

**SUPPORTING SMALL ENTITIES THROUGH
INVESTMENTS IN THE NATIONAL INFRASTRUC-
TURE: BROADBAND**

HEARING
BEFORE THE
**SUBCOMMITTEE ON UNDERSERVED,
AGRICULTURAL, AND RURAL
DEVELOPMENT**
OF THE
COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES
ONE HUNDRED SEVENTEENTH CONGRESS
FIRST SESSION

HEARING HELD
JUNE 16, 2021



Small Business Committee Document Number 117-019
Available via the GPO Website: www.govinfo.gov

U.S. GOVERNMENT PUBLISHING OFFICE

44-823

WASHINGTON : 2021

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SUPPORTING SMALL ENTITIES THROUGH INVESTMENTS IN THE NATIONAL INFRA- STRUCTURE: BROADBAND

WEDNESDAY, JUNE 16, 2021

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON UNDERSERVED,
AGRICULTURAL, AND RURAL BUSINESS DEVELOPMENT,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2360, Rayburn House Office Building, Hon. Jared Golden [chairman of the Subcommittee] presiding.

Present: Representatives Golden, Carter, Delgado, Luetkemeyer, Williams, Hagedorn, Stauber, Tenney, and Salazar.

Chairman GOLDEN. Good morning. I call this hearing to order.

Without objection, the Chair is authorized to declare a recess at any time. Let me begin by saying standing House Committee rules and practice continue to apply during hybrid proceedings. All members are reminded that they are expected to adhere to these standing rules, including decorum. House regulations require members to be visible through a video connection throughout the proceedings so please keep your cameras on. Also, please remember to remain muted, unless you are recognized, in order to minimize background noise. And if you have to participate in another proceeding, please exit this one and log back in later.

In the event a member encounters technical issues that prevent them from being recognized for their questioning, I will move to the next available member of the same party, and we will recognize that member at the next appropriate time slot, provided they return to the proceeding.

For those members and staff physically present in the committee room today, we will continue to follow the most recent OAP guidance. Masks are no longer required in our meeting space for Members and staff who are vaccinated. All Members and staff who have not been are asked to wear masks and socially distance. I sincerely hope we all do our part to protect each other and our staff.

In 2020, COVID-19 widened the digital divide and highlighted the importance of reliable and affordable broadband for American small businesses. Many small businesses shifted operations online to stay connected to their customers as people stayed home to slow the spread of virus. This digital adaptation proved to be crucial to small business success. According to a survey by the Connected Commerce Council, 72 percent of small businesses increased their

use of digital tools during the COVID-19 crisis. Unfortunately, small businesses without reliable broadband access proved to be at a significant disadvantage when it came to this digital transition.

As a Representative of one of most rural districts in the country, I heard firsthand from many entrepreneurs about the struggles, the lack of access to high-speed broadband created during the pandemic. Although I would also note that that was a conversation that I had often with small business owners and many others around the district even prior to the pandemic.

In my home State, roughly half of all road miles are considered unserved or underserved by broadband infrastructure. Statistics like these are not unique to Maine's Second Congressional District. Unfortunately, many communities across the country also struggle to access broadband at benchmark speeds. Broadband subscriptions continue to grow. However, rural and Tribal areas lag behind urban and suburban areas in broadband deployment. As a result, at least 25 million Americans still lack access to high-speed internet, many of which live in remote and rural parts of our country. This is known as the digital divide. Factors like low population densities, rugged terrain and fewer subscribers to spread deployment costs among have contributed to a lack of investment in broadband networks by private companies.

Without access to high-speed broadband, small firms in these areas are at a significant disadvantage. From connecting with consumers to filling orders, a broadband connection is essential to the day-to-day operations of many Main Street businesses. This lack of access to high-speed broadband has proven to be an economic drain on many communities, impacting individual success in education, wealth, and access to opportunity.

It is vital to the economic health of communities across the country and the Nation as a whole that we close the digital divide. As Congress considers legislative work to revitalize infrastructure, we have an opportunity to make the investment in broadband access.

Meeting this opportunity will require Congress and the administration to work closely with State and local stakeholders and invest the resources necessary to make universally available broadband a reality. I hope that today's hearing marks the beginning of a good conversation between Committee members and stakeholders dedicated to closing the digital divide and empowering small businesses.

I will now yield to the Ranking Member, Mr. Hagedorn, for his opening statement.

Mr. HAGEDORN. Mr. Chairman, thank you for that.

And it has been a few weeks, we have been on break. And on behalf of our members, we would just like to congratulate you and your wife on the birth of your new daughter and glad to hear everybody is healthy and doing well.

Chairman GOLDEN. Thank you very much. I appreciate it.

Mr. HAGEDORN. Thank you again, Mr. Chairman, for holding this hearing. It is very important. I am excited to hear from the witnesses, particularly Tim Waibel, who resident of southern Minnesota. And it is going to be a great hearing on an important issue.

As a member of both the House Small Business Committee and Agriculture Committee, broadband infrastructure has been a top

priority since being elected to Congress. According to USDA's Census of Agriculture, nearly 20 percent of the constituents in my congressional district lack reliable internet service. Unfortunately, without reliable high-speed internet, many constituents and businesses are at a disadvantage. Under the previous administration, significant investments were made, such as the American Broadband Initiative, which stimulated increased private sector involvement in broadband infrastructure, and it was a bridge to the gap in rural America. However, despite significant advances, many rural and Tribal areas still have limited or no access to broadband capabilities.

The digital divide has only grown wider as broadband deployment in urban areas continues to outpace deployment in rural areas. Congress must work to find solutions to address this digital divide.

While we can all agree that providing small businesses with the tools and resources necessary to thrive, examining policies to help businesses get back on their feet is a priority. One way that we can ensure that we meet this goal is to have better broadband connectivity, which has been found to be a key aspect in increased economic growth for rural businesses. In fact, according to a study by the Congressional Research Service, broadband access in adoption in rural areas is linked to increased job and population growth, higher rates of new business formation, increased home values, and lower unemployment rates. Industries, such as agriculture and healthcare, which are vital to rural America, have increasingly relied upon broadband connectivity as technology capabilities have developed. Telemedicine has provided many benefits to rural communities during the pandemic and also has become a reliable way to ensure rural areas receive timely quality healthcare. The continued expansion and modernization of telemedicine capabilities will be essential to ensuring rural communities that they have the equal access to high quality care.

Additionally, many small businesses, farmers and ranchers in southern Minnesota are increasingly relying upon technology as they seek to strategically decrease input, such as fertilizer and fuel, while simultaneously increasing yields.

Without the availability of high-speed internet, they would not be able to keep pace with modern technology. Programs such as the ReConnect Pilot Program, which was authorized in the 2018 farm bill, have helped build out broadband infrastructure in rural areas that lack broadband access. This has helped make significant advancements in broadband infrastructure in my district and many others across the Nation. I was proud to support additional legislative efforts in the CARES Act and Consolidated Appropriations Act of 2021, which appropriated more dollars like ReConnect, and it helped to make progress.

I am going to submit the rest of my statement for the record. I want to keep us on time. Thank you for holding the hearing. I look forward to hearing from the witnesses.

Chairman GOLDEN. Thank you, Mr. Hagedorn.

Just a quick moment to explain how the hearing will proceed. Each witness has 5 minutes to provide a statement, and each Committee member will have 5 minutes for questions. Please ensure

that your microphone is on when you begin speaking and that you return to mute when finished.

Now we will introduce our witnesses. Our first witness is Ms. Peggy Schaffer, executive director of the Connect Maine Authority, located in Augusta, Maine. She previously served as the small business advocate for the Secretary of State's Office and served as the Co-Chair of the Maine Broadband Coalition, a statewide group advocating for high-speed broadband.

On behalf of my district and the State of Maine, we thank you for your dedication and welcome you to the Committee.

Our second witness is Mr. Dan Sullivan, president of the Downeast Broadband Utility located in Calais, Maine. Mr. Sullivan has more than 40 years of experience in information technology, including as a small business owner and IT director from one of the region's largest employers. Downeast Broadband Utility, also known as DBU, is the first and only operating municipal broadband utility in the State of Maine. The network is owned by the city of Calais and the towns of Baileyville and Alexander.

Welcome, Mr. Sullivan.

Our third witness is Mr. Matt Dunne, founder and executive director of the Center on Rural Innovation located in Hartland, Vermont. Launched in 2017, the center is a social enterprise committed to supporting resilient economic development in rural America. Their sister organization—I am sorry. CORI's sister organization, Rural Innovation Strategies, provides strategic consulting to bring prosperity and investment to rural areas in the digital age. Mr. Dunne served in the Vermont State legislature, AmeriCorps, and Google's Community Affairs Division. He holds a B.A. from Brown University and is a lifelong Vermonter who lives on a 100-acre farm where he was raised.

Welcome, Mr. Dunne.

And the Ranking Member, Mr. Hagedorn, will introduce his witness.

Mr. HAGEDORN. Thank you, Mr. Chairman.

Our fourth and final witness is Tim Waibel, president of the Minnesota Corn Growers Association, one of the largest grassroots farm organizations in the country. Mr. Waibel, who hails from Courtland, Minnesota, in our congressional district in southern Minnesota is also a farmer with his wife and two sons. They grow corn, soybeans, and they raise hogs. Mr. Waibel has been on the State board of directors for the Minnesota Corn Growers Association for 9 years, serving in a variety of leadership capacities, including first vice president, treasurer, secretary, and now president. I think he has cornered the market there on the corn growers. His lifelong experience is not only a producer but advocate for the agriculture industry in general. And he will be extremely beneficial to our hearing today. And thank you, Mr. Waibel, for testifying and sharing your experience with us.

Mr. Chairman, I yield back.

Chairman GOLDEN. Thank you very much.

We will now go to opening remarks from our witnesses.

With that, I will recognize Ms. Schaffer for 5 minutes.

STATEMENTS OF PEGGY SCHAFFER, EXECUTIVE DIRECTOR, CONNECTMAINE AUTHORITY, AUGUSTA, ME; DAN SULLIVAN, PRESIDENT, DOWNEAST BROADBAND UTILITY, CALAIS, ME; MATT DUNNE, FOUNDER AND EXECUTIVE DIRECTOR, CENTER ON RURAL INNOVATION, HARTLAND, VT; AND TIM WAIBEL, PRESIDENT, MINNESOTA CORN GROWERS ASSOCIATION, BURNSVILLE, MN.

STATEMENT OF PEGGY SCHAFFER

Ms. SCHAFFER. Good morning. I am Peggy Schaffer, executive director of Connect Maine Authority. And I wish to thank you for this invitation to testify in front of the Committee House Small Business Subcommittee on Underserved Agricultural and Rural Development to talk about supporting small industries through investments in broadband infrastructure.

Congressional support for bringing high-quality broadband to everyone in this country, rural and urban, is central to solving this problem. Connect Maine is a quasi-independent authority charged with bringing broadband to everyone in the State of Maine and making sure they can use it. Connect Maine was created in 2007 with a budget of about \$1.5 million. We have two grant programs. One is for community planning, and one is for infrastructure. Over the past 12 years, we have provided about \$12 million in infrastructure grants to ISP, attracting about \$15 million in match from companies and communities.

Last summer, Maine voters approved a \$15 million infrastructure bond, and just this past month, we awarded \$8.6 million of those funds to 20 projects that will serve 8,500 households, matching \$16 million in company and community funds.

In 2016, we started our community planning process. These are small grants that help communities plan how to expand broadband service in their area. Over 160 communities engaged this in process so far. In Maine and nationally, broadband infrastructure is a road-by-road battle. Where you live really matters. A neighbor half mile from you might have good service, but bringing that same service to your end of the road might cost \$30,000 or more. Identifying these gaps is an essential part of the community planning process.

Because of the well-known problems with the accuracy of the FCC data, many States have undertaken their own efforts to get better data. Georgia, Pennsylvania, Alabama, Washington, Minnesota, Maine have all developed our own mapping and data layers. These are just the few States frustrated with the inability to understand who has service and who does not.

Broadband is a very personal service. It is how you connect with your family, healthcare, education, grocery shopping, and work. Maine communities, in fact communities across the country, realize that high-quality broadband connection is central to their future. Broadband is the lifeline for every community in this country, large or small. Our planning grants act like sticky tape. It gives the community something to grab on to and helps the ISP see a viable business case to bring broadband to that area. Once people begin talking with their neighbors about this critical infrastructure, they realize that everyone in their community needs to have access to the service and they understand the importance of affordability.

This deep granular drive into what communities want drives State plans and data. It is also why so many small ISPs have aggressively expanded their footprint with fiber. Providers and communities seek solutions that will outlive the costs incurred. No longer are we investing in infrastructure that will need to be rebuilt in 20 years. We have found several programs are ill-suited to meet community needs or interests in Maine. Examples of this are the USDA grants through ReConnect and the recent FCC Rural Development Digital Opportunity Fund.

Four projects were awarded ReConnect grants in early 2020. These are small projects that should be a 6- to 8-month build. None of these projects have started because of the bureaucracy one the USDA. If these projects had been funded through a straight grant, they would have been lit and serving people right now, not some time in 2022. Projects all across the country are having similar unneeded delays. There is one small community in Lincoln County that was denied a USDA grant because their area was auctioned off in satellite service in the FCC's RDOF auction. They are now not eligible for any other Federal funding. The town has been working for 3 years to develop a solution to bringing affordable service to everyone. Federal funding should not block that effort.

If broadband infrastructure is going to achieve its promise, we need to make sure Federal funds flow to the solutions these communities want. That is why the community—the Capital Projects Fund and the American Rescue Plan is so exciting. It puts the funds closest to community efforts through a State program. States have proven they are up to the task of efficiently and effectively delivering the use of these funds to build that infrastructure. Sixteen States awarded \$644 million in the Coronavirus Relief Fund to build out networks that were lit in under 6 months. The American Jobs Plan also offers great promise to close this connectivity and affordability gap, but it really, really matters how the funds for infrastructure are distributed and who owns the infrastructure. There are hundreds of successful models of public-private partnerships to build this infrastructure. There is no one model because there is no one solution. It requires a flexible strategy, and flexible strategies are just not what the Federal Government does well.

State broadband programs have proven their worth. Our understanding of the problems, the locations, and our ability to craft solutions that fit our communities is central to our effectiveness. Funding for the infrastructure through the American Jobs Plan should flow through State and State programs to provide the greatest benefit and the fastest affordable connectivity to Maine people.

Thank you for your time and consideration. I would be happy to answer your questions.

Chairman GOLDEN. Thank you, Ms. Schaffer.

Mr. Sullivan, you are now recognized for 5 minutes.

STATEMENT OF DAN SULLIVAN

Mr. SULLIVAN. Good morning, Congressman Golden and Ranking Member Hagedorn. Thank you very much for this opportunity to discuss the DBU project.

My name is Dan Sullivan. As mentioned, I was former IT director at the Woodland Pulp and St. Croix Tissue pulp mills in

Baileyville. I have also been in technology for 40-plus years and now presently am the president of Downeast Broadband Utility.

Calais and Baileyville had a problem: terrible expensive broadband options. The towns agreed to ban together by way of the local agreement to explore economic development ideas, and fiber came to the forefront. We had discussions with local leaders and our citizens, rotary clubs, chambers of commerce, town meetings. We hung posters. We did everything we could think of to bring people into the room to discuss what could or could not be done.

It was the overall decision by all these groups that we would look, search out a fiber-to-home solution for our two towns. So the two towns agreed to fund a feasibility study to see if this was even possible. The results came back and said, yes, it indeed was. So the towns again funded the cost to build the construction to see how much it would cost to do it. We had unanimous support from both the towns.

The network is paid for by subscribers to the network, not taxes raised. That is the beauty of this financial model. The need in these towns is so great and people want it so bad that our subscriber rate is going through the roof. So this will be paid for by the people who buy the service, not by the citizens of these towns. But, uniquely, the citizens of these towns will actually own the infrastructure.

We began construction in 2018 and completed in 2020. Then the town of Alexander—which is next to Alexander, asked to join us. We approved them. They are now being constructed. They will probably be completed the end of December. Just last week, I met with Indian Township, our local Indian reservation. They have too voted to join DBU and are now proceeding with that. Construction will begin shortly.

On top of that, 2 days ago, Princeton contacted me. I had a meeting with them. They too have voted unanimously to try to join DBU, and the town of Cooper will be doing the same thing in July. So you can obviously see there is an awful lot of demand out.

So why did we do this? We did it because our existing ISP options were insufficient, unreliable, expensive, and in many cases not even available. We approached the existing ISPs and offered to help them fund a buildout to bring fiber to our towns, businesses, and homes. They refused. They weren't interested. So local businesses and residents universally complained about how slow and expensive broadband was.

And Washington County's largest employer, St. Croix Tissue and Woodland Pulp, where I worked for many years, was very interested in this solution. And I would like to read a brief statement by the mill's manager. He said, quote: Affordable access to symmetrical broadband via fiber is a game changer for our area. It has increased property values, facilitated remote work and learning, while attracting new residents to our communities. From my perspective as an executive at Washington County's largest employer, fiber-based broadband has proven to be a valuable recruiting tool to attract technical talent to our area and business. In addition, it has helped our employees to effectively work remotely through this pandemic. Prior to the founding of the Downeast Broadband Util-

ity, our area's access to this vital service was completely insufficient, unquote.

We knew from our research that a fully fiber network was what we needed to do here to build a future-proof solution for our area. And Maine's home rule provision in Maine's Constitution allowed us to proceed with that. So we tapped into our Yankee spirit, and DBU was born.

What did we build? This is a mouthful, but we built an open access, dark fiber, home-run network. Each subscriber receives a single dedicated fiber to their home or business. This ensures had a 100-plus year future-proof solution. Science has not yet reached fiber's capacity limits. They don't know how fast they can make it work. And once the fiber is installed on these poles when technology changes, and the technology improves, only the laser equipment in our communication cabinets have to be upgraded. The existing fiber cable will be viable for those 100-plus years.

As a contrast, cell towers need to be climbed and satellites re-launched to keep up with changes in technology. These technologies do not provide a future-proof model, are impractical, expensive, contribute to mountains of space junk. And all these costs are passed down to the consumer.

Now our network is open to all ISPs, even the ones that turned us down. We basically turned their argument of low-density population not being an affordable way to do this upside down because we paid for the construction, the maintenance, and the operating costs. We have taken three legs off their stool to provide this service, and they are welcome to join us, and I hope they do.

DBU is a utility much like roads, water, sewer. And it is owned by citizens of these towns. We determined about a 30 percent tick rate from Calais and Baileyville will make the plan viable. We are presently at 23 percent in the midst of the pandemic and soon expect to pass 30 percent and beyond. We estimate Alexander and Indian Township to a 80 to 90 percent tick rate as their broadband situation is more dire. And here is the real caveat to all of this, the caveat to the ability of benefits, the base fiber internet package for the by 100/100 megabit connection is \$59.95 with no set up fees, no router fees, no contract fees. And no data caps. In the poorest county in the State of Maine, we have the fastest internet in the world at the most reliable cost.

So, in conclusion, I would like to say, Maine and our Nation have paid for inadequate solutions to our country's dismal broadband for decades, only to be still treading water and, in some instances, drowning. An undeniable fact is that fiber is the most future-proof, cost-effective way to build ubiquitous broadband for our Nation for the next 100-plus years. Municipalities owning that physical network not only ensures competition but lowers cost, provides faster, more reliable speeds, and it solves the problem. The backbone of the internet is fiber. The middle mile is fiber. It has only been this last mile to the business and consumer that has been relegated to copper or, even worse, wireless, and only because it is more profitable for cable and phone companies to keep using their 19th century technologies rather than investing completing this fiber network. These companies are private and deserve to invest their dollars as they see fit.

Chairman GOLDEN. Mr. Sullivan.

Mr. SULLIVAN. We have no argument with that. It is our position that taxpayer funds need to be—I am almost done—need to be 100 percent directed towards finishing the home solution. We really appreciate your Subcommittee's work on this. We hope that we can contribute with you to help solve this problem for Maine and the Nation.

I will take any questions that may be out there. Thank you.

Chairman GOLDEN. Perfect. Thank you.

Next we will recognize Mr. Dunne.

Mr. Dunne, you are muted still.

STATEMENT OF MATT DUNNE

Mr. DUNNE. Apologies.

Chairman Golden, Ranking Member Hagedorn, and members of the subcommittee, thank you for this opportunity. My name is Matt Dunne, and I am the founder and executive director of Center on Rural Innovation, known as CORI, a nonprofit action tank started in 2017 to close the rural opportunity gap. Today, we are working with a network of small towns across the country to help them become successful in economic development and entrepreneurship in the 21st century. This ranges from helping communities build world-class broadband, facilitating technology training, supporting accelerator programs, and investing in scalable small businesses.

The rural urban divide that has emerged since the Great Recession was driven by automation, globalization, and a decline in rural entrepreneurship. By January of 2020, before the pandemic, less than half of all rural counties had returned to their pre-recession employment levels as rural businesses, large and small, struggled to regain solid footing. The COVID-19 shutdown only exacerbated the problem for many rural small businesses, particularly those dependent on tourism.

Driving this divide was the fact that high-paying, resilient digital economy jobs like computer programmers, cybersecurity analysts, IT specialists, and others are not distributed equally across the country. Rural America represents 15 percent of our nation's workforce but only 5 percent of the digital economy jobs. It doesn't have to be this way. In the age of the internet, there should be no limit to where digital economy jobs and startups can take place.

The pandemic has only reinforced what we in rural America already knew: Broadband is critical infrastructure. It is as vital to equity and prosperity as electricity and transportation. For businesses, it was nothing short of a lifeline as Main Street companies tried to quickly shift to online ordering and delivery. While some businesses and workers could pivot to e-commerce or transition to remote work, unequal broadband access left the rest, so many of them in underserved rural areas, struggling to get by. But our awareness of the issue has created a moment in time that resembles one our nation faced nearly a century ago, when leaders realized that unequal access to electricity prevented regions of the country from being able to thrive.

The good news is that like the rural electrification effort, there are models for bringing world-class broadband to rural places like the one that Mr. Sullivan has been so deeply involved with. In fact,

at least 10 million rural Americans already live in Census tracts with gigabit-speed broadband. These communities built networks well beyond the FCC minimum standards for broadband because they understood that level of service is already on its way to becoming obsolete. As a result, they are ready to participate in the digital economy of today and meet the demands of the future. They invested in the infrastructure that can do both.

The question before us now is, are we going to go do what is necessary to generate broadband that supports the businesses of today and tomorrow? Without it, millions of underserved rural Americans and small businesses can't engage with streaming content, cloud-based services, and video conferencing applications that have become part of everyday life. That is why it is critical that future funding should prioritize delivering a minimum of 100 megabits per second upload and download speeds and building networks capable of scaling to a gigabit or more. To do otherwise is only setting ourselves up for a rural-urban divide that reemerges 5 years from now despite a massive infrastructure investment.

COVID has opened people's eyes to the possibility of working where they want to live rather than living where they need to work, including an incredible return to small-town America. But this is only possible if rural areas can achieve the same internet speeds as their urban counterparts. Doing so would enable entrepreneurs and small businesses in rural places to access markets anywhere in the world and be resilient to events like the pandemic that forced so much activity online.

We at CORI know plenty of small towns that are proving this is possible, places that invested in gigabit-speed internet broadband or are leveraging their current broadband to make successful businesses emerge. In Taos, New Mexico, a program to help local businesses build e-commerce websites during the pandemic helped some see revenue increases by 10 percent. In Wilson, North Carolina, a former auto repair specialist developed a software platform called Shyft Auto to solve the inefficiencies he knows plague the service shops everywhere. They are receiving investment and are growing. In Red Wing, Minnesota, the robotics company Poultry Patrol was able to test its prototype in the field thanks to the upload and, download speeds possible with the region's high-speed broadband network.

This is a moment unlike any we have seen before in the internet age. The funding currently being considered to boost broadband deployment expansion is vital to ensure every innovator and small business person can take part in the digital revolution and reach their full potential wherever they live.

Thank you for your time and consideration of this important issue. And I am happy to take any questions you may have.

Chairman GOLDEN. Thank you.

And, finally, Mr. Waibel, you are recognized for 5 minutes.

STATEMENT OF TIM WAIBEL

Mr. WAIBEL. Thank you, Chairman Golden, Ranking Member Hagedorn, and the members of this subcommittee. Thank you for holding this hearing and letting me testify.

My name is Tim Waibel. I am a farmer from Courtland, Minnesota. It is a town of 611 in Representative Hagedorn's district. My wife and I have raised five children. We have six grandchildren and are looking forward to three more coming in 2021. My wife and I both feel blessed that we have been raised in rural America, and we want them same blessings for future generation. I know that many of you share this feeling.

The pandemic has taught us a lot of lessons. One is that people living in the cities grew to appreciate the advantages of living in rural America, and many picked up stakes and moved here. Over the years, I have been saddened to see our communities raise wonderful kids only to see them go off to college and never return to raise their families here, instead moving to the cities and suburbs. A town like Courtland has suffered due this and not just economically; we have lost a lot of talent. And I think that those of us who have lost—excuse me. I think that those who have lost to the cities we have also been deprived of some life-enriching experiences that only a small town can provide. So the thought that at least some silver lining might come with this tragedy of the pandemic may be a rebirth of towns like Courtland, which brings me to my second lesson.

We have all heard stories remote learning. While there is more of it, I am speaking here on the issue on the heart of availability of broadband. Kids growing up in rural areas who do not have access to decent internet service are at a disadvantage. Senator Klobuchar mentioned that one student went to a local liquor store parking lot because that was the only place that they could get internet service. This is not an isolated problem. It is a problem for anyone who lives and works in rural American communities because it impacts education, business, healthcare, and even farming. Lack of high-speed internet access is a serious obstacle to the rebirth of rural America I am hoping for. I am gratified at this time when there is so much partisanship, that there is a bipartisan consensus on the need to look into significant new investment in broadband.

But as you know, throwing money at a problem doesn't always fix it. Billions of dollars have been spent on expanding broadband internet, but efforts have still come up short. So I hope that you will take into account a few points from my perspective as a life-long rural resident. First, it matters who is providing the broadband to our rural communities? Do they have a real stake in rural America? Do they have a proven track record in serving rural America? And do think have boots on the ground to get the job done?

From my vantage point, the Department of Agriculture and rural electric cooperatives and similar entities with a long history of working with the USDA check these boxes. But that is not where the lion's share of the Federal dollars have gone. Billions have gone to other Federal agencies to stand up programs using other broadband providers that are often protected from competition, even if they provide substandard service. My understanding is that there is an interest by some in standing up another Federal program, but I do not believe we are going to get any different results than we have had going down the same path.

There is fierce competition amongst various agencies and providers in regard to who gets to carry the important mission. But addressing the needs of rural America, including broadband, is a mission of the USDA, rural electric, and the like. And, yet, the dollars that we have spent have paled in comparison to the dollars under other programs where the providers do not check all the boxes that I mentioned earlier. Had FDR taken this approach for rural electrification, God knows how long it would have taken to get power to our farms.

I would like to recognize Representative G.T. Thompson, who has brought a very thoughtful bipartisan broadband bill that is worth your consideration because it recognizes the points that I am making here today. The second point is there are gaping holes on the map in terms of people with zero service. But there are also even more holes in the map where people have terrible broadband service and pay an arm and a leg. I feel I fit in that category. Both problems need to be addressed. Setting high goals for service in this process will be important. And if the providers are not meeting the goal, they ought to open it up for competition.

And, finally, in my perspective as a farmer, remember that it is not just about location served, but it is areas served. Why is that important? Because my farm not only needs the kind of internet that a business needs in town, we also have mobile offices. My tractor, combines, and so on and so forth talk back and forth where I need to be able to upload data as I work the fields. This is a vital efficiency in providing food, fuel, and fiber, but is also critical in caring for the natural resources promoting soil health, clean air, water, and the reduction of CO₂. Agriculture amounts for a very small percentage of CO₂ emissions and is already sequestering carbon, but we are glad to help sequester carbon using tools voluntary incentive-based tools. One such tool is high-speed internet.

So, as you carry out the important work in this issue, I hope my perspectives are helpful. Thank you for letting me testify. If you have any questions, I can try and answer.

Chairman GOLDEN. Thank you, sir.

And I appreciate each of you for being here today to talk about connecting rural America.

We will now move to 5-minute questions. And I will begin by recognizing myself.

Mr. Waibel, I would just point out, I think you probably have a lot in common with Mr. Sullivan, who also talked about the high cost of some of these programs that have not been nearly as effective as they should be in delivering good access, the kind of access that you have spoken about and that Mr. Sullivan has also talked about.

I had to note too, sitting here, Pete, thinking last Congress, we held a field hearing—you held in Minnesota, and Jim joined us. I forget the town. What town were we in?

Voice. [Inaudible.]

Chairman GOLDEN. Stauber. That is hilarious.

The economic case for doing something here speaks for itself. I will just say we were at a machine precision—precision machining shop there where they were talking about how they couldn't really expand the business and in fact might have to move it into a more

suburban or rural area if they didn't have access to broadband. So it is about protecting jobs and creating the opportunity to expand.

And then Congressman Stauber came up to Maine. And we had very similar conversations about how important this is in rural Maine. So a lot of similarities between the two.

Mr. Sullivan, I thought I would just start with you. Maybe you could take a little time and get more indepth about what are the issues that we came across in your community in looking at some of the Federal programs that are out there, Federal dollars, grants, and other things that just weren't workable in Calais and Baileyville, and as a result, why did you end up going with this very local solution?

Mr. SULLIVAN. I think it was alluded to by some of the other speakers. Some of the Federal programs are quite onerous and time-consuming in order to be able to make something happen. And there is a lot of abilities to trip along the way. And the need was so dire in our area that we decided to—we had such unanimous support from the citizens to be able to go and finance this operation; we decided to proceed ahead with it, rather than wait out the infrastructure rules. To Peggy's point, there is a lot of roadblocks in the way there that kind of slow these projects down.

And also I will say that the Federal description of broadband, for years, they have been at this 25/3 number, which is completely inaccurate. That is not broadband by any stretch of the imagination. So we decided to try to step over those hurdles, if possible, and we were able to do it.

Chairman GOLDEN. Thank you. I appreciate that.

I don't know if was you, Ms. Schaffer, who had in your written testimony or maybe it was someone else, the example of Cranberry Isles, where there is such a—first, a Federal agency comes and announces that there is going to be broadband brought to the community through a grant, and then, years later, it is not there. I think Senator Collins from Maine has been working on finally getting a solution. But in the interim, they took it upon themselves to fix it, I am sure working with the State. But could you talk a little bit about that but also just think about what Dan said? What other examples do you have out there of inefficiencies or just bureaucracy of those programs being unworkable, and how have you helped?

Ms. SCHAFFER. Well, I think one—the place you went to visit when you did your field visit was Roque Bluffs, and they got a USDA grant in I think it was December of 2019, official announcement in early 2020. They still have not built a thing. It is not that big a town. I think the bill was under a million dollars. They have been hit by roadblock by roadblock. And it is just when you look at—if you compare that, for instance, to Cranberry Isles, who really started out on their own, and then USDA came in late with the funding. Cranberry is built. It was built before the USDA funding came through. And now there is this discussion about who pays for what. But the process of the USDA does not really work for small towns. It really doesn't work for municipal networks. It doesn't work. And part of that is it is a one-size-fits-all solution. So, whether you are building a \$20 million grant network or whether you are building a million-dollar network, they don't downsize it in a way

that makes it or right size it in a way that makes it work for small towns. And so that for us has been a major barrier.

The other barrier for the USDA funds is they have been—you have to have a service of under 10/1 to be qualified. And one of the things I frequently say is you have to go through the willies to get to the wags (ph). So sometimes you have to serve people who have some level of service before you get to people who have gotten little service. And the USDA's standard of 10/1, which is lower even than the FCC, which is just unacceptable, it doesn't recognize that. And it also sentences people who have—who are just a little better than 10/1 to nothing, to no support and no help. And that kind of structure doesn't work when you are trying to bring service to rural America.

Chairman GOLDEN. Thank you. So we will dig in a little further on some of these things, but it sounds like you are calling for greater flexibility in these programs at the very least.

With that, I will turn it over for 5 minutes to Mr. Hagedorn.

Mr. HAGEDORN. Thank you, Mr. Chairman. I agree with you. And this is just basic infrastructure issue. It is quality of life for the folks in rural areas. We need to make sure all Americans have the same access and opportunities.

And my friend Mr. Waibel from southern Minnesota makes a good point. I mean, if we don't have these types of services, it is going to be hard to retain the folks in our rural communities and certainly to attract them in, even if we have great jobs and that type of thing.

Mr. Waibel, really quickly if you could help some of the folks understand exactly what the farmers go through and their needs are in the digital age. I know for instance, hog operators might have an automated system to feed their hogs which would obviously require a lot of work on the internet. But when you do your duties, your planning and things like that, can you kind of fill us in about what is going on out there and why you need a good broadband connection?

Mr. WAIBEL. Certainly. Thank you will for the question. So, in the fall, when we harvest, we work with certain vendors, fertilizer people, so on and so forth, that they can follow us in the field, and they know exactly when we are done harvesting a field so they can come and spread fertilizer and so on and so forth. There is no phone calls. They know exactly what needs to be spread because of prior meetings and so on and so forth. So it just saves a lot of time in that aspect. And the same way with information shared by our harvesting machines, it goes directly to people that we work with. They know exactly what we have seen and they can dig deeper into it. So certainly if we need to change something for the coming year on an application we can do so real quick and a lot of things. Everything is connected now on the farms. It is amazing. I never thought I would witness something like that in my lifetime.

Mr. HAGEDORN. I agree with you. When you talk about, especially in rural communities, you trust the USDA, you trust the local companies, the REAs and others to deliver the services that has been your experience. Do you want to go further on that, or has enough been said?

Mr. WAIBEL. I do believe the reason why I am a big fan of the REAs is because of the fact we have local boards, local people that we know that serve on these boards. And they are going to look out for, number one, the most cost-effective ways to deliver that service and, number two, what is good for the community.

Mr. HAGEDORN. Ms. Schaffer, if I understand you, you are criticizing USDA and others because they are trying to focus most of their attention on making sure everybody is at a basic level so they have some level of service. I think if you take the moneys and start spreading them around in order that everybody has 100/100 or whatever before people can get to some decent level of line speeds, that wouldn't seem fair to me. What do you say to that?

Ms. SCHAFFER. You know, there is—so you can figure this out through scoring on a grant process. So, instead of defining in the application of who is eligible and who is not, you can give extra points to a project that starts at essentially nothing and brings them up to something. And that kind of process allows for you to actually build out to more of the communities and make sure that all the communities are on an equal footing.

And so I think when you define it in your eligibility standards, you limit who is eligible. But if you can do it through a scoring process of giving more points in an application for people who are serving people who have worse service than others, then you can accomplish the same thing, but you also get to serve more of that community. So, instead of bringing a tiny little piece of that community to the modern world, you can bring the entire community up. And I think to me, that is the important piece thinking about, not just in the eligibility but really looking at how you score these projects. And that gets rid of some of this concern about what is traditionally called overbuilding.

I will say, in this country, we have much more interested policywise in preventing people from getting two kinds of service than making sure everybody has a service. So that is what when you limit it to 25/3 or 10/1, that is what you end up doing.

Mr. HAGEDORN. It just seems to me that people who have no service—I mean, this is why the government is involved in this. This is why we are all together in a bipartisan fashion, we want to make sure people have some level of basic service. And I think that is where we should focus our attention. If we can get people to higher speeds down the road, that is all well and good. And maybe a private sector and others will help us out a little bit more, but I think what Mr. Waibel and others have been saying, and I agree with, that we should focus on those who have no connectivity or have speed so slow, that they really aren't able to compete and participate like the vast majority of the people across the country.

So, with that, I yield back. Thanks, sir.

Chairman GOLDEN. Thank you.

Next, we will recognize Representative Roger Williams, Vice Ranking Member of the Committee.

Mr. WILLIAMS. Thank you, Mr. Chair.

Throughout my district in Texas, I constantly hear from constituents about unreliable or complete lack of internet, and that is in Texas. Unfortunately, many of the Federal broadband dollars are invested in the areas with the lowest cost of deployment, rather

than the areas most in need. This has led to many rural areas of the country continually being left behind in the digital economy as we have heard this hearing. That is why I have introduced the bipartisan Eliminate the Digital Divide Act, that would give money directly to the States to decide where the greatest need is for their constituents.

So, Mr. Waibel, thank you for being here. I too, I don't have an operation as large of yours, but we have calf, cow in Texas and a few pigs so I appreciate what you are doing. In your testimony, you discussed the disparities between urban and rural areas relating to access to high-speed internet. Can you discuss the challenges your community—and you have done that a little bit today—your community faces due to the lack of connectivity and how it puts them as an economic disadvantage compared to your urban counterparts?

Mr. WAIBEL. Certainly. So, if I would go 30 miles to the east of here, we have a community of about 60,000 people. And certainly the businesses, when I go down there for whether it be parts or questions at my local FSA office, their internet service is just boom. And it is there whereas when I am at home here with my service, it—a lot of folks know that that there are times it will take me an hour to get an email into my computer at home here. And that is extremely frustrating. And I think, when we look at rural America, we need to be on a level playing field. This to me is the most important thing for the future of my boys farming with us or all my kids and my grandchildren to stay up to speed with whether it be a town of 60,000 people or whether it be a town of 611 people, we need to be on the same playing field. This is going to set the future growth for our areas and the businesses that will hopefully establish and stay here in these small communities.

Mr. WILLIAMS. Thank you. I agree with that.

When we hear about small businesses adjusting to the digital economy, many of us think about brick-and-mortar retail stores creating an Online presence. However, one of the greatest beneficiaries of connected technology has been the agricultural industry. We have seen new innovations that have the potential to increase harvest yields, make watering schedules more efficient, and can update machinery automatically. All these advancements can help us better secure our food supply chain and properly feed our Nation. Unfortunately, if we continue to leave the rural parts of our country behind as we have heard, our farmers will not be able to experience the benefits of these new technologies.

So, Mr. Waibel, again how does access to broadband improve your day-to-day business as a farmer? And what concerns do you have in the future of farming, if the divide is not closed? You touched on that a little bit, but I think that is important.

Mr. WAIBEL. Yes, correct. You know, so, when I look at the whole operation, we are moving, we are in this digital age, and I think we are probably more—even though it seems like we are into it a long ways, I think the future is only going to demand more of it. And we use it just for everything. And it is only going to get more and more.

For those of you that aren't that familiar with farming, when we go into the field, we push a button, our boundaries are in the field, and the tractor takes over and does what it needs to do. You are

just in there for the ride basically and so on and so forth. So these types of situations, the more advanced our implements get and the more advanced our suppliers are, the more we are going to need to continue to have these high-speed updates that it doesn't take us an hour to get something; it takes us a minute, a second to get it. And that is where I think we really lack in rural America is the fact that we really need to get this sped up.

Mr. WILLIAMS. Thank you.

Real quick, access to broadband is no longer a luxury but a necessity. Big corporate providers have shown that the economics of connecting some of the most rural communities simply do not work. If we want to provide internet to these communities, we need to look for ways the Federal Government can better utilize the public-private partnerships. By leveraging public funding through private execution, we can tackle rural broadband infrastructure and close the digital divide.

So, Mr. Sullivan, real quick, what barriers typically keep private citizens from entering into these partnerships? And how can we incentivize them to participate in Federal grants such as the USDA ReConnect Program to build out broadband infrastructure in rural communities?

Ms. SCHAFFER. What has basically been happening is it is very difficult with some providers to work with them. In that type of arrangement, which is basically what has been happening in Maine and across the Nation now for quite some time is a lot of the existing providers have been receiving Federal and State subsidies to improve broadband. But they are not improving it to the level that it will in my 5 minute speech here about trying to make it future proof so that when we do these investments once, we don't do them multiple times because that is what has been happening. The existing ISPs are only going to put as much of their money in as they can keep their costs as low as possible to keep their stockholders happy. We understand that. That is how America works. But by investing public dollars with these partnerships without having minimums. They ought to have some standards that say we aren't going to give money unless you can provide a 100/100 fiber connection because we know that connection can be upgraded, as others have said, to a gig, to 10 gig, to 100 gig. I mean, that piece of investment will always be there. So it is important that when these ISPs are brought into a room, that they understand that. This is how we need to focus the dollars that are coming from the public because it should be there to serve the public.

Mr. WILLIAMS. All right.

Thank you very much, Mr. Chairman. My time is up. I turn to you.

Chairman GOLDEN. Thank you, sir.

We will next recognize Representative Troy Carter from Louisiana too.

Mr. CARTER. All right. Thank you, Mr. Chairman. Thanks for the opportunity. And either of you can take a stab at the question. I hail there Louisiana where we have a fairly substantial amount of our rural areas that are in fact challenged as relates to broadband. And we know that, under the current guise of COVID, COVID taught us that we will be relying much more on distant

learning in classrooms, technology for businesses. And that necessity brings the real attention to the fact that many parts of our State and our country, but particularly the Second Congressional District, we have issues with access to broadband from a basic standpoint, but then when we juxtapose that with the reality of poor people throughout our State, throughout our country that will in fact—and I have heard the word several times “left behind” mentioned by some of my colleagues. What are the plans for obviously making sure that we have access to broadband in those areas where there is no infrastructure? But, additionally, your thoughts on how we level the playing field for our impoverished areas as well. I am going to pick somebody, if somebody doesn’t jump in.

Ms. SCHAFFER. I think the piece we that do around on community planning is a central element of this because it allows the community to understand the importance of affordability. I think broadband has four pieces to it: the wire run by your house; can you afford to connect to that wire; do you have a device; and do you know how to use it? And when you began those community conversations, those last three pieces come in as a critical element of it. And then you can design a network and pick a provider and pick a partner that can give you that kind of connectivity. I think Danny talked about how Downeast they have, they are providing a high-quality service for about \$60 per month. That is still unaffordable to some families, but it begins to address sort of that issue. And I think that that, to me, the critical piece about the community understanding and working with the provider and helping to underwrite some of the infrastructure costs helps some of those equations. But affordability is a key issue in this puzzle.

Mr. CARTER. And what would you determine or think would be the greatest barrier, from an educational standpoint, of informing the public of their duty or their participation?

Ms. SCHAFFER. So do you mean participation in a planning process or participation in getting internet?

Mr. WILLIAMS. Well, you mentioned that a part of it was them understanding and participating. So what is the greatest barrier to that?

Ms. SCHAFFER. Some of that is really—and I think COVID has resolved a little of this, is understanding what the internet can bring to you. I mean, Tim has talked about farming. The USDA estimates that the farms with high-quality internet have about an 18 percent increase in capacity. So they are able to produce a lot more. And that kind of activity can happen, as Matt talked about, on just about every business level for tourism, businesses in those. And so part of these conversations in the community is understanding the needs of all of those businesses and making sure that the business and people can engage in this understanding of what this service can bring to your area.

Mr. WILLIAMS. And I will tell you from Louisiana’s standpoint, and I don’t think it is any different from many other places, but certainly Louisiana we know now that broadband is a way of life. It is not a luxury. It is not something you have as a one off. It is essential. Yet we know that large swaths of our country, large swaths of Louisiana do not have access to broadband, not just for

education but also for daily use. We know that broadband in many ways fuels our whole economy. It connects our world.

So, as we go on through this discussion, Mr. Chairman, I would love to have further discussions on how we can advance those discussions, particularly around areas in those rural areas that have really suffered. And COVID has taught us significantly what that means to our economy and what it means to our world. So I thank you all for your testimony and look forward to further discussion.

I yield back.

Mr. SULLIVAN. I would like to weigh in on that for a second, if possible.

Chairman GOLDEN. Who was that?

Mr. SULLIVAN. I would like to weigh in on that point for just a moment.

Chairman GOLDEN. He is out of time, but we will find a way to work it in, Mr. Sullivan. The second round of questions, I will just make a note.

Next, we will recognize Representative Pete Stauber from Minnesota, Eighth District.

Mr. STAUBER. I thank you, Chair, and thank you, Ranking Member Hagedorn, for holding this hearing. And, to all the witnesses who gave us their testimony, it is very, very valuable.

I just have to reiterate what Mr. Waibel said a couple minutes ago. He said, "Rural America must be placed on a level playing field."

Rural Representatives on both sides of the aisle have had it right up to here with the lip service we have been given on expanding broadband to rural communities. It is the time to do it right now. We have the opportunity for investment, and rural America especially, as Congressman Carter just stated, has been extremely devastated because of the lack of connectivity.

Our hospitals need to be connected—our schools, our small businesses, and so many others in our rural communities—to get us on that level and fair playing field so we can be connected, so we can bring businesses to rural America.

Mr. Waibel, in your testimony, you highlighted something that is critical for people to understand. Our small towns and communities in rural America have sat at a stark disadvantage for way too long. It has left our kids at a disadvantage, and the studies—our seniors at a disadvantage in their healthcare when we talk about telehealth and telemedicine. And, for certain, our farmers are at a disadvantage for optimizing their yield.

You also mentioned that not only do rural Americans lack access to broadband; where some are lucky enough to have service, it is inconsistent and expensive, and lack of competition means there is nowhere else to turn.

When we here in Congress are considering broadband investments and deployment options, we must be effective. Unfortunately, in President Biden's proposal, he prioritizes municipal broadband networks or government-owned networks.

In my home State of Minnesota, however, we have restrictions against municipal broadband networks. In fact, 18 States total have restrictions against such networks. I guess my constituents in Minnesota's Eighth Congressional District and Mr. Hagedorn's con-

stituents, like Mr. Waibel in Minnesota's First Congressional District in Minnesota, and many other rural Americans take a back seat under this piece of legislation. We count, and rural America matters.

So what is the good news? In the CARES Act and the consolidated appropriations signed into law by President Trump, we were able to get a lot of money out the door to help bridge the gap in rural America. The money was unfettered by burdensome regulation and helped stimulate private investment. This was a step in the right direction.

In these packages, a lot of different Federal agencies had been tasked with the broadband deployment mission. This can be tricky for some small businesses to navigate as we all know. That is why I will soon be introducing the Small Business Broadband and Emerging Information Technology Enhancement Act.

This legislation will direct the Small Business Administration to create a broadband coordinator position that will serve as the primary liaison to other Federal agencies involved in broadband deployment and would identify and catalog tools, training, and best practices for small businesses as it relates to broadband implementation and usage.

It is my hope that legislation like mine and others will help bring broadband investment to our rural communities, to that last mile for economic development. The CARES Act gave us a great start, and I think we need to take advantage of it.

I know that Chair Golden and Ranking Member Hagedorn understand that. They both represent rural districts. And, Chair Golden, as you alluded to, we did hear that we had a field hearing on broadband development and deployment a year and a half ago. In northern Minnesota and in upstate Maine, it was the same concerns by our small businesses, our families, our family farmers, and we have the opportunity right now to do it right.

And, Mr. Waibel, I want to repeat what you said earlier. Rural America must be put on a level and fair playing field now, and we have the opportunity. And I know we have bipartisan support in the Congress to do that, and I am looking forward to that.

Mr. Chair, I yield back.

Chairman GOLDEN. Thank you.

Next, we are going to recognize Representative Antonio Delgado from New York 19. I see him on the screen. I am not sure if he has questions. We will give him 2 or 3 seconds here.

All right. We will come back to him.

Why don't we move to another part of New York, Rep. Claudia Tenney.

Ms. TENNEY. Thank you so much, Chairman Golden and Ranking Member Hagedorn, for holding this important meeting today, and thank you to the witnesses for your time and your insight.

As we have we have heard today, the internet connection can determine your destiny, and nothing shapes our ability to access education, healthcare, and employment opportunities like access to rural broadband. The COVID-19 pandemic has only driven home this point.

Americans have never relied more heavily on reliable, accessible, and affordable internet than they do today. Throughout New York's

22nd Congressional District, there are far too many communities who do not have access to reliable broadband.

The digital divide is even more great when you consider our children have less access to education, our seniors have less connectivity with their doctors, and our business meetings are few and far between because we are always spooling on our lack of access to the internet.

And, to make matters worse—this, I think, is a critical issue—upstate New York is subject to a broadband monopoly in New York. New York State, under Governor Andrew Cuomo and the State legislature, agreed to a cable consolidation plan under an agreement with Spectrum, which they claimed that expanded improved service. However, the State and New York State's Public Service Commission have absolutely failed to enforce the agreement.

This has left too many rural customers in my district with non-existent broadband service or service that is far too expensive. Just this week alone, Spectrum has raised their rates seven times in just a few years on New Yorkers.

The only solution is to increase competition in our internet marketplace. This means enacting policies that steer investment to smaller upstart providers and reducing barriers to entry.

We must also encourage networks that can host multiple internet service providers so someone's geography does not limit their choice. I think we can work on closing this internet gap and provide choice once and for all to upstate New Yorkers.

One thing I wanted to ask, I know, Ms. Schaffer, I wanted to ask you this because you pointed out a couple important things about getting access to internet. I just first wanted to ask you about how the FCC data can—the data on broadband coverage and how it speeds—affects speeds is inaccurate. These maps are often pivotal to determine if a project is eligible for Federal funding.

This was raised to me in a recent broadband hearing I had in my own town of Sherburne, New York, where our business is located. From what your experience is, can Congress work with the FCC to resolve this, and can we give some of this determination on where we are going to allow speeds—can we give that back to our local communities?

Ms. SCHAFFER. Yes and yes.

So the FCC map is based on advertised speed by Census block, where one home in a Census block is served, then the entire Census block is considered served. So that gives—you know, there are Census blocks in rural America that are many hundreds of miles, and if one location is served or could reasonably be served, then that entire Census block is served, and it is no longer eligible for any Federal funding.

That really puts a—you know, it—that shuts off an opportunity for those—that area to get funding. They have to then rely on either local funding or State funding to fill that hole. And really to get these projects done, you need a capital stack. You need some Federal money, you need some State money, you need some local money, you need ISP money. That is really how rural America is going to get served.

And, you know, one of the things that I recommended in my testimony is moving this new Federal funds directly to State programs because State programs are much more responsive to what is happening.

Our State has a standard—broadband standard of 100 over 100 and an unserved standard of 50 over 10. So we have recognized the importance of connectivity. And, if Federal funding flows to States, then States can really craft projects and with the local people that meets the local solutions and deals with—

Ms. TENNEY. Let me just—

Ms. SCHAFER.—many of these issues.

Ms. TENNEY. Let me just reclaim my time for a minute, because I am running short.

I wanted to emphasize I am concerned about the situation in New York State where we continue to put millions of dollars into providing a virtual monopoly to Spectrum Cable, which has been a huge problem. When I served in the State Assembly, there was a former Congressman named Chris Gibson in my other district.

We put tons of money into broadband, and it didn't go anywhere but to these large entities, and now we have a problem—continuing to have a problem with rural broadband. My question is, how do we get the local governments to be able to participate in this?

And, also, the village of Sherburne has been designated as a test site to allow this municipal concept that is part of the bill that—the infrastructure bill President Biden has proposed, but also give choice and an opportunity for our consumers to choose their internet and to have actually access to broadband with minimal rates of speed as determined by the last farm bill?

I have run out of time. I apologize. I have to catch up with you on another question.

I yield back, Mr. Chairman.

Chairman GOLDEN. Thank you.

With that, I think we are going to move to a second round.

Mr. Hagedorn, do you have further questions?

Mr. HAGEDORN. Yeah, sure.

Chairman GOLDEN. Okay. Go ahead. I am going to ask some, too, but I will let you go first.

Mr. HAGEDORN. All right. Thank you, Chairman.

I think I want to associate myself with Congressman Stauber's comments and, to a degree, also Representative Tenney's comments on the Biden proposal.

I mean, from my standpoint, if you are going to have 18 States that just can't participate because they already have restrictions on these municipal broadband networks, that is pretty darn serious. I don't know why they would put that forward when basically a third of the country is shut out. I guess they are trying to be a little top-down on that one. I disagree. So I think what Congressman Stauber said there was right on target.

And, also, the telemedicine, I mean, really, if we have seen anything here in the last year, it is how that has expanded and the need for it. And the hospitals and providers have really dug in, and I think the people have accepted it. And so, from the standpoint of Congress, we need to make sure that those reimbursements are

there. I think this is one of the few good things that came out of the coronavirus situation, is the advent of telemedicine.

In the State of Minnesota, every once in a while, we have inclement weather, believe it or not. What about Maine? I think same thing in Maine, right? And so, when that happens, it is easy to still go see your doctor, but also makes it more efficient for them, seniors, disabled, you name it.

Mr. Waibel, what do you think about telemedicine? Has it taken off a little bit in your community? Are you seeing more and more of it? Will it help the people in the rural areas?

Mr. WAIBEL. Absolutely. So one of my daughters is an RN at a local senior citizens' living place. And, anyway, you know, so that was used quite a lot during the pandemic for her patients and clients where she works. And I think, you know—I even actually used it, too, one time. And it is certainly—it is a great option to have and something that, again, is going to be used more and more in the future, I believe.

Mr. HAGEDORN. Thank you.

Mr. Dunne, in your studies and the work that you are doing, do you see job migration going from urban areas to rural areas if we can have them on par as far as digital connectivity?

Mr. DUNNE. We absolutely have. There was a lot of movement pretty early in the pandemic, and, as I think another witness mentioned, people realized, boy, you know, going back to small towns might be a lot better than being shoehorned into larger cities.

But they need to be able to continue their aspirational jobs. Many times, unfortunately, the narrative has become, if you want to stay in your, you know, the community that you love, you have to give up that aspiration and those goals to be able to do things on a national or global basis.

If you have broadband, that is not the choice you have to make. You know, the young people who have been supported by those communities to be able to go off to college can come home and participate and sometimes bring their jobs with them or create new businesses based on the experiences that they have had both in that community and in their experiences outside of it.

So we do see this as a moment to reverse the population decline that really we only saw for the first time in a generation in 2011, 2012, and 2013. Even the farm crisis didn't lead to a net population loss.

So we are at a moment where we need to move quickly. COVID has created that opportunity, but we need infrastructure like future-proof broadband in order to make that a reality.

Mr. HAGEDORN. I appreciate that.

Mr. Sullivan, I want to ask you just a little bit more about your experience. It is pretty fascinating.

You are serving some rural communities, but what about the outlying areas where you may have farms. Are you also able to run the fiber to those locations?

Mr. SULLIVAN. Yes. When we started this project, we made the commitment or the towns made the commitment that every single person who had a telephone pole within reach of their home would be served. So, right now, we have got about 99 percent of both those towns are served. We have got two outlying areas similar to

what you are talking about that we are working on right now. So, by the end of this year, they will be connected as well.

So we have got some stretches where we go 6, 7, 8 miles to get one house.

Mr. HAGEDORN. Well, if Congress wanted to help and make what you do a demonstration project or expand it, what could the Federal Government do in order to be helpful, other than maybe get out of the way?

Mr. SULLIVAN. I think a better understanding of, you know, what is actually happening out there. And I am going to pick up a couple of points, one from the Representative in New York about the cable monopoly there.

That situation is—was allowed to happen. Cable companies don't compete with anybody. They have got their own highways. They just basically do what they want, so that is difficult for other ISPs to come in. So competition doesn't exist.

That is another piece that is another important aspect to this, is the—to the ranking committee member's comment there about getting some service to somebody or to everybody, I have been teaching old and young and rich and poor for over 45 years, and I can tell you, once you drag them over the digital divide, you get them working, if you build them a network that doesn't work, they are frustrated, they are angry, and they won't use it.

It will cause more issues by giving them just something because the way it works now, without symmetrical connections up and down—there is more and more stuff being done with cloud-based computing; you have got to have those uploads. And those copper-based networks of cable, fixed wireless, satellite don't have the capacity to do that, and you will basically be wasting money after money has already been wasted.

Mr. HAGEDORN. Thank you. My time has expired. Appreciate it.

Chairman GOLDEN. Thank you. I think Mr. Sullivan has talked about that a lot. Nothing more frustrating than seeing your tax dollars get put to some kind of internet solution, and then you still get the spinning wheel, whether you are a student or a small business owner.

So, Representative Williams, did you want to ask further questions?

Mr. WILLIAMS. Sure.

Thank you, Mr. Chairman.

Ms. Schaffer, a recent article by the Technology Policy Institute pointed out that, as the bar gets higher, more areas become eligible for subsidies while the costs of serving the truly unserved increases.

Do you agree with this statement?

Ms. SCHAFFER. Well, no. Actually, I mean, I think that—you know, this is infrastructure that is going to last 50 years, so we should build infrastructure that is going to meet the demands of people for 50 years. And, as I said, when you look—you know, we run a grant program, and, when you are looking at providing grants, there are many, many ways through scoring that you can really give advantage to areas that have really bad broadband.

But it is important when they build it, that they bring it up to a standard that is going to be essentially future-proof, and that is what we try to do with our grant program. So I think you can manage this pretty easily through a grant process to make sure that the people who have the worst service have the best opportunity in a competitive grant to get better service.

Mr. WILLIAMS. Let me have a followup to you.

How do we ensure that we continue to focus deployment for unconnected areas rather than upgrading systems that are already in place?

Ms. SCHAFFER. So, you know, one of the definitions of—when you—even when the FCC defines 25/3 as served, people who have less than 25/3, you know, are still eligible for that Federal funding. So you are going to overbuild that network because we know it doesn't meet today's standards.

And so I think it is important when we look at this to understand that, first off, the incumbent provider is the most likely to build—to rebuild their network because they are there already. So they have the customers, they have the structure, and so providing opportunities for the incumbent provider to improve their service, by overbuilding their own network, shall we say, with better service, is really critical.

And so that is part of trying to figure out how we get better service to these people. It is not just—every time we are building networks, it is not like we are bringing—we are not often bringing in a new provider. We are usually providing the small local incumbent provider who has been there for a long, long time the ability to upgrade service that they already have to the customers they already have.

So overbuilding is really about improving service to customer bases. Sometimes that is the existing provider that does it. And, if the existing provider doesn't want to do it, then sometimes it is bringing in a new provider. But it is making sure, at the end, with Federal dollars and State dollars, taxpayer money, that you are providing a service that can meet the needs of that area for now and into the future.

Mr. WILLIAMS. Okay. Thank you for your testimony, and I yield the remaining time back to the Chairman.

Chairman GOLDEN. Thank you, sir.

Representative Carter, I think you want to give Mr. Sullivan a little more time.

Mr. CARTER. Yeah. Sorry. I think Mr. Sullivan indicated he wanted to respond to one of my questions, but we were out of time.

Mr. SULLIVAN. Right. I was going back to the—to the idea about—I kind of answered some of this previously, but we were speaking about the rural areas and the poor areas where people, you know, can't afford the service even if it is there. It is important that the service we do provide everybody in America is one that works, and that is what I mentioned previously.

That is what I was—kind of shoehorned in my answer to your question when you ran out of time. But basically my answer to that is that we need to build networks that work and that will work for the next 50-plus years, as Peggy said. Doing something less than that will just frustrate us 5 years down the road.

Mr. CARTER. But would you not agree that, in 2021, the infrastructure for broadband is as essential as water, plumbing, electricity? I think we have to be realistic and talk about those things that are meritorious of funding. And I don't think we have the luxury. This is not Republican or Democrat. If there is anything that has ever been bipartisan, broadband for our country is certainly a bipartisan issue that we can no longer afford to kick the can down the road.

I feel the frustration of many of my colleagues who have had it up to their ears with shoddy broadband or no broadband at all.

Mr. SULLIVAN. Well, that is what we did with the Downeast Broadband Utility, is we built a utility that is similar to roads, you know, sewer, water. It is a piece of infrastructure that we know is not going away. It is only going to get more and more used. It is going to need more and more robust nature where—fiber will do that. That is why we are such big proponents.

And, if you look here in Maine—and this isn't just Maine. I have been contacted across this entire country by people that want to set up competitive municipal networks where multiple ISPs come in and fight for your business. It drives costs down. It improves service. I mean, it is basically the American competitive way.

We have allowed forever cable companies to monopolize. We have enabled phone companies to monopolize. You know, we—the cable company that—we have Spectrum in Maine. We don't have Comcast. They don't fight with each other. Comcast says: Listen, you take New Hampshire; and, Spectrum, you can have Maine.

That doesn't bring, you know, good service to our citizens. And I—again, I said in my testimony, a private business should be allowed to do what they want with their own money, but we are talking about our money, everybody in this room and everybody across this country. And I think it is incumbent on all of us to be in the room when these dollars are being talked about and not just have the existing ISPs in there pulling the ears on legislators and people who make the decisions.

You have got to get the rank and file. Bring those farmers in.

Mr. CARTER. Thank you.

I yield back, Mr. Chairman.

Chairman GOLDEN. Thank you.

Mr. Sullivan, I was actually going to ask just a followup on Mr. Hagedorn. You talked about how you are getting service to every door in your community, including, you know, the ones down the long dirt driveways in the most rural of areas. But what about the technology Mr. Waibel was talking about with tractors and such?

Can we provide that type of coverage with fiber like what you talk about, or is that a satellite-only solution?

Mr. SULLIVAN. Oh, wouldn't I—oh, I am so glad somebody asked that question. I have been spouting this forever.

If America put fiber on the telephone poles like we did electricity to every single pole in this country, we could probably eliminate 80 percent of your ugly cell towers out there. You can run little mini antennas. Cell towers always have to connect back to a fiber connection. That is how it works. There is a few that use microwave, but, by and large, it is all going back to fiber.

You can put the ubiquitous coverage all over your farms. You could put them in your distant forests. You could put it across this entire Nation. We just—we need to have a focus that says, Let's look at this like electricity. I know that is like—everybody is bored to death with hearing that analogy. But it basically is it. We have got to hang these fiber cables across the entire Nation, and we will solve a multitude of problems.

Chairman GOLDEN. Thank you.

You know, this is a great—really is, I think, a helpful hearing. There is a lot of proposals out there. I know—you know, there has been some discussion about the Jobs Plan put out there by the White House, but there is also some work being done in the Senate, and I think recently they announced—Mr. Waibel, you talked about Representative Thompson's bill. I haven't seen it, so I will have to look at that.

And then I am a member of the Problem Solvers Caucus, and we have got a different infrastructure proposal that includes some broadband as well.

So plenty of room for good compromise.

Some of the stuff, like today, I mean, through what I have seen in Calais and Baileyville, Maine, I have become a great believer in what Mr. Sullivan has worked on with trying to empower localities to take—empower themselves, owning that, you know, fiber for themselves. And you have done it in a really unique way, like you said, without raising taxes and without Federal dollars. It is locally owned.

Ms. Schaffer, I am impressed by the way that your organization works with the State to leverage private and local matches, getting the most out of the Federal dollars that are being sent into Maine. So I think that is something important for us to look at as well.

And I just had to quickly comment. When you were talking about advertised speed, man, that is an old problem and one we talked about in the last Congress, and hopefully we can continue to improve upon that.

I don't—what is the solution there? Is it—I mean, obviously just one firm, one house is the problem. Is it a percentage of people served in the Census block have to have true access to advertised speed? I mean, how would you unravel that problem?

Ms. SCHAFFER. Well, first, I wouldn't use advertised speed. I would use actually delivered speed, because there is a big difference. What people can advertise and what they can deliver are two—often two different numbers.

And, really, one of the things that we know about broadband is it is—you really need granular data. You need it down to the street level. And Census block level is just not enough.

One of the things that we are doing in Maine and they are doing in Minnesota is we are doing a crowdsource speed testing to help inform our data decisions as well as the other data that we are collecting. The FCC is starting to do that kind of work, but it is really important that you—when you look at that kind of data, you are including a customer's voice, you are including what they are actually getting at their house in the larger picture of what the data—what the service is available.

So I would not do—I would not do advertised speeds. I would do it at a—the closest you can get to the street level. And the other piece is that you should really audit what companies are telling you that they are—can provide. So they say they can provide X. Are they actually providing it? And crowdsource speed testing is one way you can do that.

Chairman GOLDEN. Thank you.

You know, one thing I have to say about Maine that is unique is, when we talk about small towns, like, we are talking about very small towns. As you know, the largest community in Maine's Second Congressional District is Lewiston. That is, you know, about 30,000 people. That is our biggest population center.

But there are, you know, 350 other towns, and some of them are very small. So that is why we need that flexibility, I think. And some of these programs are why, as you said, your organization can be a good approach, or the one like Mr. Sullivan's community has taken upon themselves.

But I wanted to ask quickly, last question for me anyway, Mr. Dunne, I see that you—CORI is looking at doing work in Waterville, Maine. How do you find and invest in communities as part of the Rural Innovation Network, and as, I guess, a good example, why Waterville?

Mr. DUNNE. Sure. So Waterville is an extraordinary community, as you know, that has gone through a transition from being a manufacturing community to something else. And it was a tough transition when the textile mills closed and the like.

But a group of leaders, including the Central Maine Growth Council and some unofficial leaders who just redeveloped some of those old mill buildings, created cowork spaces, and just started making things happen on their own. And there has also been some real leadership from Colby College. And your small, 4-year, you know, liberal arts colleges don't always step up to be engaged in their community.

Colby College really is, because they know it is critical to their future, their ability to attract faculty in the future and to be a world-class college.

So, when we saw all those things coming together and the beautiful cowork spaces, the redeveloped mill building that is where Bricks is located, we saw an opportunity. We partnered with them to help them put together a real strategy plan and to be able to then apply for federal EDA funding through the Build to Scale program, which they received.

And so they got some state funding help. They got some federal funding help. They got local energy that is happening, and they are in the process of building a high-tech accelerator program for new businesses. They are doing training programs. They are engaging students and faculty and folks locally who are looking for new economic opportunities.

So they found us, and we have just been delighted. We are also continuing other conversations with communities in Maine as well.

Chairman GOLDEN. Thank you. I appreciate that.

Any further questions? All right.

Well, I want to thank all of our witnesses again for joining us today. Your testimony has highlighted how crucial reliable

broadband access is just critical to the small businesses all over the country, particularly in our rural areas. So the internet has revolutionized the way that many small businesses operate. It has allowed them to reach customers in new markets and save money via new technologies.

The longer certain small businesses don't have reliable internet access, unfortunately, the further they fall behind. That is why, here in Congress, we need to work together to find solutions that facilitate the expansion of broadband infrastructure.

As we consider broadband infrastructure proposals, we have got to look to update our digital infrastructure for the 21st century.

I look forward to working with my colleagues in Congress on closing the digital divide and evening the playing field for small businesses.

With that, I would ask unanimous consent that members have five legislative days to submit statements and supporting materials for the record.

Without objection, so ordered.

If there is no further business to come before the Committee, we are adjourned.

Thank you.

[Whereupon, at 11:29 a.m., the subcommittee was adjourned.]

APPENDIX



CONNECTMAINE

ConnectMaine Authority Members: Nick Battista, Jasmine Bishop, Fred Britain, Susan Corbett, Heather Johnson, Jeff Letourneau, Liz Wyman

**Testimony of Peggy Schaffer
Executive Director, ConnectMaine
Augusta Maine**

**Committee on Small Business
Subcommittee on Underserved, Agricultural, and Rural Development
Hearing on
Supporting Small Entities through Investments in the National Infrastructure: Broadband
June 16, 2021**

Good Morning, I am Peggy Schaffer, Executive Director of the ConnectMaine Authority, and I wish to thank you for this invitation to testify in front of the Committee on Small Business Subcommittee on Underserved, Agricultural, and Rural Development, to talk about supporting Small Entities through investments in Broadband infrastructure. Congressional support for bringing high quality broadband to everyone in the country, rural and urban is central to solving this problem.

I am the executive director of ConnectMaine, Maine's quasi-independent authority charged with bringing broadband to everyone in the State of Maine and making sure they can use it effectively. ConnectMaine was created in 2007 with a budget of about \$1.5M a year from an assessment on essentially land lines. We have two grant programs, one for community planning and one for infrastructure.

Over the past 12 years we have provided about \$12M in infrastructure grants to ISPs, attracting about \$15M in match from companies and communities. Just this past month we awarded \$8.6 million provided by a state infrastructure bond to over 20 projects, that will serve over 8500 households, matching \$16M in company and community funds.

In 2016 we started our Community Planning Grants. These are small grants that help communities plan how to expand broadband service in their area. Over 160 communities have engaged in this process so far.

Maine is the most rural state east of the Mississippi, and one of the least dense in terms of population. Distance and density are two key factors in availability of broadband, the longer the distance with the lesser amount of population, the more difficult it is to bring service to an area.

In Maine, and nationally, broadband infrastructure is also a road by road battle. Where you live really matters. A neighbor a half mile from you might have good service but bringing that same service to your end of the road might cost \$30,000 or more. Identifying these gaps is an essential part of the community planning process. It is also one reason very granular data on who is served is essential for states, towns and providers to figure out solutions.



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Because of the well known problems with the accuracy of the FCC data, many states have undertaken their own effort to get better data. Georgia, Pennsylvania, Alabama, Washington, Minnesota, Maine are just a few of the states frustrated with the inability to really understand who has service and who does not, have developed their own mapping and data layers. National Telecommunications and Information Administration (NTIA) is a key partner in this effort. NTIA and States lead the effort to mapping infrastructure before it was turned over officially to the FCC. NTIA has continued this leadership with the National Broadband Availability Map (NBAM) which 36 states are now participants.

In addition to 230 layers of federal and private data, the NBAM allows states to upload their own data into the system. In NTIA's recent Notice of Funding Opportunity, they have noted they will be looking at a variety of sources to determine eligibility, including the NBAM and state data. Given the known deficiencies in the FCC data this is key to helping target funding to areas that are actually unserved.

NTIA is also a key partner in state broadband efforts, hosting the State Broadband Leaders Network. NTIA hosts monthly online meetings as well as twice a year in person (pre-pandemic) sessions that are invaluable for state broadband leaders to learn from each other and about new trends in digital inclusion, grant strategies, working with communities and providers.

Over the past several years, the Pew Charitable Trust has begun to research, and document state led efforts. In surveying the landscape, they recognized the significant and important work that State broadband programs are doing and the impact those programs are having in communities across the country. Pew tracks state legislation and last year put out a report on How States are Expanding Broadband Access. Just this past week the project director, Kathrine de Wit, published an article on the landmark support of state broadband efforts in the American Rescue Plan, and the critical shift in federal policy to directly support state and community lead efforts.

One of the key strategies that Pew and NTIA highlights is the importance of community planning efforts for broadband. Maine is one of many states that depends on community engagement to expand broadband. Communities that are not connected to quality high speed broadband will not get connected if they don't take on this challenge themselves. States, community organizations and economic development organizations have recognized this challenge and have stepped in to help.

In Maine this has led to fabulous partnerships to support these communities' efforts. Maine provides grants to communities, mapping assistance through speed testing, technical assistance, strategies on financial modeling for building and operating a network. Most other states do this important work also. Broadband is the central infrastructure of economic and community development of this century. The critical element of community voices is central to take rate, partnerships, funding, and digital inclusion. For this infrastructure to reach everyone and fulfill its transformational potential, communities must be engaged in the why, the who and the what of



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bringing service to their homes. They must have a say in what happens in their communities. That includes determining what kind of broadband service they need and how (and who) is going to deliver that service.

Broadband is a very personal service. It's how you connect with your family, health care, education, grocery shopping, and work. Planning helps communities talk to their neighbors about how transformational this infrastructure can be. Maine communities, in fact communities across the country, realize that a high-quality broadband connection is central to the future of their town. Without it, young people will not move back or stay. The elderly often cannot remain in their homes; small businesses don't have access to markets; citizens don't have equal access to their government; and new residents will not move in. Broadband is the lifeline for every community in this country—large or small.

Our planning grants act like sticky tape, it gives the community something to grab on to, and helps ISPs see a viable business case to bring broadband to that area. It drives the conversation around level of service, affordability, digital literacy and universal access. Once people begin talking with their neighbors about this critical communication infrastructure, they realize that everyone in their community not only needs access to the service, but understand the service has to be affordable, and scalable for future needs.

This deep granular dive into what a community wants for its future, and how they are going to get it is central to Maine, and many other states, activities. It is what drives state plans and data that states are gathering. It's also why in Maine so many small locally based ISPs are aggressively expanding their footprint with fiber. These are Maine based companies that want to bring the best service at good prices to their fellow Mainers. They understand what broadband can bring and are generally open to new business models and partnerships that can make these projects work. Providers and communities seek solutions that will outlive the costs incurred. No longer are we investing in infrastructure that will need to be rebuilt in the next 20 years.

We have found Federal programs are ill suited to meet these community needs or interest. In Maine, both the USDA programs and the FCC auctions have failed to bring service to communities in a timely manner. Combined with the fact that areas that have been awarded federal funds, even if the network is not built, are no longer eligible for any federal funding spells disaster for many communities. When the award goes to provide a service that is expensive, not what the communities want, or is satellite based, those communities lose out on building broadband that meets their current and future needs.

Two examples of this are Maine's USDA grants through the ReConnect and the Community Connect Program, and the recent FCC Rural Digital Opportunity Fund, and the previous 603 Auction.



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Four projects were awarded ReConnect Grants in early 2020. These are small projects. Three of them are municipally owned and cost just about \$1M. They should be a 6-8-month build. None of these projects have started yet because of the bureaucracy within the USDA. These projects, if they had been funded with state dollars, would be lit, serving the people and businesses in these rural communities right now. Instead, they are looking at a build in at best 2022, two full years after the award. Maine is not the only state where USDA ReConnect Projects have not been built. Projects across the country are having similar unneeded delays.

Maine had one community get awarded USDA Community Connect Grant. This small island community had applied and was rejected, but at the end of the funding cycle, USDA found extra funds and awarded the grant. On a beautiful Maine summer day in 2019, the Assistant Secretary came to the island for a grant ribbon cutting. The entire community turned out for the presentation, including the press. The Cranberry Isles would have better broadband than most of mainland communities, funded in part by a federal grant. It was a big day. Only, because of the bureaucracy in the USDA, the Cranberries never saw a dime of federal funds, and ended up paying for the network themselves. It was easier to tax its own citizens than fight with the USDA in Washington. My understanding is Senator Collins has just gotten the USDA to attempt to hopefully create a pathway forward for this project to receive its promised funding.

The FCC programs also make no effort to meet or understand an area's needs or demographics. Over half of Maine's Rural Digital Opportunity Funds were awarded to Starlink, a low earth orbit satellite system. In the FCC "603 Auction" all of Maine's areas were awarded to ViaSat, a high earth orbit satellite service. These satellite services have a role to play, especially in very hard to reach areas. But they are expensive at over \$100 a month. That is simply not affordable for many Maine people. Unfortunately, since the FCC auctioned off their locations, these communities in Maine have only state funding as a possible pathway. That is just wrong.

There is one small, rural, poor town in Lincoln County that was denied a USDA grant because of the FCC 603 and RDOF auction and is not eligible for any other federal funding. This town has been working for three years to figure out how to bring affordable universal service to town. They decided to develop a municipal network because only one provider was willing to work with them. They want to own their own destiny. Federal funding should not block that type of effort. We also cannot ignore the importance of digital inclusion. Broadband infrastructure is the what, digital inclusion is the why.

There are four key elements to bringing service to an area. First, the wire must run by your house. Second you must be able to afford that connection. Third, you need a device to access the internet. And fourth, you need to know how to use that device and the internet. Community plans are centered on these four key elements. Understanding the dynamics of the area is a central element to not only bringing the wire but making sure the cost is affordable and there is a strategy for digital literacy. This all drives take rate, which can help pay for the cost of the infrastructure. People using this resource to improve their lives is central to the purpose of this entire activity.



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If broadband infrastructure is going to achieve its promise, we need to make sure federal funds flow to the solutions these communities want, including making it much easier to fund a community owned network. This is why the Capital Fund Projects in the American Rescue Plan is so exciting to states. It puts the funds closest to those community efforts, through state grants.

Our state infrastructure grants are the best match for a community driven process that includes digital literacy and digital inclusion. Ensuring community engagement in the project boosts subscription rates which makes infrastructure investments sustainable for communities and providers. Even when an ISP is looking to expand their own footprint, engagement from the expansion area is critical to drive up take rate. Build it and they will come is not a strategy for success in broadband. Just as it isn't a cost-effective strategy to build 3-6 years from now for service that may not meet needs in 10 or 20 years, which is often what current federal programs pay for.

States have proven they are up to the task of efficient and effective use of this funding to build out infrastructure. Sixteen States used \$664M of funding from the Corona Virus Relief fund (CARES) to bring connectivity to unserved areas. I have included a chart identifying the states and the funding used to expand access during the pandemic. **The networks States funded with these funds were funded AND built in under 6 months.** They are serving people right now, unlike most of the federal funding in the past 4 years. The pandemic taught us how important a high-speed connection is. Waiting 4 or 6 years to get connected with federal funding just does not work any longer if it ever did.

The American Jobs Plan also offers great promise to close this connectivity and affordability gap. BUT, it really, really matters how those funds for infrastructure are distributed and who owns the infrastructure.

There are over 800 successful models of public ownership of this infrastructure. Electrical Co-ops, municipal utility districts, municipal ownership, traditional co-ops, counties, not for profit LLC's. There is no one model because there is no one solution. Funding partnerships of town, co-ops, ISP, and other public instrumentalities needs to be a flexible strategy. And flexible funding strategies are just not what the federal government does well. It is what States do well.

States have been proving their worth for several years now. Our understanding of the problems, locations, and our ability to craft programs that fit our communities is central to our efficiencies and most important our effectiveness. Funding for broadband infrastructure in the American Jobs Plan should flow through to State and State programs to provide the most efficient program with the greatest benefit, and the fastest, affordable connectivity to the American people.

Thank you for your time, and I would be pleased to answer any questions.



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Infrastructure Grant Programs

State	CRF Appropriations
Arkansas	\$100 million appropriated to the Arkansas Rural Connect Program
Delaware	\$20 million appropriated for broadband infrastructure
Idaho	\$48.9 million appropriated to broadband infrastructure projects , equipment, and services.
Kansas	\$50 million appropriated to the Connectivity Emergency Response Grant
Maine	\$6.4 million appropriated to Connect the Kids Now!
Mississippi	\$75 million appropriated to the Mississippi Electric Cooperatives Broadband COVID-19 Grant Program Fund
Missouri	\$5 million appropriated to the Emergency Broadband Investment Program
Missouri	\$20 million appropriated to broadband infrastructure funding
New Hampshire	\$50 million appropriated to The Connecting New Hampshire – Emergency Broadband Expansion Program
North Carolina	\$39 million appropriated to the GREAT grant program
Oregon	\$10 million appropriated to the Rural Broadband Capacity Program
South Carolina	\$50 million appropriated to the South Carolina Broadband Infrastructure Program
South Dakota	\$6.5 million appropriated to broadband project funding
Tennessee	\$61 million appropriated to the Tennessee Emergency Broadband Fund
Virginia	\$30 million appropriated to the CARES Act Fast-Track Broadband Program
Wyoming	\$86 million appropriated to broadband infrastructure funding
Total	\$667.8 million in Coronavirus Relief Funds appropriated to infrastructure grant programs



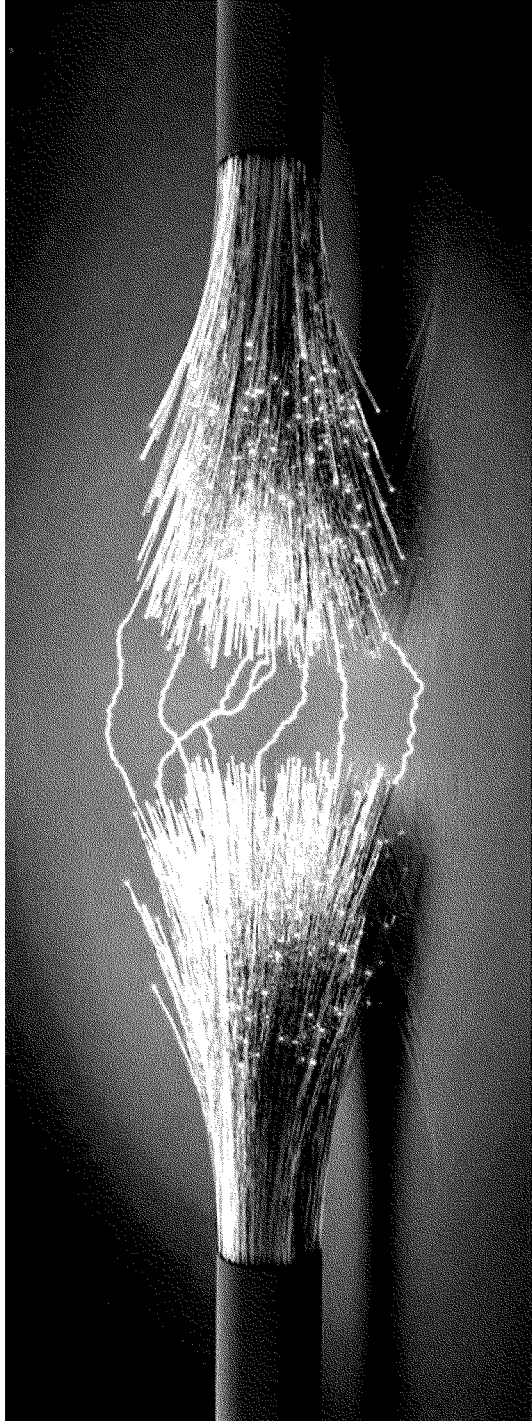
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Examples

- With a \$30 million allocation of Coronavirus Relief Funds, [Virginia](#) funded 71 projects in 50 localities. These projects connected 30,822 households and businesses – 24,026 with improved access to broadband and 6,796 with more affordable broadband.
- [Idaho](#) awarded \$48.9 million to 102 projects, connecting more than 43,000 households.
- [Kansas](#) awarded nearly \$50 million in Connectivity Emergency Response Grants to 67 projects across the state.
- [North Carolina](#) allocated nearly \$30 million to fund 18 broadband infrastructure projects that will connect 15,965 households and 703 businesses.
- [South Dakota](#) awarded \$25 million in CARES Act funds together with state funds (for a total investment of \$30.5 million) to bring service to 6,263 locations – 5,886 households and 377 businesses.
- [Maine](#) granted out \$6.4 million connecting over 700 students to a 50/10 service.
- [New Hampshire](#) granted out \$16 million of its initial \$50 million allocation, connecting 5,500 locations.
- [Arkansas](#) awarded over \$118 million in CARES Act and state funds to 76 projects across the state.
- [Mississippi](#) awarded \$73.6 million to 19 projects across the state.
- [South Carolina](#) awarded \$26.4 million of its \$50 million allocation to 78 projects in 27 counties across the state.
- [Oregon](#) awarded \$9.9 million to 28 projects across the state.

This funding does not include funds that states used for wifi hotspots, wifi devices and tablet in schools and other services.



DOWNEAST BROADBAND

Maine's First Municipal Broadband Utility
<http://www.downeastbroadband.com> Daniel.Sullivan@downeastbroadband.com

The beginning.....

- ❖ Created the Downeast Economic Development Board - 2015
- ❖ Gathered ideas and gauged interest in economic development
- ❖ Decided to focus on improving broadband

The Need

- ❖ High Speed Symmetrical Broadband Internet access did not exist in Calais and Baileyville
- ❖ Frustration from the business community and the citizens of both Calais and Baileyville fueled the desire to do something to fix the problem
- ❖ Existing Internet Service Providers were not interested in improving their networks to address the needs of our communities

Our Solution. Timeline:

- ❖ 2016 Met with existing Internet Service Providers
- ❖ July 2016 Conducted a feasibility study
- ❖ June 2017 Commissioned a detailed cost analysis to build the network
- ❖ August 2017 Calais and Baileyville respective Town Councils and City Representatives voted overwhelmingly to build the network
- ❖ August 2017 Calais and Baileyville signed an inter-local agreement forming the State's first district municipal utility
- ❖ August 2017 Downeast Broadband Utility was officially formed

Off to the races:

- ❖ 2018 RFP's were sent out and a contractor selected. Construction begins
- ❖ Network completion took 24 months
- ❖ June 2020 Network operational and customers signing up
- ❖ August 2020 Alexander votes to join DBU. Estimating end of 2021 for network completion

What we built:

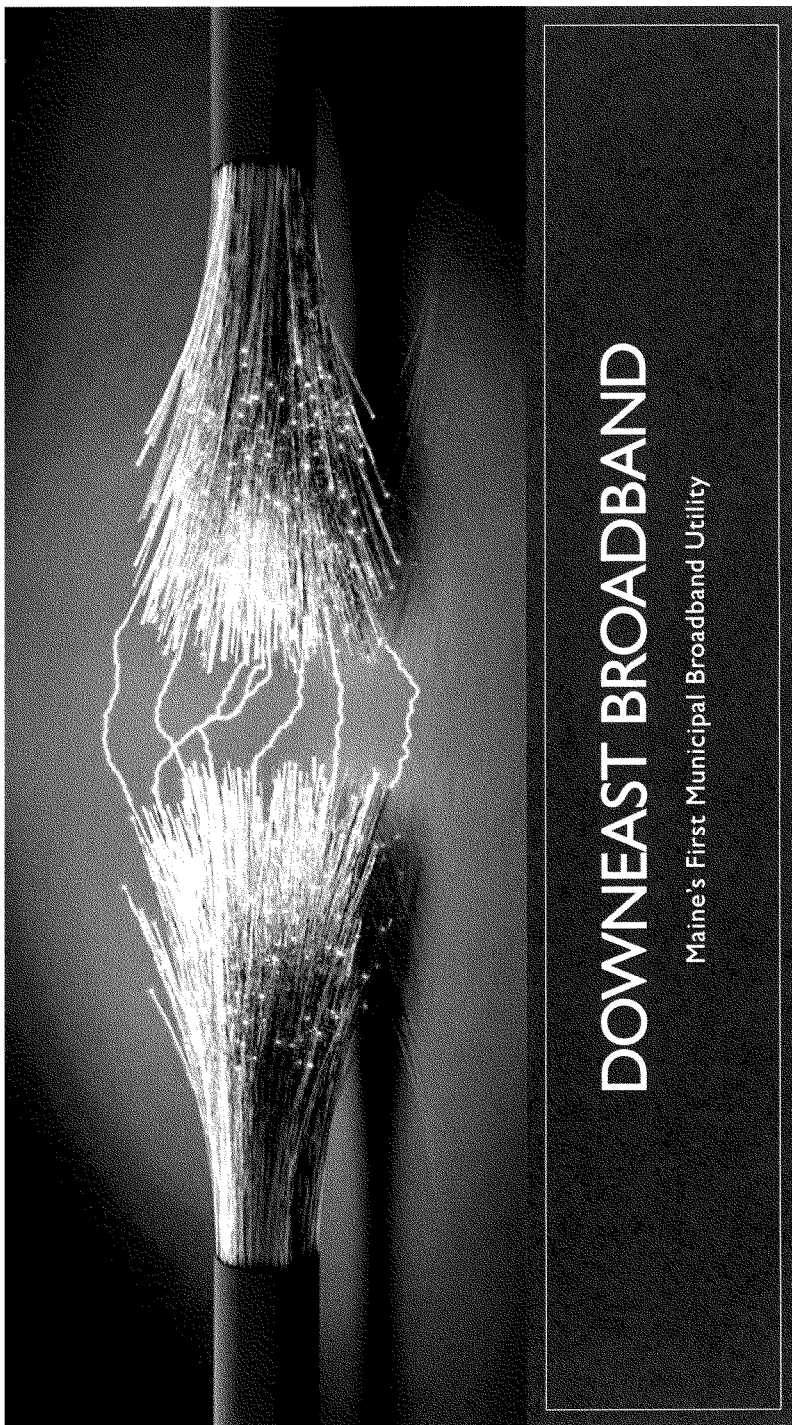
- ❖ Municipally owned dark fiber open access network
- ❖ A dedicated single fiber connection to every subscriber
- ❖ Open to all Internet Service Providers
- ❖ An asset owned by the citizens of Calais and Baileyville

Financials:

- ❖ Paid for by subscribers of the broadband service
- ❖ Citizen's taxes not raised. Loans have been secured by each town
- ❖ Estimated payback 20 years on this 100-year investment
- ❖ Revenues continue after loan payback

History Repeating Itself

- ❖ In the 1800's the U.S. government wisely invested in the cross-country railroad system
- ❖ In the 1930's the U.S. stepped up and invested again in the Rural Electrification Act that brought electricity to every corner of America
- ❖ In the 1950's Dwight D. Eisenhower wisely invested and completed the Interstate Highway System
- ❖ Now in the 21st Century it is time for the U.S. to invest in High Speed Symmetrical Fiber Broadband Internet
- ❖ Downeast Broadband has demonstrated future proof blazingly fast broadband is not only possible but it's here. Now is the time for it to be everywhere.



**Committee on Small Business:
Subcommittee on Underserved, Agricultural, and Rural Business Development**

"Supporting Small Entities through Investments in the National Infrastructure: Broadband"
June 16, 2021

*Testimony of Matt Dunne
Founder and Executive Director of the Center On Rural Innovation*



Introduction

Chairman Golden, Ranking Member Hagedorn, and Members of the Subcommittee, thank you for this opportunity to appear before you today. My name is Matt Dunne and I am the founder and executive director of the Center on Rural Innovation (CORI), a nonprofit action tank that was started in 2017 to close the rural opportunity gap. Today, we are working with a network of small towns across the country to help them become strategic about economic development and entrepreneurship in the 21st century, and ensure they can participate in our growing innovation economy.

The rural-urban divide that's emerged since the Great Recession was driven by automation, globalization, and a decline in entrepreneurship. By the start of 2020, more than a decade later, less than half of all rural counties had returned to their pre-recession employment levels as rural businesses large and small struggled to regain solid footing. The COVID-19 shutdown exacerbated the problem for many rural small businesses, particularly those dependent on tourism.

How did this happen? Automation and globalization created many jobs in America and eliminated many jobs in America. The problem is that these forces almost exclusively created jobs in the technology sector in urban places and eliminated jobs in rural areas. This inequity

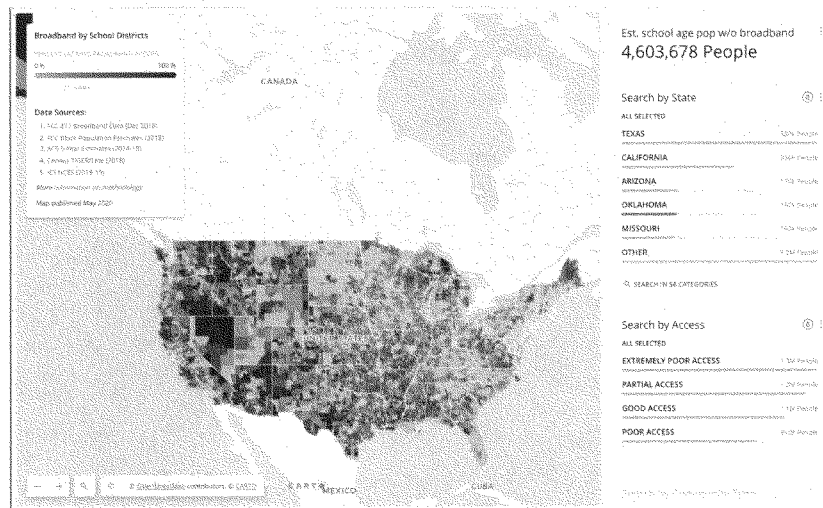
also led local small businesses dependent on strong local companies paying good wages to falter as populations declined, aged, and became poorer over that decade. Today, the high-paying, resilient, digital economy jobs that are resistant to automation — like computer programmers, cybersecurity analysts, IT specialists, and others — are not distributed equally across the country. Rural America represents 15% of our nation's workforce but only 5% of the digital economy jobs. In order to return to geographic equity, we need to even out the distribution of these jobs across our country. And in the age of the internet, there should be no limit to where digital economy jobs and start ups can take place.

But to realize this vision, we of course need to make sure there is equitable access to world-class broadband. Our organization offers boots-on-the-ground support for communities, policy-makers and others in rural America seeking to bring future-proof infrastructure to all corners of our nation. Broadband is indispensable for the rural small businesses of today, who rely on it to level the playing field when it comes to access to markets, and especially those of tomorrow, the scalable startups who need it to unlock the possibilities that come with innovation.

What COVID has reminded us

The pandemic has only reinforced what we knew before March 2020: Broadband is critical infrastructure. It is as vital to equity and prosperity in the 21st century as electricity and transportation. For businesses, it's nothing short of a lifeline. Yet, according to [one recent estimate](#), some 42 million Americans can't access high-speed internet. This means at least 42 million people also lack equal access to education, healthcare, and job opportunities — building blocks of successful, stable communities. While some businesses and workers could pivot to e-commerce or transition to remote work during the pandemic, unequal broadband access left the rest, so many of them in underserved rural areas, struggling to get by.

We saw this dynamic play out near our own headquarters. By June 2020, multiple mainstay pubs and restaurants in downtown Hanover, New Hampshire, shuttered their doors for good, unable to cover costs without full dining rooms. But in neighboring Norwich, Vermont, King Arthur Baking Company was able to pounce on surging demand despite pandemic limitations. The company offered virtual cooking classes — instructors were able to teach from their home kitchens — and expanded its online content to drive revenue.



The Center on Rural Innovation's Rural Opportunity Map helps visualize how many school-age children lacked access to broadband, according to FCC data.

And what about the rural technology entrepreneurs who felt they needed to move away from the places that they love in order to access the broadband they need to collaborate and bring their idea to market? It's hard not to think about the countless business ideas unable to get off the ground in rural places, the innovators whose potential has been limited by where they are located in our nation's porous broadband infrastructure. The ripple effects are ones rural

Americans feel each day. Without those tech-enabled companies, the ones that proved most resilient during the pandemic, rural areas were left even more economically vulnerable.

But our awareness of these issues has created a moment in time that, in many ways, resembles one our nation encountered nearly a century ago, when leaders realized that unequal access to electricity prevented regions of the country from being able to thrive. The good news is that, like the rural electrification effort, there are models for bringing world-class broadband to rural places. In fact, at least 10 million rural Americans already live in census tracts with symmetrical, gigabit-speed broadband that offers blazing-fast upload and download speeds.

And it should come as little surprise to hear that these rural places have relied upon the traditional structures that got them electricity, as well as just plain small-town grit and ingenuity, to get this done. They didn't just build their networks to meet the federal government's minimum standards for broadband (25 Mbps download and 3 Mbps upload speeds) because they understood that level of service is already on its way to becoming obsolete. Instead, they're ready to participate in the digital economy of today and meet the demands of the future because they invested in the infrastructure that can accomplish both.

Where this leaves us

The question before you now is, are we going to create the conditions and provide the resources needed to generate broadband that can scale with the ever-evolving uses of the internet, and support the businesses of today and tomorrow?

The research shows that the upload and download speeds required to use common internet-based applications are rising substantially due to data needs and usage increasing as much as 20-30% in many places. Unfortunately, that trend makes the FCC's existing 25/3 benchmark inadequate where it's the norm, and, sadly, still aspirational for millions of unserved and underserved rural Americans who can't engage with streaming content, cloud-based services, and video conferencing applications because of inadequate connectivity. At the current

pace, with increasing data-heavy enhancements for all of these use cases, even the smallest business competing with large multinational corporations or massive internet marketplace companies cannot afford to be left behind again in basic connectivity.

This is why it is critical that the vast majority of future funding should go toward providing a minimum of 100mbps upload and download speeds, and networks capable of scaling to a gigabit or more. To do otherwise is only setting ourselves up for a rural-urban divide five years from now even after a massive infrastructure investment — something none of us want to see.

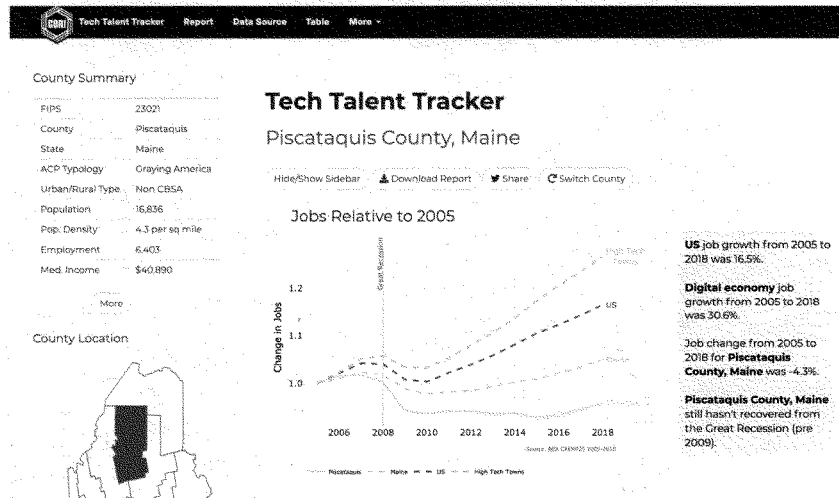
What this can do for small businesses in rural America

Building to reach those future-proof goals will ensure a business environment that allows all Americans, regardless of location, to participate in a robust, innovative digital economy.

COVID has opened people's eyes to the possibility of working where they want to live rather than living where they need to work, including returning to small-town America. But without broadband available in all of our communities, that dream of a return to rural — and the influx of consumers and workers it would provide small businesses — may be short-lived. Rural areas need to be allowed to achieve the same internet speeds as their urban counterparts, and this is the chance to make equity a reality. We can enable entrepreneurs and small businesses in rural places to access markets anywhere in the world, and be resilient to events like the pandemic that forced so much activity online and sidelined those who couldn't. And providing fiber to the home would ensure that budding startups can make the most of the same infrastructure as larger, more established firms, which are often by default located in more urban areas. It would mean that our architects and engineers, our cybersecurity analysts and IT specialists, our software developers and creative designers could work in the rural settings they crave if given the opportunity.

We at CORI know plenty of small towns that are proving this is possible — towns such as Springfield, Vermont; Wilson, North Carolina; and Red Wing, Minnesota. These are places that invested in gigabit-speed fiber broadband and are now seeing successful small businesses emerge and grow because of it.

And other communities are following their example. Leaders in Millinocket, Maine, have launched a fiber broadband initiative to bring new economy jobs to their stunning but remote area. Earlier this month, they scored their biggest win yet: Nautilus Data Technologies announced its plans to bring a \$300 million data center project to a former mill site in the town. With the necessary funding and regulatory support to enable universal high-speed broadband, this announcement could be the catalyst needed to attract other technologists to the area and build a future-focused technology ecosystem in a location that had been overly dependent upon forestry products for so long.



The Center on Rural Innovation's Tech Talent Tracker tool can visualize and compare counties' statistical attributes to those for its state, the nation, high-tech communities, and other specific counties. This screenshot of the report for Piscataquis County, Maine, where Millinocket is located, shows how it has failed to regain the same number of jobs it had before the Great Recession.

The examples are out there

The communities we work with are full of innovative, small business success stories of leveraging gigabit-speed internet in rural America.

In Taos, New Mexico, local partners used support from the LOR Foundation to create Business Alive, a program to help business owners build e-commerce websites at minimal cost. By February 2021, 10 local businesses had participated and some had seen revenue increase by 10% as a result.

After more than a decade working in auto repair shops, Marcus Aman channeled his years of experience with customers and his deep knowledge of the industry into Shyft Auto. Marcus partnered with a technologist to create an ambitious software platform that solves the inefficiencies he knows plague the service shops everywhere. They've secured venture capital investment and are growing rapidly in Wilson, North Carolina, the former tobacco hub that built the first community-owned, symmetrical gigabit, fiber-to-the-home network in the state.

Poultry Patrol, a robotics company aimed at helping the poultry industry, was able to get off the ground with its prototype thanks to the gigabit-broadband available in the Red Wing, Minnesota region. The upload and download speeds available there were crucial to testing their robots in action, allowing them to dial in their service and expand their offerings for farmers in the future.

Another AI-driven solutions startup, a company called Voi based in Springfield, Vermont, is the product of a Dartmouth College professor and a retired Marine Corps colonel trying to solve some of the most pressing behavioral health challenges of our time. They won a Small Business Innovation Research grant last year to help the Air Force, and are trying to help prevent suicide among the brave men and women serving our country with tools to help detect when someone might be at-risk and intervene before before it's too late.

Conclusion

This is a moment unlike any we've seen before in the internet age. The funding currently being considered to boost broadband deployment and expansion across the nation will let us truly solve the issue for the long term. This funding is vital to ensure every innovator and small business person can take part in the digital revolution, and reach their full potential — wherever they live.

Thank you all for your time and consideration of this important issue. I'm hopeful that with the momentum we all feel toward erasing the digital divide at last, you and your peers will make the responsible decisions needed to bring broadband — and opportunity — to all Americans. I am happy to answer any questions you may have.

**Testimony of Tim Waibel
President, Minnesota Corn Growers Association**

**On the topic of "Supporting Entities through Investments in the
National Infrastructure: Broadband" before the U.S. House of
Representatives Small Business Committee Subcommittee on
Underserved, Agricultural and Rural Development**

Chairman Golden, Ranking Member Hagedorn, and Members of this Subcommittee, thank you for holding this hearing and allowing me the opportunity to testify.

My name is Tim Waibel and I am a corn, soybean, and hog producer from near Courtland, Minnesota — a small town of about 611 people in southern Minnesota proudly represented in Congress by Rep. Jim Hagedorn.

I currently serve as the President of the Minnesota Corn Growers Association representing nearly 6,500 Minnesota farm families from across the state.

My wife and I raised 5 children who are now grown and starting families of their own. Two of them farm with us.

We are excited to have 6 grandchildren and looking forward to 3 more on the way this fall.

My wife and I feel very blessed to have been born and raised in rural America and we want that same blessing for our children, grandchildren, and future generations to come.

I know that Chairman Golden, Ranking Member Hagedorn, Rep. Stauber, and many other Members of this Subcommittee share the same feeling, having grown up in small communities.

The experience of the COVID-19 pandemic certainly taught us a lot of lessons.

One lesson that readily comes to mind is that there are certain advantages to living in the country — advantages that people living in the cities grew to appreciate more over the last 15 months, so much so that many picked up stakes and moved to rural America.

Over much of my life time, I have been saddened to watch communities like Courtland educate and raise wonderful kids only to see them go off to college and never return to raise their own families there, instead choosing the suburbs and the inner cities where there are more job opportunities and other attractions that Courtland cannot offer.

I've heard this scenario — that has played out across rural America, especially over the past 50 years — compared to strip mining where our most precious resource — our children — are plucked out of our communities and planted in the Twin Cities or the surrounding suburbs.

It's an apt description and, as you might imagine, communities such as Courtland have really suffered, and not just economically. We have lost a lot of beautiful talent over the years that could have added to the fabric of our little town in so many ways.

And, I think that those we have lost to the cities have also been deprived of some life-enriching opportunities: showing your steer at the county fair, knowing all of your neighbors, not having to lock your doors, serving on the volunteer fire department, running the vacation Bible school, being friends with people of all different occupations and levels of income, and the high quality of a lower pace of life, just to name a few examples.

So, the thought that at least some silver lining might come out of the tragedies of the past 15 months gives me a renewed sense of hope: maybe there will be a rebirth of little towns like ours.

Sure, we all enjoy being in the big city to watch a baseball game or enjoy a special restaurant or just to take in the sites and sounds of a place like Minneapolis-Saint Paul.

But, more of us may be able to do that while still reaping the benefits of life in rural America.

Which brings me to the second lesson.

We have all heard stories about how remote learning over the past 15 months has impacted our children.

While there is probably enough material there to write a few books on, I'm speaking mainly to the issue at the heart of this hearing: broadband and the availability of high speed internet.

Kids growing up on the farm or in rural communities who did not have access to decent internet service were undoubtedly at a disadvantage in their studies.

Senator Klobuchar mentioned that one young Minnesota student took an exam from a local liquor store parking lot because that was the only place she could get internet service.

Of course, this problem is not isolated to our school kids.

This is a problem for anyone who wants to live and work in communities like Courtland because it impacts education, business, health care, and yes, even farming.

Lack of high speed internet access is a serious obstacle to the kind of rebirth of rural America that I believe may be otherwise in the making.

That is why this hearing is so important and why I appreciate you inviting me to participate.

I'm gratified that in a time where there is considerable disagreement in the realm of public policy that there is bipartisan consensus on the need to make significant new investment in broadband to not only provide coverage to areas that are totally without service but also to substantially increase the quality of service to areas of the country that are poorly served.

But, as you know, throwing money at a problem does not always fix it.

Billions of dollars have been spent on expanding broadband internet access to the far reaches of the country but have come up short in achieving the objectives we are seeking to meet.

So, as you consider the path forward, I hope you will take into account a few points from the perspective of a life-long rural resident.

First, I think it matters who is providing broadband to our rural communities and farms.

Do they have a stake in rural America beyond making money in providing broadband service?

Do they have a proven track record in serving rural America?

And do they have the boots on the ground to get the job done?

From my vantage point, the Department of Agriculture, the rural electric cooperatives, and other similar entities with a long history of working with USDA check each of these boxes.

But, that's not where the lion's share of federal broadband dollars has gone.

Instead, billions of dollars have gone to other federal agencies to stand up programs using other broadband providers that are often protected from competition even if the service they provide is substandard.

My understanding is that there is interest at least by some in standing up yet another federal program to help broaden broadband access.

Frankly, I do not believe we are going to get a different result if we go down the same old road.

I understand that there is a fierce competition amongst the various government agencies and private providers in regards to who will carry out this important mission.

But, all I can say is that addressing the needs of rural America, including broadband needs, is the mission of the Department of Agriculture, not-for-profit rural electric cooperatives, and the like — and, yet, the dollars they have at their disposal have paled in comparison to the dollars under other programs and providers that simply do not check the boxes that I just mentioned.

If FDR had taken the same approach to rural electrification back in 1936, who knows how long it would have taken to bring electricity to the farm.

Whenever I buy goods or services, for my family or for our farm, my first question is who can I rely on to get the job done and to get it done right.

I look for folks who are in it for the right reasons and for the long haul.

I would like to particularly recognize Rep. G.T. Thompson, the Ranking Member of the House Agriculture Committee, who I believe has offered very thoughtful, bipartisan legislation that is worth your consideration.

The second point I would like to make is this: There are certainly gaping holes on the map in terms of people with zero service and we definitely need to address their needs.

But, there are even more gaping holes on the map where people have terrible broadband service that is way too expensive, especially for the service they are receiving. This second universe of people is as important as the first. Both need to be addressed.

I hope you will consider setting high goals for service in this process — perhaps 25/3 Mbps or higher — and if providers are not meeting this goal, open the area up for competition.

Some argue that this might lead to what's been called "overbuilding" but I believe that some overbuilding is needed if we are going to truly provide high quality service to everyone.

And, finally, from the perspective of a farmer, please remember that too often we talk about broadband service in terms of "locations served" where in the case of a farmer, we need to be focusing on the "area served".

Why is that?

Well, because while my farming operation not only needs the same kind of internet service that a business in town needs, including fiber to the building and fixed wireless, farmers also have mobile offices — commonly known as tractors — where we need to be able to upload data without wires as we work the fields.

This is not only critically important in our ability to feed, clothe, and fuel the country and much of the world, it's also vitally important to how we care for our natural resources, including the promotion of good soil health, clean air and water, and, yes, the reduction of CO₂ and related emissions.

I know that many in Congress are interested in agriculture participating in efforts to further reduce or sequester carbon in order to help the U.S. reduce the nation's overall greenhouse gas emissions. Although agriculture accounts for a very small percentage of CO₂ emissions and are already sequestering carbon through no till farming, the planting of cover crops, though methane digesters, and through biofuels, we are certainly glad to roll up our sleeves and pitch in using voluntary, incentive-based tools.

Farmers need any number of tools to be able to do this and one of them is certainly high speed internet access in our shops and on our tractors.

So, as you carry out the important work in front of you on the issue of broadband access, I hope that my perspectives are helpful in meeting your goals.

Thank you once again for inviting me to offer testimony before this subcommittee. I look forward to answering any questions you may have.

**MISSOURI FARM BUREAU FEDERATION**

P.O. Box 658, 701 South Country Club Drive, Jefferson City, MO 65102 / (573) 893-1400

June 16, 2021

The Honorable Blaine Luetkemeyer
Ranking Member
U.S. House of Representatives Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515

Dear Ranking Member Luetkemeyer:

Deployment of broadband technology is a critical link in stimulating and revitalizing the rural economy. Farm Bureau members have recognized the urgent need to deploy broadband in rural America and have elevated broadband access and affordability as a priority due to its impact on their daily lives. In Missouri, I see the need for broadband in rural communities and on the farm every day. Whether it is a business that provides an agricultural service to a local community or a company that ships products all over the country, this service is critical to our everyday life.

Farmers and ranchers depend on broadband just as they do highways, railways and waterways to ship food, fuel and fiber across the country and around the world. Many of the latest yield maximizing farming techniques require broadband connections for data collection and analysis performed both on the farm and in remote data centers. America's farmers and ranchers embrace technology that allows their farming businesses to be more efficient, economical and environmentally responsible. Today's farmers and ranchers are using precision agricultural techniques to make decisions that impact the amount of fertilizer they need to purchase and apply to their fields, the amount of water needed to sustain crops, and the amount and type of herbicides or pesticides needed. These are only a few examples of how farmers use broadband connectivity to achieve optimal yield, lower environmental impact and maximize profits. Access to broadband is essential for farmers and ranchers to follow commodity markets, communicate with their customers, gain access to new markets around the world and, increasingly, to ensure regulatory compliance.

Beyond on-farm needs, rural communities need access to health care, government services, and educational and business opportunities. For many rural communities, access can only be gained by using broadband services and sophisticated technologies that require high-speed connections. The coronavirus pandemic has only exacerbated and made more apparent the need for rural broadband in rural communities as employees shifted to working from home, school districts closed and resorted to distance learning platforms, and patients sought health care through telemedicine platforms.

As rural Americans continue to embrace telework options, our rural communities can thrive if they have stable internet connections. In my hometown, I know many individuals who, although they may not have broadband at their homes or farms, are able to utilize connected work spaces

in our once-empty downtown. These individuals are able to stay and contribute to their local community and inject their income into our local economy, rather than being tethered to an urban center.

As Congress and the Administration consider broadband-related priorities, we ask that you keep the following principles at the top of mind:

- **Push Data Accuracy & Mapping:** Missouri Farm Bureau (MOFB) continues to advocate for additional mapping and the use of more granular data sets when determining which areas are eligible for federal (and state) funding. MOFB recommends that data collection efforts and more granular maps be explored before additional significant outlays of funds are pursued.
- **Hold Providers Accountable:** We have asked that more verification/accountability be completed before awards are made to ensure the proposal can be met and then again after deployment to ensure the funded service was provided.
- **Plan for the Future:** When awarding broadband projects, we should consider speeds that account for teleworking and remote education needs, rather than just recreational use of broadband. Ensuring that adequate upload and download speeds exist in rural America will be critical to providing these services.
- **Foster Local, State, and Federal Partnerships:** Close working relationships between local, state, and federal partners are critical to maximize the use of funds available for broadband deployment. Various entities that deploy broadband should work together to the greatest extent possible in order to ensure the needs of rural America are being met.
- **Focus on Precision Agriculture:** Too often, federal programs do not take into account the specific needs of agriculture and rural America when developing programs that incentivize deployment. Agriculture as a whole has the potential to be a strong beneficiary of rural broadband services, and it will be important to take these needs into account. Access to broadband and data services can result in more data-driven decisions on the farm, if the technology is available.

We appreciate your committee's efforts to bring broadband to rural Americans, and our organization stands ready to assist in any way possible. Thank you for the work you do on behalf of Missourians.

Sincerely,



Garrett Hawkins
President, Missouri Farm Bureau



June 16, 2021

The Honorable Jared Golden
Chairman
Subcommittee on Underserved, Agricultural and Rural Business Development
Committee on Small Business
U.S. House of Representatives

The Honorable Jim Hagedorn
Ranking Member
Subcommittee on Underserved, Agricultural and Rural Business Development
Committee on Small Business
U.S. House of Representatives

Dear Chairman Golden and Ranking Member Hagedorn:

On behalf of the Small Business & Entrepreneurship Council (SBE Council) and our nationwide membership of small business owners and entrepreneurs, I am writing to thank you for your focus on broadband infrastructure in today's hearing. Access to broadband is essential to small business growth and success in the digital economy and for entrepreneurial opportunity for every American wishing to pursue their dream of business ownership. SBE Council has long supported efforts by Congress and the Federal Communications Commission (FCC) to close the digital divide and ensure every American is digitally connected.

As committee members well know, small businesses were hit very, very hard by COVID-19. Most continue to dig out of their revenue holes from the past year, and ramping up has been more difficult due to labor and supply chain shortages and disruptions, and the higher cost of doing business in general. With broadband's help, many small businesses pivoted to online tools and models to adapt, communicate and survive during the COVID-19 crisis, and these same tools are helping them better weather the recovery. But small businesses lacking broadband access, lack this key option for survival and recovery.

Many small businesses in rural and underserved areas do not have the broadband connectivity necessary to conduct e-commerce, engage online with customers or clients, use collaborative platforms to communicate with peers and/or employees, or provide virtual services – all of which serve as a lifeline and can potentially drive needed revenues and new opportunities.

While there are efforts underway to help close the digital divide through programs such as the Rural Digital Opportunity Fund and previous steps to accelerate 5G deployment and incentivize private investment, Congress and the Biden Administration must review key facts as a starting point for appropriating tax dollars into a big infrastructure package. As documented by various studies, private sector investment has led to lower costs and higher speeds.

In fact, the cost of broadband is 20.2% less than in 2015, and speeds are 15.7% faster. And Americans are paying less for broadband in 2021 than they did in 2020.

So it is clear that the vast sums of investment made by private sector providers continue to yield lower prices, faster speeds and have brought Americans the strong and innovative networks that withstood the demands of the pandemic and continue to carry our economy forward. A flexible regulatory framework moving forward, and strong collaboration between the federal government and the private sector, can continue to drive billions more in private-sector investment, which will lead to steady deployment, higher speeds, lower prices, more choices and innovative technologies for small businesses and all consumers.

Directing tax dollars to government-owned and managed networks for redundant infrastructure, as the Biden Administration proposes, would be a waste of tax dollars and do little to lower cost and increase broadband access or adoption. In fact, consumers pay higher prices for broadband in cities with a municipal provider than those without one. But most importantly, efforts need to focus on deploying broadband to communities that have no broadband. Again, it would be a waste of tax dollars to shovel vast sums of tax dollars to poorly performing local government networks where broadband is available rather than to communities that lack connectivity.


In terms of improving access through greater affordability to low-income households, SBE Council has long urged Congress to restructure the Universal Service Fund (USF) program, as I outlined in my comments to the Federal Communications Commission (FCC) on the Emergency Broadband Benefit program.

Furthermore, I would like to point out that the majority of businesses within the telecommunication sector are small businesses. In fact, among employer firms in this sector, 83.8 percent have fewer than 20 employees, and 95.0 percent fewer than 100 employees. These small businesses should have the opportunity to participate in deploying broadband through a federal infrastructure package, but measures such as project labor agreements or the inclusion of the PRO Act, would disqualify many of these competent firms.

Government initiatives must focus on what's working, such as incentivizing private sector investment and innovation, and fix what need modernizing, such as restructuring the USF – to close the digital divide and improve digital adoption and literacy. There is an opportunity to close the digital divide in America and bring economic development and entrepreneurial opportunity to every corner of the nation. A smart infrastructure package that targets those without broadband access could finally accomplish this goal.

Thank you for the opportunity to submit our thoughts, and please do not hesitate to contact SBE Council for questions.

Sincerely,



Karen Kerrigan
President & CEO

cc: The Honorable Nydia Velazquez, Chairwoman
The Honorable Blaine Luetkemeyer

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(703)-242-5840 • www.sbecouncil.org • @SBECouncil

Protecting Small Business, Promoting Entrepreneurship

Opening Statement of
Ranking Member Jim Hagedorn
Committee on Small Business
Subcommittee on Underserved, Agricultural, and Rural Business Development
Hearing: "Supporting Small Entities through Investments in the National Infrastructure: Broadband"
June 16, 2021

Thank you, Mr. Chairman. Good morning to everyone and thank you to our witnesses, including my constituent Tim Waibel, for taking time to speak with us today.

As a Member of both the House Small Business Committee and Agriculture Committee, broadband infrastructure has been a top priority of mine since coming to Congress. According to USDA's Census of Agriculture, nearly 20 percent of constituents in my district still do not have reliable internet access. Unfortunately, without reliable high-speed internet, many of my constituents and the rural businesses that they operate often are at a disadvantage. Under the previous Administration, significant investments such as the American Broadband Initiative were made to stimulate increased private sector involvement in broadband infrastructure and bridge the gap in rural America. However, despite significant advances, many rural and tribal areas still have limited or no access to broadband capabilities. The digital divide has only grown wider as broadband deployment in urban areas continues to outpace deployment in rural areas. Congress must work to find a solution to address the digital divide.

We can all agree that providing small businesses with the tools and resources necessary to thrive while examining policies to best help businesses get back on their feet is a priority. One way that we can ensure that we meet this goal is through better broadband connectivity, which has been found to be a key aspect in increased economic growth for rural businesses. In fact, according to a study by the Congressional Research Service, *“broadband access and adoption in rural areas is linked to increased job and population growth, higher rates of new business formation, increased home values, and lower unemployment rates.”*

Industries such as agriculture and healthcare, which are vital to rural America, have increasingly relied on broadband connectivity as technology capabilities has developed. Telemedicine has provided many benefits to rural communities during the pandemic and also has become a reliable way to ensure rural areas can receive adequate and timely healthcare without the need to travel. The continued expansion and modernization of telemedicine capabilities will be essential to ensuring rural communities have equal access to high quality care.

Additionally, many small business farmers and ranchers in my district have increasingly relied on technology as they seek to strategically decrease inputs, such as fertilizer and water, while simultaneously increasing yields. Without the availability of high-speed internet, they would not be able to keep pace with modern technology.

Programs such as the ReConnect Pilot Program, which was authorized in the 2018 Farm Bill, have helped build out broadband infrastructure in rural areas that lack broadband access. This has helped make significant advancements in broadband infrastructure in my district. I was proud to support additional legislative efforts in the CARES Act and Consolidated Appropriations Act of 2021 which appropriated more dollars for programs like ReConnect that have helped to make progress on closing the digital divide.

While I appreciate the Biden administration's proposal to make additional investments in broadband and real infrastructure, their plan to prioritize investments in municipal broadbands is concerning. Today, 18 states have restrictions regarding municipal broadband networks. I worry that, given over one-third of our country has restrictions in place, this will lead to implementation issues and put rural America further behind.

Congress must ensure that further investments in broadband allow us to empower rural America through economic growth in order to remain competitive in an increasingly digital global economy. Legislative proposals, such as the Broadband for Rural America Act, are a step in the right direction and would help ensure greater coordination among all federal broadband deployment efforts while prioritizing progress in rural areas.

Mr. Chairman, I look forward to hearing the testimony of the witnesses today, and I look forward to working with you to ensure rural Americans continue to receive the investments in broadband infrastructure they need. I yield back.

