

Statement by

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“Broadband: Opportunities and Challenges in Rural America”

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INTRODUCTION

Chairman Thune, Ranking Member Nelson and members of the Committee, thank you for the opportunity to testify on the importance of rural broadband.

I am Denny Law, Chief Executive Officer of Golden West Telecommunications Cooperative, Inc in Wall, South Dakota. While every rural area presents unique challenges to serve – and while I believe Golden West’s serving area is likely one of the more rural and sparsely populated in the nation – I also believe the history of advancing telecommunications in South Dakota is relatively indicative of the challenges and rewards of serving consumers and businesses throughout rural America.

Golden West Telephone Company was incorporated in 1916 to provide telephone service between the towns of Interior and Quinn, accomplished by stringing telephone line along fence posts to farms and ranches. Golden West Telecommunications and its subsidiaries now provide service to over 30,000 accounts, 25,000 broadband internet subscribers, and 10,000 cable television customers across 24,500 square miles – an area larger than the states of Maryland, New Jersey, Connecticut and Delaware combined – equating to 1.42 customers per square mile. The largest community we serve has just over 3,500 residents. Yet, with more than 14,000 route miles of fiber and copper in service, one could stretch that 14,000 mile network from Wall, South Dakota, to Hong Kong and back again – underscoring the significant strides we have made to ensure that our customers have access to the world-class communications they need to make rural South Dakota a more vibrant place to live and do business.

In addition to robust service for consumers and businesses, we serve numerous anchor institutions, including 72 K–12 schools, 62 health clinics/hospitals, 22 libraries, and five Veterans Administration facilities within our service territory. Golden West also provides telecommunications service on portions of five Native American tribal reservations in South Dakota. In addition, Golden West operates across large swaths of federal land, including land owned by National Grasslands, Bureau of Indian Affairs, Bureau of Land Management, National Forest, National Parks, and Army Corps of Engineers.

While once again every story in rural areas is unique, I think Golden West’s efforts and its community commitment are fairly representative of the hundreds of small, community-based companies and cooperatives like those in the membership of NTCA–The Rural Broadband Association. I have had the privilege of serving as chair of the NTCA committee that sets policy direction for the association, and in that role, I have had significant opportunity to meet and talk with peers around the country who, like Golden West, are doing whatever they can to deploy and sustain advanced communications services in the most rural parts of America. Small telecommunication providers like Golden West serve less than five percent of the U.S.

population spread across over 35 percent of the U.S. landmass. In the vast majority of these wide-ranging rural areas, companies like Golden West are the only full-service fixed networks available. Small broadband providers therefore are essential to connect rural America with the world – making every effort to deploy advanced networks that respond to demands for cutting-edge, innovative services that help rural communities overcome the challenges of distance and density.

RURAL BROADBAND DEPLOYMENT BENEFITS AND CHALLENGES

Benefits of Rural Broadband

Investing in rural broadband has far-reaching effects for both urban and rural America, creating efficiencies in health care, education, agriculture, energy, and commerce, and enhancing the quality of life for citizens across the country. A report released in 2016 by the Hudson Institute in conjunction with the Foundation for Rural Service underscores the nationwide benefits that arise from rural broadband; this study found that investment by rural broadband companies contributed \$24.2 billion to the economies of the states in which they operated in 2015.¹ Of this amount, \$8.3 billion accrued to the benefit of rural areas, while nearly \$16 billion accrued to the benefit of urban areas. In addition, better broadband access in rural America is helping to drive growth in online transactions – a recent survey found, for example, that rural consumers account for more than 10.8 billion internet-driven transactions annually, representing approximately 15% of the national total.²

The benefits of rural broadband, however, go beyond sheer numbers – it’s helpful as well to understand the productive uses of broadband and what they mean to those communities that get and stay connected. A major benefit of rural broadband, for example, comes in the form of distance learning. With a shortage of teachers in many areas of rural America, many schools must rely on high-speed connectivity to deliver interactive-video instruction for foreign language, science, and music classes. For example, rural Bridgewater, South Dakota resident Tara Currier-Hofer is teaching Level 1 and 2 Spanish to over 100 students in 14 high schools this year. She does it all from home, in a small office located on her farm. Because of her broadband connection, she is able instruct hundreds of students who otherwise would not have the opportunity to learn Spanish.

Robust broadband networks also enable rural residents to start their own business and gain access to new markets. JT Rickenbach from Oelrichs, South Dakota started WESTROM in nearby Hot Springs in 2002, while living and maintaining a ranch with his family. WESTROM

¹ “The Economic Impact of Rural Broadband” (2016), The Hudson Institute, Washington, D.C.

² A Cyber Economy: The Transactional Value of the Internet in Rural America, White Paper, iGR (2018), at 1.

builds electronics, cases and housings for electronics, and the machines to build electronics. WESTROM boasts two locations – one in Hot Springs and another in Hong Kong. Most of JT's business is outside of South Dakota, but despite the distance from most of his customers (many of whom are international), broadband enables JT and his family to live and work in South Dakota.

Another example of how broadband promotes and sustains entrepreneurs comes from Joyce Wheeler from Phillip, South Dakota. Joyce has lived on a South Dakota ranch her whole life, where she began to pursue her lifelong dream of writing novels. After the first two publishing houses she used closed their doors, Joyce decided to self-publish. She now works one-on-one via the internet with a company in Florida. While she receives publishing help from Florida, Joyce also relies on her broadband service for local help in marketing her books and website.

One of the best statements I have ever heard about the importance of broadband in rural areas came from a Golden West customer who lives in a very rural area near Hayes, South Dakota. She is a Software Development Manager for an international software firm. After living and working in an urban area, she and her husband decided they “were done with city life” and wanted to move back to South Dakota. She was able to negotiate a work from home/telecommuting arrangement with her employer. Fast forward the clock a few years and she is now managing software teams located throughout the world, all from her rural location in Hayes. Her statement to me was that her broadband connection meant “being able to work where you want to live instead of having to live where you want to work.”

These stories are not just exceptions to the rule or on the margins. Golden West recently completed a survey of our customers that posed the question “Does anyone in your household telecommute, or in other words, use an internet connection to work from home?” Twenty-three percent of the respondents answered “Yes,” and of those, 40 percent indicated they telecommuted for their employment five days a week. Nor are these stories, I believe, unique to Golden West or South Dakota – instead, my sense is that they are repeated in rural areas across the country, especially in places where smaller rural operators have, like Golden West, led the charge in deploying robust, high-capacity, low-latency networks and in taking pride in the delivery of high-quality customer service for the communities in which we live. Indeed, Golden West was recently given a “Smart Rural Community” Showcase award for its efforts in connecting rural South Dakota with the rest of the nation and the world, and its partnership with local business and community leaders to make effective use of the broadband networks we have built. We were one of 13 award recipients this year nationwide, and several dozen other smaller operators have received similar awards in prior years. Taken together, these awards demonstrate the importance of not only getting broadband to rural areas in the first instance, but the value of keeping it there and empowering consumers, businesses, and anchor institutions to make the most of it.

As described in a recent CoBank report on rural economic challenges, “Rural America faces a unique set of economic challenges, but it has demonstrated resilience during the past eight years of recovery. The rural population, jobs and incomes are all trending in the right direction. And current efforts to improve rural broadband access offer the greatest opportunity to make a significant dent in the rural/ urban economic divide. As broadband becomes more widely available in rural communities, enhanced access to education, healthcare and business opportunities can markedly improve the quality of life and the economic vitality in these communities. Rolling out broadband to rural communities will take several more years in some areas. But as access increases, so will rural America’s economic potential.”³

Rural Broadband Challenges

Building broadband networks is capital-intensive and time-consuming. The primary challenge of rural network deployment is in constructing networks across hundreds or thousands of miles where the population is sparse and the terrain is diverse. Especially when crossing federal lands or railroad rights-of-way in rural America, small rural providers must address environmental and historical permitting concerns or contractual obligations that can delay projects and increase their already high costs. Then, where networks are built, they must be maintained over those hundreds or thousands of miles – this requires technicians who regularly travel long distances to make service calls and customer service representatives trained to deal with questions about router and device configurations in ways that were unimaginable for “telephone companies.”

Moreover, even the best local or “last mile” networks in rural markets are dependent upon “middle mile” or long-haul connections to internet gateways dozens or hundreds of miles away in large cities. As an example, Golden West’s operations are more than 300 air miles – not route miles – from the closest Tier 1 internet peering point. Reaching such distant locations is expensive, and as customer bandwidth demands increase – moving from Megabytes to Gigabytes to Terabytes of demand per month per customer – so too does the cost of ensuring sufficient capacity to handle customer demand on those “long-haul” fiber routes that connect rural America to the rest of the world. In fact, Golden West’s analysis found that our average broadband customer monthly data usage was 92GB as of August 2016. By August 2018, the average broadband customer monthly data usage was 224GB. In just two years, we estimate the average usage will exceed 500GB a month. In four years, average monthly usage will likely exceed 1TB of data per month. By contrast, some networks come with plans that either cap data usage at much lower levels per month or slow data when they exceed these levels; for example, even in the context of their “unlimited” plans, certain wireless operators will use thresholds of 50 GB or less. These figures indicate the wisdom, the necessity, and the efficiency of investing in robust

³ “THE YEAR AHEAD: Forces that will shape the U.S. rural economy in 2018” (2018), CoBank Knowledge Exchange Report, <https://www.cobank.com/-/media/files/ked/general/2018-year-ahead-report-jan-2018.pdf>

future-proof “last mile” access networks that can handle demands for years to come *and* the need for robust “long-haul” capacity to connect rural areas to the rest of the world.

Also, barriers to broadband deployment such as disparate applications, fees, and reviews across federal and state landowning agencies must also be addressed as part of any holistic plan to promote and sustain infrastructure investment. Small providers often face infrastructure rules and burdensome permitting processes in seeking to build broadband networks across rural America. Efforts to standardize federal permitting processes and implement “shot clocks” for securing prompt approvals would free resources for broadband investment. Our industry appreciates this Committee’s bipartisan effort to reduce barriers to deployment of communications networks.

All of these factors make the delivery of broadband in rural America an ongoing effort that requires sustained commitment. We will miss the mark as a nation if we treat the broadband challenge as a one-time declaration of “success” just for the very preliminary act of connecting a certain number of locations. The construction of broadband networks is important and undoubtedly challenging in rural areas, but it is only the beginning. Particularly when one considers that even where networks are available many rural Americans pay far more for broadband than urban consumers, it should be apparent that the job of connecting rural America – and, just as importantly, sustaining those connections – is far from complete. I am proud of Golden West’s investment in rural South Dakota, and the rural broadband industry as a whole can tell a great story of success. But there is also much more work to do – and this is where public policy plays an important role in helping both to build *and* sustain broadband in rural markets.

RURAL UTILITIES SERVICE NETWORK FINANCING

Throughout Golden West’s history, we have obtained financing from the Rural Utilities Service (RUS) or its predecessor agency under the U.S. Department of Agriculture. RUS telecommunications lending has helped enable and unleash billions of dollars in private capital investment in rural communications infrastructure. In Fiscal Year 2017, RUS loans to the small, rural broadband members of the South Dakota Telecom Association totaled \$116.7 million. Due in part to the availability of this financing, many communities served by small broadband providers throughout the United States have significantly higher broadband deployment than neighboring communities served by larger carriers. But, as I will explain, RUS financing is just one important piece of a broader public policy puzzle when it comes to making the business case for rural broadband deployment.

In the first instance, deploying a communications network in a rural area requires a large capital outlay due to the challenges of distance and terrain. The RUS has long played a crucial role in

addressing rural broadband challenges through its telecommunications programs that finance network upgrades and deployment in rural areas. Since at least the early 1990s, the RUS telecom programs have financed advanced network plant at a net profit for taxpayers and helped deploy state-of-the-art networks to rural Americans left behind by providers unable or unwilling to serve low-population-density markets. With rare exceptions, RUS, CoBank and the Rural Telecommunications Finance Cooperative are the primary lenders that small rural providers can turn to for outside financing. Not only does RUS help rural America remain connected, its Broadband Loan & Loan Guarantee program and traditional Telecommunications Infrastructure Loan & Guarantee program make loans that must be paid back with interest – creating a win/win situation for rural broadband consumers and American taxpayers.

In addition to the creation of a new RUS broadband loan/grant pilot program in the FY18 Omnibus appropriations bill, the pending expiration of the current Farm Bill has afforded Congress an opportunity to reform and expand RUS broadband programs, including the Farm Bill Broadband Loan & Loan Guarantee program that was first authorized in the 2002 Farm Bill. Rural telcos wholeheartedly endorse the notion that we as a nation must closely examine these programs and aim for more robust services and higher speeds. As discussed above, networks must be built to accommodate future demands wherever and whenever possible. It is essential as well, however, to ensure the efficient and effective use of limited federal resources to promote both the availability and sustainability of broadband networks by targeting those resources carefully. It is particularly important to ensure that new networks built leveraging new federal programs do not compete with and undermine the sustainability of networks that are already in place leveraging federal resources, such as those made available through the rural development programs of the RUS and/or Universal Service/Connect America Fund support from the Federal Communications Commission (FCC).

For decades, the RUS and FCC's High-Cost Universal Service Fund (USF) have worked in concert to deploy and sustain communications networks in rural America. In fact, I would submit there has been no more successful formula for advancing and sustaining rural broadband than the combination of RUS loans financing upfront network construction (with payback) and USF helping to support ongoing operations and the affordability of rates on the networks once built. More specifically, while RUS lending programs finance the substantial upfront costs of network deployment, the USF High Cost Fund helps to make the business case for such construction and then sustains ongoing operations at affordable rates.

In particular, USF by law aims to ensure “reasonably comparable” services are available at “reasonably comparable” rates. Not to be confused or conflated, RUS capital and ongoing USF support therefore serve distinctly important, but complementary rather than redundant, purposes in furthering rural broadband deployment. It is essential that these complementary roles continue, and that we avoid the prospect of two, dueling federally-supported networks built in a

rural area that could not sustain either one without such federal support. We can make smarter, better use of federal resources by reaffirming and codifying yet again the complementary nature of coordinated RUS and FCC programs, rather than allowing these programs and the resulting networks to be pitted against one another in a manner that undermines the sustainability of the networks and the integrity of the programs themselves.

THE FCC’S HIGH COST UNIVERSAL SERVICE FUND

As mentioned above, support from the federal High-Cost USF program is essential to make the business case for rural broadband. In fact, it is the primary, if not the only, tool to ensure – as mandated by the Communications Act – that consumers in deeply rural areas like those served by Golden West can purchase telecom services that are reasonably comparable to what urban Americans receive at rates reasonably comparable to what urban consumers pay.

Put another way, USF does not itself “pay for” upfront network construction; instead, the USF program supports ongoing operations (and the repayment of loans and private capital) by ensuring that rural consumers can pay reasonable rates for their use of services atop networks, thereby allowing consumers to buy such services and operators to justify the business case for investments in those networks in the first instance. USF is thus perhaps the best, most successful example of a public-private partnership that exists in the broadband space, having helped to justify the business case for private network investments that can total tens of billions of dollars per year when measured as gross plant in service. Without USF support, it would have been impossible for Golden West to do all that it has done in seeking to continuously improve broadband access across wide swaths of rural South Dakota – and if USF support remains capped as it has been for many years, this threatens to undermine our progress, if not stop it in its tracks.

Enabling the business case for delivery of advanced telecom services across rural America is a big job, and yet the High-Cost USF has been confined under the same budget since 2011 – even as small rural carriers have sought to deliver more robust networks that will scale to meet the anticipated enormous consumer demands for bandwidth in the future and last over the lives of the loans taken out to build them.

No justification is available for why the current High-Cost USF cap is the appropriate level of funding to meet the program’s goals, beyond a judgment back in 2011 that 2010 support levels seemed like the “right” amount to carry out a National Broadband Plan. In fact, precisely because they have tried to keep investing where possible in broadband to serve their rural communities, small rural carriers now face escalating cuts to USF support for investments already made – revealing how much the High-Cost program is woefully underfunded to do the job that the law requires and that Congress wants in terms of making robust, affordable

broadband available in rural America. To make matters worse, the High-Cost USF budget is the only program budget under the FCC's universal service umbrella without even an annual inflationary factor – and each of the other programs has also seen upward adjustments to their respective budgets in recent years. This is absolutely not to begrudge or question any increases needed in the other programs by any means, but only to point out that the High-Cost USF program's capped budget is woefully out of date and out of step.

Golden West and its customers have been directly affected by the High-Cost USF budget shortfalls. The loss of USF support for network projects already completed has forced us to reduce our future investment plans. Due to USF budget cuts, we have postponed nearly \$4 million of network upgrade plans scheduled for 2019 in rural South Dakota. The end result will be fewer customers receiving broadband or upgraded broadband services. And, Golden West is not alone in feeling this pain. Because of these support cuts, I have heard that many other rural network operators are cutting back on future broadband infrastructure investments and cannot deliver affordable standalone broadband to rural consumers. A survey by NTCA earlier this year found that the average member reported over \$660,000 in cuts in USF support over the next 12 months, which translated on average to more than an estimated \$1.6 million in deferred or declined investment in rural broadband infrastructure. This in turn translates into fewer customers receiving higher-speed services; the NTCA survey found, for example, that the USF budget cuts were expected to result in 52% fewer customers on average receiving new 10 to 25 Mbps broadband than companies had anticipated prior to the cuts due to project postponements, cancellations, or modifications.

Fortunately, policymakers throughout Washington, D.C. have expressed concern about the USF budget shortfalls. Over the past several years, hundreds of members of Congress – including many members of this committee – have written repeatedly to the FCC, expressing serious concern about how the persistent and increasing USF budget shortfalls affect private infrastructure investment and consumer broadband rates. Yet again earlier this year, more than 190 members of Congress signed letters to the FCC expressing concern about the USF budget shortfalls. The letters demonstrated the sizeable, shared, and sustained bipartisan interest in prompt action on this issue, and a window of opportunity exists. Indeed, FCC Chairman Pai and several other FCC commissioners have expressed their shared concerns about the existing budget shortfalls, and have indicated their intent to act to resolve such concerns by the end of this year – we are grateful to them for planning to take action on the long-standing budget cap, and to those of you who have urged them to take such action.

But as heartening as it is to see an apparent consensus with respect to the problem and the need for a solution, it is essential to move forward now with all due speed. Remedying this USF budget concern and providing sufficient support by the end of this year is imperative to the sustained delivery of affordable, high-quality broadband service to consumers and small businesses that this Subcommittee and so many other members of Congress hope to see in rural

America. We urge Congress to continue its efforts to press for a fix to this problem, and we are hopeful the FCC will take action as promptly as possible to provide sufficient support for all recipients of High-Cost USF support.

CONCLUSION

Robust broadband must be available, affordable, and sustainable for rural America to realize the economic, healthcare, education, and public safety benefits that advanced connectivity offers. As noted in this testimony, it takes an effective mix of entrepreneurial spirit, access to capital (whether from RUS or otherwise), commitment to community, and federal USF support to enable and sustain deployment of communications infrastructure in many parts of rural America. The RUS and the High-Cost USF programs play important, but complementary rather than redundant, roles in promoting the deployment and sustainability of broadband infrastructure in rural America. Promoting greater access to capital through strong, well-tested RUS lending programs, ensuring sufficient funding of USF to make the business case for use of private and/or borrowed capital in rural areas, and demanding continued coordination between essential federal programs that aim to promote broadband access in rural America are all critical pieces of a comprehensive, thoughtful national rural broadband strategy.

Golden West thanks the committee for its leadership on and interest in all these issues, and we look forward to working with you to realize a vision of true universal service in the form of robust and sustainable networks that will deliver reliable, high-quality, and affordable communications services throughout rural America now and for years to come.