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February 12, 2019

Via Electronic Submission

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-A-235
Washington, D.C. 20554

Re: Notice of Ex Parte Communication, GN Docket No. 18-238 *(14th Advanced Telecommunications Capability Report to Congress*) and WC Docket No. 11-10 *(2017 Form 477 FNPRM)*

Dear Ms. Dortch:

On February 8, 2019, Brian O'Hara of the National Rural Electric Cooperative Association (NRECA) and the undersigned met with Preston Wise of Chairman Pai's office reviewing NRECA's Comments filed in response to the Notice of Inquiry in preparation for the Commission's 15th Broadband Deployment Report and the false positives of fixed broadband availability attributable to recent Form 477 data.

We focused on the interest and commitments of rural electric cooperatives to deploy broadband networks in their communities, the thirty-five (35) electric cooperative winners in the CAF II auction, and the risk of significant overstatements of broadband availability in rural areas due to the current Form 477 instructions. Per NRECA's Comments, we also emphasized that the fixed broadband benchmark should be subject to periodic adjustment based on current deployments of fixed broadband technologies in urban areas as opposed to a weighting of all embedded fixed broadband facilities.

The overstatement of broadband availability was underscored in the attached article from outlining the experience of the Chariton Valley Electric Cooperative.[1] The article explains how the projected reserve price for the aggregate unserved census blocks within CVEC's service area

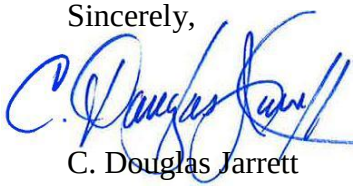
[1] The article is attached to the enclosed copy of CVEC's 17 July 2018 letter to Congressman David W. Loebsack emphasizing how the challenges for obtaining broadband in rural areas of Iowa are compounded by inaccurate reporting of broadband service availability.

one year prior to the CAF II auction approximated $8.0 million, but when the final map of unserved areas was released, the aggregate reserve price within the cooperative's service area had plummeted to less than $56,000. CVEC noted that there was no apparent increase in buildout or construction that would logically support enhanced broadband availability.

The core issue is that the Form 477 instructions, which directs service providers to report a census block as served "where a provider does, *or could*, without an extraordinary commitment of resources" provide broadband service, necessarily overstates broadband availability. As noted in NRECA's Comments in GN Docket No. 18-238, NTIA agrees the current Form 477 data overstates broadband availability. Brian O'Hara strongly recommended that more granular reporting be required as suggested in the *2017 Form 477 NPRM*, noting one approach could be reinstating the previous requirement that filers provide information by street segment if a census block is greater than two square miles.

Please contact the undersigned with any questions.

Sincerely,



C. Douglas Jarrett

Attachments

cc: Preston Wise (via email)

ATTM: A

Chariton Valley Electric Cooperative, Inc.

Your Touchstone Energy® Partner

July 17 2018

The Honorable David W. Loebsack
U. S House of Representatives
1527 Longworth House Office Building
Washington, DC 20515

Dear Representative Loebsack,

Thank you for the opportunity to share the Chariton Valley Electric Cooperative vision for rural broadband with members of the Communications and Technology Subcommittee of the House Energy and Commerce Committee.

Chariton Valley Electric Cooperative (CVEC) was organized in April, 1945, and began providing electric service to farms in 1947. It serves around 6,000 homes and businesses in the city of Albia and portions of the seven Iowa counties of Appanoose, Davis, Lucas, Marion, Monroe, Wapello and Wayne. CVEC owns and maintains 1,300 miles of overhead and underground line.

The CVEC service territory sits in a broad section of South Central Iowa, just north of the Missouri border. The seven counties, which were once the hub of Iowa's coal country, feature rolling hills, farmland and dozens of small towns – none of which have a population greater than 3,600.

CVEC's members reside in a region that has a median household income below the state average. Every county served has seen its population decline and the average age of its residents increase. Economic development efforts are ongoing, but issues ranging from available workforce to housing to access to capital create constant barriers.

However, no barrier to growth is as dramatic as the digital divide that exists in our region.

Broadband access in our territory is primarily limited to slow, outdated service from a few large investor-owned telecommunications companies. Even then, their service is focused on town centers with little availability in the rural areas. And none have expressed any interest in expanding speeds or capacities in order to allow residents and businesses in South Central Iowa to adequately access information, digital content or the global economy.

For that reason, CVEC has begun developing a plan to extend fiber to the homes of member homes and businesses. This cooperative can no longer stand by and allow its members and region to operate at an economic and educational disadvantage.

And, there is no doubt residents are frustrated. Earlier this year, when plans for the CVEC Broadband Project were announced, more than 2,000 members sent in postcards to express their support and interest. Those postcards were included in the USDA Community Connect grant application, as were 40 letters of support and need from local businesses, hospitals, schools and colleges. We also received support letters from you and Senators Grassley and Ernst.

2090 Hwy. 5 South • P.O. Box 486 • Albia, Iowa 52531-0486 • Phone (641) 932-7126 • Toll Free: 800-475-1702

www.cvrec.com

As you know, the value of fiber-to-the-home for rural electric cooperatives is great. That fiber gives us better control of our electric systems, monitoring, efficiencies and operations. But it also provides us with a tremendous opportunity to benefit our members.

CVEC plans to extend fiber to the home of each member, and will be able to offer members up to 1 Gb service at a reasonable and affordable cost as we exist to improve the quality of our members lives – not to increase the profits to shareholders.

The convergence of new technology and partnerships has made rural broadband deployment more achievable than ever. Yet despite these advances, the high cost of rural broadband deployment remains the biggest obstacle to successfully closing the digital divide.

Our plan requires three phases to reach every CVEC member. Yet, we plan to accomplish that feat in a 24-month period once we begin construction. We anticipate the overall cost of implementation to approach $35 million.

To accomplish our goals, CVEC will need the support of partners like USDA's Rural Utilities Service, the Federal Communications Commission and others. We have already applied for a $3 million USDA Community Connect grant to begin the $4.9 Phase I of our project, which is focused on unserved Appanoose County (a recently-designated Opportunity Zone). We have plans to pursue other USDA financing options, including those recently made available in the FY18 Omnibus Appropriations bill.

Another barrier we have encountered is related to faulty data that overstates rural broadband service. The FCC maps, reliant on Form 477 data, reflect the wishful thinking of existing providers and entities who lack a presence in the region yet submitted inflated performance metrics. They are precluding CVEC from accessing the resources it must have to provide the 6,000 households and businesses with broadband speeds readily available in urban areas.

Recently, CVEC was disqualified from the upcoming CAFII auction due to questionable data used to populate FCC broadband maps. According to the FCC map, 100 percent of residents in Appanoose, Davis, Lucas, Marion, Monroe, Wapello, and Wayne counties have access to a download speed of 10 Mbps. But, independent tests run in these counties show that can only happen 17 percent of the time.

This committee has a great opportunity to drive the discussion of rural broadband and the policies that will expand it. Since 2001, the FCC has used the Universal Service Fund to deliver $114 billion to build out rural communications infrastructure. But the digital divide still plagues our nation. Existing federal programs have failed to solve the rural broadband problem, and it's time for a new approach.

There exist four keys to empowering rural electric cooperatives to partner in those efforts.

1. Additional financing support with a combination of grants and loans.
2. All capable providers with experience in serving rural infrastructure needs should have equal access to federal funding, regardless of technology.
3. Grants should prioritize projects in areas with the lowest population density given that is a prime cost driver for rural broadband deployment.

4. Broadband systems funded with limited federal funds should meet the growing speed and data consumption needs of today and into the future.

We're glad that expanded rural broadband access is a topic of conversation in state legislatures and in Washington. And CVEC, like electric co-ops nationwide, is committed to rural America and the people who live there. Yet, 23 million rural Americans lack broadband access.

Congress should support investment in forward-looking, modern broadband systems that will stand the test of time. It should take an all-inclusive approach to solutions in unserved and underserved areas. It is critical that these solutions recognize the need to remain viable for years into the future.

And it should recognize that in today's 21st century economy, broadband systems built to 10/1 or slower speeds cannot support a modern household much less attract and retain new businesses.

Chariton Valley Electric Cooperative is ready to bring the rural Iowans it serves a 21st century technology. We just need help overcoming barriers that prevent us from accomplishing that.

Thanks in advance for your assistance and support.

Sincerely,

Bryon Stilley
General Manager
Chariton Valley Electric Cooperative
Albia, Iowa

THE NEW FOOD ECONOMY

The FCC says all of Iowa has access to broadband internet. Speed tests tell a different story.

Misleading data from internet service providers is cutting Iowa off from billions in broadband subsidies. Other states could be missing out, too. A New Food Economy investigation.

June 20th, 2018
by Sam Bloch

Like everyone else, rural Americans need broadband. They rely on their internet connections for many of the same reasons urban Americans do: to find doctors and look for jobs, pay bills and do homework, get the news and watch movies. But outside of cities, where great distances separate residents from social services, employers, and neighbors, reliable broadband not only keeps rural Americans apace with the modern world—it's a critical economic lifeline.

The United States government recognizes that the need is dire. The Federal Communications Commission (FCC), the federal agency primarily charged with expanding internet coverage, has committed over $9 billion to getting rural America online. In February, it released a national broadband map, purporting to show which parts of the country had access to fixed, or non-mobile, high-speed internet. The goal of the map is to inform policies and target subsidies as the government extends broadband to over 11.5 million American who still lack access.

A closer look, however, suggests that the map is based on misleading data. A New Food Economy analysis of internet speed tests in some rural counties shows connections well below what FCC is claiming, which means the number of Americans without broadband could actually be much higher than reported.

Few connections reach the "baseline" broadband speed of 25 Mbps, speed tests show

Source: M-Lab NDT Data Set, 2017, correlated with US census county level geographic data

According to FCC, Iowa is the only Midwestern state with virtually complete access to high-speed internet. Every county is covered by download speeds of 25 megabits per second (Mpbs), which the agency defines as "baseline" broadband. But another set of data tells a different story: Internet users in Iowa experience that speed only 22 percent of the time. That's according to nearly half a million speed tests run on a diagnostic tool operated by the Open Technology Institute, a research arm of the New America Foundation, a non-partisan think tank. Data from these tests, which were run last year, mostly as Google searches, are publicly available on the institute's website and were updated at the request of The New Food Economy.

Connections are worse outside the cities. Take, for example, a cluster of predominantly rural counties located in southern Iowa, between Des Moines and the Missouri border. According to the FCC map, 100 percent of residents in Appanoose, Davis, Lucas, Marion, Monroe, Wapello, and Wayne counties have access to a download speed of 25 Mbps, the speed at which three people can simultaneously stream HD video. But tests run in these counties show that can only happen 17 percent of the time.

> Because DSL connections are slow and satellite service is unreliable, many rely on cell phone hotspots to get online.

On the outskirts of Albia, the Monroe county seat, wedding photographer Carol Selvy can't show clients her photos. Selvy says she needs a week to upload a suite of files, which progresses in fits and spurts. According to FCC, Selvy has access to download speeds of 12 Mbps. (The agency's "minimum" broadband definition is 10 Mbps.) But that isn't accurate. Selvy played The New Food Economy a voicemail left by a representative from Windstream, a phone company with a large presence in Iowa, and her internet service provider.

"The best you're gonna get is 4 megs," the representative told her. That was the broadband standard in 2011.

Selvy is not alone. Corn farmers in Appanoose and Monroe counties are among the state's least productive. Some say that's due, in part, to slow connections. "We've had some of our members that want to take advantage of precision planting and spraying, but they just don't have access to high-speed internet to be able to do it," says Bryon Stilley, CEO of Chariton Valley Electric Cooperative, a member-owned utility that serves the counties. Because DSL connections in this part of Iowa are slow and satellite service is unreliable, many of the cooperative's members rely on cell phone hotspots to get online.

Bryon Stilley is an Iowa resident and CEO of Chariton Valley Electric Cooperative, a member-owned utility that serves parts of seven rural counties

Why do speed tests conflict so dramatically with what's on FCC's map? Because the broadband map, which the Commission calls a "key source" of information for consumers and policymakers, doesn't include on-the-ground measurements in the first place. The map is based on data taken from Form 477, a filing that internet providers submit to FCC twice annually. The data are the agency's main source of information on broadband availability, and the backbone of its funding decisions.

Form 477 data have surprising limitations. Providers are not required to include information in the filing about actual on-the-ground internet speeds, which are confidential and considered a trade secret. Instead, when providers submit data, they include lists of census blocks where they "can or do" offer service to at least one location, along with the maximum speeds they *advertise* there, whether that's what residents have or not. Nationwide, around 28 people live in a census block, on average. In Iowa, a rural state, the density is closer to 15.

> "We're leaving too many households behind."

For these reasons, it's hard to know how many Americans covered in the federal broadband map actually have the internet their providers say they do. When asked why FCC accepts self-reported advertised speeds as a metric, Mark Wigfield, a spokesman, said carriers are "required by statute to provide accurate data," and the agency finds a strong correlation between advertised and actual speeds, though not for DSL or satellite. "The cost and burden of collecting actual speeds would be too great," he wrote in an email to The New Food Economy.

Policymakers have openly acknowledged that the broadband map, the first major refresh of publicly accessible internet data in several years, is incorrect. When the map was unveiled in February, Commissioner Jessica Rosenworcel, who lives in Washington, D.C., admitted it had "errors," and asked the public to email FCC directly with corrections. "I looked up my house and can tell you with good authority it lists service that is not available at my location," she wrote. "You can go ahead and plug in your address and you might find the same thing."

> It's hard to know how many Americans covered in the broadband map have the internet their providers say they do.

Part of the reason for this discrepancy is that FCC doesn't collect granular data about deployment. "For a long time, the way that the FCC collected data about broadband was, as we found, if there is one subscriber in a census block, we presumed that it was available throughout the block," Rosenworcel told a House subcommittee in 2017. "I think we all know that that is not a fair assumption anymore, and we're leaving too many households behind."

And faulty data can have real-life consequences. When census blocks are reported to have access to 10 Mbps downloads, which was the broadband standard in 2014, other internet service providers are disqualified from receiving FCC funds to expand service there. In other words, the government decides the area is connected enough not to require additional funds for expansion.

But self-reported estimates don't match the speeds independently measured by the Open Technology Institute in Iowa, and the circumstances there are likely to be illustrative of a larger problem. Interviews with broadband advocates, public comments submitted to FCC, and statements by policymakers all indicate that in other states, rural residents may be in similar situations: reliant on subpar DSL and satellite connections, and ineligible for federal support.

Power lines, operated by Chariton Valley Electric Cooperative, flank a farm in rural Iconium, Iowa

Across the country, politicians with rural constituents are moving to address the problem. Last year, Republican Senator Roger Wicker of Mississippi, Democratic Senator Joe Manchin of West Virginia, and Democratic Congressman Dave Loebsack of Iowa all introduced bills to improve the accuracy of mobile broadband data—also from Form 477—in advance of an FCC funding opportunity for phone companies. Loebsack's bill was signed into law in March as part of the omnibus spending bill.

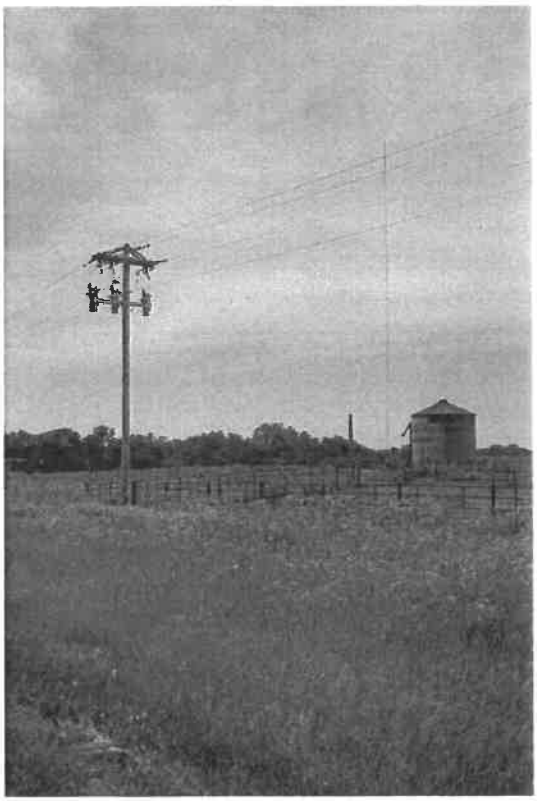
"I like to call it, 'garbage in, garbage out,'" Loebsack told telecommunications executives at a House hearing in January. "If we don't have accurate data, whether that's in agriculture, or that being a subset of something larger, then we're not going to be able to make good public policy decisions, or even investment decisions on the part of the private sector."

> There's not a business case for bringing high-speed internet to rural America.

Manchin has been more direct. One month after introducing his bill, he admonished FCC Chairman Ajit Pai for the agency's poor record-keeping. "Inaccurate data has failed rural and remote communities across this country," he said at a Senate hearing. "Inaccurate data has caused us to be left behind."

More recently, Loebsack, who represents southern Iowa, introduced another bill, co-authored by Republican Congressman Bob Latta of Ohio, that directs FCC to identify broadband coverage gaps on farms, and target funding to help farmers use data-heavy precision agriculture tools. (The bill passed a House subcommittee last Thursday.) But for the residents in his district, and particularly those who had hoped to benefit from an upcoming, billion-dollar broadband subsidy auction, the bill comes too late.

Bryon Stilley from the Chariton Valley Electric Cooperative is one of those residents. In 2016, he began planning a fiber broadband network for the 6,100 members of the co-op. Then, as now, rural members were buying internet from one of four companies: Windstream, the local phone company, which offered DSL; Rise Broadband, a "fixed wireless" provider that transmitted a wireline connection from towers; and two satellite companies named HughesNet and ViaSat. Disappointed by the options, many instead relied on service from their cell phones.



A utility pole (left) and cell tower outfitted with "fixed wireless" internet antennas (right) stand beyond a farm in rural Iconium, Iowa

Generally speaking, there's not a business case for bringing high-speed internet to rural America. It's labor-intensive, expensive and inefficient. "We're talking four-point-two, four-point-three members per mile of line," Stilley says of his area. "At the end of the day, it's hard to justify, and hard to make something like that work."

To build a $29.3 million, 1,400-mile fiber optic cable network, the cooperative would need help. Stilley decided to pursue subsidies from FCC and its primary vehicle for funding rural broadband, known as the Connect America Fund. In the past, all of these funds went to large telephone companies, such as AT&T and Verizon, and in Iowa,

to CenturyLink, Frontier and Windstream. Next month, the Commission will begin offering funds to small providers, including electric cooperatives.

That move comes too late for Stilley, whose plans to take advantage of Connect America Fund monies were dashed in December, when FCC updated a map of eligible areas and showed a major broadband expansion in his area. According to Form 477 data, Windstream and Rise Broadband had blanketed Chariton Valley's service area in minimum broadband, leaving only nine census blocks uncovered and thus eligible for funding. Across the state, Rise had doubled its coverage. Possible funds for the cooperative shrank from $8 million to $56,000, Stilley says.

But speed tests don't show an increase in high-speed internet. Last year, internet users in the seven counties in Chariton's service area were just as likely to reach the minimum broadband speed of 10 Mbps as they were three years ago: around 44 percent of the time, according to the Open Technology Institute. Windstream users reached minimum broadband in only 34 percent of tests. Surprisingly, of thousands of tests conducted in those counties in 2016 and 2017, not a single user was on Rise Broadband, calling into question the efficacy of its advertising.

> In rural America, a phone company may be the only internet provider, and connections may degrade with distance.

In an email to The New Food Economy, a Windstream spokesman said the company had expanded broadband coverage through VDSL bonding, a process of releasing additional, usually pre-existing telephone lines for internet use. Meanwhile, a spokesman for Rise Broadband said the company "has not had any significant Iowa changes," and "coverage has remained about the same," also in an email. Both companies use a mix of advertising, including direct mail and digital ads, to promote their services in southern Iowa.

Dependence on DSL is common in rural America, according to Brian Whitacre, an agricultural economics professor at Oklahoma State University and a professional bodybuilder. In cities, consumers often have their choice of wireline providers, which can include a local phone company offering DSL, but also cable and fiber companies. Not so in rural areas, where that phone company may be the only provider, and where internet connections degrade with distance.

Other rural technologies are unreliable. Fixed wireless, which is touted as "bridging the digital divide" in areas without wireline connections, requires a line-of-sight connection that can be interrupted by rain or trees. Satellite connections are also compromised by weather. One FCC study finds that satellite users rarely achieve advertised speeds. When FCC says 24 million Americans lack access to broadband internet, that includes internet users on these two kinds of connections.

> "If you're gonna base public funding decisions on data, you either have to account for errors, or give people a chance to challenge the data."

In the case of Chariton Valley, it's unclear whether broadband coverage actually increased, or was just reported to be more widely advertised.

Last year, FCC opened a proceeding to consider changing the Form 477 and seek granular deployment data, such as the locations of homes and businesses served, rather than census blocks reached. In seeking public comment, the agency wrote that filings do not have "meaningful information" about how data were collected or coverage areas determined. Nor had the agency investigated "whether actual consumer experience has diverged substantially from the Form 477 fillings."

But FCC may never know the answer, because publicly subsidized providers don't divulge their data collection process or explain how services are advertised in a specific market in their filings. They often claim that disclosing better, more specific deployment information would compromise customer privacy, and their ability to compete with other providers. (The Open Technology Institute supports collecting and disclosing more deployment data.)

Jonathan Chambers, a former FCC attorney and broadband consultant for rural electric cooperatives, including Chariton, believes that without an opportunity for his clients to challenge FCC's data, the subsidy process will remain fundamentally flawed.

Telephone poles north of Albia, Iowa, carrying phone lines that can be used for DSL connections

"If you're gonna base the service—these public funding decisions—on data, you either have to account for the errors in the data, or you have to give people a chance to challenge the data," Chambers says. "Because the funding decision means that these areas of the country now won't get funded. And if they don't get service, then

they get the worst of both worlds. They don't have service and they won't have funding."

Bryon Stilley says he is back to the drawing board. Now ineligible for Connect America Funds, Chariton Valley has applied for a grant from the Rural Utilities Services to build a smaller network in Appanoose, one of the seven counties in the cooperative's coverage area. Absent the competition of another provider, it could be years before members in the other counties experience broadband internet.

Bidding for $1.98 billion in subsidies available through FCC's Connect America Fund II auction, which has 277 applicants, including 25 rural electric cooperatives, begins July 24.

Sam Bloch

Sam Bloch has written about arts, culture, and real estate for publications including *L.A. Weekly*, Artnet and *Commercial Observer*, and served as managing editor of *Art Los Angeles Reader*. His essay about Los Angeles' "shade deserts" will be published by *Places Journal* in 2018. Reach him by email at: samuel.bloch@newfoodeconomy.org