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RURAL BROADBAND: CONNECTING OUR COMMUNITIES TO THE DIGITAL ECONOMY

HEARING

BEFORE THE

SUBCOMMITTEE ON
RURAL DEVELOPMENT AND ENERGY

OF THE

COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY

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C O N T E N T S

Wednesday, May 17, 2023

RURAL BROADBAND: CONNECTING OUR COMMUNITIES TO THE DIGITAL ECONOMY

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U.S. SENATE
Subcommittee on Rural Development and Energy
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, DC.

The subcommittee met, pursuant to notice, at 3 p.m., in room 328A, Russell Senate Office Building, Hon. Peter Welch, chairman of the subcommittee, presiding.

Present: Senators Welch [presiding], Klobuchar, Stabenow, Tuberville, Boozman, Braun, and Fischer.

Also present: Senator Hoeven

STATEMENT OF HON. PETER WELCH, U.S. SENATOR FROM THE STATE OF VERMONT

Senator WELCH. Good morning. I call the hearing of the U.S. Senate Subcommittee on Rural Development and Energy to order. Today we are holding our Subcommittee's first hearing, and it is on the topic of rural broadband, that Senator Tuberville and I thought was of vital importance.

I would like to thank Chair Stabenow and Ranking Member Boozman, the Subcommittee Ranking Member, Senator Tuberville for their support in convening this hearing, and I really want to thank all our witnesses for making the trip here and sharing your experience and knowledge. You are on the forefront of getting broadband deployed.

Our overall job is to revitalize rural America, and the health of rural America. Our rural communities embrace strong values, they care about where they live, they care about the people they live with. They are the highest rate of enrollment in our military. We are proud of the values of rural America.

It is under stress from its agricultural economy, and it has lost a lot of its manufacturing base, and our goal is to do all we can to help revive that.

One of the big challenges in rural America is access to high-quality, high-speed broadband. It is absolutely essential. In pre-COVID, a lot of us had a debate with our urban colleagues. Post-COVID it is obvious that you cannot be in the 21st century without high-speed internet any more than you can be in rural America without electricity. One-third of rural Americans are unable to access broadband of 100 Mbps, and you have got to have speed. That is just above average speed for most internet users. When our communities lack access to quality internet, they are locked out of the

global economy and cutoff from critical services, and we want to change that. Workers have fewer opportunities, farmers and small businesses are isolated from new markets, and our kids are really limited in their educational opportunities.

We need a rural broadband that will do three things. One, it will have the high speeds, 100 Mbps. It has to be future-proofed in the buildout so that five or ten years from now, one or two farm bills later, we are not in the same position, lagging behind urban America. Anything short of that and we will be back here doing this all over again.

Second, we have got to make Federal broadband efforts more effective and efficient. It is one thing to get the money; it is another thing to spend it wisely, and make it effective, and get that broadband service to the last farm on the dirt road in your small town.

Finally, USDA needs the tools and flexibilities to address the long-term, scalable broadband needs of underserved rural communities, and all of our communities are somewhat different. That is what makes the challenge so great. Even in Vermont, which we will hear about, we have got places where there are lots of mountains. We have got places where it is kind of flat.

Today along with Senator Marshall, I introduced the Reconnecting Rural America Act. That bill, No. 1, would establish 100 Mbps symmetrical buildout speeds; No. 2, set unserved definitions to ensure the program is reaching those who need broadband the most and not building where it is not needed; next, expand USDA's authority to coordinate with other Federal agencies; and finally, provide sufficient authorization levels to address the overwhelming demand that the program currently experiences.

Now the Northeast Kingdom—and this is on the top of effective implementation—is a small section, beautiful section, proud section of Vermont, and it serves many underserved homes. Today, the Northeast Kingdom broadband, represented by one of our witnesses, I am happy to announce, received an award of $17.5 million from USDA's ReConnect program to address the broadband needs of this region in Vermont. The money is going to go a long way toward helping us in the kingdom.

We have confidence that the NEK, Northeast Kingdom, Broadband will get it done right. That is because they are based in their community. Vermont has established Community Union Districts that are voluntary associations of towns. It is not based in Wall Street, where hedge funds smell the money and come in, walk away, and do not get the job done.

We have got a lot to do and a lot to hear from. We can do this. You know, rural electrification—that was 100 years ago—it took about 15 years, and that was a social commitment, not a business decision. It was based on a recognition by Congress of the importance of rural America. We have got to do that again.

I really want to thank all the witnesses who are here, and I am now going to turn to my counterpart, my colleague in this effort, and I have really enjoyed working with you and your staff, you have been terrific, Senator Tuberville.

STATEMENT OF HON. TOMMY TUBERVILLE, U.S. SENATOR FROM THE STATE OF ALABAMA

Senator TUBERVILLE. Thank you, Mr. Chairman. I look forward to working with you. I think we can get a lot done. A special thanks to all the witnesses here today, especially Mr. Fred Johnson, who I have known for a while. Thank you for coming all the way from Alabama.

You know, I look forward to our discussion, and as we all know, this is not just for Alabama but for all over the country. Rural broadband is important. We have had the internet for years, and we are struggling in that area. In today's day and age, access to reliable internet service is not a want—it is a need. It is vital. Rural communities cannot compete, much less survive, with urban areas unless they have broadband internet.

If the pandemic taught us anything, it is that Americans need reliable and fast internet to work, take online classes, and complete homework, have virtual meetings through Zoom, and participate in telemedicine. Additionally, our farmers rely on internet access to operate their equipment and operations. The technology of farming is constantly changing, and our producers need resources to remain competitive. Modern farming utilizes precision agriculture technologies, tractors and combines with GPS systems and irrigation equipment that can be managed remotely from smartphones and tablets. Without internet access, our farmers cannot farm, and our rural communities will get left behind.

In Alabama, 55 out of the 67 counties are considered rural. Out of the State's population, 43.6 percent live in rural areas.

Rural development programs aim to prioritize investment in the most rural and unserved areas across the country, which are often economically depressed. In Alabama, this region is called the Black Belt, which consists of 19 counties in the western part of the State. The Black Belt is the home to nine out of ten most economically challenged counties in the State. These areas are in critical need of support and development.

A vital step in developing our rural communities is ensuring access to reliable broadband service, and that is why I am here today to advocate not only just for Alabama but for the entire country. We need to work on this farm bill for rural internet. Two key considerations that need to be kept top of mind throughout our discussion of broadband in the farm bill: prioritizing unserved areas and considering feasible buildout speeds to provide reliable service.

In their latest funding proposal, the USDA increased requirements for sufficient broadband access from speeds of 25/3 Mbps to 100/20 Mbps, download and upload speeds. Yet, about 10 percent of Alabamians do not have access to download and upload speeds of 25/3. Furthermore, only 34 percent of my State has access to fiberoptic service, which can supply 100/100 symmetrical speeds. How are we supposed to close the digital divide if we are leaving our rural communities in the dust?

This Subcommittee cannot focus solely on providing fast speeds when we continue to have areas with no service at all. These service gaps are what we should consider when allocating resources. We, as a Subcommittee, should consider all technology options to deliver broadband to our rural communities. While fiber deploy-

ment has been hugely successful in Alabama, other States may have positive experiences with other types of deployment, given various terrains and local needs. Regardless, we should advocate for deployment of at least 100/20 speeds across the country.

Turning our attention to the unserved areas is the best way to develop rural communities. We must prioritize broadband deployment to unserved and underserved areas. With this game plan we ensure efficient use of taxpayer resources and do not leave communities behind.

I look forward to working with my colleagues to craft effective broadband policy that benefits all Americans.

Thank you, Mr. Chairman.

Senator WELCH. Thank you, Senator Tuberville, and without objection I will introduce into the records two letters, one from Rural Development and another from a group of interested parties on broadband.

[The letters can be found on pages 80–85 in the appendix.]

Senator WELCH. Now I would like to introduce the witnesses, and I will be quick because we want to hear from them, more than about them.

Roger Nishi is the Vice President for Industry Relations at Waitsfield and Champlain Valley Telecom in Vermont. He currently serves on the board of directors for the Technology Association of New England and Telecom Insurance Group. He has 36 years of experience. Thank you, Roger, for being here.

Christa Shute is the Executive Director of NEK Broadband in St. Johnsbury, Vermont. She has been a leader in broadband since 2009. She has 20 years of management experience. Her organization, NEK Broadband, serves one of the most rural parts of our State, and she recently secured the State's first-ever ReConnect award, as in today. Christa and her team will make excellent use of this funding. Congratulations.

Senator Durbin is not here. He wanted to introduce Mr. Shekleton, but he is unsparing in his praise for the work you have done. Mr. Shekleton is the Director of Broadband Operations at Jo-Carroll Energy. That is a rural electric, natural gas, and broadband facility in Elizabeth, Illinois.

Senator Tuberville, would you like to introduce Mr. Johnson and Mr. Forde?

Senator TUBERVILLE. Yes, I will. Thank you, Mr. Chairman.

I am proud to introduce Mr. Fred Johnson of Rainsville, Alabama. Fred has served as the President and CEO of Farmers Telecommunications Cooperative in Rainsville since 2002. Fred is renowned throughout north Alabama for his work to bridge the digital divide and put Alabama on the map. His company, Farmers Telecommunications Cooperative, or FTC, is the State's largest member-owned provider of telecommunications services. FTC was also the first Alabama company to deploy a widely adopted gigabit internet access service that now delivers multi-gig speeds throughout their service area.

Fred's career spans 41 years in the fields of rural communications, telecommunications, rural electrification, and public accounting. He is a member and current Vice President of the board of directors of Rural Telephone Finance Cooperative. Previously he

served on the board and as the Chairman of The Rural Broadband Association.

He received his undergraduate degree from Southern Wesleyan University and his graduate degree from the University of Tennessee, which we will not hold against him, Chattanooga. He is currently pursuing a doctorate in business administration from Southern. I am grateful for the hard work he has done so far in deploying broadband in Alabama.

Mr. Forde, thank you for being here. Next, I am proud to introduce Mr. Forde as a guy from North Dakota. They have got a pretty good football team. Special thanks to Senator Thune and his office for facilitating the connection to have Justin with us today.

Justin is the Vice President of Government Relations for Midcontinent Communication, or Midco, and has worked for the company since 2014. Midco is the leading provider of reliable high-speed internet via fiber and fixed wireless technology across the West and Midwest. Before joining Midco, Justin served on my colleague, Senator John Hoeven's staff, so he is very familiar with Senate hearings and the Ag Committee.

Justin has served on the board of several organizations, nonprofits, including Greater North Dakota Chapter of Minnesota Cable Communications, and so on. He earned his bachelor's degree from Northern State University and master's from Florida State. Glad you're here.

Senator WELCH. Thank you.

Roger Nishi, you are recognized for five minutes.

STATEMENT OF ROGER NISHI, VICE PRESIDENT, INDUSTRY RELATIONS, WAITSFIELD AND CHAMPLAIN VALLEY TELECOM, WAITSFIELD, VT

Mr. NISHI. Good afternoon, Senator Welch, Ranking Member Tuberville, and members of the Subcommittee. Thank you for holding this hearing and asking me to testify today. My name is Roger Nishi, and I am the Vice President of Industry Relations at Waitsfield and Champlain Valley Telecom in Vermont.

WCVT is a 119-year-old, family owned, third-generation, community-based rural broadband provider serving the Mad River Valley and Champlain Valley regions of Vermont. WCVT strongly believes in the USDA programs. We have had a relationship with USDA and RUS and the predecessor, REA, for many years. In the early 1960's, the Haskin family literally "bet the farm," and when no one else would give them a loan locally, signed a 25-year loan with REA for $400,000 to install new direct-dial telephone equipment. Seven years later, they went back to REA and secured $640,000 to bring single-party service to all of their customers, the first in Vermont to do so.

Jump forward to 2010. WCVT was the recipient and awarded $5.6 million from the RUS Broadband Initiative Program to bring fiber to approximately 740 locations within the company's service area, to areas where DSL just did not make sense.

Over the years our network has evolved, from cord board operators to the computer digital switches of today, with internet from dial-up to the various flavors of DSL, and now our main focus is

on fiber. Each progression has brought better service or greater speeds to our customers.

As we continue to evolve our networks and connecting our communities, there are several ways that USDA can help move our rural networks forward.

No. 1, future-proof the networks in rural America by building fiber. This can be accomplished by keeping the minimum speed for eligible projects administered by USDA to receive funds at the 100/100 level. 100/100 means fiber. We have been saying fiber is our future at WCVT for many, many years, and the same needs to be said of all rural areas. Other technologies have limitations, do not have the future capacity of fiber, and cannot keep pace with the ever-expanding demands of our customers. Investing in fiber is the best money spent and the most effective use of Federal funding.

No. 2, experience matters, and track records of success should be taken into consideration. We believe that USDA programs should prioritize funding with those serving rural areas and those that have shown that they can do the job, and also those that worked with USDA in the past with loans. They should work with them also. One thing that I would like to note is any grant application scoring should not penalize commercial companies.

No. 3, we need to limit overbuilds by having all of the organizations work together to ensure that there are not overbuilds and there is not duplicative funding. That is just an inefficient use of Federal funding when we do so. A key to this is accurate maps, and those accurate maps will help make sure that we do serve those that are unserved today.

Further, we need to limit project delays due to permitting. Too many times today jobs are slowed down because of the permitting process. We need to make sure that there are time limits put on approvals and also adequate staffing to do to the reviews.

While the USDA programs help build networks and support community development, I do need to mention other programs that are not part of your jurisdiction but work hand-in-hand with the grants and loans programs.

Universal service funds, which help ensure sustainable networks. The FCC's A-CAM and CAF-BLS universal server programs complement loan and grant funding. The funding contributes to construction budgets, helps maintain, sustain, and upgrade networks to help keep rates reasonably affordable for all customers. Such funding helps make everyone's business case for many rural companies. I encourage you all to call the FCC and urge them to take immediate action on extending A-CAM and CAF-BLS companies.

The next item, do not tax grants. Pass S. 341. Thank you for cosponsoring that, Senator. Right now if Waitsfield receives grants, approximately 21 percent will go to pay taxes. It is really discouraging knowing that that money could be going to build broadband to more rural customers.

Finally, I am running out of time so I will be really quick, the Affordable Connectivity Program. We do need to make sure that this is sustained and funded, and over time, increase that $30 amount that goes to consumers because $30 does not make broadband always affordable.

Thank you for hearing from me today, and I appreciate the time. Thank you.

[The prepared statement of Mr. Nishi can be found on page 32 in the appendix.]

Senator WELCH. Thank you very much.

Christa Shute.

STATEMENT OF CHRISTA SHUTE, EXECUTIVE DIRECTOR, NEK (NORTHEAST KINGDOM) BROADBAND, ST. JOHNSBURY, VT

Ms. SHUTE. Thanks very much. Chair Welch and Ranking Member Tuberville and members of the Subcommittee, thank you for the opportunity. As the Executive Director of NEK Broadband I am here to share my experiences with the USDA development programs and why I believe the continuation of ReConnect is so critical to the economic vitality of rural America, and some of my top concerns and recommendations for your consideration.

We are one of ten communications union districts in Vermont. We are formed of 56 towns in the northeast portion of the State. It is an exceptionally beautiful but rugged and rural area. We applied and received, as was announced just now, the ReConnect award. That $17.5 million is part of a $23.5 million project. It will bring 321 miles of infrastructure across 22 of our most rural and underserved towns, to serve 3,300 people, 94 businesses, 183 farms, and 11 educational facilities. A huge thank-you to the work of the USDA staff as they have been helpful and responsive.

We all know the importance of broadband and how critical it is to our rural communities. I will just share a couple of real experiences.

Teachers have remarked on the dramatic and heart-breaking difference between those that were able to continue learning and those that were not due to the lack of broadband access, and this continues as we move more and more to digital learning.

The other key for most of our rural areas are the vast distances that they must travel for health care. This week, Blue Cross Blue Shield stopped reimbursing for telephone visits, which means we must develop access to broadband and create affordability for everyone, in part, through continued authorization of the Affordable Connectivity Program, because the need extends beyond the pandemic.

ReConnect is necessary because the BEAD program simply will not be enough to achieve universal service. Like many other programs, BEAD focuses on the lower costs per address for a competitive grant for the lower costs per address, and as a result it is going to favor the more populated rural areas. It is going to go to rural America, but it is going to go to the more populated areas. This is going to exacerbate the issue in the most rural of rural America.

The competition for ReConnect funds, on the other hand, is based on characteristics that support our most rural communities and addresses the true cost to get to some of these sparsely populated areas. I applaud the Appropriations Act providing $365 million for Round 5 of ReConnect, but it undermines two key characteristics of the ReConnect program and makes it virtually unusable for all

of Vermont and a lot of other areas that have spotty coverage through wireless.

First, those eligible areas in ReConnect 3 and 4 were based on 120 Mbps service, and the act requires that 90 percent of the area have 25/3 service. This will disqualify Vermont and other areas with fixed wireless.

Second, ReConnect 3 and 4 focused on long-term infrastructure investment. The USDA understood that we needed to make long-term investments so that we did not need to make them again, and that means building a standard of 100 Mbps symmetrical by building with fiber.

My top recommendations for the existing ReConnect program include the definition of rurality, the importance of public infrastructure, and the application process. Currently, ReConnect heavily favors some parts of the country over others, primarily the two pieces are the 100 miles from a city or town with a population of 50,000, which is most of the Eastern Seaboard does not qualify, and with less than six people per square mile.

The reality is that rurality is not a straight line. "You can't get there from here" is a common New England expression because it can be complicated to get from one point to another, due to topography, terrain, and weather. Similar challenges exist throughout the Appalachian Range and the Rockies. Consider providing rurality points based on population per town, for example, with towns with less than 5,000 people.

For public infrastructure, that is currently a point structure under ReConnect, and it is an important one. When we invest in public infrastructure, we are reinvesting our dollars over and over again. We believe in public-private partnerships like we have with Waitsfield and Champlain Valley Telecom, where the municipal owns the underlying infrastructure and leverages the expertise of a private company. We can protect our grant dollars and create public accountability by ensuring that municipalities have access to these funds.

I do have top recommendations around the application process, particularly that I would love to share with you, and I can do that in the question section, perhaps.

I would like to conclude by saying that broadband is fundamentally an equity issue. Rural areas, and particularly low-income residents need access to broadband for the basic of education and telehealth. I support the ReConnecting Rural America Act, with the modifications that I noted in my testimony.

Thanks very much.

[The prepared statement of Ms. Shute can be found on page 40 in the appendix.]

Senator WELCH. Thank you.

Mr. Shekleton.

STATEMENT OF JESSE L. SHEKLETON, DIRECTOR, BROADBAND OPERATIONS, JO-CARROLL ENERGY, INC., ELIZABETH, IL

Mr. SHEKLETON. Chairman Welch, Ranking Member Tuberville, and members of the Subcommittee, thank you for inviting me to testify today. My name is Jesse Shekleton, and I serve as Director

of Broadband Operations for Jo-Carroll Energy, a rural energy and broadband cooperative headquartered in Elizabeth, Illinois.

Jo-Carroll Energy formed in 1939, leveraging a USDA loan to help close what then would have been the electric divide. Since then, Jo-Carroll Energy has grown to provide reliable and affordable electric and natural gas services to a combined total of more than 26,000 families, farms, and small businesses in northwest Illinois.

Jo-Carroll also provides vital broadband service to nearly 4,000 members, and growing fast. USDA's ReConnect and Community Connect programs have been key contributors to this buildout in rural northwest Illinois.

As a not-for-profit, member-owned cooperative, Jo-Carroll Energy is locally controlled and strives to keep its services safe, affordable, and reliable. In 2008, we began offering fixed wireless broadband services to our members, but due to issues with reliability, capacity, and intermittency we have now pivoted to building a fiber-only network. We have determined that fiber is the most effective and economic technology to provide robust broadband to our rural communities. Fiber allows us to ensure that the investments we make in this network today will be able to meet existing and future utility needs as well as improve the economic outlook at and quality of life in the rural communities we serve.

Through USDA's ReConnect and Community Connect programs, Jo-Carroll has been able to expand its broadband footprint to connecting areas of eight public school districts, three fire stations, and numerous farms, families, and businesses with fiber broadband. Fiber enables also, as a utility, to better manage consumer demands for electric and natural gas service during peak times as well as expand other smart grid offerings to our members.

Improved connectivity also provides a massive benefit to one of the largest economic sectors in Illinois, agriculture. Precision agriculture has grown in recent years, with farmers and ranchers leveraging a wide range of connected devices to reduce input costs and improve yields. As precision and smart ag technologies expand to include autonomous tractors, soil sampling, or field mapping, demands for bandwidth on the farm will continue to grow, underscoring why a robust and scalable connection is essential.

As Congress considers how to best support rural connectivity through the upcoming farm bill, I would like to offer a few suggestions.

Congress should prioritize scalable, future-proof networks in any future rounds of Federal funding for broadband. Consumer and technology demands for increased internet speeds continue to grow and are trending toward a need for multi-gigabit service by 2030. Prioritizing symmetrical speeds and network technologies that are scalable will ensure that rural and remote areas are able to meet consumer needs, both now and into the future.

Additionally, Federal programs, including those managed by USDA, do not move quickly, and there are long lags in deployment. It is often months, many months, from the time an award is announced to the time construction is started. Permitting issues, supply chain delays, challenges in finding a qualified work force, and inflation are commonplace and can be detrimental to the original

feasibility of a project. Streamlining the permitting processes will better align project timelines with the consumer needs of today.

More than 80 years ago, not-for-profit electric cooperatives partnered with the USDA to bring electric service to areas that were challenging and too costly for investor-owned utilities to serve. Today, electric cooperatives are once again partnering with USDA to bring vital broadband services to those same areas.

On behalf of Jo-Carroll Energy, I want to thank the Chair and Ranking Member for inviting me to testify today. Reliable, scalable internet access is critical to the growth and economic development of rural communities in northwest Illinois and across the country. Jo-Carroll and the rest of our Nation's electric cooperatives look forward to working with you on our shared goal of connecting all Americans with a robust and reliable internet connection.

I am happy to answer any questions you may have. Thank you.

[The prepared statement of Mr. Shekleton can be found on page 53 in the appendix.]

Senator WELCH. Thank you. Thank you very much.

Now Mr. Johnson, you are recognized for five minutes.

STATEMENT OF JAMES FREDERICK JOHNSON, CEO, FARMERS TELECOMMUNICATIONS COOPERATIVE, INC., RAINSVILLE, AL

Mr. JOHNSON. Chairman Welch, Ranking Member Tuberville, distinguished members of the Committee, thank you for this opportunity.

I am old enough to have had the unique experience of being challenged by a number of the wise men and women who are responsible for the early rural development of our area. They challenged me to carry on that effort. To that end, I am humbled and grateful to have the opportunity to speak to you today about this particular subject. The reason is simple: what you do here makes a difference in the lives of the people I serve and millions like them across the land.

The unprecedented commitment of the U.S. Congress to expand the deployment of broadband holds great promise for the Nation, yet the task is substantial and there are pitfalls to be avoided. Important lessons drawn from the prior successes must not be forgotten. The farm bill affords you an opportunity to ensure they are not. I hope that my comments today are helpful in that regard.

First and foremost, may I suggest that the U.S. Congress demand that broadband resources provided under the farm bill be used for getting broadband to those who do not have it? The goal is not to duplicate existing investment or to generate artificial competition in areas that already cannot support even a single, unsubsidized competitor. If scarce taxpayer resources are to be efficiently used, those tax dollars must go first to those who need it most.

Commonly, USDA funding has required that at least 90 percent of a proposed service area be incapable of receiving service equal to or greater than 100 megabits downstream and 200 Mbps upstream. Now arguments may be made to lower this eligibility threshold but only in view of one important fact: the lower the threshold, whatever it may be, the higher the probability that taxpayer dollars will be used for duplicating networks rather than serving the unserved, and further imperiling the ability of existing

providers to economically leverage their existing networks in areas where others will not provide service.

By focusing more granularly on proposed funding areas, Alabama has a good track record in this regard. Even would-be competitors have rallied around a program that does not foster conflict among providers but, rather, enables service to the truly unserved. Indeed, free from imminent threats of government-funded competition, two of my Alabama colleagues, Pine Belt Telephone and Communications, and the Hayneville Telephone Company have just utilized a mix of USDA funding and private equity for what I think is, collectively, the largest single investment yet in broadband infrastructure in some of the most economically challenged areas of Alabama, in fact, two of the counties to which Ranking Member Tuberville referred in his opening comments.

I should also note that these two colleagues are family owned, community-based providers with a history of supporting their community. The rule should not discourage the participation of companies like that in this program.

Out of concern for time I will confine the balance of my remarks to five quick points.

First, 100 megabits symmetrical broadband should continue to be USDA's minimum standard services for funding and new development. USDA investments should support technology that can be readily upgraded to deliver the fastest speeds over the long term. Some technologies may appear cheaper to deploy now, but they will be unable to keep pace with consumer demand.

Two, Federal grants must be entirely spent for designated purposes and should not thereafter be subject to Federal taxation. That is illogical, and we appreciate the efforts at co-sponsoring on S. 341.

Three, meaningful improvement in permitting, at all levels of government, is essential for efficient deployment.

Fourth, we encourage you to give RUS the ability and flexibility to allow concurrent expenditures of grant funds and matching dollars. This will eliminate potential financial hardship, yet it will preserve the much-needed requirement that grant recipients be sufficiently invested in the program.

Finally, we strongly urge coordination of Federal resources across all aid platforms and programs. That is absolutely essential. Remember that basic voice telephone connectivity, including access to 9–1–1, is still essential for many areas that do not have reliable cell service, a fact that is often overlooked. Support the efforts of your colleagues in this regard to modernize the future of the Federal Universal Service program. It is absolutely essential to preserving much of what has been done.

Albert Einstein once said this: "Everything should be made as simple as possible but never more so." In the frame of that reference, please remember that the successful deployment of broadband in rural America is not a singular model of identical blocks. It is a tapestry involving the efforts of diverse existing and would-be providers. I encourage you to maintain your focus on the customers in our country who have no or inadequate service. Take note of the lessons learned by successful providers. It will go a long way to keeping rural Americans fully connected to our world.

Know that I and the people I serve appreciate your leadership on this issue. Thank you for your service and for allowing me to address you today.

[The prepared statement of Mr. Johnson can be found on page 58 in the appendix.]

Senator WELCH. Thank you very much.

Now our last witness, Mr. Forde.

STATEMENT OF JUSTIN FORDE, VICE PRESIDENT OF GOVERNMENT RELATIONS, MIDCO, WEST FARGO, ND

Mr. FORDE. Chair Welch, Ranking Member Tuberville, and members of the Subcommittee, thank you for inviting me here to discuss Midco's experience with Federal broadband funding programs. My name is Justin Forde, and I am the Vice President of Government Relations for Midcontinent Communications.

Nearly 500,000 residential and business customers count on Midco services across five States: South Dakota, North Dakota, Minnesota, Kansas, and Wisconsin. The majority of the approximately 450 communities we serve are very rural, with most having populations closer to 500 than 5,000.

The last few years have put a renewed spotlight on the importance of broadband connectivity for all Americans, and at Midco we have risen to the challenge of connecting as many of our friends and neighbors as possible. We have invested over $765 million in the last 6 years to extend and upgrade our network. In 2021, we launched an initiative to invest another $500 million to future-proof our existing network and to expand to new communities, and we are making great progress. Today I can report that 100 percent of Midco's wireline customers are receiving speeds that exceed 1 gig, many already receiving 5 gig speeds for those customers.

Our growth has included important progress in reaching previously unserved areas, thanks to our partnerships with the FCC through its CAF II and RDOF auctions, as well as our partnerships with the States we serve. For example, we were recently awarded two grants through the Minnesota Office of Broadband Development, totaling over $2.5 million, for deployments to improve connectivity in Isanti County, in lakes country in Minnesota, and in Forest Lake, along the St. Croix River. Two grants in South Dakota, one in the very tough-to-serve Black Hills area, and one along the Missouri River, west of Yankton.

We are committed to our rural communities and believe that they are being overlooked by many programs today. Unserved communities lack broadband for one reason above all others—they are expensive to serve. Programs like ReConnect could help companies to incentivize to build, but recent changes to the program have significantly shifted the focus away from truly unserved areas in rural America.

This leads to my first recommendation. The ReConnect program should absolutely refocus on unserved areas. While rural areas originally had to have 90 percent of households unserved to be eligible for funding, the most recent round reduced that threshold to a mere 50 percent of households. This decrease encourages overbuilding and does not make good use of government funds. For example, we were recently overbuilt by two ReConnect awards in

rural South Dakota, even though we were building those areas funded by Connect America Fund Phase II FCC auction awards. What this stops is there are still other parts of South Dakota who still lack broadband while two providers are receiving funding from USDA, and one from the FCC, to serve the exact same areas.

Similarly, the level of broadband service to be required for an area to be considered served has been raised from 25/3 to 100/20. As a result, areas that already had robust broadband service are suddenly eligible as unserved. Applications for ReConnect have focused on these areas which are easier to serve and near population centers. While they get new service, other areas just down the road that are rural struggle to attract broadband deployment, and those truly rural and tough-to-serve areas still remain without broadband.

Second, broadband funding programs must be technology neutral and encourage broad participation. Certain communities present topographical or other challenges that make building wireline a poor solution. We are still able to reach many of these rural communities because we edge out from our fiber network using fixed wireless technology. The build-to speeds often required to obtain funding mean we often cannot apply if some portion of the network needs to be fixed wireless. Programs need flexibility to accommodate different technological solutions to take care of our customers and your constituents.

Third, barriers to participation need to be as low as possible. Even with recent improvements, the amount of data required for ReConnect applications is vastly excessive. Some of the rules, including the government having a first lien on assets, simply make this program unworkable for private capital.

Finally, Federal and State agencies absolutely must coordinate to ensure a common understanding of unserved areas. Maps used for broadband grant funding should be consistent and should show all areas where funding has been awarded, whether that be Federal, State, or local, or even if facilities have not yet been constructed. Entities should not be able to "forum shop" for the least restrictive program. In one case, we have successfully challenged a grant from a provider who already lost RDOF and CAP-II auctions to build under the ReConnect program, only to have the applicant still go for a fourth funding source to serve the same area and be awarded it under the ARPA Capital Projects Fund.

One promising piece of legislation that would address many of these issues that we have identified is the Rural Internet Improvement Act of 2023. It would make many key improvements to the ReConnect program, focus funding on unserved areas, reduce those participation burdens, and require tighter agency coordination. These are key changes so that broadband actually reaches the folks in rural America that need it faster.

I commend the Committee for its focus on ensuring that the billions of dollars spent on broadband deployment benefit all Americans, including those in rural America.

Thank you again for inviting me here today, and we look forward to working with you on these important issues.

[The prepared statement of Mr. Forde can be found on page 64 in the appendix.]

Senator WELCH. Thank you very much. Thank you to all of the witnesses. We will begin now with five-minute rounds of questions for each member.

Mr. Nishi, I want to have you talk a little bit about this question of the 100/100 Mbps versus a different standard. I have a concern about future-proofing technology changes very quickly. Technology neutral is one thing, but there is a question about having broadband that has the capacity to be able to benefit by any improvements in technology so we do not have a situation where rural America is left behind 5 or 10 years from now. That is my point of view. We also have this demand where people have no service whatsoever, and a lot of folks might think anything is better than nothing.

Can you talk about that, because in my ReConnecting Rural America Act, with Senator Marshall, we would establish symmetrical speeds of 100/100 Mbps.

Mr. NISHI. Thank you, Senator, for that question. 100/100 and fiber networks, it is time to get the base built out in the rural areas, and the base is getting fiber to each and every location within the areas we serve. Over time, we will be able to update the electronics on the fiber to bring multiple gigabit speeds to our customers in future years. No other technology right now has the future that we can provide over the fiber.

Now is the time to focus on fiber and get fiber everywhere, as soon as possible, as it will be the most efficient use of the Federal funding dollars that are available.

Senator WELCH. Thank you. Ms. Shute, can you explain the Community Union District concept in Vermont, and whether you think entities like that should be eligible for ReConnect grants?

Ms. SHUTE. Certainly. A Communications Union District is a municipality. It has been formed by multiple municipalities that join together to provide communications services to the area. Our focus is on the unserved, primarily those with less than 25/3 Mbps wired service, and that effectively means that anybody less than cable.

The Communication Union District also provides the opportunity for a public infrastructure point, and it is important that we have the opportunity to build the infrastructure and operate in these communities where it is not been feasible for private companies to do so.

Senator WELCH. Thank you. Mr. Shekleton, I appreciate your testimony about coordination, it is really important. Based on your experience, how would the ReConnect program benefit from USDA having more flexibility with coordination with other Federal agencies? Also, do you support the inclusion of other provision in the ReConnecting Rural America Act in the farm bill, such as the 100/100 Mbps speed requirement, increased authorization levels, and coordination?

Mr. SHEKLETON. Yes, thank you for the question, Senator. The benefit of the USDA having greater flexibility coordinating with other Federal agencies, I think the benefit there is USDA's rich history in its commitment to rural America. I think in coordination with the other agencies, USDA could actually stand out to be a leader in those coordination efforts.

The USDA has been providing the Telcom industry with loans and grants for decades. They have a long history of experience in this arena. I think there is a great benefit there, including some of the streamlined permitting opportunities that USDA could bring to the table and help lead a more effective and efficient process.

Senator WELCH. Thank you. The streamlined permitting seems to be a common concern that every one of you has. Is that correct? Also, the taxation of grants to bleed away what you could be spending on broadband deployment is a real problem as well, as all of the witnesses shared. Thank you.

My time is just about up, so I am going to yield to the Ranking Member, Senator Tuberville.

Senator TUBERVILLE. Thank you, Mr. Chairman. You are going to see people moving in and out because we have a vote going on as we speak. Again, thanks for all of you being here.

Let's talk about service speeds real quick, Mr. Forde and Mr. Johnson. For instance, my State, in Alabama, there are 190,000 people that are considered underserved, and we have service speeds that are 25/3 Mbps. According to the USDA definition, an unserved area is considered one with available speeds of 100/20, when before it was 25/3.

Given this change, how can we ensure areas with 25/3, or even less, are going to have service? Mr. Johnson and Mr. Forde.

Mr. JOHNSON. Senator, in the State of Alabama we are now focusing on a threshold of 100/20, but you are absolutely correct. There are many people that do not have access to service of 25/3.

If we look at the best available data today, a family of four is already demanding bandwidth in excess of 100 meg symmetrical service, if you look at some of the best data that is available today.

In light of that, we are way past arguing that 25/3 is an acceptable service standard for any level of service. It gets a little more dicey when we come up to the next step. Now 100/20 is the threshold for eligibility, but in the State of Alabama there is great preference shown to the expenditure grant funds for projects that will deliver at 100/100.

Now obviously FTC is a complete supporter of the concept that if we go out, certainly, more than 8 to 10 years, optical fiber technology is likely to be the only service that will be able to meet the bandwidth demands that are currently projected. To be certain, the DOCIS 4.0, of the cable industry will serve very well in the interim, in many cases, as long as the networks are very sufficiently robust and well maintained.

Nonetheless, if you look at existing capacity demands, and you go out beyond 8 to 10 years, you are forced to look at long-term solutions, which we firmly believe are best serviced by extending optical fiber as far as you possibly can, given the amount of funds that are available.

Senator TUBERVILLE. Mr. Forde.

Mr. FORDE. First of all, what we are seeing is as these speed thresholds have increased from 25/3 to 100/20, almost 100 percent of the applications that we are seeing are for areas between 25/3 and 100/20. Therefore, nearly 100 percent of the remaining addresses in our highly rural areas that had less than 25/3 still remain at that. We are truly not accomplishing the fact of trying to

get to those unserved addresses as these speed thresholds have increased.

Certainly I would say that all of our technologies that we deploy, whether it is our fiber system, our hybrid fiber coax system, or our fixed wireless, they are all future-proof, and we have no issues with delivering higher speeds on any of those technologies. We do not find that any consumer cares how they got their broadband service as long as it is fast and reliable.

Third, no consumers are using 100/100 symmetrical speeds. It is a download world. We want to provide the consumers with what they want and need today and tomorrow, and should not have to be providing 100-megabit upload speeds that nobody is using. Even during COVID, we saw very little increase in upload speeds. It is still 14 to 17 times higher in download speeds. It is a download world, not an upload world. We should not be building those networks for folks that are not using them.

Senator TUBERVILLE. Mr. Forde, you talked about how fiber deployment works in certain terrains, especially your area of the country. What broadband technologies have you seen deployed in these areas that actually work? I mean, what is the best availability for you?

Mr. FORDE. We like to use the best technology for our customer and your constituents, right. When you are talking about serving the last hard-to-reach areas, you know, you are talking about the Black Hills of South Dakota. You are talking about the Iron Range in northern Minnesota, right. Some of these areas have very tough geography. You could be dealing with as much as $100,000 per mile to drill through rock. You could be dealing with an eight- or nine-mile-long driveway. It is simply irresponsible to try to run fiber through some of these locations when a fast, reliable, fixed wireless connection can easily do the job and take care of the consumer.

The other thing I will note, especially this winter, in the northern part of the country, we dealt with pretty much 8 months of frozen ground. We were able to deploy fixed wireless technology to serve folks who needed it in blizzards. It simply would take years and uneconomical to run fiber through all those areas.

Senator TUBERVILLE. Mr. Johnson, have you got different parts in Alabama?

Mr. JOHNSON. Yes, sir, and I would respectfully take issue with some of my colleague's assertions there, but I will try to keep it very fact-based.

Approximately 20 percent of my consumer base now takes gigabit service. I am also routinely required to certify frequently to a number of employers in the Chattanooga, Tennessee, area that their employees, who are working from home, not voluntarily but as a requirement of their jobs, are able to receive both download and upload speeds at or greater than 100 megabits symmetrical service.

Our experience with our user profiles is entirely different from his in that regard. To that end, I will tell you that consumers today will become very concerned with both their download and upload speeds when their demand requirements exceed them. Now granted, some of them today are not, but when those download speeds are no longer sufficient, they will care very much about them.

Senator TUBERVILLE. Thank you.

Mr. FORDE. Just to clarify, we would stand ready to provide those download and upload speeds whenever our customers need them.

Senator TUBERVILLE. Thank you.

Senator KLOBUCHAR. [Presiding.] I guess I am chairing, so I am calling on myself at this moment.

Mr. Nishi, I am the Co-Chair of the Senate Broadband Caucus, along with several others, and we work to connect every American to high-speed broadband. Could you talk about why providing broadband internet high speed is a key rural development priority, and Mr. Johnson, what tools do we need to streamline and bolster USDA broadband?

Mr. NISHI. Thank you for this question, Senator. Rural development in all of our areas is key, and getting the broadband out in the rural areas, it is needed, and it comes back to the whole concept of universal service, where we believe that rural areas should have reasonable and comparable services at reasonable and comparable rates to those in the urban areas.

Now people can argue and say that the rural areas do not need symmetrical service, but I can say that architects, designers, and others do need the upload speed to do their jobs, and they should not be limited where they live by the broadband that they receive in the areas that they do live.

Senator KLOBUCHAR. Okay. Very good. Mr. Johnson, jut quickly.

Mr. JOHNSON. The most brief recap I can give you is meaningful improvements in permitting, especially at the Federal level, but really at all levels of government, allowing the concurrent expenditure of matching dollars with grant funds rather than forcing a full expenditure of the matching dollars up front will aid in the provision of capital across the board.

Finally, coordination, especially with those in the Congress that are at oversight of the Federal Universal Service Fund. Remember that these grants build the networks. They do not sustain them or operate them.

Senator KLOBUCHAR. Okay. Thank you. Mr. Forde, thank you for mentioning the Iron Range, the birthplace of my dad. In your testimony you highlight your company's collaboration with farmers in Minnesota. How can we best ensure that farmers, ranchers, those in agriculture are getting connected at fast speeds, which is a bit of our goal out here?

Mr. FORDE. Well, thank you so much, Senator, and it is a pleasure to see you again and a pleasure to do so much great work around your State. We have got great projects going on, from International Falls, using ARPA dollars, along Lake of the Woods. We are building cities like Greenfield, Minnesota, and Annandale with 100 percent private capital.

As you mentioned, in the Ag Committee we partnered with Land O'Lakes and we are using fixed wireless from grain elevators, which is providing an 8-mile circle of 100/20 service to about 2,700 farms and ranches. The important thing about that is that provides that fast, reliable service not only to those farms and ranches but also other agriculture items that are located there. For the future

of precision ag it is important that we reach sugar beet piling stations in the Red River Valley, grain dryers.

Senator KLOBUCHAR. Okay.

Mr. FORDE. These things need connections as well, and we want to, again, provide the right connections for the ag community and all the different communities throughout Minnesota, and happy to continue to do that with so many great projects going around all across your State.

Senator KLOBUCHAR. Okay. Mr. Nishi, back to you. You mentioned the MOU in your testimony, and could you talk about—and this is the MOU, FCC, USDA, Treasury, this agreement to share information about reporting of data and metrics relating to broadband deployment, just because we have had issues. Senator Wicker and I have worked on this and passed a law to require this. I know you mentioned it. How can agencies work together better so we get accurate information?

Mr. NISHI. The MOU really does help because that has shown that they have talked and that they have come to an agreement that they need to work together. There does need to be oversight from Congress to make sure that they are following the MOU and keeping them on track.

I think it is something to where they are now working together, but it does need your oversight to ensure that they do stay on track.

Senator KLOBUCHAR. Okay. Thank you.

Mr. Shekleton, making sure consumers have reliable service is a 24/7 job. Could you talk about some of the difficulties providers face when they are ready to go with new projects but there are work force issues? I am a personal believer that we need to do something sane with immigration reform, including visa caps and work force permits, because we just do not have enough workers in some of the areas of jobs in rural America right now, including nursing homes and including tourism and including ag. So go ahead.

Mr. SHEKLETON. Thank you, Senator, for the question, and yes, work force development is definitely a key issue and a challenge, and maybe arguably a growing challenge right now. We are making concerted efforts to basically mitigate that and try to get ahead of what is already a busy schedule with our build-outs, and now with the looming BEAT funding allocations that are coming, the State of Illinois, for example, is right now, I believe, earmarked to get between $900 million and up to $1 billion in BEAT funding.

That is a lot of work to get done, and I can tell you, working on the front lines of rural America on a daily basis, the people want it yesterday. We need to get the work force up and running and trained before these allocations of funds are released, so that when the funds are released we have the people staffed up ready to go to work.

We have an MOU locally. I think local outreach and collaboration activities are key. It is almost like a grassroots movement of work force development, if you will. We are working with local educators, community colleges, our local Illinois works group, and different CTE programs, and really trying to create these classroom-to-ca-

reer pathways, because that truly is the feeder program to our future workers.

Senator KLOBUCHAR. Thank you.

Senator STABENOW. [Presiding.] Well, good afternoon, and I want to thank both Chairman Welch and Ranking Member Tuberville. I am pleased to be here. Sorry to be late, but Senator Boozman and I, I think, are both running on the same schedule here this afternoon. In the absence, until Senator Welch returns, I will call on folks. First, Senator Boozman.

Senator BOOZMAN. No. Go ahead. I am going to be here.

Senator STABENOW. Okay. Senator Fischer.

Senator FISCHER. Thank you, Madam Chairman, and thank you, Senator Boozman. I appreciate your graciousness. Thank you very much. Thank you to all of our witnesses for being here today.

Broadband and connectivity overall is becoming essential to power modern agriculture. Farmers and ranchers are integrating under-soil sensors, variable rate irrigation, high-tech ear tags for livestock, and many other technologies into their operations.

To make full use of precision agriculture innovation we need to close the gap and connect the last mile to the last acre. Producers need that connectivity that extends far past main residences. They need connectivity around farmland and ranchland. Coverage across acreage is not possible without both wired and wireless connections.

Mr. Forde, do you think that Rural Development's broadband programs are missing an opportunity here to support producers and focus on last-acre connectivity, and should we be looking to make sure USDA has the right balance of both last-mile and last-acre resources?

Mr. FORDE. Yes. I could not agree more. We absolutely make sure that USDA is technology neutral. Our farm and agricultural communities that we serve, and throughout the Midwest, you know, we are simply not having fiber wires dragged behind combines. They will not be delivering that service to pastures. It is important that technology neutral future-proofs that for the future of the ag technology. Wireline will not always be the future. It is a wireless world that we live in. I appreciate your efforts to try to focus the technology that the ag community wants and needs for the future, so that technology they have is also future-proof for the acre.

Senator FISCHER. I appreciated your comments about the vastness of rural America and really sparsely populated area. You forgot to mention Nebraska, and the Nebraska San Hills, especially, where we are from. With less than 1 person per square mile it is important to be able to get to that last acre.

Mr. FORDE. That is why I think the Rural Internet Improvement Act that you and Senator Klobuchar have sponsored, along with Senator Thune and Senator Luján will be so important to really focus on those last unserved areas in the Sand Hills, and make sure that those people get broadband first, and are first in line before other people are getting two or three or four bites at the apple, so to speak.

We need to make sure that they get that service out there. We need to do that as fast as possible. In some of those areas you might have an eight- or nine-mile-long driveway.

Senator FISCHER. Or longer.

Mr. FORDE. At $50,000 to $60,000 a mile, that may take years to deploy a wireline service. If we can quickly and efficiently deploy a wireless service that is fast and reliable in the middle of winter, let's get that done, and let's get that person service tomorrow.

Senator FISCHER. You know, I view broadband as essential infrastructure. It is an investment in our country. It is an investment in the future. It is like rural electric lines going out and connecting all of the people in this country. It is like roads being built to connect people in this country. I think it is a right that every citizen should be able to have in order to have a future.

I noticed, Mr. Forde, that there has been a lot of talk about using Federal broadband programs to future-proof networks, but that term is not in any statute. Can you tell the Committee what you think that means and whether your networks are future-proof?

Mr. FORDE. Yes. We will continue to invest to make sure all of our customers, rural customers, have the latest and greatest technology. We would not build a system, whether that be fiber, HFC, or fixed wireless that is not future-proof. They are all scalable. They are all made for the future of those residents. Nobody is building any networks today that are not future-proof, regardless of technology.

Senator FISCHER. When it comes to farmland and ranchland, how do you future-proof that connectivity across acreage?

Mr. FORDE. You have got your multiple forms of technology out there ready to serve that agriculture customer in the way that they want. If a farmer calls and says they want their drain tile pump connected, their grain dryer, and their water pumping station, we would need to be able to take care of that issue today. It is simply unfeasible to run wires to locations that farmers might not even know where they need tomorrow.

Senator FISCHER. We are talking about rural development and being able—I view that as strengthening rural America, to be able to have that development. It begins and ends with agriculture, in my opinion, no matter the State you are in. Agriculture in rural environments is vital not just to those rural communities that they are near, but it is vital for the States themselves, and especially when you have big States there.

Mr. FORDE. It is such an exciting area. All of the development in ag tech is just tremendous, and we are excited to be part of that ecosystem.

Senator FISCHER. I am too. I am excited for this farm bill and looking at precision agriculture and making sure we have the connections there to have it work for everybody. Thank you very much.

Mr. FORDE. Thank you.

Senator WELCH. [Presiding.] Senator Stabenow. Thank you.

Senator STABENOW. Well, thank you, Mr. Chairman. That was a quick vote. You are very fast. That is good.

Senator WELCH. Yes. My fast steps in. I am here with the coach.

Senator STABENOW. I know.

Mr. WALSH [continuing]. my time on the 40-yard dash.

Senator STABENOW. Well, I want to thank both of you. I am really excited to work with both of you, Mr. Chairman and Ranking Member, as well as with our Ranking Member on the Committee, because high-speed internet is not a luxury. I mean, I grew up in rural Michigan. We all know it, but the pandemic sure showed us that it was not. I grew up in a small town where the hospital was incredibly important. My mom was head of nursing at a very small hospital, but telemedicine happened. Too many stories that I have heard of kids sitting in the fast-food restaurant parking lot trying to get Wi-Fi to do their homework, or they are going to the only library, or wherever it is.

This is so important, and I want to say, I am glad we got additional dollars in the Bipartisan Infrastructure bill. I think that USDA Rural Development's success in deploying high speed internet is very, very important. We have seen it firsthand in Michigan. I think USDA, the ReConnect program, really important. I appreciate the work being done on that. Using $34 million and a grant from ReConnect, our Upper Peninsula telephone company will deploy a fiber-to-the-premises network to connect over 1,600 Michiganders to high-speed internet, and that is a big deal up in the UP. I am looking forward to working with all of us to be able to do in the farm bill more so that we can connect all our farmers and communities, small businesses, hospitals, everybody in rural communities. We want people having a high quality of life. They go away to college, and we want them coming home to small towns and being a part of that, and high-speed internet is really important.

Mr. Shekleton, what do you believe the Committee should consider when looking at the minimum acceptable speed when evaluating if a household is served? Additionally, what do you believe should be the minimum required build-out speeds for applicants to the ReConnect program?

Mr. SHEKLETON. Thank you for the question, Senator. I believe that a speed to consider a premise served should be 100/100, and that should also be the minimum required build-out speed. I think we need to standardize on a definition and finally move forward with what we have been talking about as a scalable and future-proof solution. It sounds to me like the definition of scalable and future-proof seems to be somewhat subject to interpretation.

If we take a trip down memory lane, for example, there were industry experts, in 2003, who were stating that by 2005, the average household would need one megabit of service, and there were other industry experts that thought they were crazy, that that would never happen.

Fast forward to 2010. The FCC's definition increased to 4/1. Fast forward to 2015, that is when it established 25/3.

If we are only looking at what is in front of us and we are simply meeting the needs of today, are we really giving consideration to the innovation and ingenuity of the American people? I do not think we are. I think when we look at the future and we look at the trends and the data that scale out to needing multi-gigabit speeds by 2030, that is absolutely, positively something that can happen and become a reality.

When we say future-proof, I think we need to make sure that we do invest wisely with these precious tax dollars, and if this truly is a once-in-a-generation opportunity with this funding, then we get one shot to do it right. Thank you.

Senator STABENOW. Thank you. Building on that, Mr. Nishi, some may say that symmetrical internet connections are unnecessary for most rural customers. Why should USDA prioritize building symmetrical networks, and what are some of the long-term benefits of these connections?

Mr. NISHI. I will come back to the whole concept of universal service where there should be reasonable, comparable services at reasonable, comparable rates, in urban and rural areas.

A designer or an architect or someone that is living in a rural area, to run their business they may need 100/100 so that they can upload their work. It is really coming back to a fairness and equitableness across all areas in the U.S.

Senator STABENOW. Thank you. I will close, Mr. Chairman. I just want to say that I think it is so important that we are doing our best to create high quality in rural communities, and not just say a little bit is enough. You know, it is not just enough to be able to get a few streaming TV shows or something, that we need to be talking about rural communities and rural businesses and hospitals and farmers and so on having the same high quality that is in our urban areas. I hope, from my perspective, we are going to be able to move in that direction.

Thank you, Mr. Chairman.

Senator WELCH. Thank you, Madam Chair.

Ranking Member Boozman, thank you. It is good to be back. I worked with him in the House.

Senator BOOZMAN. I know, and we appreciate your friendship.

Senator WELCH. I heard he has gotten even better in the Senate. He was pretty good in the House.

Senator BOOZMAN. Well, you are doing pretty good in the Senate yourself, and we appreciate you, Mr. Chairman, and Senator Tuberville, this is a great hearing. In fact, I think this is one of the—you know, just echoing what the Chairwoman said—I think this is one of the most important hearings that we have. When you look at climate, when you look at trying to get cleaner air, cleaner water, healthier soils, I think the underpinning in the future is going to be depending on technology that is going to be dependent on broadband.

We used to think in terms of the three Rs and waters is how you developed an area—roads, railroads, runways, and throw water in. Then you have got the potential for development. If you do not have broadband, you simply are not going to develop, and with the loss of population in rural America, as the Chairwoman said, not only do we need it, but we need it at strengths that we can actually do something with it.

Mr. Forde, according to a GAO report published last year, there are currently more than 100 programs administered by 15 agencies that could be used to expand broadband access. Yet despite numerous programs and a Federal investment of $44 billion from 2015 through 2020, millions of Americans still lack broadband. That is what we are talking about. With billions more authorized and

spent since 2020, through ReConnect and other programs across government, have you seen a noticeable reduction in the number of unserved locations in rural and hard-to-reach areas of the States in which Midco operates?

Mr. FORDE. No. In fact, we have hardly seen that needle move at all. That is because none of the funding sources actually target the people without broadband.

Senator BOOZMAN. What do we do to close the digital divide?

Mr. FORDE. We absolutely need to make sure that people with no broadband are served first, before anybody else gets any other funding to upgrade previously existing systems.

Senator BOOZMAN. Okay. That is clear. We appreciate that.

Another issue that comes up, as I meet with constituents in Arkansas—and I think all of us could say this—I often hear complaints about the ReConnect application process. According to one provider who we spoke with recently, their staff spent more than 300 hours just to complete one application.

Has anyone on the panel had a similar experience? If so, do you have recommendations to how we can streamline the process?

Mr. FORDE. Thank you for the question, Senator. Yes, we have looked at the ReConnect application, but it simply is very difficult for private capital. Putting the government to have the first lien on assets, information about what we are doing throughout our footprint and build-out plans and some of the other requirements, as well as of course, yes, the lengthy pages and details just certainly make it almost unworkable for design to work with companies such as ourselves.

Again, we hope that the Rural Internet Improvement Act will give us some access to help us reach those areas that we are talking about that are truly unserved with a grant program such as this.

Ms. SHUTE. May I add to that?

Senator BOOZMAN. Yes, ma'am.

Ms. SHUTE. Thank you. We recently applied for both ReConnect 3 and Reconnect 4, so it is fresh in our mind. This is the application——

Senator BOOZMAN. You look traumatized.

Ms. SHUTE. A little bit. This is the application without any of the supporting documentation.

I have two recommendations. The first is that for ReConnect, for Community Connect, even for the Broadband Technical Assistance Program, we should make it a two-step application process. They are points based, right? If we have a pretty simple form that people can fill out then the application process can weed out the bottom four-fifths of applications that do not have a fighting chance of doing it. Then when you are investing the time, you have at least the knowledge that you have got a pretty good shot at getting funding and that you are going to get it back.

I think one of the things to recognize is what is required to do this. Part of it is extremely detailed budgets and financials. We are talking 10 years of budgets and financials that integrate with your existing budgets and then move forward. In order to do the kind of detailed budget that ReConnect asks for, which is very detailed, you effectively have to do a design. If you are a small provider, you

cannot invest in a design for an area that you cannot afford to build until you have knowledge that you are going to be able to go there.

We were fortunate to be able to raise money to use consultants to do it. We could not have done it without the consultants.

The second big lift, in USDA in particular, is that there is a difference in information that is used. USDA uses households. We use premises. The BDC maps is someplace in between those two things. When you put in the number of people that are going to take service every year, under every single service offering, it does not match what is going on, so it does not match your financials. In other words, we just need to streamline the data that we are using, the mapping, the household premises, but most importantly, let's do a two-step application process for all of these grant programs.

Senator BOOZMAN. Very good. Thank you, Mr. Chairman.

Senator WELCH. Senator Braun.

Senator BRAUN. Thank you, Mr. Chairman. When I was in the Indiana Statehouse back in 1915, 1916, and 1917, we are a State, first of all, that always has cash-flow. We invest. We are right now in the process of putting money into rural broadband. What we did, and what was unique, and I was part of it, was it had never been done before on road funding, for instance. When it was proposed, it was called Community Crossings. That is where the State government put out—I think we started with a $1 million fund, per municipality or county government, up to which they could match. First of all, everybody complained about it, No. 1, because they did not want any skin in the game. Now they want even higher levels of putting skin in the game and want more money from the State to do it.

What about taking the same idea currently with broadband, and whatever we do here, reward more to folks back in the States, in the places trying to do it, and maybe, for the places that are not getting it, for whatever the arbitrary reason might be, to where they would be given preference based upon putting more of their own skin in the game.

I will ask Mr. Johnson and Mr. Forde what you think about that.

Mr. JOHNSON. Senator, I would tell you that on a very personal note I think you are right on. Having sufficient investment by potential providers in the game is absolutely essential to avoiding, respectfully, the entrance into the market by fly by-nights that are simply taking an opportunity for short-term gain without a long-term commitment to the sustainability of those networks.

I have always personally argued that minimum requirements such as 20, 25 percent are essential, first of all, but I also encourage other kinds of skin in the game such as a demonstrated history of delivering the service, or, for lack of better terms, some form of sufficient evidence that they are capable of delivering on the promise. Whether that is a government entity or a private entity, you are still on track. The more skin in the game they have, the more likely they are to be successful.

Mr. FORDE. Yes, from Midco's experience we will not take more than any public dollars that are needed. There are some State programs that we participated in where we had our Midco contribu-

tion be as high as possible and take as little of taxpayer dollars as possible to fund build-out to those areas to make it feasible for private capital. We are always doing that.

I recently out, in one of the States we serve, that we are now the only provider in the State that is extending to homes surrounding our current network without asking the government for more money.

Senator BRAUN. I think another good reason is we are currently running deficits that we have never seen in the history of our country, and getting more cost sharing from folks back home would seem to make sense to stretch what I think is going to be a more difficult Federal dollar to get ahold of.

What I hear often in traveling around the State, as well, and it may have been addressed earlier, but would be some of the regulations involved that are currently in place that constitute what a suitable level of service would be. It is clear that in the very rural areas it is close to zero. We are dealing with that currently, and I think addressing it pretty well in Indiana.

The places where I heard it has been most difficult is where some of the biggest providers provide the internet service, where you have got customers per mile in any place where you have got population. When you drift into that kind of a twilight zone between the very rural and the places just outside of the so-called well-served areas, and then you are using peculiar formulas that seem to keep so many people in a place where it is not that far away, the big providers do not seem very anxious to even go anywhere if it does not have the density, and then hide behind formulas to keep them from serving those areas that I have described.

Anyone that wants to weigh in on that? We will start over with Mr. Forde, and Mr. Johnson, and whoever else wants to come in.

Mr. FORDE. I can say we absolutely love those areas, and we love building them all with 100 percent private capital. We have the financial business model that works perfect for us to build in all those areas. We are doing that around all of our cities throughout the Midwest.

Senator BRAUN. Are you ever running into issues where even though you want to do it, you cannot because there is some regulation or formula that keeps you from going in there?

Mr. FORDE. You know, not so much on the financials, but occasionally there are permitting issues. Certainly things such as fair access to poles, crossing railroad tracks, environmental rules and regulations, crossing rivers. You know, those are some of the barriers that we see in some of those areas that, you know, slow us down, at the very least, from getting broadband out to those folks who are just across the tracks, so to speak.

Senator BRAUN. Thank you.

Mr. JOHNSON. I commend him for his use of private capital. It is extremely important that we remember this. The reason all of rural America does not have broadband is because historically there has been insufficient economic incentive to attract private capital to get that job done. It will not happen without government subsidy. That is the only business case.

To your point about adequate technology, I would respectfully submit that some of that debate can be resolved if we ever take the

time to actually look at the physical properties and the physical capabilities of the various tools we are using to deploy broadband. It will answer a lot of the questions about what is and is not future-proof technology.

Senator BRAUN. Anybody else want to briefly weigh in?

Ms. SHUTE. I think it is about developing the basic infrastructure. When we look at the areas in that twilight zone between the very rural and the urban, I think the BEAD program is going to be able to address that. What ReConnect needs to address is the areas that go back from that, and the infrastructure is what we are building on, just like we did with rural electrification. That is what takes us into the future.

Mr. NISHI. I would like to add that 100 in rural 100 is important. The Fiber Broadband Association Nucleus study shows that in 2023, households are already using 100/100. At the same time, there are those that said the Rounds 3 and 4 ReConnect should not have those standards in it, but at the same time it was four to five times oversubscribed. There are many people out there that believe in 100/100 networks.

Ms. SHUTE. Could I just add that I think one of the challenges that some rural States face is that when you have 25/3 wireless technology that provides spotty service throughout an area, you can become disqualified from a grant program. The entire State of Vermont is basically going to be disqualified from ReConnect 5 as it currently stands, and yet those folks, a lot of them have less than 4 down, 1 up, from a wired connection. When you live in rural areas, like many parts of the country, with a lot of hills and mountains and weather, that wireless service does not always exist, and that is why we need to get to those folks and to provide a level that makes sure everyone has a wired connection.

Mr. SHEKLETON. I would just like to comment on one part of Mr. Forde's comments, that we feel that pole attachments are not a barrier to deployment of broadband. In fact, in the cooperative space we are an at-cost model. We do not make any profit off of that. It is specifically the at-cost model of each co-op, depending on its geographic location of the system that it operates in their well-maintained facilities, and there has actually been proven evidence where cooperatives have offered other entities to come in at zero dollars as long as they promise to bring robust, reliable high-speed internet to every one of their members, and there was no response.

Senator BRAUN. Thank you.

Senator WELCH. Senator Tuberville.

Senator TUBERVILLE. Yes, I have got one question here. Mr. Forde and Mr. Johnson, why is it so important to keep the required percentages of unserved locations within an awarded area as high as possible, and not lower it to 50 percent, as the most recent ReConnect round of funding does, to successfully deploy broadband to the most rural areas?

Mr. JOHNSON. I will go back to my original comment. There are reasonable arguments that can be made on both ends of that spectrum where that should be. The reality of it is, if we are talking long-term solutions and limited dollars. The lower that threshold, commonly somewhere between 80, 85, 90 percent, historically, the lower that threshold, I can assure you the higher probability that

scarce taxpayer dollars will be used to improve existing networks at the expense of those who have nothing or completely inadequate, service.

Mr. FORDE. Absolutely. We have to focus on these truly unserved areas. The percentages have to be 90 or higher for all of these programs, to ensure that those people with nothing get served first, before we can look at folks that need financial help to upgrade in the areas, if they need that.

Senator TUBERVILLE. Thank you, and——

Ms. SHUTE. I think——

Senator TUBERVILLE. Yes, go ahead.

Ms. SHUTE. Sorry. I think it is critical that the percentage be part of the point system. That is what USDA has done, right. If there is an eligibility level, but then there is a point system that enables the understanding of RUS staff of what is on the ground. Because every State is different. We just simply have different needs. We are looking to get to the most unserved. The way to do that is to allow USDA to put point systems in place, as it already has, to accommodate those.

Senator TUBERVILLE. One other question, to whoever wants to answer this. We are probably going to need to know this. When we get in all these deep rural areas, what is the most burdensome permitting issue that we have, and we are going to have, coming up, you know, going into these rural areas. Anybody want to—throw your two cents' worth in.

Ms. SHUTE. I would say that the most burdensome is the make-ready licensing. A lot of the most rural areas are cooperatives that had to cut across farmlands that are now trees and forests and no longer farmland. There is a high cost there.

I also think a two-step application can help us get through the Federal permitting process by starting the process at the end of the first step, so that by the time we get the application we can start working. We are going to have to wait to get through that Federal permitting process, and we are ready to go on the ground right now, today, if we could.

Mr. NISHI. To keep the application process running and get approvals quicker, we believe that there should be some shot clocks for the various agencies, where if they do not get the approval in time it is deemed approved.

At the same time, there are areas where it was previously disturbed, where we need to go through permit process, even though we already may have cable there. That approval needs to speed up also. They are ready, so why do we need to go through the whole process again.

Finally, there are a lot more applications now with all the money out there in builds, so we need to make sure that the various agencies are adequately staff in approving these applications.

Mr. JOHNSON. Senator, FTC has not encountered this for unique reasons. Across the country, many of our colleagues face considerable difficulty with right-of-way when it pertains to the railroads.

Mr. FORDE. Yes, I think anything we can do to streamline the processes for all the Federal agencies, you know, in applications, would be very helpful to serve rural America. Certainly if our application works for the FCC, it should work for USDA, from that

perspective. You know, the environmental for crossing rivers has been extremely difficult with the Army Corps and the myriad of agencies to deal with there. I would echo the comments of others in those agencies. Streamlining those processes in the names of broadband will help us deploy a lot faster. I do not think you can tackle just one. I think we need to tackle them all, because every situation is different.

Senator WELCH. Senator Boozman?

Senator BOOZMAN. Yes, very quickly if it is Okay. Just following up on the permitting process, you know, the difficulties, I was going to ask about forest land, Federal forest land, and how difficult that is. You have got pretty stringent timeframes with RUS and other things. Those processes can last forever, you know, in the sense of the permitting.

Should Congress in the farm bill require the Forest Service, which happens to fall under the jurisdiction of the USDA, to expedite the approval process for projects supported by Federal broadband deployment programs?

Does anybody want to jump in on that one? Do not worry. They are not going to treat you any worse than they do now.

[Laughter.]

Senator BOOZMAN. You do not have to comment if you do not want to. Again, this is something that we need to work on, especially when you have two agencies are trying to do one thing with one agency that is a very good thing, you know, when you have got another agency that sometimes is not quite as helpful as we would like for them to be.

Mr. JOHNSON. Senator, I will brave the question. Yes, absolutely, and you have jurisdiction.

I would just simply remind, it is a governmentwide issue. There are a lot of permits, a lot of issues, from environmental, all with legitimate concerns. Either we will do better as a country in resolving those questions expeditiously, or people will not get broadband as quickly as we need them to.

Senator BOOZMAN. Right. Again, I am not saying that they do not do the appropriate protocols, but let us do it in an expeditious way so you all can get to work and get things done. Yes, sir.

Mr. FORDE. Yes. I will add that, yes, in some of those Forest Service areas that we have seen, if there is an existing road, right-of-way, an easement, where a road is going through the Forest Service already, I mean, the ability to just access that with a limited fast permit process makes total sense, rather than having to go through a whole separate process or create a whole separate easement to go through those areas that are already ready to be deployed.

Senator BOOZMAN. Right. Thank you, Mr. Chairman.

Senator WELCH. We are going to wait a few minutes. Senator Luján is on his way back from the vote and wants to ask a few questions. I will sort of give a semi-closing statement.

First of all, this is an incredibly helpful hearing in getting a cross-section that each of you has experience. You know, a couple of things. One, there seems to be uniformity that having a simplified application process really is beneficial.

No. 2, Senator Braun's question about skin in the game, and you explained part of that as financial, but part of it is a history of success and accomplishment, because there are a lot of areas in rural America where the capital is just not there. A big decision that Congress made with rural electrification was that it was worth to do it, for political and social reasons. It was not because it was economically beneficial to do it. I think a lot of us on this Committee think the political and social reasons are really good reasons.

Then I heard uniformity about let's not tax the grants. The grant you thought was 10X turns out to be 7X. I would be bummed out. You do not like that.

Then the permit process, and there are two parts to that. The Federal, which we would have some jurisdiction over, but then local, where every locality is different, but hopefully get some cooperation.

You know, the big issue here, that I think is a major policy question, is this future-proofing. That is the term that we are using. What it means to me is we cannot give second-class service to rural America, and I think Senator Stabenow really used a phrase I like, "Good enough is not good enough, because it is good enough for today." We do not get anywhere unless we make a commitment that good enough is what is good enough for everybody.

One of the reasons, by the way—there are all kinds of reasons, but we are trying to get folks to come into rural America, and in Vermont, when somebody is looking at a house, if they are not where there is high-speed internet, and it is a person who might want to be moving up, that is the end of the deal. That is it. They are not coming. We have got to get jobs and entrepreneurs and folks back into rural America, and those people will not come unless there is confidence that they have got sustainable, high-speed, state-of-the-art internet. That is a design question the engineers know about it.

We are all disappointed that Senator Luján cannot make it here, because he is a big champion, and a wonderful Senator.

We have finished with this hearing. It was really terrific. I think what you saw, and you are experiencing, I hope, is that there is a bipartisan commitment from members of the U.S. Senate who have a commitment to rural America. We come from different parties and have different political points of view, but there is a strong unity here that the importance of rural America cannot be a second-class part of America.

We will keep the record open for five days for any additional questions from members or submissions from witnesses. With that I declare the hearing over.

[Whereupon, at 4:45 p.m., the hearing was adjourned.]

A P P E N D I X

MAY 17, 2023

Statement by

Roger Nishi
Vice President of Industry Relations
Waitsfield and Champlain Valley Telecom
Waitsfield, Vermont

Before the
United States Senate Committee on Agriculture
Subcommittee on Rural Development and Energy

Hearing on
Rural Broadband: Connecting our Communities to the Digital Economy

May 17, 2023

INTRODUCTION

Good afternoon Senator Welch, Ranking Member Tuberville, and members of the Subcommittee.

Thank you for holding this hearing and inviting me to testify about broadband programs overseen by the United States Department of Agriculture (USDA).

My name is Roger Nishi and I currently serve as Vice President of Industry Relations at Waitsfield and Champlain Valley Telecom (WCVT) in Vermont. I have over 36 years of industry experience and have served on the board of various rural telecommunications associations which included being elected to the position of Chairman of the Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO) and President of the Technology Association of New England (TANE). I hope that my testimony will provide firsthand insight to members of this subcommittee on the connectivity needs of rural communities and encourage bipartisan cooperation to strengthen and improve this year's Farm Bill.

WCVT is a 119-year old, third-generation, family-owned, community based rural broadband provider serving the Mad River and Champlain Valley regions of Vermont. Being locally owned allows us to truly understand the telecommunications needs of our customers – our neighbors – and share in a commitment to improving our communities. We provide voice, video, and high-speed Internet services to more than 16,000 customers. Our service area spans approximately 669 square miles including twenty-four rural towns in parts of three counties.

In spite of the sparsely populated nature of rural Vermont where residential lots are large and communities spread out across fields and mountainous terrain, WCVT and other small, rural broadband providers in Vermont and around the country have led the charge in deploying broadband services that meet the modern needs of consumers. Currently, half of our network is served by fiber-to-the home technology offering synchronous broadband speeds up to 1 Gigabit per second. This includes all schools, anchor institutions, larger businesses and many of our rural residential customers. In Vermont, our construction season is here and we continue to make progress converting customers to fiber. Over the next few years, we are making significant investments in extending fiber-to-the-home to the communities we serve. These are large capital construction projects that have many moving parts and pieces. While we can't reach everyone overnight, please know that every single dollar we invest in fiber is benefiting Vermont and the local communities we serve. Building fiber to everyone is going to take time, but each and every day, we are making progress.

Similarly, in its most recent survey of the broadband deployment efforts of rural community-based operators, NTCA-The Rural Broadband Association, of which WCVT is a member, found that nearly 80% of its members' customers on average are connected by fiber-to-the-premise ("FTTP") networks and that more than 80% of those customers on average can receive at least 100 Mbps broadband service. This progress far outpaces the work of other providers in connecting other parts of rural America, but it also shows that the work is not finished and

highlights the important role USDA's broadband deployment programs can play to help finish the job.

Indeed, while Vermont might be best known for its picturesque landscape, abundant outdoor activities, and quaint inns and bed and breakfasts, look deeper and you will find a vibrant high-tech business community served by a state-of-the-art telecommunications network that continues to evolve and residential users capitalizing upon the ability to work and learn from anywhere. Access to affordable broadband service is a critical component of the continued economic viability of our rural communities, and we are seeing the benefits of these investments across much of Vermont.

Our employees are working hard to complete the next evolution of our network to support continued growth in higher speed Internet services and an increased level of reliability and redundancy in the network as we continue to grow our fiber network. It takes an enormous amount of planning, resources, and significant capital investment to make this happen – and, as proud as we are of the successes to date, there is a lot more work to do and investment needed to reach areas still lacking the kind of connectivity needed to participate meaningfully in today's increasingly online world.

While what I have discussed is the story of WCVT, the same can be said of the other small Vermont independent telecommunications / broadband companies. Further, the case is the same for telecommunications companies across rural America, where industrious community leaders saw the need for better communications more than 100 years ago, and where that spirit still lives today, ensuring that communities can thrive and prosper into the future. This is where USDA broadband programs play such an important role, and where the Farm Bill represents such an important opportunity to strengthen and sustain these efforts.

FARM BILL CONSIDERATIONS

Throughout the history of WCVT, the company has had a relationship with USDA and the Rural Utilities Service (RUS), and through its predecessor agency, the Rural Electrification Administration (REA). In the early 60s, our Company looked to REA for expertise and much needed capital to upgrade the company's network. Our owners, Dana and Eleanor Haskin, literally "bet the farm" and signed a 25-year loan with REA for $400,000 to install a new direct dial telephone system and network. Seven years later, the company again looked to REA for an additional $640,000 loan to convert all of its customers to single-party service, becoming the first company in Vermont with all private lines. Our rural communities have been able to benefit from these generational infrastructure investments in our telecommunications network that REA helped us make.

In August 2010, WCVT was awarded a $5,560,000 RUS Broadband Initiatives Program (BIP) combination grant and loan that helped to jump start our fiber builds and brought fiber-to-the-home technology to approximately 740 homes and small businesses in parts of Addison, Chittenden, and Washington Counties. The proposed funding areas contained rural locations that lacked high-speed access, which was then defined as service at a rate of at least 5Mbps up and downstream combined, due to extreme distances well over 15,000 feet from our switching

locations. These areas were some of the company's most remote and difficult to serve over the copper network. In addition, the RUS-BIP award allow us to upgrade our backhaul infrastructure, with the addition of a new core ring with the capacity to carry multiple 10-Gig rings. With similar RUS-BIP funding, other Vermont companies have built fiber-optic and wireless networks, enhancing their level of service for Vermonters.

Now, as Congress considers how to revitalize USDA broadband funding programs as a part of more comprehensive Farm Bill deliberations, I would encourage a focus on several key areas. Addressing these issues in a thoughtful and efficient manner will ensure that USDA broadband programs realize the greatest difference for, and have the most lasting impact upon, rural communities in Vermont and across the country.

The Importance of Building Robust and Reliable Networks and Looking to Proven Track Records of Performance in Rural Areas

There is a national imperative today, captured in recent waves of funding in various appropriations bills and backed by a long-standing statutory mission of universal service, to ensure that all-Americans have access to robust and affordable high-speed internet. Congress has taken critical steps towards this goal by passing monumental legislation such as the American Rescue Plan and the Infrastructure Investment and Jobs Act, but more remains to be done to reach the unconnected and to keep them connected thereafter.

The COVID-19 pandemic laid bare inequalities in broadband access in various communities, including many rural areas, and highlighted why all Americans need access to reliable broadband. But in overcoming this digital divide, Congress must ensure that networks, built with precious and limited federal funds, are scalable and stand ready to meet the needs of users today and well into the future. Even as certain networks may seem cheaper to deploy initially, it would be a mistake for Congress to think only of what can meet the needs of today. These are investments being made to serve communities for decades, and we should expect and demand that the networks demonstrate a capability to do so given the use of federal funds to deploy them. Members of this subcommittee in particular must consider future needs as they focus on rural development and the long-term viability of rural communities.

Studies have shown that fiber represents the most economical choice for the most capable fixed broadband service on a long-term basis.[1]Fiber, unlike coaxial cable or the legacy copper phone lines, is the only infrastructure that can be upgraded without significant new investment. Similarly, while manufacturers of fixed wireless technologies and certain firms that use these systems claim the ability to deliver high-speed services, it is uncertain that this technology can deliver such a high level of service on a widespread basis across wide swaths of rural America and that it can keep pace over time with exploding demands for bandwidth, especially as more users congest the network.

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[1] Future Proof: Economics of Rural Broadband COMPARING TERRESTRIAL TECHNOLOGIES & INVESTMENT CONSIDERATIONS TO MEET INCREASING CONSUMER BROADBAND DEMANDS; https://www.ntca.org/sites/default/files/documents/2021-05/Future%20Proof%20--%20Economics%20of%20Rural%20Broadband%20FINAL_0.pdf

Scalable and future proof networks support public safety, small business growth, education and telemedicine needs while enabling precision agriculture, powering 5G technology, and allowing for real-time, two-way communications by many users at the same location. To accomplish this, the minimum speed for eligible projects administered by USDA to receive funds should remain 100/100 Mbps – just as was the case in Rounds 3 and 4 of the ReConnect Loan and Grant Program. It has been argued that the 100/100 Mbps minimum speed threshold is too high and that it may prevent certain providers from applying for the program. However, during Rounds 3 and 4, the program was oversubscribed by 4 to 5 times, proving that numerous providers are willing to build the kinds of networks that consumers need today and well into the future. We also need to remember that the program rules should not be built around the artificial concept of "letting every provider play." Instead, the focus should be on the customer and the best long-term return for the federal dollars funding such investments.

We need to make sure program requirements are determined by the needs of rural communities and not by the limitations of certain providers. It is also unclear why, if providers of all kinds believed themselves capable to participate in FCC universal service auction programs at a gigabit level, they believe that 100 Mbps symmetrical objectives in USDA programs somehow present an insurmountable bar to participation. Indeed, if anything, Congress should view the 100 Mbps symmetrical threshold as a *baseline*, and give USDA the flexibility to increase this standard over time as needs and use cases for broadband evolve. In far too many broadband funding programs, we have seen all too often the mistakes of "locking speeds in" at lower levels deemed necessary for current use, only to find such speed targets outdated shortly thereafter.

Just as not all technologies are created equal, it is equally true that not all providers are created equal and not all will necessarily meet the needs of our rural communities. To be sure, there should be no bar on any provider seeking to participate in the program if it can show operational, technical, financial, and managerial capabilities necessary to perform as promised. But experience matters, and proven performance matters. Congress should prioritize funding opportunities for companies with a demonstrable track record of serving rural communities. This could be structured as prioritizing providers with experience with USDA programs, or simply as looking first to those with many years of experience in building and operating networks and delivering services in deeply rural areas. It would be good public policy and a prudent use of federal funding resources to prioritize funding for those that have shown before that they can do the kind of work contemplated in these programs.

The Importance of Coordinating/Limiting Overbuilding

Scores of different broadband funding programs are administered by the Federal Communications Commission (FCC), USDA, Treasury, and National Telecommunications and Information Administration. While some of these programs aim to do very different and complementary things, others are nearly identical in seeking fundamentally to provide capital for broadband deployment. Thus, Congress must ensure that these federal agencies work together to avoid overbuilding or unnecessary funding duplication. Just over one year ago, the aforementioned agencies entered into a Memorandum of Understanding to enhance information sharing. Congress must exercise its oversight responsibilities to make sure that these agencies continue to communicate with one another and with the public, and that they factor data shared

amongst them into decisions with respect to funding. Failure to do so could result in a waste of precious federal dollars and will undermine public confidence in these vital programs.

Additionally, the FCC must ensure that its map is accurate and accessible to other agencies. The use of a single accurate and properly vetted and challenged map as a common baseline across federal agencies (and even by states) is imperative and offers the best means to ensure that funding will not be directed to areas where a provider is already subject to an enforceable commitment to deliver certain levels of service leveraging another program.

Project Delays

I also encourage Congress to address the difficulties with permitting and approvals. Specifically, for the 2023 Farm Bill, I would encourage this subcommittee to include specific requirements for agencies to process applications in a timely manner. Many small, rural providers experience permit approval process delays from 12 to 24 months when applying to place telecommunications facilities. Approval delays occur at many steps throughout the process, but those posed by environmental and historical preservation reviews contribute significantly to the long wait times.

I also encourage Congress to reevaluate RUS's staffing needs and other federal and state agencies involved in permitting and approval procedures to determine if additional funds and staff will help alleviate these delays.

While WCVT is not currently experiencing any permitting delays in our current builds, we are very cognizant of the impact that delays can have on the overall sequencing of construction and our ability to complete our projects. While we know the permitting processes and timelines, and take such into consideration in our planning, we can ill afford extensive delays with our short construction season, the availability of our contractors and the overall cost implications on our projects. WCVT and the overall industry is fearful of having work stalled due to a permitting delay, and losing construction crews to other providers that are ramping up construction to levels never before experienced in the industry given the vast amount of funding now available.

OTHER BROADBAND ISSUES

While not directly pertinent to provisions that may be included in the Farm Bill, the subcommittee should be aware of several other issues that have material effects on rural broadband – and thus ultimately affect the viability and sustainability of USDA broadband funding programs

Sustaining Networks

Rural providers face the challenge of not only building costly networks in low density areas with challenging terrain, but we must also upgrade and maintain these networks to meet ongoing consumer demands. We must also keep rates affordable, even in the face of higher costs of operation in rural areas.

Since the early 20th century, we have had a national mission of universal service when it comes to connectivity and communications. In 1996, Congress codified this mission through mandates for universal service in the Telecommunications Act. The goals of universal service remain just as important today, if not more so than before, and they should be seen as part and parcel of a successful national broadband strategy. Providing universal service does not mean that the work is done when a network is built; instead, it is at that point once the "ribbon is cut" that the providers need to focus on ensuring customers and communities can make the best possible use of a network.

While the Agriculture Committee does not have direct jurisdiction over the mission of universal service or certainly the FCC's Universal Service Fund (USF) programs, it is important to take stock of how these programs interact with the deployment funding programs administered by USDA under the oversight of this subcommittee. While the USDA programs have been critical in providing capital – both loans and grants – for network construction, the FCC's Alternative Connect America Model (A-CAM) and Connect America Fund-Broadband Loop Support (CAF-BLS) mechanisms play an essential complementary and coordinated role by helping providers find the business case for deployment in the first instance, to sustain these networks once built, and to keep rates for services atop these networks more affordable for rural consumers.

I strongly encourage Congress to urge the FCC to take immediate action to enhance and extend the A-CAM model and to update the CAF-BLS mechanism. Members of Congress have already written to the FCC on a bipartisan basis to encourage prompt attention to updating these programs as soon as possible. We hope that the FCC will take these communications from Congress to heart – the ultimate success and sustainability of broadband efforts across rural America depends upon such action, and timely resolution of these issues by the FCC would also assist greatly in promoting effective coordination with future rounds of ReConnect and other upcoming grant initiatives.

Taxing Broadband Grants

Congress can also accelerate broadband deployment by passing S.341 the Broadband Grant Tax Treatment Act. This bipartisan bicameral bill has been introduced in the Senate by Senators Warner and Moran and fifteen of their Democratic and Republican colleagues.

Congress has generously appropriated billions of dollars to make robust broadband service available to unserved and underserved areas, and discussions of how to further advance these efforts is a clear focus of the Farm Bill. Such grant funding is unfortunately taxable for most provider recipients. In some states, providers would be subject to double taxation because federal taxes would trigger an assessment of state taxes as well. This effectively means that a significant portion of every grant dollar is being returned to the government in the form of taxes due, rather than being used to place fiber in the ground or antennas on poles. The Broadband Grant Treatment Act would exclude broadband deployment grants from an organization's income, freeing up the funds from these grants for use specifically in deployment activities.

Affordable Connectivity Program

While broadband providers work to expand accessibility, we cannot ignore the importance of affordability. Approximately 1 in 5 Americans who do not use the internet cite cost as the key factor. The Affordable Connectivity Program (ACP) overseen by the FCC is a critical component to help low-income users in rural and urban areas alike adopt – and keep adopting each month – broadband service. Like the federal USF programs discussed above, ACP should therefore be seen as part of a coordinated comprehensive national strategy to promote universal broadband connectivity and access for every American. I encourage Congress to find ways to sustain the ACP through additional funding, so that no American is left without service due to the inability to afford to connect.

As we all know, access to affordable broadband services is crucial to creating opportunity and leveling the playing field for everyone. High-speed internet service plays a vital role in every household, connecting Vermonters to school, telehealth resources, employment, family, community resources and so much more. Access to affordable broadband service is critically important to promoting equity and equal opportunity. The Affordable Connectivity Program helps to bridge the digital divide by narrowing the gap between availability and affordability, making high-speed internet service more affordable and accessible to those in need.

CONCLUSION

America will continue to prosper if we continue to invest and promote affordable, sustainable, and scalable broadband service in rural communities. WCVT and other community-based providers serving rural communities have long been leaders in deploying broadband services to America's rural areas. We are eager to continue working with you, USDA, and others to fulfill the national objective of making broadband universally available and affordable. Thank you. I look forward to answering any questions you may have.

Statement by

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Before the
United States Senate
Agriculture, Nutrition & Forestry Committee
Rural Development and Energy Subcommittee

"Rural Broadband: Connecting our Communities to the Digital Economy."

Support and Recommendations
for USDA Rural Development Broadband Programs

Washington D.C.

May 17, 2023

Introduction

Chair Welch, Ranking Member Tuberville, and members of the Subcommittee, good afternoon and thank you for the opportunity to testify before you about rural broadband, specifically as it relates to the current United States Department of Agriculture broadband programs and their future in the 2023 Farm Bill.

My name is Christa Shute. I am the Executive Director of NEK Broadband. I have a juris doctorate and master of laws and I served as Director of Business Development and Financing for the Vermont Telecommunications Authority, a former quasi-state entity charged with bringing broadband to the unserved from 2009 to 2015. My remarks today are on behalf of NEK Broadband, a Communications Union District, with the support of the Vermont Communications Union Districts Association, or VCUDA. These districts are special purpose regional municipalities formed by two or more towns. Our district is formed from the 56 northeastern towns and comprises 2091 square miles with a population of 65,216 people. It's an exceptionally beautiful, if rugged, area of mountains, hills, rivers and lakes that is commonly referred to as the Northeast Kingdom.

The purpose of my testimony today is to share with you (1) the ongoing importance of these USDA broadband programs, (2) a concern that the Consolidated Appropriations Act of 2023 has jeopardized the viability and usefulness of the ReConnect program in remote areas like Vermont's Northeast Kingdom, (3) our experience with the programs and recommendations for making them more effective and equitable for low density communities across the country, and (4) to share my thoughts on the importance of public infrastructure.

NEK Broadband is a Communications Union District (CUD)

In 2015, the Vermont State Legislature enabled the formation of Communications Union Districts (CUDs) as municipal, inherently non-profit, organizations of two or more towns that join together for the delivery of communications services under 30 V.S.A. Chapter 82. The legislative Act identified the need of this special purpose municipality stating: "Communications union districts (CUDs) were created by the State to coordinate and implement creative and innovative solutions in their respective territories, particularly where existing providers are not providing adequate service that meets the needs of their residents and businesses while ensuring public accountability." (From Act 71 sec. 1. Findings and Intent). CUDs are thus positioned to be the unofficial "provider of last resort" for broadband and ensure public accountability for serving all Vermonters within their respective service territories.

Communications Union Districts in Vermont do not have the power to levy taxes and cannot access the property taxing or assessment authority of member towns. Rather, we raise funds through grants, donations, borrowing, and customer revenue. As a municipality, borrowing can be accomplished through the municipal bond market using revenue bonds. As a telecommunications provider borrowing may also be done through the U.S. Department of Agriculture's Rural Utilities Service (RUS) ReConnect programs, but not currently through the RUS Telecommunications Program which is reserved for the incumbent provider.

CUDs are community driven organizations governed by boards with voting representatives from each member town. Our mission is to provide affordable universal high speed internet access in our rural region. Much like cooperatives that helped complete rural electrification, CUDs reinvest every dollar earned back into either the system or the community

through affordability programs and lowering rates. How a CUD accomplishes this task is dependent on the governing board. At NEK Broadband, we have chosen to own public infrastructure and to partner with a local, family owned Internet services provider, Waitsfield and Champlain Valley Telecom, who is also testifying here today. As our partner, Waitsfield and Champlain Valley Telecom provides network operations and retail services to our NEK Broadband customers. In our contract with Waitsfield we have reserved the future ability to develop this expertise in-house if it helps us lower rates for our customers.

Our Districts partner with each other and through the Vermont CUD Association to leverage resources and experience. We work with the Vermont Community Broadband Board, an arm of state government that drives the state planning activities to ensure every Vermonter has access to truly high-speed internet. NEK Broadband also works with existing providers to find solutions by wholesaling our infrastructure and services to make the most effective use of grant dollars by limiting the amount of unnecessary duplication in our area.

We primarily operate where private for-profit businesses have not focused their capital expenditures or in some cases, have refused to build the infrastructure necessary for broadband. Grants and low-interest loans are a necessity for the construction phase of our operations. The communications union district model enables us to invest these public dollars into public infrastructure so that revenues are reinvested in the community through a continued build to every last household with electricity, affordability programs to increase access, and lower rates as appropriate to a viable operation.

The development of ongoing affordability programs to ensure that ALL have access is essential to the success of our communities and our network. We must get this basic necessity to EVERY household, and to that end it must be as simple as possible for those who need assistance to access subsidy programs such as the Affordable Connectivity Program.

Why is ReConnect important to the most rural of rural America?

The USDA broadband programs are critically important to the economic vitality and even existence of our most rural communities. *First*, by providing grant funding focused on the true need at the true cost, these programs create the safety net that ensures the most rural areas and the smallest towns also have access to broadband through grant funding. They will complement the BEAD investments and together we will truly have the opportunity to bring universal broadband service to every address with electric utility service. *Second*, the USDA programs have focused on a long-term infrastructure investment in these communities, not a short-term fix. Fiber-optic based service ensures that these infrastructure investments are valuable far into the future as technology develops. Today, our fiber network can provide the 100/100 Mbps minimum standard as well as 1,000/1,000 Mbps (1 Gig) symmetrical speeds and is capable of 10 Gig. Since information is transmitted over the fiber-optic cable itself at the speed of light, the infrastructure we build today can be upgraded with new equipment for many decades to come to achieve faster speeds as the technology and demand evolves.

The ReConnect and Community Connect programs are a critical component to successfully solving rural high-speed internet problems because they meet a need which other funding sources do not. The BEAD program will not obviate the need for these programs. While BEAD will invest over $40 billion in broadband infrastructure, there is no chance it will be sufficient to reach universal service to every address. BEAD, like many other programs, focuses on how many addresses can be served with the finite dollars available. We all want

federal dollars to go as far as possible and help as many people as possible. However, in favoring lower costs per address, BEAD favors the more populated rural areas that are on the fringe of areas already served with cable and fiber.

Our most rural areas tend to have long roads with low population; they have hundreds of miles of cooperative and municipal electric poles and wires that were built off of the road through fields that have now become forests. In the NEK Broadband District we have eight different electric companies: one investor owned utility, two cooperatives, and 5 municipal electric departments. Delayed preventive maintenance and vegetation management can result in higher costs to make the poles ready for construction of the infrastructure and because the poles and wires were originally built using the straightest line from one customer to another - the costs of going across fields that are now woods significantly increases the construction costs.

As a result, the competitive allocation rules in BEAD are likely to exacerbate the problem by requiring prioritization of projects that cost less per address. This means that once again those in the most rural of rural areas are likely to be marginalized as providers seek to bring the most competitive project forward. In addition, the BEAD rules are problematic for smaller community entities because it requires both a 25% non-federal match AND a 25% letter of credit. Without programs like ReConnect and Community Connect the most difficult and costly places to build will be left behind.

In Vermont, the State chose to invest nearly $200 million of ARPA funds in the development of fiber-optic broadband infrastructure through Communications Union Districts and their partnerships with private companies. This leverages the benefit of public infrastructure with the expertise of private companies for a quick to market but long-term solution. Under BEAD the state will receive the $100 million minimum plus some additional amount likely between $25 million and $150 million. Yet the combined business plans of the Communications Union Districts throughout Vermont anticipate a need of nearly $700 million to reach those without a wired connection of more than 25 Mbps/3 Mbps with a fiber-optic cable - future proof infrastructure.

The USDA Rural Utilities Service broadband programs must continue to provide the support needed so that the most rural areas have access to funding which will allow us to provide the same level of high-speed internet available in urban areas. We don't expect to get the entire project grant funded. However, the areas we are building are by definition the areas that lack the internal rate of return required by shareholders and in some areas even have a negative return on investment. The USDA RUS broadband programs are critical to our success in creating equitable access to what has become a fundamental necessity of life.

Why is ReConnect Important to NEK Broadband?

The Northeast Kingdom of Vermont is the most rural part of Vermont with the lowest median income. 54 of the 56 towns have fewer than 5,000 residents. In more than 35 towns less than half the population has access to a minimum 25/3 Mbps wired service; in 22 towns less than 25% have such access. We have 10% of the state's population but we have 40% of the statewide addresses with less than 4 Mbps up / 1 Mbps down service; and 33% of the addresses with less

than 25 Mbps/3 Mbps down. We estimate that we will need to construct around 2,500 miles to reach every unserved address. That means a $200 million project or more depending on future increases in labor, material costs, and interest rates.

We applied to ReConnect 3 and ReConnect 4 for assistance in our most rural area. The project has less than 5 people per square mile and encompasses most of Vermont's FAR4 or Frontier and Remote area as defined by the U.S. Government. I was given permission to share with you that NEK Broadband has received an offer of award from USDA to be the recipient of a $17.5 million grant from the USDA ReConnect 4 program for a $23.5 million project in the most rural part of Vermont's Northeast Kingdom. As we all know, nothing is final until the ink is dry, so our official announcement will await the signed contract which is expected to be in mid-June.

I applaud and appreciate the staff of the USDA that work on Rural Development and the ReConnect program. They have been helpful, responsive, and fair. For example, in ReConnect 4, they implemented a series of webinars to provide opportunities along the way to ask questions and better understand the process. We applied for both ReConnect 3 and ReConnect 4 grants - so my testimony today comes from those experiences. Some of the challenges in the ReConnect 3 application process were addressed in ReConnect 4. However, the process remains challenging. The application, particularly the financial reporting, is onerous, and complicated with requests for information that are not required. We couldn't have done it without outside consulting support. Much of it is a necessary burden if you have a chance of success. Later I provide recommendations on how to ease this burden while maintaining the oversight and accountability necessary.

The Continued Importance of USDA Broadband Programs.

As we all know, true high-speed internet is fundamental for effective participation in our nation's economy, healthcare, education, personal job success, as well as access to federal and state services, the political process, and community engagement. In some ways, world-class high-speed internet access offers more benefits to the most rural areas. Rural areas are, by definition, more challenged by distance and inefficiencies. Often there is only one choice, if any, for essential services such as health care and school systems - and where services exist they can be many miles from home and miles apart. The lack of internet access in such a high percentage of our rural towns makes other issues more acute. During the pandemic the importance of broadband became evident. I offer the examples below directly from health care and education professionals, to demonstrate the particular importance to our most rural areas and why we cannot leave anyone behind by not reaching them and why we cannot squander the opportunity to build infrastructure for the future by building technologies of the past.

- Lack of access to broadband in our region was devastating for children during the pandemic. Teachers have remarked on the dramatic and heartbreaking difference between those that were able to continue learning and those that were not due to lack of broadband access. Rural schools also have difficulty attracting the talent and instructors necessary for a quality education. This makes access to broadband even more critical.
- Ironically, the massive shift over the last several years in school districts to educational environments that make digital learning possible is further exacerbating the student gap between the broadband "haves" and "have nots". Going to a one-to-one computing model (where each student is assigned a laptop or device) and the use of tools like Google Classroom (suite of online tools that allows teachers to set assignments, have work

submitted by students, to mark, and to return graded papers), requires reliable internet access outside the classroom. Those students that do not have broadband at home, need to find it somewhere in the community, or risk falling behind.

- Consider the opioid crisis. There is a dearth of health care professionals in small towns and rural areas. When a person has to drive many hours to get the physical treatment, success is dependent on follow-up support services. Therapy sessions to help an addict transition and succeed are unavailable without broadband because people in recovery can't afford to drive hours each way multiple times a week and public transportation is non-existent. Many of these patients have additional transportation challenges – they no longer have a vehicle, their driver's license has been revoked, and they have burned enough bridges with family members and friends that could otherwise be an option for getting them to appointments. With the end of the pandemic emergency, Blue Cross Blue Shield has stopped reimbursing for all telephone visits but they still allow telehealth/virtual visits. Other insurance companies are anticipated to follow suit. Imagine how different this equation would look if we knew these households had world class broadband available.
- Similarly for the mental health crisis. Behavioral health visits have taken off with the pandemic and are highly popular with patients. Telehealth plays a critical role in providing a medium that enables patients to open up about their issues and concerns from their safe place – the comfort of their home. In addition, patients get more reliable & consistent treatment as they do not encounter the transportation challenges or additional time commitments of traveling to a distant office or healthcare facility.

USDA ReConnect - Observations and Recommendations

This testimony has outlined the continuing importance of the USDA broadband programs and the need to move them past the pilot stage with funding and guidance through the Farm Bill. Below are my observations and recommendations on this critical program.

1. **Permanent Program**: USDA ReConnect should move beyond a pilot program to be an *ongoing program in the USDA rural development tool kit.*
2. **Different Types of Rural.** From our perspective the most important correction to the existing ReConnect program is the definition of rural. Currently there is a qualification status of rural and there are rurality points. There are different types of rural areas throughout the country. Currently ReConnect heavily favors midwest states over states with mountainous and hilly terrain by giving points for areas that are either (a) at least 100 miles from a city or town with a population of greater than 50,000 people or (b) with less than 6 people per square mile. There is a large portion of the eastern seaboard that has little areas that is 100 miles from an urban area. None of Vermont qualifies under section (a) and our ReConnect project was the only area of Vermont that could qualify under section (b). Yet, terrain can be as or more challenging than the distance a crow flies. "You can't get there from here" is a common New England expression because it can be complicated to get from one point to another due to topography, terrain, and weather. Similar challenges are experienced all through the Appalachian Mountain Range. *Provide rurality points based on the population per town - for example towns with less than 5,000 people per jurisdiction. With the influx of BEAD funds, the current ReConnect definition of rural for defining eligible areas may be able to shift downwards*

from populations of 20,000 to a smaller number. Other items for consideration of rurality are the miles of state and town highway to reach the nearest emergency room or medical facility; or the number of medical facilities in an area; or the distance to the nearest highschool or library that is open more than 30 hours per week.

3. **Continue to fund the three ReConnect options: grant, loan, grant/loan.** All three types of USDA ReConnect program options are critical:
    a. **The grant option** is critical for those with the highest need and can also raise the 25% non-federal match requirement.
    b. **The loan/grant 50/50 combination** is very important for those that cannot otherwise provide a non-federal match. Currently the loan portion must be spent in full prior to receiving any grant. *The loan portion should be able to be spent proportionally to the grant portion.*
    c. **The loan only option** is especially critical in light of the BEAD funding. These USDA ReConnect loans are eligible as a match for BEAD. For entities such as NEK Broadband this is critical to being able to apply and compete for BEAD funds.
    d. **Invest in interest rate buydowns in order to continue to offer a low interest rate fixed by rule** as an option for loan only applications to entice entities to apply for loans rather than a grant or grant/loan. Loan only option should stay at a fixed interest rate at or below market. Having an interest rate that is fixed eliminates the uncertainty of what market rates are going to do over the course of the construction project. *Having a lower interest rate motivates applicants to apply for a loan only and therefore extends the government's ability to continue investing in rural America until the job is done.*
4. **The Congressional action that funded ReConnect 5 must be corrected or else the <u>Appropriations Act of 2023 will unintentionally disqualify many rural states from any participation in ReConnect 5.</u>**
    a. **Defining Existing Broadband**. If Congress wants to define broadband for ReConnect, then define broadband as a minimum of 100/20 Mbps to maintain consistency with other federal programs in identifying eligible areas for funding.
    b. **Eligibility Areas.** *USDA should be permitted to define the eligibility areas. Allow USDA to create a sliding scale point system based on the percentage of the project that does not have 100/20 Mbps or a fixed wired 25/3 Mbps connection rather than statutorily dictating a percentage for disqualification that does not match the reality on the ground.* To get to the unserved we need to be able to build the network. USDA should evaluate whether the network that needs to be built to access the unserved is an efficient use of grant dollars, and important to the vitality and economic development of the community.
        i. **Reconnect 3** eligibility was based on areas where "at least 90 percent of the households in the PFSA must lack sufficient access to broadband, defined as at least 100 Mbps downstream, and 20 Mbps upstream service." (ReConnect Round 3 Application Guide)
        ii. **Reconnect 4** eligibility was based on areas where at least 50 percent of the households lack "sufficient access to broadband is defined as "fixed terrestrial broadband service at 100 megabits per second (Mbps) downstream and 20 Mbps upstream." (ReConnect Round 4 Fact Sheet)

There was also a separate grant category for projects serving areas where 90% of households lack sufficient access to broadband.

iii. **The Consolidated Appropriations Act of 2023 (2023 CAA)**, where $363,512,317 was appropriated for ReConnect 5, has regressed the standard to before ReConnect 3. The Act dictated eligibility areas as 90% of the households have insufficient access to broadband, defined as 25 Mbps down and 3 Mbps up.

iv. **Many states will have little to no eligible area under the 2023 CAA.** This is because the rural mountainous portions of states such as Alabama, Georgia, Kentucky, Pennsylvania, Vermont and West Virginia to name just a few, have fixed wireless service that is not uniform and where real-world coverage and connection speed cannot be reliably predetermined because of terrain, weather, and equipment capacity. Yet addresses where wireless services are claimed based on a propagation study would become ineligible.

v. Vermont is the Green Mountain State, full of hills and valleys and twisty turns. The fixed wireless coverage and mobile coverage is spotty at best. There may be households with coverage across the street from households with no coverage. There may be coverage in the winter but not in the summer with foliage, or when it is raining. *Because of intermittent and sporadic wireless "coverage" there are few if any places that will qualify at the stringent level set by the 2023 CAA and yet forty-four percent 44% of premises in our district lack access to wired internet with speeds of at least 25 Mbps down and 3 Mbps up.* We have attempted to find areas that meet the 25/3 definition for our Community Connect grant. We found two small sections of adjoining towns.

vi. *Congress should find an appropriate avenue to correct the prescriptive requirements in the 2023 CAA that will disqualify many states from participating in a time frame that enables competition for loans that can qualify as needed match funds for BEAD.*

c. **Defining the Build Standard of Broadband.** *100 Mbps symmetrical using fiber-optic cable should be the build standard because it provides an infrastructure that can be upgraded with equipment to speeds that vastly exceed what we can imagine today.* In addition, many of the cable companies have already started upgrading to fiber seeing the inevitability of the future. Infrastructure built for 100 Mbps symmetrical can be upgraded in the future to 1Gbps or 100 Gbps and beyond. The speed of light of fiber-optic cable is only limited by the equipment we develop for it. *Give USDA flexibility to set the build standard, starting at 100 Mbps symmetrical with adjustments over time as needed to keep pace with consumer needs.* Both ReConnect 3 and ReConnect 4 required that a project "may only be used to fund projects proposing to build facilities capable of delivering 100 Megabits per second (Mbps) symmetrical service to every premises in the PFSA at the same time." (Round 3 and 4 Application Guides)

5. **Continue to provide priority to municipalities and cooperatives.** These entities redistribute the profits to the community rather than distributing it to shareholders.

Having public infrastructure creates accountability and can still enable private company participation. Broadband has become critical infrastructure and in areas that support only one provider, public infrastructure should be prioritized so that rural Americans are protected from an unregulated monopoly where no entity will ever be able to invest in a second set of infrastructure to compete. We need to enable all willing and able providers that have demonstrated a commitment to their community.

6. **Onerous Application Process**
    a. **Application Timeline Guidance.** The application guide should be released 30 days before the application window so that applicants can prepare – releasing the application guide concurrent with opening the window favors applicants with large staff or deep pockets to pay for grant writing resources. Alternatively, lengthen the application window.
    b. **Application Financial Reporting**. The financial reporting in the application is very difficult to use as it is very challenging to track changes caused by entries in other parts of the application. In addition, the financial reporting is very much based on a typical telecommunications provider and not necessarily to a cooperative or municipality. *USDA should create forms that are based on the type of entity applying - or provide clear direction on how to manipulate a for-profit based system to reflect a municipal accounting reality.* It is reasonable to ensure that the potential awardee has the financial, technical and managerial wherewithal to be fiscally responsible with the grant funds. However, the hurdles put in place to prevent a fly by night entity should not disqualify the very governmental and cooperative entities that can most help our rural areas in the same way that occurred under rural electrification.
    c. **Two Step Application Process.** Rather than have entities invest hundreds of thousands, or significant volunteer hours in resource-strapped rural communities, to create these complicated applications there should be a two-stage competitive process. The first stage should be a questionnaire that provides the high level answers that will roughly determine the points and the cost of the project. Then a subset of applications that meet a certain level, say 150% of the dollars available, gets invited to complete a full application and compete for the grant funds. This would enable smaller entities to participate and only invest precious dollars and time if there was a reasonable chance of success. This is also a way to limit the number of full applications that USDA staff need to process to increase administrative efficiency without trying to do so through artificial rules (such as 90% without 25/3 Mbps) that favor certain regions of the country over others.
7. **Government entities should be exempt from CIAC tax for broadband as they now are under the IIJA for water and wastewater.** When our Districts pay a local electric utility for the work they need to do to get their poles ready for our fiber, they now charge us a tax fee. It is not a sales tax that we are exempt from as municipalities, it is a recovery of federal income tax the utility will have to pay on the money we pay them. That's because under regulatory accounting these costs are treated under federal tax law as 'contributions in aid of construction' (CIAC) and taxable as income to the utility. The 2017 Tax Cut and Jobs Act eliminated the tax-free treatment of capital contributions if made by governmental entities. In 2019, Sen. Shaheen and Sen. Murkowski led an effort to reverse this for water and wastewater related CIAC. It was ultimately included in the

Infrastructure Investment and Jobs Act, and was effective retroactively to 1/1/2021. We need to do the same for broadband-related CIAC and it should have the same retroactive effect. This will ensure that ARPA, BEAD, and USDA Broadband dollars are not being spent in a way that simply recycles them back into the tax system for a different distribution and will help immensely in getting the job of reaching every unserved address completed. Paying hundreds of thousands of dollars in CAIC taxes in Vermont reduces the funds available to connect the underserved.

8. **Allowing government and cooperative entities to build networks that get to the unserved even where it means incidental overbuild of cable or grants to private companies.**
    a. Many grants are based on the concept that we just need to entice the private sector to go a little further down the road - the classic cable extension. But in many of our rural areas we are not just building a home or two at the end of cable. If cable is offered it is generally in the center of town. The cable forms the hole in the proverbial donut. In more populated areas the hole is quite large and there is just a little on the edges. But in our more rural towns the donut hole is much smaller and to reach all the areas outside of the served we need to build through the area. Particularly for government and cooperative entities working on these rural areas with small donut holes, projects should be allowed to build through an area to get to the served on the other side and in doing so enable greater infrastructure for the future to all members of the community.
    b. As a Communications Union District, we find ourselves building amongst unbusinesslike contortions trying to build to every unserved address without being allowed to form a comprehensive network. Our District is a checkerboard of RDOF awards, yet we cannot get to the unserved areas without building through the RDOF award winner area. Infrastructure that is controlled by the people (through government or cooperative governance) should be permitted to access funds for getting to these unserved in a way that allows them to compete for customers along the fiber they must build through the served area. Unless the RDOF/BEAD award winner is willing to make a commitment to serve the pockets of unserved on the other side of the served area, we need the ability to build through the area. It is reasonable for the grant to provide points for offering wholesale access to those fiber builds to other grant awardees to push for more economic efficiency. *USDA should be permitted to make these judgment calls on what is best for our most rural communities rather than be limited by the permission of other entities such as the FCC/NTIA.*

Community Connect Grants.

This grant program is such a wonderful concept. It pushes towns to expand digital access to its residents by increasing the time, space, and equipment available in community facilities. However, the program needs an overhaul to become usable for small towns. Here are my concerns and some suggestions:

1. The program is almost impossible to leverage anywhere that has anyfixed wireless coverage because it disqualifies any project with a SINGLE address that is above 25/3 Mbps within the polygon. *The program should either (a) allow holes in the service area around the served addresses but allow the distribution infrastructure to proceed through;*

or (b) base its point system on a sliding scale based on the percentage of unserved addresses.

2. The application process is complicated and exacerbated by conflicting guidance and rules. The Technical Broadband Assistance Program can be of great assistance - but the deadline for that grant is the same deadline as the Community Connect deadline. While the USDA should ensure that every applicant has the technical and financial wherewithal to fulfill the grant obligation, it creates a lift for an application that is daunting for a community relative to the maximum award potential. *There should be the same two step application process as outlined above for ReConnect* so communities are only investing the massive amount of volunteer, paid, and consulting time to complete an application if there is a chance of success.
3. *Staff should conduct workshops through all states to get feedback on the application process, the guidance provided, and the needs of the community.* For example, does the 25/3 Mbps rule only apply to residents or also to businesses and community anchor institutions (CAAs)?. So many grant programs over the decades have worked to get CAAs to 25/3 Mbps that building a community center based grant application that doesn't hit a 25/3Mbps address is nearly impossible.
4. The "Community Center" aspect of the grant – offering a free, connected space to the public 7 days a week – addresses a real need in providing accessibility to those that cannot afford it or are outside their home. That being said, many rural towns have the best candidates for this type of facility (i.e., libraries, community buildings, schools) in the higher density, already served segments of town (i.e., the village or downtown). Constructing or launching a new facility poses real problems/challenges for rural communities to execute and staff/manage, thus bringing additional burdens on already resource-strapped communities. Ideally, this requirement would make it easier for rural communities to leverage existing facilities and utilize this grant to take them to the next level in terms of serving the community (i.e., additional open hours and staffing, more and better equipment, enhancements to facilities, etc.).

Broadband Technical Assistance Program

This is a new and valuable program that addresses some of the issues described in ReConnect and Community Connect. However, some of the same issues apply. The application process is significant, this time for a smaller grant amount, with no knowledge of whether there is a competitive chance of receiving funds. The same quick form two step process could alleviate this issue.

Distance Learning & Telemedicine Grants

These grants remain valuable. As technology changes and progresses, organizations find the need to upgrade or put in new infrastructure to meet the new internet demand challenges of modern medicine and education. However, the most critical need at this time is ensuring that the most rural and poorest households can actually access broadband services and afford to pay for the services and the devices that can connect them to distance learning and telemedicine. This can be accomplished through programs such as BEAD, ReConnect, and Community Connect. USDA can also assist by allowing these distance learning and telemedicine grants to work with

providers to find ways to help connect those with no access because of devices or affordability so they can access the services provided by the institution.

Telecommunications Infrastructure Loans & Loan Guarantees

Under the Rural Development program there are Telecommunications Infrastructure Loans & Loan Guarantees. However, to be eligible for these loans the area must either be without telecommunications facilities or in an area where the applicant is the recognized telecommunications provider. *Eligibility for these loans should be expanded to include not just the incumbent local exchange carrier but also a cooperative or communications union district providing 100 Mbps symmetrical broadband in areas that are not getting service from the recognized telecommunications provider or a competitive provider.*

Public Infrastructure.

Fiber-to-the-home in our most unserved and underserved areas can only be affordably built just once. Public funds must be used to build public infrastructure for the public good. Communications Union Districts as non-profit municipalities and cooperatives are accountable to the people they serve and service. CUDs and cooperatives are in the best position to determine how service is to be provided, by themselves, another single provider, or by multiple providers.

Some people advocate for open access in order to promote competition. The reality is that creating a viable business model is so difficult in these unserved and underserved rural areas that one FTTP provider needs to be provided the opportunity to hit critical mass and a sustainable business. If you directly fund a shareholder driven, for-profit FTTP provider to build and own the infrastructure in an area then you have created monopolistic control in an unregulated industry. Further, if you just grant them the money outright there is no commitment to providing universal service that will continue to keep up with technology. They will have built an asset that they can now turn around and sell to a company that may decide servicing retail customers is too costly and shift to using the infrastructure only to provide services to businesses and anchor institutions. Or perhaps worse, if the provider fails you have funded infrastructure that may no longer be usable for its intended purpose. Now, you have to build that infrastructure all over again when there will likely be no more available funding sources.

Public funds should prioritize projects with public infrastructure that either develop or leverage the expertise of private companies. Through control of public infrastructure the body politic or cooperative can prevent its residents from being held captive by the whims, successes, or failures of a profit making entity. Public-private partnerships done correctly provide a way for our tax dollars to be reinvested in our communities year over year, while also capitalizing on the benefits and expertise of our local companies.

Conclusion

I appreciate your time as I have explained the importance of the USDA Rural Development broadband programs. I hope that my recommendations are seen as constructive and helpful as we seek to make the programs available to all parts of the country in a way that efficiently uses the minimal resources of our most rural areas. There is value in each of the programs identified

above and they address different needs throughout the country, from different perspectives. Specifically, I would ask that you move the ReConnect program from a pilot to an ongoing program, ensure that all programs are building infrastructure that can be upgraded for the future, and alleviate unnecessary application burden by providing a two step process. Thank you for your time and consideration.

Testimony of Jesse L. Shekleton
Director of Broadband Operations at Jo-Carroll Energy
United States Senate Committee on Agriculture
Subcommittee on Rural Development and Energy

"Rural Broadband: Connecting Our Communities to the Digital Economy"
May 17, 2023, 3:00pm
328A Russell Senate Office Building

Chairman Welch, Ranking Member Tuberville, and Members of this Subcommittee, thank you for inviting me to testify today. My name is Jesse Shekleton, and I serve as Director of Broadband Operations for Jo-Carroll Energy (JCE), a rural electric, natural gas and broadband cooperative headquartered in Elizabeth, Illinois.

JCE formed in 1939 as a nonprofit corporation, leveraging a Rural Electrification Administration loan to build its first 20 miles of electric line, bringing service to 60 rural members in May of 1940. Since then, Jo-Carroll Energy has grown to include more than 2,400 miles of electric distribution lines and over 300 miles of natural gas pipelines, bringing reliable and affordable electric and natural gas service to more than 26,000 families, farms, and small businesses in northwestern Illinois.

More than 80 years later, Jo-Carroll is continuing to work with what is now known as the Rural Utilities Service at the U.S. Department of Agriculture, though today that partnership has expanded to include broadband. USDA's ReConnect program and Community Connect program have provided funding for JCE to bring fiber broadband service to numerous communities and families across Jo Daviess, Carroll, and Whiteside counties.

For many electric cooperatives, the story of rural broadband today mirrors the story of rural electrification nearly 100 years ago. The cost of building and maintaining networks in sparsely populated areas with difficult terrain is prohibitive for many providers. Today, more than 200 rural electric cooperatives across the country have recognized the impact that a reliable internet connection can have on their communities and understand the challenge of deploying this infrastructure in low density, rural, and remote areas. Rural electric cooperatives have a longstanding commitment to improving the communities in which they serve, and are actively engaged in rural economic development efforts across and beyond their service territories.

Evolution of Broadband Service at Jo-Carroll Energy

In 2008, JCE launched its broadband arm, Sand Prairie Internet, as a business division of the co-op to provide reliable, high-speed internet to Jo-Carroll's consumer-members. Sand Prairie was initially intended to provide a fixed wireless system to support utility operations, such as enabling communications with the utility's substations. With this infrastructure, JCE was able to also offer retail fixed wireless service to line-of-sight members. However, as demand from

cooperative members grew for rural connectivity, JCE began to experience limitations with the fixed wireless system. Much of Jo-Carroll's service territory includes densely forested rolling hills and bluffs, which made the fixed wireless network unreliable, intermittent, and unable to meet capacity needs.

Since then, Jo-Carroll Energy has pivoted to building a fiber-only network. Fiber enables JCE's members to bring rural economic development and prosperity to their communities, and enable robust opportunities for education, healthcare, and agriculture in northwestern Illinois. For example, in Elizabeth, Illinois, where Jo-Carroll is headquartered, a fiber broadband connection has helped by providing reliable, high-bandwidth services to recently opened businesses including a local pharmacy and convenience store that offers the only grocery sales option to the small community.It also is a draw for younger families, especially as many have transitioned to hybrid work or are considering the educational needs of their children. Other communities within Jo-Carroll's service territory, such as Galena, Illinois, have seen the impacts that a fiber broadband offering can have on economic development. It provides opportunities for economic growth and business development that allow these small, rural communities to compete with their larger counterparts.

A fiber backbone enables Jo-Carroll Energy to best manage electric and natural gas operations, such as smart grid applications, which require a high bandwidth and low latency connection. It also allowed JCE to implement a supervisory control and data acquisition (SCADA) system, enabling real-time monitoring of electric and natural gas infrastructure from a central control center and improving efficiency across the network. Both SCADA and advanced metering infrastructure require a communications network with a very high reliability, which was challenging to achieve on fixed wireless. Other smart grid offerings, such as smart home, distributed energy resources, and expanded electric vehicle infrastructure, as well as enhanced middle mile capacity, have lasting benefits to the cooperative and surrounding communities. A fiber backbone along the electric network better enables providers, whether JCE or otherwise, to reach additional unserved and underserved areas while also creating redundancy, improving reliability, and lowering costs across utility systems.

Beyond the benefits that a broadband connection can provide in town or to the co-op, improved connectivity also provides a massive benefit to one of the largest economic sectors in Illinois: agriculture. Precision agriculture has grown in recent years, with farmers and ranchers leveraging a wide range of connected devices, from connected combines to drones, to reduce input costs and improve yields. Some technologies require low bandwidth but a wide range of field coverage, such as sensors on various farm vehicles, making them difficult to connect. Other applications, such as the use of drones to spray fertilizer or herbicides, require a lot of bandwidth and very low latency. As precision and smart ag technologies expand to include autonomous tractor navigation, soil sampling or field mapping, or simple tools to monitor livestock, demands for bandwidth on the farm will continue to grow, underscoring why a robust and scalable connection is essential.

As a not-for-profit, member-owned cooperative, Jo-Carroll Energy is locally controlled and strives to keep rates affordable for our consumer-members. With that in mind, JCE has determined that fiber is the most effective and economic technology to provide robust broadband to our rural communities, farms, and families. Fiber allows us to ensure that the investments we make in this network today will be able to meet existing and future utility needs, as well as improve the economic outlook and quality of life in the rural communities we serve.

Expanding Broadband Access in Northwestern Illinois

Affordable and reliable broadband access is critical for the economic growth and development of rural communities. Robust internet access allows students to access the educational resources they need, improves access to medical care in rural communities, and enables farmers to better leverage new technologies to improve crop yields. This connectivity is critical to fully participate in today's internet-based economy, and many families and businesses to locate elsewhere if robust internet access is unavailable in rural areas.

For many rural communities, the U.S. Department of Agriculture has been a longtime trusted partner in rural economic development efforts. Jo-Carroll Energy got its start in 1939 through a loan from USDA, then known as the Rural Electrification Administration. Today, JCE seeks to leverage numerous USDA programs to assist not only in providing reliable and affordable electric service, but also to support broadband expansion as well as other rural economic development projects.

In October 2020, Jo-Carroll Energy was awareded a $14 million ReConnect grant to connect approximately 250 square miles across 4 counties in northwestern Illinois. Once completed, this project will serve more than 7,600 people, 8 public school districts, 3 fire stations, and numerous farms and businesses with fiber broadband. While there is strong demand for broadband service via this grant, there are numerous federal grant requirements that have slowed progress of the fiber build. Participation in federal infrastructure programs require additional environmental reviews as part of the permitting process, and easement acquisition at the local level can be costly and cumbersome. Similarly, increased demand for materials coupled with delivery delays have slowed the project timelines. Despite this, Jo-Carroll Energy plans to complete the proposed project within the five-year build timeframe as required by ReConnect.

In addition to the ReConnect program, Jo-Carroll Energy has seen success with USDA's Community Connect program. JCE received a $2.05 million Community Connect grant in 2019, which enabled JCE members to contribute directly to the economic growth and development of rural Galena, Illinois. Upon completion of this grant, over 88% of the rural households involved have taken fiber service, a true testament to the growing need and strong demand of this value add rural service.Additionally, the project area and adjacent rural areas have seen a 20% increase in permanent residents moving into available homes. Consequently, this helps ensure two primary employers in the area remain viable and continue to provide over 150 full time and

350 seasonal jobs to rural residents who depend on this work. In 2021, Jo-Carroll received another $2.3 million Community Connect award to bring fiber connections to Schapville and rural Scales Mound, and hope to see similar economic growth as a result.

Beyond providing these robust internet connections, JCE is also pursuing opportunities to grow and support the skilled workforce needed to deploy and maintain this valuable infrastructure. Demands for a skilled and qualified workforce continue to grow as more broadband funding from federal programs come online, which is why Jo-Carroll is exploring opportunities for partnership in northwest Illinois to create career pathways and apprenticeship opportunities that focus on fiber construction, network technicians and cybersecurity specialists. This will not only ensure that JCE and other providers in the region have access to a skilled workforce, but will continue to create economic development and retention opportunities across these rural counties.

Considerations for the 2023 Farm Bill

As Congress considers how to best support rural connectivity through the upcoming Farm Bill, I'd like to offer a few suggestions. First, Congress should prioritize scalable, future-proof networks in any future rounds of federal funding for broadband. The economics of deploying reliable, high-speed internet infrastructure in rural and remote areas is challenging for any provider, which is why we still have so many unserved and underserved areas across the country. Similarly, consumer demands and needs for increased internet speeds continue to grow[1], and are trending toward a need for multi-gigabit service by 2030[2]. Prioritizing symmetrical speeds and network technologies that are scalable will ensure that rural and remote areas are able to meet consumer needs both now and into the future, and will minimize or eliminate the need to fund incremental upgrades down the line. At a minimum, Congress should require a minimum build-to speed of 100/100 Mbps symmetrical in all future rounds of federal funding, though it also should be recognized that 100Mbps is currently well below the internet service most consumers demand or need.

In general, federal programs should be flexible. The challenges of building and maintaining a broadband network in low-density rural areas can vary from community to community, however many of those communities and providers are often seeking to leverage more than one federal or state program for assistance with their projects. Recent rounds of ReConnect have allowed grant funds to assist in areas already covered by programs like the FCC's Rural Digital Opportunity Fund program, as long as those funds are used for complementary, and not duplicative, purposes. Areas currently unserved by broadband are expensive, and Congress should provide the flexibility to leverage multiple programs to offset some of the high costs of deployment so that providers are able to best meet the needs of those rural and remote areas.

[1] https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-twelfth-report
[2] https://www.fiercetelecom.com/telecom/fba-tips-household-broadband-speed-need-to-surpass-2-gbps-by-2030

As Jo-Carroll has sought to implement Community Connect grants, one of the biggest challenges faced has been the requirement to facilitate a community center within the proposed funded service area (PFSA). Due to the inherent rurality of these grant areas, existing facilities conducive to hosting such a center do not typically exist, meaning a temporary facility is required. This adds an additional scope of work to the potential project, and often requires an extensive special use permit by the respective county to facilitate a temporary facility. As Congress seeks to modify the Community Connect program via the upcoming Farm Bill, one suggestion would be to allow the required community center to be facilitated in areas not immediately in but adjacent to and within a reasonable distance from the PFSA. For example, when building in a very rural PFSA, the flexibility to facilitate the community center at a nearby small town library or other existing public facility would provide both a benefit to that facility while reducing unnecessary expenditures and minimizing any environmental impact concerns of setting up a temporary site within the PFSA.

Federal programs, including those managed by USDA, do not move quickly, and there are long lags in deployment, and it is often months from the time an award is announced to the time a system is operational and providing service. Coupled with permitting issues, supply chain delays, challenges in finding a qualified workforce, and inflation, delays are commonplace and can be detrimental to the original feasibility of a project. Furthermore, permitting review timelines are often a major barrier to rapid infrastructure deployment. Federally supported projects often require NEPA or NHPA reviews, which can be costly, time consuming, and cumbersome, and in many instances those environmental reviews are required even when a co-op is leveraging existing electric infrastructure in existing rights of way for broadband deployment. While these federal programs exist to help offset the high costs of building in rural areas, the long lag times and permitting delays can be a barrier and sometimes even a deterrent to participation.

Conclusion

More than 80 years ago, not-for-profit electric cooperatives partnered with the U.S. Department of Agriculture to bring electric service to areas that were challenging or cost prohibitive for investor-owned utilities to serve. Today, electric cooperatives are once again partnering with USDA to bring vital broadband service to those same areas.

On behalf of Jo-Carroll Energy, I want to thank the Chair and Ranking Member for inviting me to testify today. Reliable, scalable internet access is critical to the growth and economic development of rural communities not only across northwest Illinois, but the country as a whole. As the Committee considers the upcoming Farm Bill, JCE and the rest of our nation's electric cooperatives look forward to working with you in our shared goal of connecting all Americans, no matter where they live, with a robust, reliable, and future-proof internet connection. I'm happy to answer any questions you may have.

FARMERS TELECOMMUNICATIONS COOPERATIVE, INC.

Statement

Of

J. Frederick Johnson

Chief Executive Officer

Farmers Telecommunications Cooperative, Inc.

Rainsville, Alabama

Before the

United States Senate

Committee on Agriculture, Nutrition, and Forestry

Subcommittee on Rural Development and Energy

Washington, DC

May 17, 2023

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Chairman Welch, Ranking Member Tuberville, distinguished members of the Committee. Good afternoon. My name is Fred Johnson and I have the pleasure of serving as the Chief Executive Officer of the Farmers Telecommunications Cooperative (FTC), Inc. in Rainsville, Alabama. FTC was organized in 1952 to serve a portion of Northeast Alabama declined by investor-owned telephone companies. It received its initial debt capital from what was then the Rural Electrification Administration. Since its beginning, FTC has had a long and proud history of leading Alabama in communications excellence. We installed the state's first digital multiplex switch and, over three decades later, we became the first Alabama company to deploy a widely adopted gigabit Internet access service. We currently serve an area of approximately 662 square miles and our world-class broadband network is based entirely upon optical fiber with more than 2,528 route miles currently in service. Our network is fully capable of delivering multi-gig speeds throughout our service area and has been for quite some time.

My career spans 41 years associated in some way to either rural electrification, rural telecommunications, or a combination of the two. It has been an exceptionally gratifying career. It is telling that I will be the last CEO of FTC who both knew and was personally influenced by the forward-thinking men and women involved in the early rural development of our area. Their commitment to the economic viability of our region was not lost on an impressionable high school boy who was himself growing up in the home of a co-op leader. Neither have I forgotten their charge to carry on that concern for the future of Northeast Alabama. To that end, I am both extremely grateful, and humbled, to have the opportunity to speak to the United States Senate at this point in my career. Congress's work to expand broadband, including in the 2023 Farm Bill, will impact the lives of the people I serve as well as the millions like them across the United States. The task, however, is daunting and there are several pitfalls that need to be avoided if we are to be successful in expanding broadband to the hardest to reach areas. The 2023 Farm Bill affords an opportunity to ensure the wise use of scarce taxpayer resources. I firmly believe FTC's experience provides a good example of a job done right.

In 2007, our trustees made a courageous decision to deploy optical fiber to 72% of our service area. There was little evidence to support the notion that economics would allow further extension. Cooperatives typically struggle with such a commitment that does not benefit all service members. However, our trustees understood the economic imperative for modernizing our communications infrastructure. Our improvement plan left no business community or industrial park unserved, and our efforts were rewarded. For the next fifteen years, we worked hard, engineered smarter, and carefully grew our footprint, in such a way that we did what was once thought impossible. By December 31, 2021, every member of our cooperative, along with several thousand locations adjacent to our original service territory were served with optical fiber. FTC now has what is arguably one of the most robust broadband networks in America. Many factors contributed to our success, including: the availability of RUS financing, the ability to leverage the existing telecom network, the willingness of our members to provide equity financing, state broadband grants, and adequate public policy support assuring that basic connectivity to the nation's communications network was as affordable to our customers as those in urban and suburban America.

I highlight these factors because they are imperative when it comes to deploying and then maintaining a sustainable broadband network. There is a strong tendency to view funding the deployment of networks as a job well-done. Instead, it is but a start, and the complexity of sustainable broadband networks must not be overlooked. Robust broadband networks require substantial maintenance, operational support, and robust connectivity to the backbone of the Internet, all of which comes with a cost. Even more importantly they require a long-term commitment. Current funding levels have produced many emergent providers with an expressed willingness to undertake the deployment challenge. However, providers –like FTC – have established a long and storied history of serving rural and small-town America and are committed to the long-term success of our communities. Community-based providers, like FTC, and other members of this panel can speak to how we have been successful in our

communities and what lessons could be learned for the 2023 Farm Bill. Below I highlight the factors I believe Congress should consider as Farm Bill discussions are underway.

First and foremost, Congress must assure that broadband deployment resources provided under the Farm Bill are used for getting broadband to those who do not have it. The goal is not to duplicate existing investment or to generate artificial competition in areas that already cannot support even a single unsubsidized competitor. If scarce taxpayer resources are to be used effectively for deployment specifically, that support must go first and foremost to those who are unserved.

One discussion that directly impacts this objective concerns eligibility thresholds for funding proposed service areas. Commonly, USDA funding has required that at least 90% of a service area be unserved. There abound suggestions to lower that threshold. The discussion is a valid topic. However, one important fact remains. The lower the threshold, the higher the possibility that taxpayer dollars will be used for unwarranted duplication of investment which would, in some cases, further imperil the ability of existing providers to leverage their networks in economically efficient ways toward the public policy objectives upon which we all agree.

On this precise point, the State of Alabama has a good track record in the administration of its state broadband grants, primarily by focusing on the whole of proposed funding areas. Even would-be competitors have rallied around a program that does not foster conflict among providers but, rather, enables deployment to the truly unserved. Indeed, in addition to the use of state funds, two of my Alabama colleagues, Pine Belt Telephone and Communications and the Hayneville Telephone Company, have received USDA funding of approximately $75 million, combined, for deploying broadband in some of the poorest areas of Alabama. To the best of my knowledge, this is the largest collective investment in that area of the state to date and it is in keeping with the highest aspirations of these programs. This investment is yet another success story of government programs working as designed. I should also note

that my colleagues at Pine Belt and Hayneville are family-owned community-based providers. Despite FTC being a cooperative provider, we do not encourage preferences in the rules that negatively impact privately owned companies with a demonstrated history of investing in, and providing for, their communities. All providers seeking federal funding should be on a level playing field. It is for this reason FTC encourages Congress to codify that providers seeking USDA funding should not be favored based on the form of their organizational or commercial status.

Other important issues for this Committee to consider when drafting the 2023 Farm Bill:

- Ensure that broadband deployment programs are used to build networks that meet the needs of rural consumers. 100 Mbps symmetrical broadband has recently been and should continue to be USDA's minimum standard of service for deployment. USDA's investments should support technology that can be readily upgraded to deliver the fastest speeds over the long-term. Some technologies may appear cheaper to deploy now but will be unable to keep pace with consumer demand.
- Please ensure that federal grant dollars, when used for the intended purposes of funding broadband deployment, are not subjected to federal taxation. There is no logic in awarding a grant which must be entirely spent for its intended function and then requiring a portion to be returned via taxation.
- Pay heed to the permitting roadblocks and hurdles, at all levels of government, that competent broadband providers must overcome when they deploy their networks. There must be public policy improvement in this area to avoid significant application and construction delays.
- Be aware of technical financing hardships caused by requirements that providers expend all matching funds prior to receiving grant funds. Allowing for concurrent expenditures of both

private and public funds obviates this hardship while preserving the much-needed requirement that grant recipients be sufficiently invested.

- Continue your efforts at coordinating the award of federal resources across all aid platforms and programs. Remember also that basic voice telephone connectivity, including 9-1-1 service, is still essential in those large swaths of America that do not have reliable cell service. Support the efforts of your colleagues to modernize the future on the Federal Universal Service program that supports this worthy objective.

Know that I, and the people I serve, appreciate your leadership and willingness to assure that rural America remains connected to the rest of our world. Thank you for your service to our nation and for allowing me to address the Committee this afternoon.

TESTIMONY OF JUSTIN FORDE

VICE PRESIDENT OF GOVERNMENT RELATIONS

MIDCONTINENT COMMUNICATIONS

on

Rural Broadband:
Connecting our Rural Communities to the Digital Economy

before the

Committee on Agriculture, Nutrition and Forestry

Subcommittee on Rural Development and Energy

UNITED STATES SENATE

WASHINGTON, D.C.

May 17, 2023

Chair Welch, Ranking Member Tuberville, and Members of the Subcommittee, thank you for inviting me here to discuss Midco's experience with federal broadband funding programs. My name is Justin Forde, and I am the Vice President of Government Relations at Midcontinent Communications ("Midco"). Midco is the leading provider of reliable, high-speed internet via fiber and fixed wireless technology. By 2025, Midco will deploy 10G, the next great leap for broadband – while expanding our fiber network to rural areas. Midco also delivers TV services including Midco Sports, which is a regional sports network, phone, data center and advertising services, plus wholesale networking solutions.

More than 490,000 residential and business customers count on Midco services across five states: South Dakota, North Dakota, Minnesota, Kansas, and Wisconsin. Midco communities range from fewer than 100 people in places like St Leo, Minnesota, to our largest community, Sioux Falls, South Dakota, which has a metro population of nearly 290,000. The majority of the approximately 450 communities we serve are very rural. Many have less than 50,000 people, with most having populations between 500 and 5,000.

The last few years have put a renewed spotlight on the importance of broadband connectivity for all Americans. At Midco, we have risen to the challenge of connecting as many people as possible throughout our service area. We have invested over $765 million in private capital in the last six years to extend and upgrade our fiber network. Collectively, cable ISPs have invested more than $185 billion in capital over the last 10 years to get America connected, including $21.7 billion in 2022 alone. Since 2019, over 9.2 million new households have been connected to the internet. Currently, over 94.5% of US homes have access to terrestrial broadband service that offers speeds of at least 25 Mbps download and 3 Mbps upload – and in the homes served by cable, 99% have 1 Gigabit service available. At Midco, we provide Gigabit

service to 100% of the largely rural communities we serve with our fiber network.

But we need to solve the remaining broadband deployment challenge of connecting those who do not have internet available – primarily in the most rural areas that are difficult to serve in a cost-effective manner.

Unserved communities lack broadband for one reason above all others – they are prohibitively expensive to serve. The cost of deploying infrastructure over expansive, difficult terrain is exponentially higher than other areas. At the same time, the revenue to offset those expenses is inversely less where fewer people and businesses reside. Government funding is essential to offsetting these dynamics and incenting companies to build.

Many of Midco's service areas are adjacent to areas that are not economical to serve without federal assistance, and we have sought and obtained funding through a variety of federal and state programs to assist with expanding to those areas. We received $38.9 million from the FCC's CAF II auction to build fixed wireless and $4.9 million from RDOF to build fiber to the home networks. To-date, Midco has been awarded nearly $22 million from state and local broadband programs, using a mix of local and state funding sources, as well as various COVID relief allocations distributed to state and local governments by the federal government. This $22 million has been matched 1:1 by private investment from Midco.

Initially, one of the most promising programs that we believed would be critical to helping us reach the remaining households in our rural areas was the Rural eConnectivity program run by the Department of Agriculture's Rural Utilities Service ("RUS"), better known as the "ReConnect" program. Unlike other RUS broadband funding programs, it was tightly focused on helping get broadband to unserved areas and it did not give a preference to past borrowers, so we believed we had a fair chance to compete.

We were originally barred from participation, because our company is legally organized as a partnership, but we worked extensively with RUS to obtain an informal waiver of the ban on partnership participation. More generally, the cable industry worked with RUS and Congress to make significant improvements to the program, making it easier and more attractive for providers to participate. An example of this is reducing data requirements that were overwhelming for a company like Midco to assemble.

In the recent past, however, Congress has changed this program significantly, making participation for companies like Midco far more difficult – and winning funding awards nearly impossible. These changes have taken the focus away from unserved areas, meaning that our networks are being overbuilt with government dollars and the program is not resulting in a meaningful change in the number of rural households gaining broadband access.

With so many billions of federal funding dollars being focused on broadband expansion, we believe that it is more important than ever to get these programs right. I'm here today to offer my thoughts on how to reorient the RUS broadband funding programs so that they meaningfully improve rural America's broadband access. And specifically, as I will discuss, Midco believes that the Rural Internet Improvement Act, introduced by Senators Thune and Lujan, would go a very long way toward this desperately needed course correction. Most notably, the RIIA provides important protections against overbuilding, modernizes eligibility rules, reduces excessive data burdens in both the application and funding phases, and calls for substantially increased coordination among the various agencies distributing broadband funding.

Midco's Long History of Commitment to Rural America

Before discussing Midco's experience with funding programs, I want to explain how we have innovated to provide broadband to rural communities in various ways. Innovation and

foresight have shaped Midco's course for more than 90 years. We have made it our mission to ensure that our most rural communities are at the leading edge of technology. Across our footprint, our goal is to continue to find ways to meet and exceed the communications needs of our customers.

Founded in 1931, Midco began by operating movie theaters, and then entered the radio business. In 1954, our owners launched the first television station in South Dakota. From there, Midco evolved its service line to include cable television and phone service. On April 15, 1996, in Aberdeen, South Dakota, a town of about 25,000 people then, Midco launched our broadband internet service.

Our commitment to innovation continues to motivate our business initiatives. We own and operate multiple data centers in North Dakota and South Dakota to give local businesses a cost-effective way to secure their critical data and IT infrastructure. We provide solutions for regional and national banking, healthcare, energy, and government customers, among many other industries. We combine our data center services with powerful network solutions through our wholly owned, operated and engineered Midco fiber network. Our data centers are directly connected to our fiber backbone, giving local businesses access to some of the fastest internet speeds in the country.

Midco's willingness to evolve stems from our desire to serve the communities where we live, work, and educate the next generation. In 2017, we launched the Midco Gig Initiative – a commitment to bring Gigabit internet speeds to our entire service area – from the region's smallest towns to its largest cities. This initiative was successfully completed in 2022. In 2019, we announced our involvement in cable's 10G initiative, a plan to deploy ultra-high-speed multigigabit symmetrical connections, combined with low latency, unmatched reliability, and

rock-solid security for a broad range of customers. In 2021, in furtherance of this commitment, Midco launched its Fiber Forward initiative. The initiative is a $500 million investment in next generation technologies to upgrade our existing network and expand to new communities, doubling our Midco-owned fiber network mileage.

Fiber Forward will use Midco's robust fiber network and next-gen fiber tech to deliver 10G speeds, incredible reliability and increase performance to support what's next in revolutionary innovations. Throughout this year, we will expand and upgrade our fiber network in more and more places. We have just announced plans to begin construction in multiple rural communities that will benefit greatly from this future-proof investment.

Today, 100% of Midco's wireline customers across our footprint are receiving service that exceeds 1 Gig speeds, and we already offer 5 Gig speeds to 6% of those customers. Our growth has included important progress in reaching previously unserved areas, thanks in part to our partnership with the FCC through its CAF II and RDOF auctions, as well as our partnerships with the states we serve. In 2022 alone –

- We used private capital to carry out a Fiber Forward initiative in Grand Forks, North Dakota. This $25 million project will result in more than 40,000 homes and businesses in Grand Forks benefiting from our future-proof investment.

- We entered into a collaboration with farm cooperatives Crystal Valley and Land O'Lakes Minnesota to expand broadband internet access through multiple initiatives, including (1) to residents of Trimont, MN and the surrounding community by installing high-speed broadband technology to three area towers so that 1,595 residents in the rural area who were unable to access adequate broadband service at their homes could gain connectivity; (2) to 1,200 residents of Hope, Minnesota and surrounding areas; and (3) after installing high-speed broadband technology on one tower in the Madelia area at Crystal Valley's location, to 1,500 residents in rural areas who had lacked adequate broadband service at their homes.

- We continued construction on 120 miles of new fiber along Minnesota's Highway 10 corridor in Hawley and Detroit Lakes. By the end of 2022, 1,200 Detroit Lakes homes and businesses had access to fiber internet, and we plan to connect

another 2,000 sites in 2023. In Hawley, we serve 765 homes and expect to serve the entire community by summer of 2023.

- In Sherburne County, Minnesota, Midco has and plans to continue to utilize private capital, RDOF funds and local partnerships with the county and six townships to complete several broadband expansion projects. From 2020-2024, nearly 10,000 homes and businesses in the county will be connected with over 1.5 million feet of new broadband infrastructure constructed. In total, Midco's investment in Sherburne County since 2020 is over $32M.

- We began construction on 300 miles of new fiber in St. Croix County, Wisconsin, which will connect 10,000 homes and businesses over the next few years.

- In Minnesota, we partnered with Koochiching County, Koochiching Technology Initiative, and North Star Electric Cooperative to connect 231 International Falls homes along Rainy Lake and Highway 11 with fiber-to-the premises offering symmetrical, low-latency connections of up to 5 gigabits per second.

- We began a $3 million private capital investment to bring fiber-to-the-premises services to more than 1,800 homes and businesses in Hartford, South Dakota.

- In North Dakota, we invested nearly $400,000 to upgrade our fiber network in the Grafton area and bring faster speeds to nearly 3,000 homes and businesses.

- We were awarded two grants through the Minnesota Office of Broadband Development's Border-to-Border Broadband Program: $1.6 million to cover a portion of our planned $3.3 million deployment to improve connectivity to hundreds of homes, businesses and farms in Bradford and Springvale Townships in Isanti County, and an additional $975,000 to cover a portion of the $1.9 million to improve connectivity in unserved and underserved areas of Forest Lake, Minnesota.

These examples are a testament to our continued commitment to reach those who are unserved or underserved to the greatest extent possible.

Midco's Innovative Approach to Getting Broadband to Remote Areas

As evidenced by the examples above, Midco is reaching new homes with broadband fiber every day. But we also remain keenly aware of the challenging topography of the states we serve – which includes mountains, granite cliffs, vast farmlands, the Iron Range, the Badlands and protected national forests. This topography means that reaching everyone by fiber may not

always be feasible, and so we are constantly innovating to combine different technologies to tailor our offerings to the needs of each customer or community.

While in many cases, fiber is best, we have been able to reach many other rural communities with broadband by leveraging our extensive fiber backbone through our Midco Edge Out® strategy. We "edge out" our high-speed internet from our fiber backbone in urban areas to rural areas using fixed wireless technology. We use the initial fixed wireless expansion from our wired plant to meet customers' immediate needs, and then, when appropriate, leverage that expansion to justify a wired network buildout and repurpose the fixed wireless equipment to serve other rural communities. While some rural areas may support a future wired build, other, more remote rural areas will continue to be served with a fixed wireless solution.

Midco believes in the power of fixed wireless to bridge the digital divide and enable our Midco Edge Out® strategy so much that we spent $8.8 million to acquire spectrum in the FCC's Citizens Broadband Radio Service auction in 2020. This spectrum not only allows us to offer speeds of more than 100/20 Mbps at distances up to eight miles from the vertical asset, but it also gives us access to crucial mid-band spectrum to continue innovating. As an example of this continued innovation, Midco recently deployed new fixed wireless equipment for testing in rural Minnesota that is currently delivering 500/100 Mbps to customers.

Fixed wireless allows us to reach remote, rural areas that are up to 50 miles away from our fiber network in areas where it will never be practical – or sometimes, even possible – to build fiber. We can also implement this solution relatively quickly, even during the winter months, when harsh weather makes fiber construction impossible.

For broadband to reach rural America as quickly as possible, it is critical that the programs be technology-neutral, encourage the broadest participation of qualified broadband

providers, and be as flexible as possible. Setting high "build to" speed thresholds that can only be delivered by a fiber network build may sound helpful, but in practice will continue to leave many behind. And that leads me to our current concerns about the ReConnect Program and other broadband funding programs administered by RUS.

Why ReConnect is Not Helping Rural America as Much As It Could

Recent changes to the ReConnect program over the last few years have significantly shifted the focus of this program away from the portions of rural America lacking broadband access.

First, while rural areas originally had to have 90% of households unserved to be eligible for funding, the most recent round allowed funding in areas where as many as 50% of households already have access to broadband service. Broadband programs should target funding to truly unserved areas, where private investment is not going to occur without government assistance but consumers need to be connected.

Allowing government broadband programs to grant funding in places that already have broadband service, or are already about to have such service through a different government funding program, dangerously impacts providers' incentive and ability to keep building in those areas. Midco was overbuilt by two ReConnect awards in rural South Dakota, even though we were building a fixed wireless network serving those areas that was being partially funded by a Connect America Fund Phase II Auction FCC award. Because Midco had not yet finished construction, its challenges to those funding awards were denied. Today, this network is active and this area is served by two providers, one who received funding from USDA and one who received funding from the FCC.

We believe that scarce government resources should protect against overbuilding and be

targeted to those who will build out to consumers who will not otherwise gain access to all the benefits broadband provides, for jobs, education and health care services, without those resources. Only by directing new broadband funding where it is truly needed can we ensure that broadband funding programs will make meaningful headway in closing the Digital Divide.

Second, the level of broadband service required for an area to be considered "served" has been raised, resulting in the strong likelihood that government dollars will not be put to their highest use because they will be used for overbuilding rather than expanding to new areas. When eligibility is restricted to areas that do not receive a basic level of broadband service, such as 25/3, we know that funding will be used to bring broadband where it did not previously exist. But when areas are defined as eligible for funding unless they have a higher level of service, many areas where we and others have invested heavily, including through public/private partnership programs, are suddenly considered "unserved."

As a result, nearly all broadband funding from all government sources is now going to people that already have 25/3, since the new 100/20 standard has been added to programs like ReConnect. The exact same people who remain unserved at all, or are served by speeds less than 25/3, are not benefitting from government funds. Instead, funds are being sent to more populated and easier to build areas where networks can be upgraded, rather than built from the ground up. Providers will naturally apply for funding to serve these newly eligible areas, because those are the places that are easiest to build and serve. As a result, areas that already have robust broadband service get even faster service, and areas that are not economical to reach, and have struggled for years to attract broadband deployment, remain without, even after billions of dollars in funding are spent.

This needs to change. There should be an absolute priority for extending service to areas

without 25/3 service. For example, you could provide that 75% of the funding needs to be for projects without 25/3, or you could provide that no funding could be granted for projects in underserved areas (those that have service that is between 25/3 and 100/20 speeds) until at least 50% of areas lacking 25/3 have been covered.

Third, the "build to" speeds often required to obtain funding – sometimes, as great as 100/100 symmetrical build-to speeds – mean that Midco often cannot apply for funding for areas that desperately need service when it knows some portion of the network will need to be fixed wireless, which cannot meet those requirements. While high "build to" speeds make good sense in areas that can be served by fiber, an inflexible requirement also means that areas that cannot effectively be served with fiber will remain unserved. Programs need flexibility to accommodate different technological solutions, and guidelines for identifying those areas where flexibility can and should be accommodated. States might be able to play a key role here in delineating such areas. The BEAD Program, for example, allows states to designate an "Extremely High Cost Per Location Threshold," above which the State can pick a proposal using an alternative technology when doing so would be less expensive, ensuring that the very highest cost areas are not left out if they cannot be served effectively by fiber.

Fourth, even with recent improvements, the amount of data required to apply for funding is vastly excessive and often entirely unrelated to the proposed project. For example, there are significant financial data requirements designed to evaluate an applicant's financial viability, when there are bond ratings done by expert credit rating agencies available that provide that same assessment. The RIAA would address this burden, by allowing a company with a sufficient bond rating to use the bond rating to establish their financial viability, and would generally require a much closer look at whether all the data required to apply for funding is

really relevant and necessary. If rural areas are to get broadband quickly, as many providers as possible need to participate, and barriers to participation should be as low as possible without sacrificing necessary oversight.

Finally, with numerous federal agencies and nearly all states dedicating funding to broadband deployment, it is increasingly important to ensure that all relevant agencies and to the extent possible, state programs that are awarding grants for buildout, are coordinating with each other. Close coordination is necessary to ensure that government support is being used to help solve the problem of the unserved and to help achieve the goal of universal connectivity. Entities seeking funding should not be able to "forum shop" for the least restrictive program. Midco has faced the situation where we successfully challenged a provider from overbuilding us in rural North Dakota under the ReConnect program, but the applicant responded by applying for funding in that same area under the ARPA Capital Projects Fund program, and succeeded in obtaining funds to overbuild us.

To avoid this result, government entities awarding funding should promptly report those awards to the Federal Communications Commission, and vice-versa, so that maps used for granting broadband funding are consistent, and everyone is working off a common data set in determining which areas are unserved. Maps should show all areas where funding has been awarded, whether from federal, State or local programs and even if facilities are not yet constructed, so that remaining dollars can be targeted at the areas not yet covered. Programs should work together towards the common goal of connecting more areas.

Why the Rural Internet Improvement Act Would Improve RUS's Broadband Programs

One promising piece of legislation that would address many of the issues we have identified is the Rural Internet Improvement Act of 2022. It would make many key

improvements to the ReConnect program, enhancing participation and results, so that broadband reaches rural America faster. In particular, it would –

- Target funding to the neediest rural areas, by limiting all types of funding to areas in which at least 90% of households lack access to broadband, with the highest possible priority for applications proposing to serve areas without 25/3 service.
- Update the minimum build-out speed requirements to 100/20, which is a reasonable speed that allows for different technological solutions.
- Protect against wasted dollars by excluding funding in areas where a provider has been granted funding under another federal, State or local broadband funding program, or where a provider is otherwise required to build broadband by a federal, State or local government entity (except that the provider who secured such funding could obtain additional ReConnect funding if they used such funding for different, non-duplicative expenses, or they agreed to build broadband with faster speeds or expedited deployment milestones than were originally required).
- Simplify the application process, by limiting the amount of data required in applications to the greatest extent practicable, including allowing applicants to demonstrate financial viability in the least burdensome way and requiring the Secretary to establish means by which applicants can offer various forms of loan collateral and security, not just an exclusive first lien on grant-funded assets.
- Establish better communication between federal agencies when awards are made and improve the challenge process, so that money is spent transparently and does not duplicate other agencies' efforts.

These changes would go a long way towards our shared goal of connecting rural America, and we urge you to give them careful consideration.

* * *

In closing, I commend the Subcommittee for its focus on ensuring that the billions of dollars being spent on broadband deployment benefit all Americans – including those in rural America. Progress has been made in some federal and state programs to target funding at unserved areas, largely by improving the design of those programs to better identify unserved areas and by defining broadband service in a way that prioritizes people living in hard-to-reach areas that may require a menu of technologies to serve each and every household. We hope that

the ReConnect program and other new programs will be changed so that they are implemented with similar goals and guardrails in place. Thank you again for inviting me here today, and we look forward to working with you on these important issues.

DOCUMENTS SUBMITTED FOR THE RECORD

MAY 17, 2023

March 14, 2023

The Honorable Debbie Stabenow
Chairwoman, Senate Committee on Agriculture
328(A) Russell Senate Office Building
Washington, D.C. 20510

The Honorable John Boozman
Ranking Member, Senate Committee on Agriculture
328(A) Russell Senate Office Building
Washington, D.C. 20510

The Honorable Glenn "GT" Thompson
Chairman, House Committee on Agriculture
1301 Longworth House Office Building
Washington, D.C. 20515

The Honorable David Scott
Ranking Member, House Committee on Agriculture
1301 Longworth House Office Building
Washington, D.C. 20515

Re: Better Broadband Objectives in the Next Farm Bill

Dear Chairwoman Stabenow, Chairman Thompson, Ranking Member Boozman, and Ranking Member Scott:

The stakeholders below represent a broad cross-section of entities with a vested interest in the vitality and long-term viability of rural America. From producing food to sustain the nation to providing critical connectivity and energy for rural communities, and from educating rural students to caring for the medical needs of rural residents, the organizations below and members of them play a critical role in powering the American economy and ensuring that rural areas thrive.

Against this backdrop, we welcome and appreciate the Agriculture Committees' focus on the upcoming Agriculture Improvement Act ("Farm Bill") reauthorization generally and more specifically on potential reforms to or refinements of rural broadband programs administered by the United States Department of Agriculture ("USDA"). We write today to underscore the need as part of the Farm Bill to aim for levels of connectivity in USDA programs that will meet the needs of rural Americans not just today but well into the future. Sound and fiscally responsible policy dictates investing in infrastructure that is built to last and, as representatives of rural communities, we believe it is essential that rural residents, businesses, and anchor institutions have access to the same robust and affordable connectivity enjoyed by urban dwellers. Unfortunately, some Americans are still left behind by a lack of service or broadband service that does not meet the needs of modern farms, ranches, homes, small businesses, school, libraries, and hospitals. While broadband has value universally, it is especially important for rural Americans who, because of the long distances needed to travel, often rely even more than their urban counterparts on online access.

USDA telecommunications programs generally, and the ReConnect Loan and Grant Program more specifically, have been vital to connecting rural Americans for many years. In just the first three rounds of ReConnect, USDA has invested more than $3.1 billion in broadband infrastructure deployment. Indeed, notwithstanding high program expectations for service performance and network capability, funding demands in every round of ReConnect thus far have far outpaced the amounts made available – including the most recent third round in which applicants were required to deploy networks capable of delivering at least 100 Mbps symmetrical service. The overwhelming demand for ReConnect funding even as applicants have been expected to perform at high levels proves that setting a high standard for network and service capabilities does not deter applicants whatsoever, but rather demonstrates a surplus of interest by providers willing and able to deliver better broadband in rural America that will rival what is available to urban users.

For these reasons, we encourage you to continue to put the interests of rural communities first by codifying in the Farm Bill a minimum service level commitment of 100 Mbps symmetrical broadband service – the level specified in the oversubscribed third round of ReConnect – for any applicant seeking funding through ReConnect. By contrast, employing a lesser standard would represent an inefficient step backwards, flying in the face of the substantial demand demonstrated in the most recent round of ReConnect and failing the rural communities that need broadband capable of keeping pace with user demand for decades to come. Policies that encourage sustainable networks that meet the needs of consumers now and into the future will be most efficient in responding to consumer demand over the lives of those networks, particularly when compared to short-term solutions that are likely to be quickly outpaced by technological evolution and consumer demands and require substantial re-investment relatively soon thereafter.

We thank you for your time and consideration of our views on this important initiative for rural Americans. We look forward to working with you on ensuring that the Farm Bill makes a meaningful difference for Americans in rural and urban areas alike.

Sincerely,

NTCA- The Rural Broadband Association
National Rural Electric Cooperative Association
Fiber Broadband Association
National Association of Counties
National Association of Development Organizations
National Rural Health Association
National Rural Economic Developers Association
The Power and Communication Contractors Association
National Rural Education Association
Rural Community College Alliance
National Rural Telecommunications Cooperative

Farm Credit Council
CoBank
National Cooperative Business Association
National Utility Contractors Association
Rural Telephone Finance Cooperative

cc. Chair and Ranking Member of the Senate Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies

cc. Chair and Ranking Member of the House Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration

USDA
United States Department of Agriculture

Rural Development

Rural Utilities Service

1400 Independence Ave SW, Room 4121 Stop 1510 Washington, DC 20250

Voice 202.720.9545

May 9, 2023

The Honorable Peter Welch
United States Senate
SDG-12 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Welch:

Thank you for your letter of April 19, 2023 following up from the March 24, 2023 broadband stakeholder roundtable with Rural Development Under Secretary Torres Small and State Director Sarah Waring. We appreciate the opportunity to learn directly the from Vermonters. Their views are important as we strive to bring broadband to all unserved rural areas. The perspectives will be taken into consideration for future rounds of ReConnect and Community Connect.

We address your questions below:

1. **What additional statutory flexibilities or tools, if any, does USDA need to address the broadband challenges raised at the roundtable, including expanding access to the ReConnect and Community Connect programs?**

- The ReConnect, Community Connect and other Broadband Programs administered by USDA are important tools to improve rural community quality and economic development through broadband connectivity. Covid accelerated awareness of the wide spectrum of household broadband benefits from distance learning to tele-medicine to tele-work. Broadband is also the critical linkage enabling the agricultural sector to adopt the full benefits of precision agriculture.

- The ReConnect Program was created in the 2018 Consolidated Appropriations Act. Since that time, USDA has conducted four ReConnect rounds which resulted in a total of 881 applications for more than $12.1 billion. The completed rounds 1 – 3 resulted in 286 awards for $3.2 billion. This was 244% greater than the request for funds. Administration of this new program requires substantial added resources. Fortunately, Congress provided funding for the necessary administration of the ReConnect Program. It is important to continue funding these resources as the ReConnect Program continues with additional rounds. As the total number of awards continues to rise, USDA will have long term greater management and oversight responsibilities requiring additional resources. Efficient and more effective management of all the USDA programs will be enhanced by authorizing the use of administrative resources for all USDA broadband programs instead of the silo effect of ReConnect only administrative resources.

- Additional outreach resources that cover all the USDA broadband programs will enable better public service for rural stakeholders.

- Improved resources for environmental reviews and expedited coordination with other federal agencies will accelerate the time line of broadband project approval. This will assist in addressing both bringing broadband to rural residents and enabling awardees to initiate construction in a shorter time. This addresses an issue raised by stakeholders.

- Continued funding for the new Broadband Technical Assistance Program will help communities with the greatest need for broadband but lacking in the pre-capacity expertise and to support development of new broadband cooperatives similar to rural electric cooperatives in the 1930's.

- Authorization of additional and more flexible use of administrative resources and expanded rural outreach will assist meeting broadband challenges .

2. Does USDA RD support 100/100 symmetrical broadband buildout speeds for the ReConnect Program?

- Yes, the ReConnect Program 4th Round requires that the proposed network must be capable of providing broadband service to every premise located in the PFSA at the time of application submission at the speed defined in the latest FOA.
- The speed defined in the latest FOA is 100 Mbps symmetrical service to every premise in the proposed funded service area (PFSA). "Capable of delivering 100 Mbps symmetrical service to every premises" means that all premises in the PFSA must be able to receive this service at the same time.

3. What authorization levels for the ReConnect and Community Connect programs will be sufficient to meet current demand among rural communities?

- Applications for funding significantly exceed funding available. The first three rounds of ReConnect received $7.77 billion in applications or 244-percent greater than funded awards, $3.17 billion. 623 applications were received, 286 applications were awarded. In the current Reconnect Round 4, $4.4 billion in 258 application requests were received. This is 440-percent over the available $1 billion. The consistent elevated level of over-subscription means that some acceptable applications were not funded. The much smaller Community Connect Program had 111 awards for a total of $185 million between FY 2010 – 2023. It is similarly oversubscribed. USDA supports increases in funding for those programs to meet high demand in number of applicants and total funding requests.

- Increase in funding levels will help meet unmet demand for projects. Long term multi-year funding will assure rural communities in stability of continued funding availability. The Farm Bill represents a vehicle for five year funding.

4. What additional flexibilities and authorities related to coordination among various federal departments such as the Federal Communications Commission and the National Telecommunications and Information Administration, would USDA find helpful to meet the needs of rural communities?

- USDA meets regularly and on an ad hoc basis with the FCC/NTIA/Treasury to ensure that federal dollars are spent in the most efficient way possible. Additionally, USDA shares information with our federal partners regarding the awards made under our programs to enable other agencies to take those awards into consideration to ensure projects do not overlap or overbuild existing services already made available.

We encourage Vermonters to apply for the USDA Community Connect Broadband Grant Program which closes on June 20, 2023. We also encourage applications for the new Broadband Technical Assistance (BTA) Cooperative Agreement Program. It opened April 19, and closes June 20, 2023. The program offers assistance for Technical Assistance Providers, Recipients and supports Cooperatives. This program provides resources that can help with many of the topics raised at the St. Johnsbury round table. https://www.rd.usda.gov/programs-services/telecommunications-programs/broadband-technical-assistance-program

Thank you again for your letter of support. We appreciate your interest in RUS programs and your concern for ensuring that rural Americans have equal access to advanced telecommunications services.

If you have any further questions, please have a member of your staff contact Mrs. Leslie Brown in our Office of External Affairs, by phone at (202) 720-9928.

Thank you for writing and for your support of USDA.

Sincerely,

ANDREW BERKE

Digitally signed by ANDREW BERKE
Date: 2023.05.09 09:35:26 -04'00'

Andy Berke
Administrator
Rural Utilities Service
United States Department of Agriculture

QUESTIONS AND ANSWERS

MAY 17, 2023

U.S. Senate Committee on Agriculture, Nutrition, and Forestry
Subcommittee on Rural Development and Energy
Rural Broadband: Connecting our Communities to the Digital Economy
May 17, 2023
Questions for the Record
Mr. Jesse L. Shekleton

Senator Tommy Tuberville

1. **Do you have suggestions on how to streamline the ReConnect program in order to more quickly deploy this needed infrastructure in rural areas?**

Federal programs do not move quickly, and it can often be months or longer from the time an award is announced to the time a provider will receive funds and can begin construction. This can cause a lot of frustration with consumers who believe that a connection is imminent, when instead it leaves customers in limbo while they await construction to begin.

Additionally, the "unserved" threshold required by the program has presented challenges. Requiring that areas be 90% unserved with 25/3 Mbps has been increasingly difficult, as some consumers might have subscribed to a broadband plan at or just above 25/3 Mbps but because they exceed that threshold, we're unable to leverage the ReConnect program to provide future-proof fiber to their homes. In many cases, these consumers subscribing to 25/3 Mbps receive an actual speed well below this threshold. Flexibility with that threshold, or in areas that might have commitments from fixed wireless companies to build to the minimum definition of "served" inhibits the goal of connecting our rural customers with lasting and scalable fiber.

2. **Can you speak to streamlining the permitting process and expediting the approval process when federal dollars are tied to the broadband permit?**

Many co-ops seek to leverage existing poles, rights of way, and easements as part of their builds, but often have to complete duplicative and cumbersome environmental reviews or permitting applications in order to do so. Streamlining the permitting and environmental review process for use of existing infrastructure would alleviate many of these burdens, reduce cost, and speed deployment. Beyond just long environmental review timelines, other internal agency review timelines can be lengthy and often vary from program to program. The lack of urgency in making these decisions can cause unnecessary and costly delays.

   a. **What issues have you faced with permitting?**

For Jo-Carroll, securing easements from property owners is unpredictable and expensive. On our most recent ReConnect grant, the co-op has spent nearly $1 million to date on securing approximately half of the total easements needed for the infrastructure build. While this is more of a state issue, these costs are time consuming and required even when the co-op utilizes the public right of way space associated with County and Township roadways.

Additionally, while Jo-Carroll has not had to cross federal lands to date as part of an infrastructure build, we have faced long lead times for environmental processes by grant administrators post-award. National Environmental Policy Act (NEPA) reviews are commonplace for RUS-financed and privately financed electric cooperative infrastructure projects. Electric co-ops support thorough and efficient reviews to protect the environment, but the existing process takes too long, is too expensive, and is an impediment to our ability to meet the future needs of our consumers and communities.

3. **Would you agree that utility poles are "critical infrastructure"?**

Utility poles are an important component of the safe and reliable delivery of power. As such, there are numerous existing regulatory considerations that electric utilities face when ensuring that these systems can safely and reliably meet the needs of consumers.

   a. **Would having poles designated as such by Congress help in efforts to establish a more robust grid for power and communications in rural areas?**

The current definitions in place are sufficient for building and maintaining networks in rural areas.

4. **Are you working with the entire supply chain, including utilities, the U.S. utility pole industry, and the telecommunications equipment industry to make sure they are involved in supply chain discussions to ensure we are deploying broadband solutions in rural areas as effectively and efficiently as possible?**

Jo-Carroll employees have engaged with its vendors and distributors, and has attended preparedness conferences, on how to best position ourselves as a utility and as a broadband provider amidst supply chain challenges. Its clear that there are ongoing supply chain constraints, and the confluence of projects on both the electric and broadband side have resulted in increased demand for things like poles, wires, and cables that could be used in either type of project. Delayed projects are at risk of becoming failed projects very quickly, and one of the best ways to address that issue, and reduce costs, is long term and long range work planning. However, that can pose a challenge when competing for federal projects and programs, as reserving long range production slots can conflict with the requirement to bid for federal projects with short build out obligations. The U.S. Treasury recently issued guidance providing flexibility in application of the uniform administrative requirements of 2 CFR Part 200 for State and Local Fiscal Recovery Funds and Capital Projects Fund grantees, which will help to effectively ensure the timeliness and efficiency of grant funded broadband deployment projects. Providing similar flexibility to 2 CFR Part 200 across other federal agencies would help to streamline projects and efficiently deploy networks.

5. **How can Congress ensure that federal funds are best and most effectively used as we look to close the digital divide?**

Prioritizing symmetrical speeds and future-proof networks is the best way to ensure that federal funding resources are best and most effectively used. Congress must consider not just the current

needs of families and communities in rural areas, but look at consumer trends and anticipate future needs. Funding robust and scalable broadband networks will ensure that networks built with taxpayer dollars will be able to support rural residents for decades to come, and eliminate or greatly reduce the need to rebuild or replace networks down the line.

U.S. Senate Committee on Agriculture, Nutrition, and Forestry
Subcommittee on Rural Development and Energy
Rural Broadband: Connecting our Communities to the Digital Economy
May 17, 2023
Questions for the Record
Mr. James Frederick Johnson

Senator Tommy Tuberville

1. Alabama's broadband mapping and deployment efforts are regarded nationally as exceptional. The State and the Internet Service Providers (ISPs) work together to reach the ultimate goal – providing broadband service to Alabamians.

    a. How has the statewide address-level broadband map been helpful in the grant process and overall broadband deployment, and how can Alabama's maps be used a model for the rest of the country?
        i. The Alabama maps specifically identified locations and whether those locations were unserved or underserved. No assumptions were made about census blocks, as a whole, which was the fatal flaw of previous FCC efforts. Providers were thus able to specifically draw proposed service areas and focus their efforts on the targeted beneficiaries.
        ii. The FCC's current broadband fabric, essentially, achieves the same purpose nationally but the FCC must allow a robust challenge process so that providers may correct the inevitable flaws in the FCC's efforts to perfect the map. Alabama was able to do so.

    b. We know that the FCC and the Rural Utilities Service each have their own broadband data maps. What can we do in this Farm Bill to ensure that all federal agencies are utilizing the same maps to avoid duplication of efforts and maximize federal funding?
        i. The legislation should require there to be cooperation between all Federal agencies toward this end and all such agencies should be able to participate in the refinement or challenge process.

2. Would you agree that utility poles are "critical infrastructure"?
        i. Yes

    a. Would having poles designated as such by Congress help in efforts to establish a more robust grid for power and communications in rural areas?
        i. Yes

3. Are you working with the entire supply chain, including utilities, the U.S. utility pole industry, and the telecommunications equipment industry to make sure they are involved

in supply chain discussions to ensure we are deploying broadband solutions in rural areas as effectively and efficiently as possible?

i. Yes

4. How can Congress ensure that federal funds are best and most effectively used as we look to close the digital divide?
    i. As stated in my earlier testimony, I would summarize in the following fashion:
        1. First, scarce taxpayer dollars should go first to those who need it the most. That is, to those who have no service or clearly inadequate service (i.e., less than 100/20). There are simply inadequate resources to fund overbuilding of existing facilities capable of service at or above this threshold.
        2. When federal dollars are invested, high priority should go to those projects that utilize optical fiber to the premise. The physical properties of the medium, versus those of competing wireless technology, reveal clearly that this approach ensures the highest long-term return on the taxpayer's investment. Arguments by the fixed wireless industry that it is impractical to dream of wired connections to all of America forget the obvious contradictions as evidenced by the fact we did exactly that with rural electrification and the public switched telephone network.
        3. Recipients of federal assistance should always be sufficiently financially invested in projects, so as to eliminate speculative endeavors, and be able to demonstrate the ability to both construct and operate the networks so funded.

U.S. Senate Committee on Agriculture, Nutrition, and Forestry
Subcommittee on Rural Development and Energy
Rural Broadband: Connecting our Communities to the Digital Economy
May 17, 2023
Questions for the Record

Responses of Mr. Justin Forde

Senator Tommy Tuberville

Q: In Alabama, only 34% of the population has access to fiber optic broadband with 100 over 100 symmetrical speeds. Do you have concerns with setting minimum broadband deployment thresholds of 100 over 100 speeds?

A: Yes, we would have serious concerns with defining an area to be unserved if it did not have a broadband threshold speed of 100/100. Much of the country, like Alabama, does not have 100/100 service. Even areas that have Gigabit service may not have 100 Mbps upload speeds, because many broadband providers configure their networks to match the way that people generally use them and so dedicate substantially more network capacity to download usage. This means that if government funding is available in any area that does not have 100/100 service, much of that funding will go to upgrades in areas that already have fast broadband service, because those are the areas that are fastest, easiest and most cost-effective to build. Meanwhile, the same rural Americans in Alabama and elsewhere that do not have broadband today, are unlikely to have broadband tomorrow, even after billions in government funding are awarded.

Q: You have said that the Rural Utilities Service asks applicants for an excessive amount of data. Can you give some examples of this and explain how this might affect a company's interest in or even ability to apply for the ReConnect program?

A: There are many examples of how RUS is asking for data that goes well beyond what is necessary.

One such example is that while RUS freed publicly traded applicants with a certain bond rating of the need to submit data regarding "non funded service areas," – *i.e.*, all the other areas of the country that they serve that are not covered by the application – it did not extend this relief to privately held companies, even though some of the nation's largest broadband providers are privately held. Having to assemble vast quantities of data about operations country-wide is a tremendous disincentive to program participation.

Moreover, such a requirement is unnecessary to safeguard the program. RUS explained that "the purpose of the NFSA is to provide sufficient information to evaluate the viability of an operation. Publicly traded companies with a sufficient bond rating have publicly demonstrated this and there is no need for the NFSA." However, this explanation is insufficient; many privately held companies have bond ratings, and in any event, other agencies allow use of several different metrics to establish financial viability.

For example, the FCC in the RDOF auction allowed privately held companies to establish financial viability (and so provide less financial information) by showing that they had been in business for a certain number of years.

As another example of the program burdens, since 2021, RUS has allowed a ReConnect applicant to rely upon the consolidated audited financial statements of its parent entity. This was a much needed and appreciated step in streamlining the application process to reduce the data burdens on applicants, encouraging greater participation in the ReConnect program. However, RUS does not allow awardees to rely on consolidated audited financial statements at the post-award reporting stage. This inconsistency creates significant burdens for applicants whose financials are consolidated into their parent's statements, despite RUS's apparent effort to reduce that burden. As such, it is a disincentive to participate in the program. Further, it is unnecessary, since RUS already has determined that a parent's consolidated audited financial statements are sufficient to determine program eligibility and prevent waste, fraud, and abuse; there is no reason that those same financials should not suffice at the post-award stage.

Q: Do you have suggestions on how to streamline the ReConnect program in order to more quickly deploy this needed infrastructure in rural areas?

A: The ReConnect rules should focus on promoting and enabling broad participation, so that there is participation from providers in all areas of the country. In addition to reducing the data burdens associated with participation noted above, there are a number of program requirements that interfere with or disincent participation. These include certain financial requirements (*e.g.*, the requirement that the provider give a first lien on assets), lack of technological neutrality (*e.g.*, by giving a scoring preference for buildouts promising symmetrical speeds), or extra unrelated regulatory requirements (*e.g.*, a scoring preference for agreeing to offer wholesale access or rate regulated service, or commit to net neutrality). The "challenge" process by which providers demonstrate that they already offer (or are committed to build and offer) service in an area covered by an application is also cumbersome and difficult to navigate, with unpredictable results.

The Rural Internet Improvement Act, introduced by U.S. Sens. Thune, Luján, Klobuchar and Fischer, would address many of these concerns. It would simplify the application process, by limiting the amount of data required in applications to the greatest extent practicable, including allowing applicants to demonstrate financial viability in the least burdensome way and requiring the Secretary to establish means by which applicants can offer various forms of loan collateral and security, not just an exclusive first lien on grant-funded assets. It would also establish better communication between federal agencies when awards are made, and would improve the challenge process, so that money is spent transparently and does not duplicate other agencies' efforts.

Q: Can you speak to streamlining the permitting process and expediting the approval process when federal dollars are tied to the broadband permit?

A: Building to a new area requires navigating a labyrinth of federal, state and local rights-of-way, as well as negotiating rights to access certain privately owned assets such as poles and railroad crossings. We need to streamline these permitting process as much as possible, so that providers get the needed right of access within a specified timeline and can begin construction to meet broadband funding deployment deadlines. Fees for access – both to public rights-of-way and to private assets required to complete construction – need to be predictable and reasonable.

Q: What issues have you faced with permitting?

A: We have faced issues with all types of permitting, including roads, railroad, poles, federal lands, and environmental. All these delays in permitting cost time and money, and delay the timely deployment of broadband.

Q: Would you agree that utility poles are "critical infrastructure"? Would having poles designated as such by Congress help in efforts to establish a more robust grid for power and communications in rural areas?

A: Yes, utility poles are critical infrastructure and play an integral role in connecting Americans to the internet. Obtaining timely and cost-efficient access to utility pole infrastructure, especially in unserved areas of the country, is critical to extending broadband networks and lack of such access remains a barrier to effective use of federal funds for broadband deployment. Moreover, too often, the costs associated with pole access and replacement are not shared equitably between pole owners and attachers, thereby raising the cost of deployment significantly. Resolving these issues would ensure timely and cost effective pole access that will increase the impact of federal funds.

Q: Are you working with the entire supply chain, including utilities, the U.S. utility pole industry, and the telecommunications equipment industry to make sure they are involved in supply chain discussions to ensure we are deploying broadband solutions in rural areas as effectively and efficiently as possible?

A: Yes. We work closely with all corners of the telecommunications industry, including pole owners and equipment manufacturers, to ensure the integrity of our supply chains. One challenge remains the Buy America provisions of the Act. In that regard, a recent clarification from RUS has been very helpful.

Entities awarded ReConnect funding to build and deploy broadband networks are subject to buildout timelines. It is imperative that they have access to necessary materials and supplies to meet these deadlines. Most broadband providers recognize the importance of supporting products and materials produced in the United States, but are faced with the immovable fact that many of the products needed to manage and operate broadband infrastructure and offer broadband service are manufactured outside of the United States with no suitable American-made alternative.

Broadband networks contain dozens of network elements, including, but not limited to: switching equipment; routing equipment; transport equipment; access equipment; billing/operations systems; and customer premises/end user equipment and devices. Many of these devices in turn include hundreds of component parts. Each network element, device and component has its own complex supply chain, sourced from trusted vendors and suppliers around the world. Obtaining many of these necessary items from American sources is not currently possible.

Appropriately recognizing that supply chain limitations may exist, and creating a preference that loan funds be used for American-made materials and supplies, but not a strict requirement, ensures the promotion of American-made goods without interfering with providers' ability to meet their deployment obligations. RUS recently clarified that this is the approach they will follow. This clarification is critical to the success of the ReConnect Program, and we commend RUS for putting it forward.

Q: How can Congress ensure that federal funds are best and most effectively used as we look to close the digital divide?

A: The most important thing that Congress can do to ensure that federal funds are used effectively is to ensure that funding is directed at truly unserved areas. Broadband funding programs have to make careful judgments about the best use of their funds, with the goal of using funding to get broadband service where private capital can't achieve that result. To that end, it is a more prudent investment for programs to prioritize projects that will bring broadband to areas that truly lack it than to use money for upgrades, even if that means fewer households will be served by the project. Only by targeting the most unserved areas can these programs make meaningful progress towards connecting rural America.

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