the lips of Indian Country for a decade now, and I am only reiterating what my committee told Chairman Pai this past February.

I will see a question about ETC, and I will raise you one tribal broadband fund.

Senator UDALL. Right, thank you. Thank you for that bold recommendation.

Mr. Enjady, your telcom is in a unique position. MATI is not only a part of the telcom industry, but also responsible for serving Indian lands, which means that if the FCC requires more data, that task will fall on your shoulders.

How can the FCC both require more granular data like latitude and longitude of service areas, but avoid imposing such burdensome requirements that you spend all your time with paperwork?

Mr. ENJADY. Thank you, Vice Chairman Udall. Thank you for the question.

I think if we can, and I know the FCC is short-staffed in a lot of areas. But if we can make, like Geoffrey was saying, a template, to come out and be able to go with us, place to place, and provide the data that we need, especially going house to house.

Now, as you know, Indian Country is in desperate need of housing. We have so many families, multiple families living under one roof. So it is a big issue that is happening right now. Do we divide those homes up? Just getting more homes in Indian Country is tough. Our population is growing and we need more homes.

With that comes broadband, too, being able to communicate and do what we need to do as we provide these services. It is difficult in this situation of getting to provide the services that we need. I would just like to say that, please come out, talk with us. NTTA as a whole would welcome FCC to come out and work with us and be able to develop these templates that I talk about, and be able to work and get the granular data that they need.

Looking at the census block as Mr. Goldstein pointed out, when one entity or person or home has broadband, the whole is counted as having broadband. It is quite skewed. So we need to go house to house, and we can provide that data right now. That is part of the RUS mapping. Once you become, since you cannot collateralize tribal lands and go out to a conventional bank and get money, RUS has been our banker. So they require different information. They have an area of coverage map that could be probably applied to, that could be used on that side.

There are different ideas that we have that we can work together. But we just need to get together and do it in the first place.

Senator UDALL. Yes. Mr. Blackwell, you also sit in a unique position, having worked for the FCC and now with Indian tribes. In your experience, what can the FCC do to make sure everyone has the best available data?

Mr. BLACKWELL. Thank you very much for the question, Mr. Vice Chairman. I think one of the first things FCC can do is create a

formal intake process. The other is really to get the right folks in the carriers and in the tribal nations talking to each other, the mapping folks, the IT folks, the GIS folks. Folks who have much better technical expertise than I do in that area, maybe the folks who do the sales and marketing and maybe make the attorneys sit on the outside of the meeting, so that folks can really begin to engage on what the data means. Of course, the predicate being that tribes receive the data and get some training on how to analyze it.

I would, if I may, I would like some time to be able to think about the answer and follow up with you, sir.

Senator UDALL. The record will be open for two weeks. For all of these questions, you will have the opportunity to get information in the record.

Nearly one-third of the kids in New Mexico are at risk of falling behind in school, simply because they can't get on the internet at home. It is past time to end the homework gap in New Mexico and in all of Indian Country. That is why I introduced S. 2958 earlier this year, to push the FCC to look for more innovative solutions, like putting wi-fi on school buses as part of its work with the E–Rate program to get students connected.

It is also why I was alarmed to see that the two E-rate specific recommendations from the GAO's 2016 report on tribal broadband have not been addressed. To make sure E–Rate is reaching students in Indian Country we need to know that the FCC is not still using junk data to track tribal applications.

Mr. Goldstein and Mr. Webre, has the FCC made any progress addressing these two recommendations?

Mr. GOLDSTEIN. Senator Udall, I will get back to you specifically on that. We have not looked, we do follow up on an annual basis and I am happy to get back to you for the record.

But one thing I would mention is we have just begun work for the Congress. It is a mandate that was recently passed, in which we are examining exactly what you are looking at and talking about, which is low-income education. We have already identified some examples where we are going to go out and take a look at kids who are able to complete their work on school buses and things like that. We have ongoing work in this area.

So we will hopefully shed some additional light on this.

Senator UDALL. Thank you. Mr. Webre?

Mr. WEBRE. Yes, Senator. As a result of the GAO's open recommendation that the FCC improve the reliability of FCCD data related to institutions that serve E–Rate defined tribal program applications, beginning in funding year 2017, year after the GAO recommendation was given to us in 2016, we did implement that recommendation. Specifically, the E–Rate forms now include guidance about when a school or library should identify itself as tribal. USAC has greatly enhanced its method for collecting this information by improving the tribal checkbox in USAC's system.

In addition, USAC's tribal liaison encourages tribal applicants to check this box so that USAC can better understand who is participating in the E–Rate program and provide tribal outreach and training, and assess those outreach and training efforts. The funding year 2017 ended in June 30th of this year, and applicants are all still submitting their invoices. So we haven't had a chance to

look at a fulsome record yet. But we are encouraged by this development and we look forward to getting that information.

Senator UDALL. Mr. Webre, when exactly will this Committee see accurate data from the E–Rate program about its work in tribal lands?

Mr. WEBRE. We do think within a short period of time, Senator, once we get all the 2017 funding year invoices in.

Senator UDALL. That is good. We will be looking forward to that.

For Mr. Blackwell, would allowing more flexibility at E–Rate for innovation, like putting wi-fi on school buses, help address the digital divide in tribal schools faster?

Mr. BLACKWELL. Yes, absolutely. There are thousands of tribal children who ride long bus rides back and forth to school. The thing that I think of when I hear your question is, so many places in Indian Country I have seen kids sprawled out after hours in a parking lot next to a tribal headquarters or tribal library trying to catch the spillover wi-fi.

If E–Rate were able to put wi-fi in buses, it would just simply extend the classroom. I think that is a good idea. Now, the bus driver might have to block some social media.

[Laughter.]

Mr. BLACKWELL. But yes, I think it is a great idea. I can't think of a single tribal educator I have ever met that would disagree.

Senator UDALL. Great. Let me just close here by thanking all of the witnesses. I don't think there is anything more important in Indian Country than getting Indian Country connected to the rest of society and the world. So this has been a very, very important hearing. I really appreciate Chairman Hoeven for focusing in on this and working with me on it.

If there are no more questions for today, members also may submit follow-up written questions for the record. The hearing record will be open for two weeks. I want to thank the witnesses for their time and testimony.

The hearing is adjourned.

[Whereupon, at 4:21, the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF THOMAS W. FERREE, CHAIRMAN/CEO, CONNECTED NATION

SUMMARY OF KEY POINTS

- As the single largest grantee under the SBI program, Connected Nation (CN) managed broadband mapping and planning projects across 12 states and 1 territory (spanning 42 percent of the U.S. landmass).
- Accurate and granular broadband mapping is one of the most critical tools in developing sound broadband policy to close the digital divide.
- While our mapping efforts have been highly successful, the SBI program as a whole faced a number of challenges, and the current Form 477 data collection process is deficient in at least five significant ways.
- We believe any future broadband mapping effort must prioritize the accuracy and granularity of broadband maps at the street or parcel level of detail but must also prioritize the protection of providers' proprietary and confidential information that may be used to derive more granular coverage footprints.
- A viable and effective path forward would be for Congress to establish a single, independent, third-party clearinghouse for broadband data collection and mapping. This clearinghouse would have responsibility for carrying out five (5) primary tasks:

  1) *Broadband data collection and analysis*, working with the service provider community through a rigorous non-disclosure agreement framework;
  2) *GIS mapping of broadband availability and speeds*, derived from infrastructure and subscriber data submitted by service providers, at the street or parcel level of detail;
  3) *Processing feedback submitted by consumers and other stakeholders* to highlight areas of concern on the map-areas that may need refinement;
  4) *In-field validation* of the maps once they are produced, driven primarily by the public feedback received, to ensure continual refinement of the maps over time; and
  5) *Mapping where federal funding will result in network buildout*, to ensure that there is no duplication of support for the expansion of service among the various federal programs that invest in broadband.

Introduction

Chairman Hoeven, Vice Chairman Udall, and members of the Committee, thank you for inviting me to share Connected Nation's insights in this important proceeding this afternoon. My name is Tom Ferree and I serve as Chairman and CEO for Connected Nation, a national non-profit organization with a 17-year history of measurably improving lives and strengthening communities through increased access to, and adoption of, broadband and related technologies.

Headquartered in Bowling Green, Kentucky, Connected Nation's work has impacted more than 30 states, and we served as the nation's single largest grantee under NTIA's State Broadband Initiative (SBI) grant program. Under SBI, we managed broadband mapping and planning projects across 12 states and 1 territory, representing 42 percent of the U.S. landmass, and our mapping and data validation techniques have been widely recognized as "best practices" by NTIA, the FCC, and others. Connected Nation also has a long history working at the grassroots level in more than 600 communities through initiatives like our Connectedsm Community Engagement Program, in which we help local leaders build comprehensive technology action plans for their communities. [1]

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[1] *http://www.connectednation.org/get-connected*

Our work is also extensive in tribal communities. Since 2013, Connected Nation has traveled expansively through Indian reservations and tribal villages from west of the Mississippi River to the westernmost portions of the Aleutian Islands in Alaska to test, validate, and map broadband coverage. Mobile drive testing, conducted as part of the FCC's Mobility Fund Phase I and outside plant audits conducted during the SBI program witnessed firsthand the challenges facing tribes as they struggle to gain access to even the most basic broadband service. In addition to mobile drive testing and "in-the-field" infrastructure verification, we also played a key role in completing an inventory of school connectivity assets in every school across all 53 of Alaska's public school districts, spending numerous hours and resources on areas with largely indigenous populations. Many of the areas in Alaska, some only accessible by boat or plane, dramatically illustrated how the most rural of Native Americans, including students, are being left on the wrong side of the digital divide.

Connected Nation's experience on the ground in these communities has helped us develop an intimate understanding of the impact that broadband has on rural and tribal areas, and there can be no doubt that accurate and granular broadband mapping is one of the most critical tools in developing sound broadband policy to close the digital divide. Unfortunately, the existing broadband maps are inaccurate, are overstated, and largely misrepresent available connectivity in tribal communities today, as noted in a recent Government Accountability Office (GAO) report released in September.

We believe strongly in the importance of accurate and granular broadband data collection and mapping for three reasons:

1) To inform better decisionmaking on where public resources should be invested to support broadband buildout,

2) To avoid potential overbuild situations where service may already be available at a comparable speed and cost, and

3) To ensure accountability for the ratepayer and taxpayer dollars once public investments have been made.

Today, we look forward to discussing the successes and lessons learned from our experiences with broadband mapping as well as the current Form 477 data collection process administered by the FCC. Our intent is not to be critical, but rather to foster an understanding of how we believe the process could be improved for the future to best represent coverage in rural and tribal areas.

Lessons Learned from the SBI Mapping Program and the Form 477 Process

The SBI Program, which was created by the Broadband Data Improvement Act of 2008, states the opportunity to, among other things, establish a broadband mapping program and submit broadband data to NTIA twice a year from 2010 through 2014. This data was used to create the nation's first comprehensive national broadband map in 2011, which unfortunately has not been updated since the program ended in 2014.[2] Connected Nation was selected by 12 states and 1 territory to collect, process, analyze, and map broadband data, while also collecting feedback from the public on where revisions should be made.[3]

Throughout the SBI Program, Connected Nation averaged provider participation rates of 95 percent across our states, despite the fact that this program was largely voluntary. This was primarily due to the emphasis we placed on provider relationship-building, as well as our willingness to accept information in whatever format it was available and to assist providers who needed help. By 2014, we had established data-sharing relationships with more than 1,200 unique broadband service providers of all sizes, with non-disclosure agreements in place with many of them to ensure protection of their proprietary and confidential information.

While our mapping efforts were highly successful, the SBI program as a whole faced a number of challenges. Since every state had its own mapping agency or third-party partner, this meant that multiple methodologies were employed in collecting provider information, analyzing the data, and mapping the results. This also meant that providers, many of whom operate in more than one state, had to juggle not only multiple points of contact and data requests, but they had to report their information in varying ways to satisfy those requests.

Additionally, known best practices, such as those we developed to represent mobile and fixed wireless coverage propagation, were not required to be adopted across all states. For example, fixed wireless coverage in some states continued to be rep-

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[2] *https://www.broadbandmap.gov/*
[3] Alaska, Florida, Illinois, Iowa, Kansas, Michigan, Minnesota, Nevada, Ohio, Puerto Rico, South Carolina, Tennessee, and Texas.

resented as full circles or drastic polygons that did not reflect the true coverage on the ground. Unfortunately, some of these inaccuracies persist even today in the Form 477 data being submitted to the FCC.

As the SBI program transitioned to the Form 477 filing process in October 2014, we began mapping and refining this data for state partners that have chosen to continue their mapping programs. Unfortunately, a number of challenges remain:

1) Form 477 requires providers to report census blocks where they provide service. If even one household in a given block is served, the entire block is considered as having service, resulting in a significant overstatement of availability. This is particularly problematic in rural areas where census blocks can be very large—some being larger than the entire state of Connecticut. Yet these are the areas where broadband availability is most lacking and needs to be most accurately defined.

2) Since some providers rely on third-party vendors to compile Form 477 data and the filings are primarily in .csv (comma-separated values) format, providers that do not have GIS (geographic information system) capabilities have no way of visualizing their service territories to ensure accuracy, resulting in overstated or understated reporting.

3) Some known providers from the SBI years are simply missing from the Form 477 dataset, meaning that they are likely not filing as required.

4) Wireless coverage during the SBI years (when properly mapped) was developed from propagation modeling based on tower locations and signal penetration. Under Form 477, however, wireless coverage is reported by census block just like any other type of fixed service, indicating areas as served where there may actually be no service for miles.

5) Missing data and inaccurate filings also may have the effect of understating service capabilities, putting the providers themselves at risk for overbuild, since Form 477 data is now used to direct federal subsidies toward areas lacking robust broadband.

A Path Forward

Taking into consideration these lessons learned, Connected Nation would like to offer a few observations and recommendations regarding the future of broadband mapping and how we can make sure our rural and tribal areas are well represented. First, any future mapping effort must prioritize the accuracy and granularity of the maps themselves to ensure that the nation's broadband landscape is fully understood at the street address or parcel level of detail. Census block data is not sufficiently granular as we look to solve the broadband gap in rural and other insular areas of the United States.

Second, that level of granularity requires the protection of providers' proprietary and confidential information. Such protection is needed to safeguard critical infrastructure from vandalism, sabotage, or worse, and to preserve the confidentiality of competitively sensitive infrastructure and subscriber information, which should remain closely held.

Third, any future mapping effort must be premised on a uniform reporting mechanism to eliminate inconsistencies in state-by-state reporting. That uniformity in reporting will provide decision-makers the high level of confidence needed to target federal funding to broadband deployment projects and a piecemealed approach to data collection will not achieve the end goal of a comprehensive, reliable, and granular map.

We are aware that concerns have been raised in the past that more granular data cannot or should not be collected, either because doing so could present an increased burden (and unfunded mandate) on providers, or because the collection of such data would require government access to infrastructure and/or subscriber location data that the government has no business possessing. We agree that these are legitimate concerns but posit that a viable solution exists that would yield a more granular understanding of service availability, while protecting the confidential and proprietary nature of the data that would be used to produce it.

As Congress considers funding and other incentives to promote broadband deployment, we believe it should also consider establishing a single, independent, third-party clearinghouse for broadband data collection and mapping that is accountable to Congress, the FCC, the public, and the provider community, and it should cover all 50 states, the 5 inhabited U.S. territories, and the District of Columbia. This clearinghouse would have responsibility for carrying out five (5) primary tasks:

1) *Broadband data collection and analysis*, working with the service provider community through a rigorous non-disclosure agreement framework;

2) *GIS mapping of broadband availability and speeds*, derived from infrastructure and subscriber data submitted by service providers, at the street or parcel level of detail;

3) *Processing feedback submitted by consumers and other stakeholders* to highlight areas of concern on the map-areas that may need refinement;

4) *In-field validation* of the maps once they are produced, driven primarily by the public feedback received, to ensure continual refinement of the maps over time; and

5) *Mapping where federal funding will result in network buildout*, to ensure that there is no duplication of support for the expansion of service among the various federal programs that invest in broadband.

To be clear, Connected Nation believes that broadband service providers have a reasonable expectation that their proprietary and competitively sensitive infrastructure and subscriber data should be protected from disclosure. The good news is that the public disclosure of such information isn't necessary to serve the public interest. Instead, that information could be protected and analyzed by a single non-government clearinghouse entity to derive broadband coverage and speed capabilities without revealing the more sensitive characteristics of any given network. Connected Nation has proven throughout its history that a neutral, third-party aggregator of infrastructure data can both hold that information tightly and produce accurate and granular coverage maps from it—maps that are much more accurate than the current Form 477 process yields.

Another important function that a clearinghouse entity should play is on-the-ground field validation of coverage in geographic areas that warrant additional scrutiny, as well as areas where federal dollars are being invested to build out new infrastructure. This should involve the deployment of network engineers to visit communities, visually inspect infrastructure assets, conduct drive-testing of wireless networks, and make coverage adjustments to the maps accordingly. The public should also play an important role in providing feedback on the map, and their feedback should be used to both engage providers in refining coverage depictions, as well as helping to determine where field audits should take place.

We hope that Congress will consider a clearinghouse as a path forward to serve the public interest by informing federal decisionmaking on infrastructure investments, ensuring accountability for those dollars as they are spent, and protecting sensitive provider data all at the same time. By facilitating accurate and granular mapping, Congress can ensure that broadband on tribal lands is properly depicted and future federal efforts to close the digital divide are aptly targeted. We look forward to answering any questions that you may have.

Thank you.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO
GEOFFREY C. BLACKWELL

Tribal Priorities for FCC

In your testimony, you discussed the importance of FCC understanding tribal priorities on the ground level. You discussed a dedicated tribal budget and accessibility to correct data to understand the broadband access challenges in Indian Country. You also mentioned potentially writing a letter to the FCC regarding the importance of tribal access to broadband.

Question 1. How else can the Committee be helpful to ensure the FCC prioritizes tribal needs and funding?

Answer. I am happy to provide a bold answer to this question. I have been working in this arena for almost twenty years and, as I stated in my oral testimony, what I have learned about the challenges of the digital divide in Indian Country in those twenty years has taught me to be bold in my proposals. I firmly believe that Congress should create a Tribal Broadband Fund to, finally, spur infrastructure deployment on Tribal lands and in Native communities. This is not a new proposal, but it has new potential. The federal government and the Federal Communications Commission ("FCC") have been supporting the telecommunications industry with billions of dollars a year through the Universal Service Fund programs, including the High Cost Fund (also known as the Connect America Fund) and the Lifeline program. These billions have only brought us this far in Indian Country. When we learn what the actual figures are on broadband deployment in Indian Country, after the corrections are made in response to the GAO findings on the data being inaccurate, there will be an even greater impetus to focus on the problem that these currents programs have not, cannot, solve.

It is time for a new program—a targeted program with bold priorities to bring connectivity where the U.S. has not previously been able to bring it. It is time for a Tribal Broadband Fund, a program dedicated to actually delivering on the proverbial promise to Indian Country. Done well, the Tribal Broadband Fund will make all the difference and go a long way toward articulating both the federal government's commitment to, and faith in, Indian Country.

Again, this is a not a new proposal. It was needed before, but now its time has really come. Indian Country first coalesced around this proposal in response to the federal calls for input on a national broadband plan in 2009. The FCC accepted this input and first supported this recommendation in its 2010 National Broadband Plan, when it said:

> *Recommendation 8.18:* Congress should consider establishing a Tribal Broadband Fund to support sustainable broadband deployment and adoption in Tribal lands, and all agencies that upgrade connectivity on Tribal lands should coordinate such upgrades with Tribal governments and the Tribal Broadband Fund grant-making process.

Acknowledging the "unique connectivity challenges" facing Indian Country back in 2010, the FCC went on to explain this recommendation by stating that support from a Tribal Broadband Fund "would be used for a variety of purposes, including bringing high-capacity connectivity to Tribal headquarters or other anchor institutions, deployment planning, infrastructure buildout, feasibility studies, technical assistance, business plan development and implementation, digital literacy, and outreach."

While much progress in broadband connectivity has occurred in Indian Country since 2010, the most recent broadband deployment statistics on Tribal lands remain appalling. According to the GAO, the statistics are actually worse than the reports indicate. As I stated in my testimony, the most recent FCC data, contained in its *2018 Broadband Deployment Report* and released in February of this year, shows that Tribal lands continue to be left far behind from receiving the advanced services envisioned by Congress. For example, 36 percent of residents of Tribal lands lack access to fixed broadband service at the FCC's benchmark speed of 25 Mbps downstream/3 Mbps upstream ("25/3"), as compared to 7 percent nationwide. And the disparity grows even more striking on Tribal lands in rural areas, where 59 percent of residents lack access to what has become the high-speed Internet lifeblood of our 21st century economy, educational opportunities, health care, and public safety. And, as everyone now knows, and Tribal Nations have always known, it's worse than that.

There are broadband success stories in Indian Country, such as the Middle Rio Grande and Jemez and Zia E-rate consortia in our state of New Mexico that obtained universal service E-rate funding to bring Tribally owned fiber broadband networks to the schools and libraries of six Pueblo communities. While these successes are to be celebrated and will serve as a model for future E-rate consortia, such accomplishments are, sadly, much too few and far between in Indian Country. As long as the majority of federal broadband funding goes to incumbent carriers, incumbent thinking, incumbent models, and incumbent apathy, the innovation necessary to bring broadband infrastructure to many remote and cyclically under-privileged and economically distressed Tribal lands will lay fallow.

That is why a Tribal Broadband Fund is more necessary in 2018 than it was when the FCC recommended its creation in 2010. Inertia is often the greatest challenge and it is time to address it. There are those who will oppose a Tribal Broadband Fund. Some will oppose because it is not their idea, or they do not stand to benefit. Others will oppose because it is simply a change from the world in which they operate. Others will say it cannot be afforded, or it isn't necessary if some tweaks and changes are made to the current programs. Others will suggest yet another pilot program or commission another study. None of that matters, especially when compared to the enormity of the problem and the various dangers inherent in the lack of connectivity for these communities.

What we have now simply isn't working in enough places to make a measureable difference. Carriers and providers will find ways to adapt and derive value in a new subsidization and build out program. Pilot programs for broadband in Indian Country have done very little compared to the glaring enormity of the problem. It is time to be bold. And anyone who knows anything about the Universal Service Fund knows that it has the resources to afford the amounts it will take to bring about change. We are talking about a level of funding that may take many millions, but not many billions. I know this because, in 2009, three very active inter-Tribal organizations then involved in developing responses to the National Broadband Plan docket also came together to develop a potential total figure for the amount that

a Tribal Broadband Fund would need to be successful. Although the organizations chose not to publish that figure at that time, those same organizations and the same cadre of Tribal telecom policy analysts could easily re-engage on the effort.

There will also be those who say that the FCC doesn't have the authority to create a new fund among its Universal Service Fund mechanisms. Although I personally doubt that, Congress can and should easily clarify this question before it is even offered. The onus should be placed upon those with the responsibility, and it should be a shared effort with Indian Country to develop such a fund. The FCC has some of the best regulatory communications attorneys, economists, and engineers in government, and with Congressional oversight and paired with the intellectual resources, research, and analysis capabilities of Indian Country and institutions dedicated to working with Tribal Nations to bring about a change in broadband deployment, I am confident that the development of a Tribal Broadband Fund can be well planned out, calibrated for operational efficiencies, properly funded, and created with the correct targets, abilities, and measurements for successful outcomes.

This will not be too simple or too easy a task, but it will be a very worthy and important task. Perhaps it is most important to state that the need for such a Tribal Broadband Fund, and its ultimate goals, is completely congruent with the goals of Universal Service itself. A substantial fund, targeted specifically to broadband deployment on Tribal lands, will bring 21st century connectivity to Tribal lands and Native communities that, but for such funding, will never see meaningful connectivity.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CATHERINE CORTEZ MASTO TO GEOFFREY C. BLACKWELL

Streamlined Application Process

Reading through the GAO report on partnerships I noticed many of the same concerns that tribal communities have are shared by those in rural areas more generally. Specifically, under section titled "Grant Application Requirements," the report says quote "Representatives from eight of the tribes we contacted told us that in general, the language included in the federal grant applications is difficult to understand or the administrative requirements of federal grants are burdensome." This is similar to concerns I have heard from others in both tribal and nontribal rural areas in Nevada.

Question 1. Do you believe streamlining the application processes for broadband programs would be helpful for encouraging broadband buildout?

Answer. Yes, I believe streamlining the application processes for broadband programs should be one important part of a comprehensive strategy to make broadband programs more accessible and, as a result, to encourage broadband deployment across Indian Country and other parts of rural America. In addition to streamlining application processes, I believe that this comprehensive strategy should be comprised of the following components: (1) strategic and timely review and processing of broadband funding applications; (2) technical assistance—before, during, and after broadband deployment; and (3) genuine and purposeful engagement and education.

A significant data point from the past is the experience and outcome of the American Recovery and Reinvestment Act of 2009. The Notice of Funds Available application strategy of certain federal agencies in response to the mandates of the Stimulus Act, especially when paired with a "shovel ready" project approach, did not help Indian Country. Not at all. The process to deploy on Tribal lands is simply more complicated, thus planning and technical assistance processes in Indian Country often take longer. Often taking the time needed to genuinely train and engage to develop good deployment plans and business models makes all the difference. Many Tribal Nations either already are, or have the genuine potential to become, the economic mitochondria in their regions, and it is time for lawmakers and regulators to recognize and engage on that potential.

Streamlining broadband funding application processes is a delicate balance between federal agencies' fiduciary responsibilities with respect to federal dollars and creation of a "gotcha" process for applicants. Often, a simple and inadvertent mistake dooms a new, inexperienced, or even veteran Tribal applicant to the rejection pile. It is often difficult for federal officials in Washington, DC to understand that those completing complex broadband applications undertake that task in addition to their regular, full-time jobs as Tribal planners, IT professionals, teachers, school or hospital administrators, or a myriad of other in-house Tribal professionals. While there have been incremental improvements over the years with some federal

broadband programs, such as the Federal Communications Commission's (FCC) E-rate program, there is much yet to be accomplished.

Strategic and timely review and processing of broadband funding applications is closely related to the current challenges associated with broadband application processes. The often extremely long and drawn-out application review period serves as a serious impediment to broadband deployment. Consider the FCC's E-rate program, for example. This very valuable and successful program still has serious challenges with timely review and approval of broadband applications for schools and libraries. Often, applications are not approved until well into, or at the end of, the program's funding year. The practical impact of this process is that applicants are forced to seek a waiver from the FCC or, in some cases, are automatically given an extra year to use the E-rate funding—both of which result in yet another year in which those schools and libraries continue to lack 21st century connectivity and all of its benefits.

Compare the current experience of E-rate with that of the Stimulus Act when, in my opinion, things simply moved too fast to be of impact to areas that had the worst effects of the digital divide. Had the agencies involved in the stimulus programs taken a deliberate, but calculated, amount of time to actively engage in consultation with Tribal Nations and other unserved communities about what projects could be possible with the help of a gauged amount of technical assistance and coordination, I believe a great deal more government investment in rural and Tribal lands would have resulted. I am familiar with what it takes to bring broadband projects together in rural and Tribal communities. City economics don't often work. With the Stimulus Act, "demand aggregation" was not a part of the planning—it was speed and impact. But the "bang for the buck" analysis went only so far. Technical assistance planning that engaged these communities to aggregate their core community institutions and other institutional users would have presented some compelling stimulus rural projects, in my opinion. But as it was, a majority of the actual infrastructure funding went to incumbents in areas where there was already a measure of broadband deployment.

There are many definable reasons as to why these areas of the country lack service, and projects based on simple economic measures, like population density, or on unrealistic timing, will always lack the indicators of success in rural and Tribal communities. These are areas where most corporations would not venture based on their own business models, so I have consistently encouraged federal lawmakers and regulators to envision new models and work closely with these communities to determine sustainable models that engage on the realities of their situations and that are based on more than simple economic puts and takes. Many Tribal Nations, responding to the lack of interest from for-profit companies and other outside entities, are forced to face the reality of somehow having to deploy broadband themselves. They have to confront the reality of their own ownership economics and, in their environments, federal dollars are essential. With few exceptions, no critical infrastructure has ever come robustly to Indian Country without significant federal involvement, investment, and oversight.

I understand that the federal government has a fiduciary responsibility with regard to federal dollars, but a better balance must be struck that helps both the process and the applicants.

Tribal Expertise

In the GAO report on partnerships one of the concerns mentioned is that tribes often do not have some of the technical expertise necessary to access some of the funding that is available. This is also a concern that stakeholders have raised with me as one of the major problems for getting some of this funding to where it is truly needed. The GAO notes that the Rural Utilities Services has provided some funding for technical assistance for applicants, funding that enabled RUS to address some of the barriers tribes face. However, according to the report, RUS has not adequately taken steps to identify or address the barriers tribes face when applying for RUS grant funding, including lack of expertise.

Question 2. What can the federal government do better to bring some technical help to tribes?

Answer. Providing specific and dedicated technical assistance funding for outside expert entities to work with Tribal Nations is a very important and productive step that the federal government can take to bring technical help to Tribes in the broadband arena. And this funding must cover all facets of broadband projects—before, during, and after broadband deployment. Such a mechanism would help the government ensure that federal dollars are being invested and utilized wisely and for the long-term benefit of Tribal communities.

While technical assistance provided directly by federal government agencies is always welcome, it cannot substitute for on the ground, side-by-side assistance and support. Largely located in Washington, DC, far from Tribal lands both geographically and culturally, government staffers generally do not live daily with the remoteness and the terrain issues that define many Tribal lands. This is not a criticism, but it is a fact. Providing Tribes with the necessary funding to choose those from whom they want to receive technical assistance will lead to broadband deployment that will benefit generations to come.

Question 3. Are federal workshops helpful?

Answer. Yes, federal workshops can be helpful, if planned and conducted properly and in partnership with Tribal Nations and communities. When I served as Chief of the FCC's Office of Native Affairs and Policy (ONAP), I overhauled the Commission's Tribal training program. In 2012, my team and I identified and implemented a paradigm that incorporated the following components: (1) consultation with Tribal Nations; (2) responsiveness to the needs and requests of Indian Country; (3) a targeted regional approach; (4) smaller but more engaged and vested audiences; (5) a far more interactive approach; and (6) a Native Learning Lab with laptop computers pre-loaded with training modules and dedicated staff members to answer individual questions and/or assist with regional issues. Perhaps most importantly, our efforts to consult with Tribal Nations to elicit their input and responses to our regulatory approaches were predicated on a measured amount of training and technical education. Telecommunications policy and regulations are complex areas, but are not insurmountable areas to understand with targeted and interactive training and education efforts. This approach was transformative to the FCC's policies and progress on Tribal government matters, and my staff and our team from across the FCC received accolades from remote corners of Indian Country.

Another key element to any federal workshop or Tribal consultation is the presence of actual decision makers on all sides. I found early on in my federal work that, when senior decision makers and policy experts from across the FCC actually stepped foot into Tribal workshops in Indian Country, it not only attracted the presence of elected and appointed senior Tribal officials, but it also engaged them in a meaningful way that a routine training did not. It built relationships and trust, and it informed many an effort first hand if the senior decision maker was present. My eyes were opened many times in such conversations, and I owe a debt of gratitude to many senior officials from both sides of those tables for what I learned from them in those interactions. It is imperative that Tribal workshops involve decision makers, not only trainers or outreach staffers.

I also cannot emphasize enough the importance of an interactive approach to any federal workshop. While presentation of materials and information is important, it is not enough. Quite the contrary—a shared federal/Tribal experience is necessary. The most popular segment of the FCC's consultation and training workshops during my tenure as Chief of ONAP was almost unanimously a panel comprised of Tribal leaders, IT directors, and other IT professionals. This panel discussed and debated broadband issues unique to their communities and engaged the audience in the discussion—which was educational and informative to both the conference participants and the FCC staff members in attendance.

Workshops, and the materials and issues presented, also have to remain fresh to remain relevant. Federal presenters must imagine themselves as participants in the audience and ask, "Why is what I'm hearing relevant to the challenges at home?" There are few things worse than hearing the same material, presented in the same way, time and time again. We also learned on numerous occasions that workshops coordinated among several federal agencies with broadband programs—such as the FCC, the Department of Agriculture, and the Department of Commerce—can make very effective use of the time and money of both Tribal Nations and the federal government.

Telemedicine

In Nevada, we've recently completed the Nevada Broadband Telemedicine Initiative. It has been a great example of a public-private partnership, including Switch, a Nevada tech company and the Nevada Hospital Association, as well as local and federal cooperation to improve the rural quality of life in the state. For example, when Desert View Hospital in Pahrump recently celebrated their connectivity they talked about how they are able to triage mental health issues via telemedicine without the necessary costs of transport to Las Vegas, as an example. I am very excited about this and how these applications can work for our native communities in Nevada, many of whom live hundreds of miles from the nearest population center.

Question 4. Is this any unique challenges for rural tribal communities accessing telemedicine that may differ from other remote places?

Answer. Yes, there are unique challenges facing Tribal communities. For example, access to broadband is much lower in Tribal rural communities than in non-Tribal rural communities. Recognizing the GAO's findings about the seriously inferior quality of the FCC's data, even what appears in the most recent reports is starkly severe. According to the FCC's most recent data, contained in its 2018 Broadband Deployment Report, 59 percent of residents of rural Tribal lands lack access to 25 Mpbs downstream/3 Mpbs upstream (25/3) broadband service. This dire statistic compares to another unacceptable statistic—30 percent of residents of non-Tribal rural areas lack access to 25/3 service. Again, according to the GAO study, this is an overstatement. It is a unique frustration that the only data we have is inaccurate. But nevertheless, it is clear that broadband deployment in rural parts of Indian Country is far lower than other parts of the nation, which presents a serious impediment to, among other things, accessing telemedicine.

In addition, the definition of "rural area" for purposes of certain federal broadband funding programs exacerbates telemedicine challenges in Indian Country. For example, the FCC's Rural Health Care universal service subsidy program defines "rural area" by using U.S. Census Bureau definitions. While perhaps making sense from Washington, DC, the practical reality in Indian Country is that many areas not meeting the FCC's definition of "rural area" are what anyone setting foot in these areas would determine to be rural. For example, there are several Pueblo communities in New Mexico that, while located between Albuquerque and Santa Fe, are about as rural as you can get. Yet, these Pueblos are deemed non-rural for purposes of the Rural Health Care program. Terminology that is not in line with reality can itself be termed a failure of government. The practical effect of failing to meet the FCC's definition of "rural area" means that many Tribal communities are precluded from the very subsidies that would facilitate access to telemedicine. A more reasonable definition, rooted in the reality of rural Tribal communities and rural America in general, would correct this ongoing error.

Rural Spectrum

In Nevada, we have two main metropolitan areas and the rest of the population lives in small towns and rural areas often separated by hundreds of miles. Tribal communities in these areas are not only separated by distance, but also by mountainous and remote terrain. Another challenge is that this land is almost always owned by the federal government, so we have a very unique situation in Nevada as we try to build out broadband to some of the rural and tribal communities that live in these areas. One of the issues that has arisen is that wireless spectrum works differently in mountainous areas than it does on flat land or in the city.

Question 5. What challenges that arise with getting the right spectrum to bring fixed wireless to these areas?

Answer. This is an area where I have chosen to spend a focused amount of time during my career, both as a federal regulator and a Tribal representative, always as a broadband policy advocate. Spectrum licensing and the access to spectrum is a key to unlocking the immense wireless divide that many communities in rural and Tribal regions experience. There are numerous challenges with providing access to spectrum and wireless coverage to Tribal and rural communities across the country, including:

- The lack of wireless services is where the biggest digital divide is occurring. The problem is not so much a lack of spectrum as it is a lack of access to spectrum.
- Large amounts of spectrum are warehoused and not built out by those who hold the spectrum licenses. Many Reservations have dozens of licensees holding spectrum over their lands but those licensees either decline to provide service or decline to sublease the spectrum to those who would build out.
- Potential sublease negotiations and discussions often fail before they even get a chance to begin. The FCC's secondary markets regulations are spongy. They lack due process and procedures that make it possible for parties, including Tribal Nations and smaller, more market sensitive carriers, to get genuine engagement from the license holders. These regulations do not include concrete guidelines or methods that would ensure actual subleases, through partitioning or disaggregation of spectrum, seeing the negotiation table, much less actual build out. Moreover, the FCC has not acted on proposals contained in its 2011 Spectrum Over Tribal Lands Notice of Proposed Rulemaking ("Spectrum Over Tribal Lands NPRM") that would augment Tribes' ability to sub-lease spectrum.
- The FCC regulatory notions of build-out to rural and Tribal lands should be overhauled and updated. Whereas wireless services were seen 25 years ago as a luxury and never a complete alternative option to wireline services, now wire-

less services are the primary method by which mobile citizens in rural and Tribal communities stay in touch.

- The licensing areas themselves need to be overhauled to attract and incentivize new entrants and new, more small market based approaches. Rural and Tribal community economics are not the economics of pure population density. More rural and Tribal community oriented models that engage communities at many levels, including their core community institutions, have a chance to succeed-if provided the potential that spectrum licensing holds. A license is a bankable asset that can bring the ability to attract investment.

- It is time to start looking to new entrants and new incentive strategies involving spectrum because it is clear that the larger national wireless companies will not build out to Tribal lands and rural communities. The FCC simply cannot incentivize carriers to go where, pursuant to their own business models, there is no economic incentive to serve. The FCC has tried to pay the wireless industries to build our for over 18 years, to no significant avail. Since 2000, for example, the Tribal Lands Bidding Credits program has not met with success. The offer was simple—work with a Tribe and build out to its lands to a particular level and the FCC will provide back to you the value of what you have spent in buildout in a credit for spectrum in the FCC's highest-bidder wins spectrum auctions. It was a groundbreaking approach in 2000, but it has been a failure at bringing any measurable buildout to Tribal lands. Why? Because, while the price of spectrum has gone up so far through any imaginable roof in the FCC's Auctions (see the results of the FCC's Advanced Wireless Spectrum 3 auction), Indian Country with all its challenges and relatively impoverished low population density continues to remain an unattractive area for the major wireless corporations. This is especially true with such significant federal regulation. It is time to recognize the need for new license based incentives.

- As a result, Tribes have been forced to look at ownership economics, making the difficult choice of providing service themselves and going into debt because no one else will provide service.

The solution to this enduring challenge and injustice is to make spectrum available and accessible to those who will use it on Tribal lands—smaller market sensitive companies, including most importantly, Tribal Nations themselves. Giving Tribal Nations spectrum, and empowering the opportunities of smaller market sensitive business models, is a necessary next step.

The FCC is rightly proud of its elaborate and largely successful wireless licensing framework. I shared in that pride for a significant portion of my career. But Indian Country and rural America were largely an afterthought in that framework. And when it comes to the effects of regulatory mechanisms, that framework has not led to better build out in Indian Country. In many communities, it is beyond laughable as to how bad the service is—it is actually dangerous. It is time to do something new and different.

In 2011, over 7 years ago, the FCC unanimously launched the Spectrum Over Tribal Lands NPRM. The FCC has yet to take any action on this NPRM but, among many proposals, there are multiple that are still quite relevant and viable. Among these, the FCC proposed a Tribal priority (similar in concept to the priority in has had in effect for the same time period for full-power commercial radio licenses) that would be made available only for unserved or underserved Tribal lands for qualifying Tribal entities, designated as such by the relevant Tribal government. For such Tribal lands within a geographic area covered by an unassigned license, the FCC sought comment on a proposal that a Tribal priority would permit a qualifying Tribal entity to proceed in licensing without proceeding to competitive bidding. This would greatly reduce the cost of initiating and providing service on Tribal lands. The rationale for this approach is the same for both full-power commercial radio licenses and wireless spectrum licenses because, in both situations, Tribes have a governmental responsibility for, among other things, public safety. Consider the wild fires in California and other western states, and the continuing critical and unmet need for interoperable communications across Tribal lands and rural America becomes even more dire.

The inability to access spectrum held under existing spectrum licenses via secondary markets negotiations processes, as discussed above, also continues to plague Tribal Nations. In its 2011 Spectrum Over Tribal Lands NPRM, the FCC sought comment on a Tribal proposal for the creation of a formal negotiation process through which a Tribe that had been refused good faith negotiations regarding a secondary markets transaction within a wireless licensee's geographic area of license could require the licensee to enter into such negotiations. This approach would prevent Tribes from being foreclosed from access to existing, unused spectrum

over their lands. If the FCC will not take the next steps, any steps, it is time for Congress to act to shake loose new thinking, or shake loose new action on these still highly viable options.

Congress and the FCC hold in their hands the solution to many of these spectrum challenges facing Tribal lands and rural America in the form of an open rulemaking proceeding. For all of the reasons discussed above, Congress should direct the FCC to take action on its 2011 Spectrum Over Tribal Lands NPRM to effectuate the Tribal Priority and the new secondary markets mechanisms.

Question 6. What challenges arise with getting infrastructure built on federal lands?

Answer. This is a difficult question to answer. Or rather, the answer could be so long and complex so as to recall memories of an old encyclopedia. As Tribal lands are federal lands, a large portion of my other answers are relevant here. However, in simple terms, there are two major areas in my experience that come immediately to mind among the many challenges. The first is having effective and reliable processes for the use of the federal lands, such as leaseholds, rights-of way, easements, and other such methods of legally deploying communications infrastructures. It goes without saying that these legal property law processes should be respected and followed, but it is important to note here that I have either witnessed or learned about the presence of communications infrastructure on dozens of Indian reservations that lack the proper federal authorization. It was saddening to see dark fiber on a reservation that was never known about or lighted because it was laid without the proper right-of-way. These processes must be prioritized for communications infrastructure. Federal land management agencies must engage a new element of their personas and recognize they have a responsibility to play a role in the deployment of broadband nationwide. Leaseholds and rights-of-way must be properly valued. Federal lands should be appropriately and properly made available to deployment, rather than stand as obstacles.

A related major area that comes immediately to mind is the coordination of efforts when federal lands are used. It could be a very good idea to re-convene federal interagency task force or working group efforts, but these should involve practice level experts who will contribute, not figureheads. Collocations of wireless infrastructures on federal towers should be made available, if not actually marketed. When trenches are dug for placement of infrastructure into the ground, the famous "dig once" ideology should be recognized and other deployments should be included as appropriate, as possible. "Dig once" is a simple concept, but can be challenging in practice.

Environmental and cultural preservation regulation as they apply to communications infrastructures is an area where I have spent a large amount of time. This is a complex and often-controversial arena. First, I believe one cannot turn one's back on the historic and cultural heritage of our communities. Reviews should be budgeted and accounted for in planning and programmatic funding. Secondly, I think the controversies should be placed in the hands of the experts, with the mandate to find middle ground. In the face of complexity and challenges to the environmental and cultural preservation review processes, there is an alarming trend to juxtapose those requirements against the goals of deployment and development.

In my opinion, this is a mistake. These are areas of governmental priorities that should not be balanced against each other. Instead, as much as possible, they should be harmonized. Connectivity should not come at the price of environmental and cultural preservation impacts. And while there are places that are simply too sacred to see a tower placed in their midst, or fiber trenched through, the cultural preservation process should be cognizant of the need and place that connectivity occupies in society. One must acknowledge a history of impact and loss of cultural resources and sites of religious and cultural significance in Indian Country. If Tribal preservation officials are leery of industries, it is not for no reason at all. These are areas where lawmakers and regulators should engage with experts, avoid the hyperbole in arguments, and avoid simply making rough policy cuts based on the outlier cases or the radical opposing viewpoints held by certain of those in industry and the preservation community. Lawmakers and regulators should seek to find the common ground, uphold the law, call out parties that offend or take advantage of the system, and reward those who participate or coordinate in the deployment of infrastructure that maximizes the potential for deployment and minimizes the potential for cultural preservation impacts.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO
PATRICK WEBRE

Tribal E-Rate Timeline

During the hearing, I mentioned that two E-Rate specific recommendations from the 2016 GAO Report on tribal broadband have not been addressed. When I asked about the progress on addressing those two recommendations, you replied that the FCC implemented the first recommendation; the program forms now contain guidance on what qualifies as "tribal." You also stated the USAC's tribal liaison encourages tribal applicants to identify themselves as tribal so it can track who is participating in the E-Rate Program, leading to more accurate data.

Question 1. What else has the FCC done to ensure further progress in addressing these two recommendations from the 2016 GAO report on tribal broadband?

Answer. The Commission implemented the first recommendation from the 2016 GAO Report (GAO–16–222) (i.e., to provide guidance on what qualifies as "Tribal" on E-Rate program forms) in funding year 2017. Specifically, the E-Rate program forms now include guidance about when a school or library should identify itself as "Tribal," and the Universal Service Administrative Company (USAC) has greatly enhanced its method for collecting this information by improving the Tribal "check box" in its system.

Regarding the second recommendation, the FCC has directed USAC to improve its IT systems for purposes of data collection and reporting about the E-Rate program, and USAC has made substantial progress in this area. For example, in November 2017, USAC rolled out its OpenData platform, which makes E-Rate program data-including data on Tribal schools and libraries-available to the public. It's available at *https://opendata.usac.org/*. We anticipate this data will be more informative as schools and libraries follow the new guidance on how they can identify themselves as "Tribal," and we expect this data will help the Commission assess its progress in ensuring that all Tribal schools and libraries have affordable access to broadband.

Question 2. When will we see accurate data from the E-Rate program in tribal lands?

Answer. The Commission remains committed to ensuring that all Tribal schools and libraries have affordable access to modern broadband technologies. To ensure that we have accurate data on all Tribal applicants within the E-Rate program, USAC's Tribal liaison encourages Tribal applicants to check the "Tribal" box on E-Rate applications so that USAC can better understand who is participating in the E-Rate program, provide relevant Tribal outreach and training, and assess the effectiveness of those outreach and training efforts. Educational efforts have included conducting monthly conference calls with Tribal applicants and multiple Tribal-specific training sessions on an annual basis; coordinating with Tribal organizations such as the Bureau of Indian Education, the Association of Tribal Archives, Libraries and Museums, the National Indian Education Association, the National Congress of American Indians, Native Public Media, and the Alaska Tribal Administrators Association; maintaining and updating a Tribal-specific reference webpage on USAC's website; and distributing newsletters tailored to the needs of Tribal applicants. To this end, USAC's Tribal liaison, in coordination with the Commission's Office of Native Affairs and Policy and Wireline Competition Bureau, has made significant strides in engaging Tribal governments and communities, explaining the relevance of the E-Rate program to eligible Tribal schools and libraries, and helping eligible Tribal schools and libraries successfully participate in the E-Rate program.

Challenge Process for Form 477 Data Collection

During the hearing, I mentioned the process for challenging data collected using Form 477. When Tribes challenge the data, Tribes endure a costly appeals process and often are unsuccessful. Tribes also report that this process is skewed in that the Industry controls the reporting of data.

Question 3. How many Tribes have appealed the data collected from Form 477?

Answer. The Commission uses FCC Form 477 to collect voice and broadband data from all facilities-based providers of mobile and fixed telecommunication providers. This data is used to produce reports of the state of voice and broadband coverage in the United States, as well as appropriately inform FCC policy decisions. As recognized in the current Form 477 rulemaking (FCC 17–103), the FCC currently collects information at the census block level, and the Commission is currently considering the best ways to improve the level of detail the Commission collects while appropriately balancing the costs and burdens on the companies submitting the information.

The semi-annual Form 477 collection currently does not have a formal challenge process as the collection is designed for providers of voice and broadband service to report where they can reasonably provide service upon a request from a customer. This data is then used to produce the various maps and reports the Commission provides on the state of voice and broadband service in the United States. When this data is used to inform the Commission's funding and policy decisions, the Commission appropriately considers the limitations of the Form 477 data. This has resulted in multiple formal challenge processes for Commission funding.

For example, in both the A–CAM (DA 16–842) and CAF II (DA 15–383) proceedings the Commission instituted a formal challenge process to the areas determined eligible by the models and Form 477 data. No Tribes or Tribal carriers participated in these challenge processes.

Although the Mobility Fund Phase II auction does not rely on Form 477 data (but instead separately submitted, standardized mobile broadband data), the Commission opened a window for challenges that lasted through November 26, 2018. Sixteen Tribal governments participated in the MF II challenge process (DA 18–1225).

In the Commission's April 2018 *Tribal Opex Order*, the Commission gave relief to carriers serving Tribal lands, but limited that relief to carriers that had not yet deployed 10/1 Mbps service to 90 percent or more of the housing units on the Tribal lands in its study area. Mescalero Apache Telecom Inc. has filed a petition challenging the Form 477 used to find that Mescalero Apache had more the 90 percent deployment.

Question 4. How many Tribes were successful?

Answer. With respect to MF II challenge process, on December 7, 2018, Chairman Pai announced that the FCC has launched an investigation into whether one or more major carriers violated the MF–II reverse auction's mapping rules and submitted incorrect coverage maps. The Commission has suspended the next step of the challenge process—the opening of a response window—pending the conclusion of this investigation.

With respect to the petition filed by Mescalero Apache Telecom Inc., on December 20, 2018, the Commission adopted an order granting relief to the carrier.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CATHERINE CORTEZ MASTO TO PATRICK WEBRE

Streamlined Applications Process

Reading through the GAO report on partnerships I noticed many of the same concerns that tribal communities have are shared by those in rural areas more generally. Specifically, under section titled "Grant Application Requirements," the report says quote "Representatives from eight of the tribes we contacted told us that in general, the language included in the federal grant applications is difficult to understand or the administrative requirements of federal grants are burdensome." This is similar to concerns I have heard from others in both tribal and nontribal rural areas in Nevada.

Question 1. Do you believe streamlining the applications processes for broadband programs would be helpful for encouraging broadband buildout?

Answer. Yes. In all of the Commission's rulemakings devoted to broadband buildout, the Commission focuses on how to best reduce regulatory burdens while ensuring consumer protections.

RUS and E-Rate

Looking at the recent GAO Report on partnerships on tribal lands, there is a focus on ways RUS could help tribes obtain funding to expand broadband deployment on their lands—including through RUS's grant program. I understand that there are 60,000 mostly rural K–12 Native students who attend federally-supported schools that do not have the broadband infrastructure required for digital learning in the classroom.

Question 2. Are any of you aware if there are ways that RUS grant programs could be leveraged to provide the matching funds for the FCC's E-Rate program in order to connect these students?

Answer. Yes. In the E-Rate program, the Commission will match, on a dollar-per-dollar basis, up to an additional 10 percent of funds for high-speed connection construction, so long as the connection meets the Commission's connectivity targets of at least 100 Mbps per 1,000 students and staff (users) in the short term and 1 Gbps Internet access per 1,000 users in the longer term as set forth in the *2014 First E-Rate Order* (FCC 14–99). Thus, if an E-Rate eligible Tribal school received RUS grant funding to construct a high-speed broadband connection, the Commission

would provide additional funding to match, on a dollar-per-dollar basis, up to 10 percent of the high-speed broadband connection construction costs, so long as the project provided broadband that meets the Commission's connectivity targets.

Rural Spectrum

In Nevada we have two main metropolitan areas and the rest of the population lives in small towns and rural areas often separated by hundreds of miles. Tribal communities in these areas are not only separated by distance but also mountainous and remote terrain. Another challenge is that this land is almost always owned by the federal government, so we have a very unique situation in Nevada as we try to build out broadband to some of the rural and tribal communities that live in these areas. One of the issues that has arisen is that wireless spectrum works differently in mountainous areas than it does on flat land or in a city.

Question 3. What challenges arise with getting the right spectrum to bring fixed wireless to these areas?

Answer. The Commission has worked diligently to make available additional spectrum for use in rural and tribal areas to reduce the cost of providing service. For example, through the broadcast incentive auction, we have repurposed 84 MHz of spectrum from the broadcast TV band to be used for advanced wireless use nationwide. The Commission also recently started an auction of 1.55 gigahertz of spectrum in the 24 and 28 GHz bands that will be essential to 5G deployment and other advanced services, and is working to facilitate an auction of the Upper 37, 39, and 47 GHz bands to further support these types of services. Furthermore, the Commission sought comment on opening a new local priority filing window for rural Tribal Nations in the 2.5 GHz spectrum band. Such a window would allow rural Tribal Nations an opportunity to access 2.5 GHz spectrum to address the educational and communications needs of their communities and residents on rural Tribal lands, including the deployment of advanced wireless services in areas that currently lack such service.

Question 4. What challenges arise with getting infrastructure built on federal lands?

Answer. The FCC generally has no direct role in land management agencies' decisions concerning infrastructure deployment on federal lands, but we have taken important steps to support government-wide efforts to reduce barriers to infrastructure investment and deployment. The FCC participated in an interagency working group formed in 2016 to streamline federal agencies' review, pursuant to the National Historic Preservation Act, of the effects of proposed communications deployments on historic properties. That working group's efforts culminated on May 24, 2017, with the Advisory Committee on Historic Preservation's issuance of a Program Comment that authorizes federal agencies to accelerate their processes for identifying and considering the effects of communications infrastructure projects on historic properties, and to exempt certain undertakings from historic-preservation review under specified conditions. And on January 24, 2018, the Broadband Deployment Advisory Committee (BDAC), voted to adopt the report of its Working Group on Streamlining Federal Siting, which recommended that all federal land-management agencies be directed to harmonize their application forms, fees, and procedures for environmental and historic preservation review, communicate more clearly with applicants during the review process, and prioritize their consideration of broadband siting applications such that all review be completed within 60 days.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TOM UDALL TO MARK GOLDSTEIN

Tribal E-Rate Timeline

During the hearing, I mentioned that two E-Rate specific recommendations from the 2016 GAO Report on tribal broadband have not been addressed. When I asked about the progress on addressing those two recommendations, you replied that you will get back to me on this and that the GAO does follow up on an annual basis.

Question 1. Is GAO aware of any FCC progress in addressing these two recommendations from the 2016 GAO report on tribal broadband?

Answer. The two open recommendations are from GAO–16–222 and state that FCC should (1) improve the reliability of FCC data related to institutions that receive E-Rate funding by defining "tribal" on the program application, and (2) develop performance goals and measures to track progress on achieving its strategic objective of ensuring that all tribal schools and libraries have affordable access to modern broadband technologies. On October 24, 2018, we requested an update from FCC on the status of its efforts to implement these recommendations. An FCC offi-

cial told us that our request was being reviewed by subject matter experts; however, FCC was not able to provide us with the requested information in time to be included in this response before the hearing record is closed. We will continue to actively work with FCC on the steps it is taking to implement these recommendations and will update the status on our website as appropriate.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CATHERINE CORTEZ MASTO TO MARK GOLDSTEIN

Streamlined Application Process

Reading through the GAO report on partnerships I noticed many of the same concerns that tribal communities have are shared by those in rural areas more generally. Specifically, under section titled "Grant Application Requirements," the report says quote "Representatives from eight of the tribes we contacted told us that in general, the language included in the federal grant applications is difficult to understand or the administrative requirements of federal grants are burdensome." This is similar to concerns I have heard from others in both tribal and nontribal rural areas in Nevada.

Question 1. Do you believe streamlining the application processes for broadband programs would be helpful for encouraging broadband buildout?

Answer. While we have not conducted any recent work necessary to answer this question, our work has shown that completing federal grant applications to obtain funding for broadband deployment can be challenging for tribes. As we stated in our September 2018 report, tribal officials we interviewed told us the grant application process for broadband infrastructure may be resource-intensive and time-sensitive, thus putting an administrative and financial burden on tribes. For example, some of the tribal officials we contacted cited difficulties preparing requirement application materials between the time a grant announcement was made and the submission deadline. Further, tribal officials we contacted from New Mexico and Oklahoma told us the constrained timeframes prevented them from effectively preparing a comprehensive application package.

Tribal Expertise

In the GAO report on partnerships one of the concerns mentioned is that tribes often do not have some of the technical expertise necessary to access some of the funding that is available. This is also a concern that stakeholders have raised with me as one of the major problems for getting some of this funding to where it is truly needed. The GAO notes that the Rural Utilities Services has provided some funding for technical assistance for applicants, funding that enabled RUS to address some of the barriers tribes face. However, according to the report, RUS has not adequately taken steps to identify or address the barriers tribes face when applying for RUS grant funding, including lack of expertise.

Question 2. What can the federal government do better to bring some technical help to tribes?

Answer. Dedicated funding and technical assistance grants have helped some tribes acquire the technical expertise they need to access broadband infrastructure funding. For example, RUS previously administered the Broadband Initiatives Program (BIP), authorized by the Recovery Act in 2009[1] to expand high-speed Internet service in unserved areas. In addition to providing funding to deploy broadband infrastructure, BIP included funds specifically for technical assistance. In our September 2018 report, we noted that 12 technical assistance grants went to tribal communities to develop regional plans to provide broadband service in rural areas that remain critically unserved. During the course of our review, RUS officials told us that RUS would need dedicated funding, such as that authorized by BIP, to provide technical assistance for tribes. The RUS officials believe that such technical assistance would help tribes overcome some of the barriers that they face in applying for RUS grants.

Question 3. Are federal workshops helpful?

Answer. During the course of our review, RUS officials told us they have held a number of external training and outreach events, such as workshops and seminars, with tribes over the past 5 years to provide information about RUS's broadband programs. For example, in April 2018, before the 2018 Community Connect grant's application deadline, RUS hosted a webinar on various requirements for grant applications. RUS officials told us that RUS's outreach efforts generally focus on specific

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[1] Pub. L. No. 111–5, 123 Stat. 115, 118–119 (2009).

programs and instructing potential applicants on program requirements and how to complete application packages. Although GAO did not conduct a formal review of the effectiveness of these workshops and outreach events, RUS officials told us they strive to make outreach efforts interactive so that there is two-way communication between the agency and tribes. In addition to workshops, RUS officials said they reach tribes through direct contact, telephone calls, emails, and joint outreach with FCC.

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