

THE STATE OF RURAL COMMUNICATIONS

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS,
TECHNOLOGY, AND THE INTERNET

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

APRIL 9, 2013

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ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

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THE STATE OF RURAL COMMUNICATIONS

TUESDAY, APRIL 9, 2013

U.S. SENATE,
SUBCOMMITTEE ON COMMUNICATIONS, TECHNOLOGY, AND
THE INTERNET,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:33 a.m., in room SR-253, Russell Senate Office Building, Hon. Mark Pryor, presiding.

OPENING STATEMENT OF HON. MARK PRYOR, U.S. SENATOR FROM AKANSAS

Senator PRYOR. Let's go ahead and have our witnesses take their seats and have the audience sit down. Thank you all. Call this meeting to order.

I want to say good morning and welcome to the Communications Subcommittee's hearing on the state of rural communications. I want to thank all the witnesses for being here today.

This is actually the first in a series of hearings that we intend to hold on the state of the communications in the United States. So, this is state of rural, and we'll have others in the coming weeks. These hearings will serve as an important snapshot on the various communications sectors around the country. They will help educate our subcommittee members on a lot of these issues. And it's an important chance for us to listen to the stakeholders to find out how they see the lay of the land. And also, it's going to be important for the Subcommittee itself to help hear from other members on the Subcommittee about their views on the state of communications around the country.

Beginning with the Communications Act of 1934, Congress has stood by the principle that all Americans should have access to communications, whether they live in the urban or rural parts of the country. That principle has meant that 98 percent of all Americans have access to wireline communications. And, of course, the USF is a big part of that. There's other policies involved. And it's an important principle that continues to underpin our push to make sure that rural Americans have access to wireless communications, video services, and, even more importantly, high-speed broadband. And I think broadband is the basic fundamental communications network of tomorrow. High-speed broadband in rural America means jobs, it offers access to worldwide markets and digital economy. It provides advances in healthcare and education,

and it makes possible the new forms of civic and social engagement for the 21st century.

So, for example, in my state, I've seen, firsthand, the benefits of broadband. We have companies, such as Goggles and Glasses in Batesville, an online eyewear retailer, and BriteSun Data Services in Maumelle, a data network installation company. These businesses are increasingly utilizing broadband to expand and take full advantage of their potential.

The companies before us today, and the folks that they represent, and many others around the Nation, have invested billions of dollars in their networks to make their services available to rural customers. I look forward to hearing from our witnesses today about their businesses and their experiences serving our nation's rural customers.

I also would like to know about the challenges that your companies face in serving rural America. How do we bridge the digital divide and meet the core principles of universal service enshrined in the Communications Act? And how do we ensure that rural consumers have the same quality of service as their urban counterparts?

So, I know the members of the Subcommittee will benefit from listening to what you have to offer. And, like I said, we'd love to hear your perspectives.

Now, what I thought I would do is recognize Senator Wicker, the ranking member of the Committee, and then, if it's okay with the other Committee members, I may dispense with further opening statements, just to allow us to get to the witnesses.

But, Senator Wicker, you're up.

**STATEMENT OF HON. ROGER F. WICKER,
U.S. SENATOR FROM MISSISSIPPI**

Senator WICKER. Thank you very much, Mr. Chairman.

This is the first hearing of the Subcommittee on Communications, Technology, and the Internet, and I would like to express my enthusiasm about working alongside my good friend and colleague, Senator Pryor. I also appreciate Senator Pryor's stated desire for us, up here, to get our talking done quickly and let the witnesses have a chance to give us their expertise.

Mr. Chairman, you have put forward an ambitious agenda, covering a broad cross-section of topics. I hope this will position our subcommittee, not only as a forum for education and debate on the current state of communications policy in our nation, but also as a vehicle for identifying the best path forward to ensure rapid, quality broadband for all Americans, including rural Americans.

I am particularly glad that the first subcommittee hearing is focused on the state of rural communications, a topic near and dear to me. We, in Congress, must ensure that any digital divide that exists between urban and rural areas is effectively bridged, and that all Americans have the tools necessary to take full advantage of our broadband economy.

The impact that high-speed broadband can have on economic development in rural areas, like Mississippi and Arkansas and Missouri and Nebraska and Wisconsin, cannot be overstated, and strides have, indeed, been made. In particular, I'd like to recognize

the work of CSpire Wireless, for example, a regional wireless provider headquartered in my home state. CSpire provides nearly one million customers with mobile voice and broadband access, and generates roughly \$1.5 billion in incremental positive economic impact on local, state, and regional economies.

I would also like to highlight the nearly \$975 million investment by AT&T in its Mississippi wireless and wireline networks in—with a focus on expanding 4G LTE mobile Internet coverage across the state of Mississippi. I am confident that these success stories are not only indicative of Mississippi, but can be found across America.

I would like to welcome our witnesses and thank them for testifying this morning. While not all inclusive, the companies represented cover a broad range of providers with extensive footprints in rural America, from wireline to wireless to cable. I'm looking forward to learning about the work our witnesses are doing to maximize broadband access and adoption.

At the same time, it is equally important for this committee to learn about the regulatory obstacles providers face, and how Congress can help clear those obstacles.

Thank you again, Mr. Chairman, for holding this important opening hearing, and I look forward to working with you and all the members of this subcommittee as we begin to examine the varied and complex communication policies and the issues facing our emerging broadband economy.

Thank you, sir.

Senator PRYOR. Thank you.

What I thought I would do is, unless any of our colleagues here would like to make their opening statements, I thought I would just jump right into hearing from our witnesses today. And I could do these long introductions. All of them have great credentials and offer—and bring a lot to the table today. But, I thought I'd just very briefly introduce each one and then allow them to make their 5-minute opening statement.

We would love for you to keep your opening statement to 5 minutes each, if possible.

First, Mr. John Strode, of—he's Vice President, External Affairs of Ritter Communications; that's based in Jonesboro, Arkansas. Mr. Steven Davis, he's Vice President of CenturyLink. Ms. Patricia Jo Boyers, she's President and CEO Of BOYCOM Cablevision, up in Missouri. And Mr. LeRoy T. Carlson, Jr., Chairman of U.S. Cingular.

So, Mr. Strode, if you wouldn't mind? Thank you.

STATEMENT OF JOHN STRODE, VICE PRESIDENT—EXTERNAL AFFAIRS, RITTER COMMUNICATIONS

Mr. STRODE. Thank you, Mr. Chairman.

Chairman Pryor, Ranking Member Wicker, Committee members, thank you for the opportunity to testify on this very important topic. I am John Strode, Vice President of External Affairs for Ritter Communications Holdings. Ritter operates in Arkansas and Tennessee, employs about 280 people, serves nearly 33,000 telephone access lines, 26,000 broadband customers, and 20,000 basic cable subscribers.

The challenges we face, in terms of customer density and distance, are similar to those faced by nearly 1,100 other rural carriers who, together, serve about 5 percent of the Nation's population but 40 percent of its geography. The cost recovery necessary to serve such vast regions has historically come from a mix of universal service support, intercarrier compensation, and customer rates. Considering our success in building out broadband over the past decade, with minimal growth in USF support and declining intercarrier compensation revenues, this strategy has clearly worked.

Unfortunately, ongoing efforts to transform this delicately balanced structure have generated uncertainty and stalled investment, leaving customers and broadband advancement in the lurch. In the face of these regulatory shifts, many companies are cutting costs, letting employees go, scaling back services, and/or increasing rates, and hope that they can continue to repay loans taken out to build advanced networks.

Regulatory uncertainty arising out of the changes already adopted and the threat of more changes to come has led many small companies to pull back on investment, and left all of us with limited visibility into what rural broadband will look like for consumers in the long run.

This uncertainty can be traced to two primary sources.

First, the FCC's quantile regression analysis model caps USF support, based on a pool of data that is difficult to analyze, contains acknowledged data errors, and is unpredictable. Rural providers are not looking for guarantees, but, like any small business, we need a reasonable capability to develop and execute a business plan. The law recognizes this, requiring that USF support be sufficient, predictable, and specific. But, the unsettled nature of the QRA model leaves many—leaves even a company that is not yet capped fearing that potential investments may result in the company being penalized for trying to provide the services that the national broadband plan calls for.

Second, the FCC continues to consider additional caps, cuts, and constraints on cost recovery before the dust has even settled with respect to the reforms adopted in 2011 that are now being implemented. We remain hopeful that the agency will hold true to its commitment for a data-driven transformation process and first consider the effects on consumers of those changes already adopted before racing forward with further modifications.

A recent survey conducted by NTCA, the rural broadband association, underscores the impacts of this regulatory uncertainty. Out of 185 small-carrier respondents, 127 indicated that they have either postponed or canceled plans to upgrade network infrastructure due to this uncertainty; 101 of those respondents indicated that the combined value of the projects put on hold equaled more than \$492 million.

So, how can we get rural broadband investment back on track? Three key steps should be taken:

First, the FCC should reevaluate the QRA models and caps to ensure greater transparency, accuracy, and predictability. They should also employ the caps as triggers for further review rather than as automatic disqualifiers of support.

Second, the FCC should refrain from any further cuts, caps, or constraints until the effects of these changes that are now being implemented can be evaluated.

And, third, it's important that the FCC define a path forward for a sustainable broadband future for all rural consumers.

On another note, but just as critical to the concept of universal service, rural telcos have, for years now, confronted the problem of calls failing to reach rural customers. The industry has been seeking to shed light on the routing practices that are the source of this problem. The FCC has taken several steps, including issuing a declaratory ruling, in February 2012, and a consent decree with Level 3, in March 2013, that required a contribution to the U.S. Treasury and a compliance plan, going forward. The industry is appreciative of the spotlight placed on this issue by Congress and the FCC, yet the problem persists. It is clear that the problem is not limited to just one entity, and it is essential that the FCC undertake further enforcement to ensure that its recent consent decree is not a one-time event.

While I was unable to cover every issue facing rural carriers, I respectfully request that you review my full written statement, which describes other challenges the small carriers continue to confront with regard to deployment for wireless services and access to affordable video content. Small rural carriers, like Ritter, have been at the forefront of technological evolution driven by a commitment to the communities they serve.

We look forward to working with this committee to continue delivering on that commitment.

Thank you.

[The prepared statement of Mr. Strode follows:]

PREPARED STATEMENT OF JOHN STRODE, VICE PRESIDENT—EXTERNAL COMMUNICATIONS, RITTER COMMUNICATIONS, ON BEHALF OF NTCA-THE RURAL BROADBAND ASSOCIATION

Chairman Pryor, Ranking Member Wicker, committee members, thank you for the opportunity to testify on this very important topic. My name is John Strode, and I am the Vice President-External Affairs of E. Ritter Communications Holdings, Inc. (Ritter).

Ritter was formed under the laws of the State of Arkansas on April 11, 1990. Ritter's parent company has been in business since 1886 and has operated rural telecommunications companies since 1906. Today, Ritter owns and operates three rural incumbent local exchange carriers (ILECs), two in Arkansas and one in Tennessee; a facilities-based competitive local exchange carrier (CLEC) and fiber network in Jonesboro, Arkansas serving primarily small and medium-sized businesses; and three cable television systems, one in a six-county area of Northeast Arkansas and one county in southeast Missouri, one serving a three-county area in North Central Arkansas; and one in a two county area of West Tennessee. Ritter has also developed a fiber network consortium extending from West Tennessee across Northern Arkansas to Fayetteville in Northwest Arkansas. Ritter currently provides broadband service, local and long-distance voice service, switched access service, special access and private line services, and cable television service.

Ritter has about 280 employees, with about 180 in Arkansas and 100 in Tennessee. Between all of its communications operations, Ritter serves nearly 33,000 telephone access lines, 26,000 broadband customers and 20,000 basic cable subscribers.

I have been involved with the communications industry in one form or fashion for more than three decades. Specifically, for the past 17 years I have been employed by Ritter and previously I worked for the Arkansas Public Service Commission. I am here to represent the hundreds of small ILECs across the country who strive everyday to provide quality voice, broadband, and other advanced services for all

residents in their service territories. The areas these companies serve range from the Arctic Slope of Alaska to the outskirts of the Florida Everglades. Companies like Ritter across the rural telecommunications industry serve approximately 5 percent of the Nation's population, but approximately 40 percent of the Nation's land mass.

While the size of the companies, the geographic and topographical challenges they face, and their customer densities might all be different, one thing remains constant—the dedication they have to their communities. Many of the companies have invested in their communities through scholarships, community development programs, training programs, and most importantly well paying jobs. Companies such as Ritter live and work in the communities they serve, they are sources of economic development opportunities at home and critical links to economic development opportunities in distant markets, and they ultimately are the last line of defense in ensuring that the Nation's universal service policies represent more than just words on a page.

Universal Service/Intercarrier Compensation Modernization

The Federal Universal Service Fund (USF) and Intercarrier Compensation (ICC) mechanisms have served as critical components of cost recovery for network investments and service delivery in high-cost, rural areas for decades. The need for reform of these mechanisms has been discussed for a number of years, and there was a general recognition over the past several years that these systems needed modernization to realize their potential in a “broadband era.” Unfortunately, the transformation order released by the Federal Communications Commission (FCC) in November 2011 has instead injected uncertainty into the business of deploying broadband networks and offering advanced services in rural America. Given the long-term nature of investing in advanced networks, it is essential that some degree of reasonable predictability be restored—and a reasonable path forward for the recovery of such investments better defined—if our Nation is to see the objectives of universal service truly achieved in this broadband era.

In previous appearances before the Senate Commerce Committee, representatives of the FCC have repeatedly expressed their intent to employ a data driven process in undertaking USF and ICC reforms. The FCC has also identified four pillars of reform that guided its efforts: (1) modernization; (2) fiscal responsibility; (3) accountability; and (4) incentive-based policies. We concur generally with these broad themes. There were indeed aspects of the USF program that needed updating to perform well over the longer-term and to reposition the system to support broadband-capable networks and shifting consumer demands. But unfortunately the data in the wake of the reform—and Ritter's own experiences as a network operator in hard-to-serve, high-cost areas for over 100 years—indicate that the recent changes should be revisited, or at the very least recalibrated, to achieve the ultimate objective of universal service: ensuring that every American has access to affordable, robust, sustainable broadband, voice, and other critical communications services.

When one considers that rural carriers were doing a “commendable job” advancing broadband deployment even as of several years ago (according to a group of FCC commissioners and state regulators)¹, and when one considers that rural telcos have been doing this work even in the face of declining ICC revenues and only minimal—approximately 3 percent annual—growth in USF, it becomes apparent that, even if the USF program may have needed modernization, it was also performing reasonably well in terms of advancing broadband in the most rural reaches of the United States within a fiscally responsible system. Moreover, accountability could be measured best and most easily through results. Even as more remains to be done to get broadband from basic speeds to the kinds of speeds demanded by consumers and businesses today, rural telcos were already doing a “commendable job” of reinvesting in network deployment to further this cause.

Modernization therefore could have taken a different track than what transpired, building upon the best of what worked but repositioning critical USF systems for the future. Instead, in the wake of the FCC's changes, there are a number of rural telcos adversely affected by new caps, cuts, and constraints on their cost recovery mechanisms. The reasons those telcos are affected by the changes vary, and each change needs to be evaluated carefully, consistent with a data-driven analysis, to see whether the regulatory changes are in fact helping to preserve and advance universal service objectives.

¹*High-Cost Universal Service Support, Federal-State Joint Board on Universal Service: Recommended Decision*, WC Docket No. 05–337, CC Docket No. 96–45, FCC 07J–4, at para. 30 (2007).

As a representative of Ritter, however, I bring a unique perspective, in that our company is *not* as adversely affected as many others—at least yet—by the FCC’s changes in terms of lost USF support. But, as we stand here today, these regulatory changes and the threat of more to come undermine predictability in the cost recovery mechanisms. This has in turn made it increasingly difficult for my company and many others like ours to decide whether and to what degree to invest further in advancing broadband. It is important that policymakers take steps as soon as possible to examine and address these concerns, to inject reasonable predictability into the cost recovery mechanisms for long-term network investments, and to promote continuing investment in rural broadband.

A good deal of the current regulatory uncertainty can be traced to two sources.

First, there is the FCC’s ongoing consideration of whether to adopt additional changes, such as further reductions to ICC revenue streams or other USF changes such as reductions in the prescribed rate of return, on top of those already adopted. Given that the “dust has not even settled” on the changes already made and still being implemented, it is hard to see why one would race forward with additional changes that might only raise consumer rates further, reduce broadband investment, and/or threaten the payback of loans, including Federal loans due to the Rural Utilities Service. It is hard to square such an approach with a commitment to a “data-driven” process.

Second, the FCC has adopted a model based upon “quantile regression analysis” (or QRA) that applies caps to USF support based upon a pool of data that appears to contain a number of errors and is difficult, if not impossible, for any single company manager to analyze. Moreover, the QRA model and resulting caps, at least for now, shift from year-to-year in ways that cannot be easily predicted. To be clear, rural providers like Ritter are not looking for guarantees with respect to revenue streams—we simply want some reasonable visibility into USF support and the ability to plan our businesses accordingly. The law requires that USF support be “sufficient, predictable and specific”—and the QRA in its current form does not permit company managers to make reasonable predictions about cost recovery revenues to be obtained even a few years out, never mind over the 20-year-plus life of telecom networks.

In fact, Ritter’s multiple operating companies provide an interesting perspective on the flaws of the current QRA model. Based on the data used in the QRA model, it would seem at first blush that two of Ritter’s subsidiaries, E. Ritter and Tri-County, are somewhat similarly situated based upon their “access lines per square mile” and several other factors. On the other hand, E. Ritter is located in the Mississippi River Delta where the soil is very rich and allows for cable to be buried, which provides a lower cost in the long run; while Tri-County is situated in the Ozark Mountains where the cable must be strung up on poles and overcome a 2,000 feet elevation change. The cost characteristics of Tri-County are many times greater than E. Ritter and Tri-County is very close to the caps set by the regression. There are many legitimate reasons that some companies have high costs and the regression should be used as a tool to identify companies that need further examination, not as a blunt instrument to excise funding based on an arbitrarily determined percentile.

Such oddities in the caps are compounded by data errors in the underlying QRA model that is used to develop the caps. For example, Tri-County’s service area is 120 square miles larger than the FCC’s accounting in the model. Similar calculation errors have been found in companies across the country. While each data issue on its own might not seem troubling, because of the way in which the model looks at all telcos nationwide, a change in any given factor for a single company can actually cause significant fluctuations in the USF support that telcos across the country receive. The FCC is taking steps now to address a number of these data errors—but this will result in the entire model and the QRA caps effectively being reset at the end of this year, adding to the unpredictability as we all hold our collective breath waiting for the new caps to come out.

While much attention has been paid to the so-called Connect America Fund Phase 1—which is aimed at giving larger carriers a near-term incentive to invest in rural areas—smaller rural carriers have been forced to put many significant investments on hold for the time being pending the resolution of the regulatory uncertainties described above. A recent survey conducted by NTCA–The Rural Broadband Association² underscores just how real the impacts have been. Out of 185 small carrier re-

²This survey can be found through the following link: <http://www.ntca.org/2013-press-releases/survey-shows-rural-telecommunications-carriers-postponing-delaying-network-upgrades-because-of-regulatory-uncertainty.html>.

spondents, 127 indicated they have either postponed or cancelled plans to upgrade their network infrastructure due to lingering regulatory uncertainty. One-hundred and one of these respondents indicated that the combined value of the projects put on hold equaled more than \$492 million.

More recently, a publicly filed outline of a meeting between U.S. Department of Agriculture (USDA) Secretary Thomas Vilsack and FCC Chairman Julius Genachowski further underscored these concerns.³ That filing outlined the importance of the USDA's historic role of promoting rural economic development and financing rural utilities infrastructure. It also noted that the economic stability of rural areas depends on the availability of resilient robust communications infrastructure. But the filing then indicated that, in Fiscal Year 2012, only 37 percent of the telecom infrastructure financing made available through the USDA was used. USDA specifically cited communications from current and prospective borrowers of the program regarding hesitation to increase outstanding debt and move forward with planned construction due to the recent regulatory changes. In other words, it is not as if demand by carriers and consumers is not there—to the contrary, it is quite clear that consumers across the country are seeking increased levels of broadband, and as always, rural telcos are willing and eager to serve them. Rather, the concerns that have reduced loan demand arise out of whether the regulatory changes now being implemented and those perhaps still to come will preclude the payback of loans taken out to advance deployment of broadband-capable networks in rural areas.

Such developments are disappointing when one considers what rural broadband investment means to the country as a whole. For example, the Hudson Institute released a paper in October 2011 highlighting the significant investment that rural providers provide beyond their own local economies—the study showed that they contributed \$14.5 billion to the economies of the states in which they operated in 2009.⁴ An earlier study indicated that every one percentage point increase in broadband penetration increases overall employment by 0.2 percent to 0.3 percent a year.⁵ In short, broadband investment translates into jobs in the near-term, valuable infrastructure in the long-term, and benefits that flow not only locally, but regionally and nationally as well.

So how can we address these concerns as a country and get rural broadband investment back on track? Three key steps can and should be taken in short order.

First, the FCC should re-evaluate the QRA model and the caps it produces to ensure greater transparency, accuracy, predictability, and methodological integrity in their application. The caps should be phased-in over a longer period of time—especially given that the caps still need further development and particularly to the extent that they apply inappropriately to limit recovery of investments made years ago, before the rules were changed. The caps should also be used ultimately as a “trigger” that flags a carrier for additional review, rather than serving as an automatic disqualifier of recovery of certain costs.

Second, consistent with its commitment to a “data-driven” approach, the FCC should not adopt additional cuts, caps, and constraints on USF support and ICC cost recovery until it has fully implemented the changes already adopted and evaluated their impact on consumers. A number of the reforms already adopted and just now being implemented will result in rate increases on rural consumers and are slowing down broadband investment as noted above. Before undertaking changes that may only exacerbate these concerns, the FCC should take stock of the effects of its reforms on broadband deployment, broadband adoption, and end-user rates through a data-driven analysis.

Third, the FCC needs to define a path forward for a sustainable broadband future for consumers in areas served by smaller carriers like Ritter. The FCC created a Connect America Fund for larger carriers, but it left in place legacy USF programs for smaller carriers that reflect, on the whole, reductions in USF and ICC revenues. And the irony is that this legacy system *still* needs updating to serve the objective of universal service in a broadband-enabled world. Today, if a Ritter customer wants to stop buying plain old telephone service from our company and just wants broadband alone, that customer's broadband rates would increase because USF support on that line goes away under the legacy rules that are still in place. It is essential that the FCC update its USF mechanisms to avoid this result—it can and

³ See Ex Parte letter filed on 2/15/13 by Acting Administrator Padalino which can be accessed here: <http://apps.fcc.gov/ecfs/document/view?id=7022122079>

⁴ The Hudson Institute study is available through the following link: <http://www.hudson.org/files/publications/RuralTelecomOct2011.pdf>

⁵ (n.d.). Retrieved from website: http://www.brookings.edu/~media/Files/rc/papers/2007/06labor_crandall/06labor_crandall.pdf.

should create a targeted Connect America Fund in areas served by smaller rural carriers by providing sufficient support for the networks (both last-mile and transport) that enable the availability of advanced services of all kind in rural markets, regardless of whether each customer chooses to buy just plain old telephone service on those networks. This does not require massive changes or reworking of the existing mechanisms along the lines of the Connect America Fund that is still in its second year of development for larger carriers—all that is required here is a technical fix to the existing rules to achieve the FCC’s modernization objectives.

In the end, small carriers like Ritter and their representatives in Washington, D.C. remain committed to working with the FCC and other policymakers to ensure that the statutory promise of universal service is realized. The experience over the past decade proves that sufficient, predictable, and specific USF and ICC mechanisms drive investment, improve the quality of life, create jobs, and increase economic opportunities in rural markets. We believe that the several simple and straightforward steps noted above will make a significant difference in providing clarity to network operators, lenders, and investors, thereby allowing them to make informed judgments about where and when to deploy capital to build broadband-capable networks. We believe that these steps are consistent with the statutory objectives of universal service and the pillars of reform previously identified by the FCC. And, finally and most importantly, we believe that consumers and businesses in rural areas will benefit from efforts to facilitate greater certainty in communications markets and to define a path forward for sustainable rural broadband.

Contribution Reform

While debate has raged regarding the distribution side of the USF, many policymakers and industry parties alike continue to hope the FCC will soon finally tackle the contribution side as well. There are many in the industry and policymakers as well, who feel the FCC should have at least tacked contributions and distributions at the same time, if not tacking contributions first to better ensure a foundation for and appropriate “sizing” of the fund for the jobs required of it.

Contributions to USF are currently based upon interstate and international revenues from certain telecommunications providers. As consumer preferences shift, it has been widely recognized that the eligible pool of revenue that can be assessed to fulfill the statutory mandates of all four USF programs is declining.

The contributions system must be updated, much like the distribution side of USF, to account for these shifts and to ensure that those that rely upon next-generation networks contribute to their universal availability and access. Contrary to what many may wish to believe, the cost of deploying and using communications infrastructure is not costless—even in an “IP world,” data must be moved from one location to another, and that takes transport facilities, routing, and delivery in even the most efficient and advanced of networks. We must therefore take steps to ensure that the USF is sustainable by capturing the broadest possible swath of those who benefit from the universal availability of the network; casting the contribution obligations more broadly will also help to reduce the burdens now being borne by only a subset of customers, most of whom are making only minimal use of communications networks as compared to other bandwidth-intensive users.

Some have questioned the FCC’s authority to expand the contribution base, but the FCC has ample authority under Section 254(d) to expand the list of assessable services to any services delivered by providers of “telecommunications.” It has used this authority for years to assess contributions upon providers of interconnected VoIP services, and the FCC also long ago concluded (as upheld by the U.S. Supreme Court), even in classifying broadband Internet access service as an information service, that broadband Internet access service also includes a “telecommunications” component. There is thus no “classification” barrier to be resolved in rationalizing contributions, because the legal path to assess contributions on the provision of broadband Internet access services is clearly laid out in the Act and already well-supported under existing FCC policy and precedent.

Furthermore, it makes sense in the current environment, when the USF distribution mechanisms are being reformed to focus more on promoting broadband deployment, that the contributions system should also look to broadband to support such deployment. Indeed, if the FCC can distribute USF support to enable the deployment of broadband-capable networks, as it has done in the wake of its November 2011 reforms pursuant to Section 254(c) (which refers expressly to “telecommunications services”) and Section 254(e) (which refers to “facilities and services for which the support is intended”), Section 254(d) provides an even more straightforward route to require USF contributions based upon the clear and unquestioned fact that broadband Internet access service incorporates a “telecommunications” component. Taking this step to “broaden the base” and update the contributions

mechanisms in short order is essential to make sure the USF is sustainable and to realize the Nation's shared broadband goals.

IP Technology Evolution

Communications networks are evolving, along with consumer preferences and the demand for advanced services. As noted earlier in my testimony, rural network operators and service providers have been at the vanguard of anticipating and responding to these changes, doing a "commendable job" according to a group of FCC commissioners and state regulators charged several years ago with evaluating the progress of investment in advanced infrastructure.

The numbers bear this out—they show that small rural carriers are no longer interested in just being telephone companies. Instead, these small businesses have been at the forefront of investing in their networks and making all kinds of cutting-edge services available to consumers. A recent survey released by NTCA found that its entire membership of small rural telecom providers now include broadband within their service offerings;⁶ a study a few years ago by the National Exchange Carrier Association (NECA) further found that smaller rural carriers could deliver at least basic levels of broadband to 92 percent of their customers as of 2010, and that more than half of smaller carriers had deployed or had plans to deploy next-generation, IP-enabled switching and routing technology in place of legacy telephone switches by 2011.⁷

Consumer demand for services on these advanced networks is on the increase as well—the above-referenced NTCA survey indicated that the consumer "take rate" for broadband (*i.e.*, the rate at which consumers who can get access to broadband are choosing to purchase it) is nearing 70 percent. In other words, these rural networks are not being built just for their own sake, but precisely because real customer demand is driving them—including demands for higher-speeds that require additional investment and upgrade beyond the basic levels of broadband that many small rural carriers can make available today. Small carriers have demonstrated their commitment to promoting broadband adoption in a variety of ways beyond just trying to deploy the best possible "future proof" networks. From providing home-network installation and computer/online literacy training to participating in the FCC's Broadband Lifeline pilot program, rural telcos are looking to make sure that as many consumers as possible get onto the network and that they recognize and realize the value of the services provided. Broadband adoption is not just a one-time event—it requires a commitment to ensure that each customer finds good reason to *stay* on the network once they've chosen to subscribe, and as community-based providers, small rural carriers are as well-positioned as any to make that case.

The question then becomes how do we promote and sustain this evolution to next-generation network technologies, including IP-enabled services that depend upon a robust broadband foundation. To be clear, it is not as if the public switched telephone network is "dying" or that it needs to be "shut off" by regulatory mandate at some point. Nor is it the case that an IP-enabled service equals "the Internet." IP is just a technology, and there is nothing special about a network that uses IP that makes it the "Internet." There are plenty of networks maintained by firms ranging in size from the smallest rural telco to AT&T and Comcast that are privately managed and provide quality-of-service that is unavailable and unobtainable on the public Internet. Moreover, the evolution to IP technology is already occurring *as* the "public switched telephone network" becomes more of a "public routed communications network."

So it is an utter red herring to contend that this migration to IP-enabled services and underlying higher-speed networks necessarily means that everything is moving "to the Internet." IP may be a technology that is *used in* the Internet, but to be unmistakably clear, IP *does not equal* the Internet. Instead, what we are seeing is an evolution in technology that, while representing a significant leap in capacity and capability, is analogous to when we moved from analog to digital technology in networks decades ago. This is not to say that we should maintain the same old regulations as we migrate to newer network technologies—this is just to say that we should not assume that the existing regulations are inapplicable or of no use as new technologies come on line simply because IP happens to have "Internet" in its name. In the end, core statutory principles relating to protection of consumers, promotion of competition, and assurance of universal service apply by law to all communications, regardless of the technology used on underlying networks.

⁶This survey can be found through the following link: <http://www.ntca.org/images/stories/Documents/Advocacy/SurveyReports/2012ntcabroadbandsurveyreport.pdf>.

⁷This survey can be found through the following link: https://www.neca.org/cms400min/NECA_Templates/PublicInterior.aspx?id=100.

It is important that policymakers approach the debate over how to promote and sustain the ongoing IP evolution with this backdrop in mind. The FCC is considering such questions now in the context of a pair of petitions filed by NTCA and AT&T in late 2012. Our belief is that policymakers can best promote and sustain this ongoing evolution through carefully designed regulatory policies that do not “prejudge” the value (or inapplicability) of specific rules upfront. Policymakers should neither dismantle the current regulatory framework simply because services are being provided via IP technologies, nor should they leave existing rules in place and simply hope that they serve the same purpose they once did.

The former option, which NTCA has characterized as taking a sledgehammer to existing regulations, would create a regulatory vacuum that undermines the interests of consumers and defeats the objective of providing regulatory certainty. Customers have felt the negative impacts from the absence of adequate regulatory oversight of services. Those impacts are underscored by rural call completion issues. Those impacts are felt by customers whether the services are IP-enabled or otherwise. The latter option, meanwhile, would turn a blind eye to the fact that consumer expectations *are* changing and services *are* evolving and that regulations must be re-evaluated periodically to determine if they have redeeming value and purpose.

The NTCA petition therefore charts a middle course that would look at existing rules to see if each rule still has value in serving the statutory goals of consumer protection, promotion of competition, and universal service. This approach has the benefit of starting from a well-known regulatory framework that gives certainty to consumers, investors, lenders, and the industry, but recognizing that there may be the need to modify or discard elements of that framework to the extent needed to address technological change or other factors. We support such a comprehensive and thoughtful review of the regulatory framework, and we also encourage the FCC to take certain targeted steps in the near-term to accelerate the IP evolution—such as tailoring universal service support to support broadband more directly and ensuring reasonable interconnection between IP-enabled carrier networks.

Call Completion

Rural consumers and the carriers that serve them are losing faith in the ability of regulators to ensure seamless connections across critical communications networks. Increasingly over the past few years, calls do not get through to rural areas—or when they do, they often have quality problems. This large scale problem is seriously and negatively affecting not only consumers, but public safety and the viability of businesses that are located in rural areas.

The problem stems from choices made by originating long distance carriers to use the cheapest possible route to transmit calls to rural areas—with the apparent sense that, if the calls should happen not to get there because the least-cost router in the middle failed to deliver the call, there is little regulatory or economic consequence (if any) for such failures. The solution to this problem lies with the originating long distance carriers that need to better police their service quality, and meaningful oversight and enforcement action by the FCC is needed to prompt such a solution.

The FCC recently released a Notice of Proposed Rulemaking (NPRM) which would force carriers to retain information so that the scope of the problem could be ascertained on a company-by-company basis and enforcement action could be pursued. However, to date, that NPRM has not been published in the Federal Register and no comments have been filed—this is more than 2 years after rural carriers and their trade associations first brought this issue to the attention of the FCC. The FCC also recently announced a “Consent Decree” with Level 3 Communications, in which the carrier paid a “voluntary contribution,” to monitor its call completion performance, and to pay additional amounts if its performance failed to satisfy certain metrics.

In the interim, unfortunately, there has been no measurable and sustained improvement in overall call completion rates to rural areas, and calls continue to fail at an alarming rate. The FCC has made it clear that carriers may not block, choke, or restrict traffic. But these words have done little to deter call failures on their own, and only strong oversight paired with effective FCC enforcement action against offending carriers will ultimately put an end to the problem.

Video Issues

Small carriers have been providing video service to their consumers for many years. In some areas this is done in direct competition with large cable companies, enhancing consumer choice. In more remote places where over-the-air signals may be weak and unreliable, this is a critical service to customers who need access to local news and weather reports.

Video provision is also a broadband issue, as small carriers frequently use the same infrastructure to deliver both video and broadband services. In fact, the FCC has found that these services are intrinsically linked.⁸ When small carriers are able to offer video and broadband services together, data shows that broadband adoption goes up 24 percent,⁹ which makes it more feasible to invest in broadband networks. However, small carriers' ability to deliver video and broadband services are impeded by outdated program access rules that make the business case increasingly difficult even for the Nation's largest cable companies.

Retransmission consent rules that are now over twenty years old—and thus reflect a very different video marketplace—give programmers a stranglehold over video content and prevent small providers from negotiating market-based rates for programming. Increasingly, customers are facing blackouts of channels due to programmers' "take it or leave it" tactics, which are technically prohibited but occur frequently. In addition, evidence suggests that small and medium video providers pay up to twice the rates that large companies do for the same programming. And some types of content that is necessary for a viable service offering, notably sports programming, may be subject to even higher rates if it is available at all.

In addition, recent years have seen a spike in instances where separately owned stations within the same market coordinate their retransmission consent negotiations. Such collusion has enabled these separately-owned broadcasters to command retransmission consent prices that are 21 percent to 161 percent higher than each station negotiating on its own behalf could command on its own.¹⁰ These high rates are in turn passed on to consumers and decrease competition in the local television market.

Customers must also pay ever-higher prices for video programming they do not even want because programmers force providers to buy multiple unwanted channels, and place them in basic service tiers, in order to have access to channels that customers demand. This "forced tying" prevents small providers from offering more affordable packages of channels, and is raising prices to unsustainable levels.

Technology and the video marketplace have changed drastically since the current program access regime was enacted over 20 years ago. Just as we are talking about the need to re-evaluate rules in the context of an IP evolution in communications networks, it is far past time for policy makers to reform these outdated rules and encourage, rather than impede, video competition and broadband deployment.

Wireless Issues

Rural consumers require access to a strong and reliable wireless network and rural carriers are attempting to meet that demand despite monumental challenges. A lack of interoperability across the 700 MHz spectrum may lead to spectrum lying fallow or islands of rural service with devices that cannot be used outside of a customer's home service area. A lack of fair and reasonable data roaming agreements with large carriers compounds the problem, creating barriers even when spectrum is interoperable. Furthermore, rural carriers often lack access to the equipment and handsets that are available to larger carriers.

The anti-competitive actions and advocacy efforts of larger carriers are pushing smaller players out of the wireless market, to the detriment of rural consumers whose only option for wireless service is often the local community-based telecommunications provider.

Conclusion

Small rural carriers like Ritter have been at the forefront of technological evolution and deployment of advanced services, driven by a commitment to the communities in which they live and operate and supported by cost recovery mechanisms that, while in need of updating, enabled them to invest in high-quality networks in some of the most challenging corners of the United States. Small rural carriers also represent the lifeblood of economic development in their communities, providing well-paying jobs and critical connections to distant markets.

Universal service is a national policy codified in Federal law. But it is much more than that—it is also a sensible reflection of the notion that our networks are made more valuable by the number of connections to them, and the data show real and meaningful payback to regional economies and the national economy through rural broadband investment. Universal service is therefore too important to be the subject of experiment or theory. We also cannot look at universal service merely as a question of "how many customers are connected right now?" Universal service cannot be

⁸MB Docket No. 05–311, 22 FCC Rcd 5101, 5132–33, ¶62 (2007).

⁹See NECA comments, GN Docket Nos. 09–47, 09–51, 09–137 (filed Dec. 7, 2009), p. 6.

¹⁰See ACA comments, MB Docket Nos. 09–182 and 07–294 (fil. Mar. 5, 2012), p. 9.

viewed as a snapshot “scoreboard” of the number of customer connections in place at any given time. Instead, universal service will only succeed, and the universal service dollars put into network investments will only be effective and efficient and provide a return to the country as a whole, if the connections are *sustainable*—that is, if the networks that are built through universal service dollars are “future-proof” in terms of capacity and if the services that are available on those networks remain high-quality and affordable.

Small rural carriers remain committed to their communities and the consumers they serve in the face of changing technologies and shifting consumer preferences. But we can only carry out the mission of customer service in today’s and tomorrow’s communications markets if network operators have reasonable visibility into the ability to recover investments over time and if we can provide consumers in the hardest-to-serve parts of the country with the affordable, reliable cutting-edge telephone, broadband, video, and wireless services that they demand and deserve. The future of rural communications could be in question if small rural carriers cannot reasonably plan for the next round of network builds, or if calls do not complete to rural areas, or if consumers cannot gain access to affordable video or wireless services. We hope that Congress and the FCC will help make the promise of rural communications a reality through effective and sensible oversight that protects consumers, promotes competition, and ensures universal service.

Senator PRYOR. Thank you.
Mr. Davis.

**STATEMENT OF STEVE DAVIS, EXECUTIVE VICE PRESIDENT,
PUBLIC POLICY AND GOVERNMENT RELATIONS, CENTURYLINK**

Mr. DAVIS. Good morning, Mr. Chairman and members of the Committee. We appreciate your leadership in calling today’s meeting on the state of rural communications.

In our view, the central issue in rural communications is the availability of broadband access and the challenge of bringing it to markets with low population densities in often very challenging terrain.

CenturyLink serves thousands of rural communities, often with household densities below 15 people per square mile, many of which do not have access to any other provider of voice service or terrestrial broadband. By comparison, the population of the greater Washington, D.C., metropolitan area is about 13,000 people per square mile.

Over the past 5 years, CenturyLink has invested more than \$4 billion to bring broadband access to every corner of our service territory where it is economically feasible to do so. And, despite the rural nature of our markets, we are making high-speed Internet service available to more than 91 percent of the homes and businesses within our local service area.

America is a vast country, and there are many diverse places in almost every state where the cost of investment is too great and broadband availability simply won’t be feasible under today’s system. According to the FCC, nearly 18 million consumers in rural areas still lack access to broadband and, as such, aren’t yet at the table in today’s digital economy. These rural customers want high-speed fiber-fed broadband networks that are capable of delivering access to new educational opportunities, cloud computing services, healthcare applications, IP television, and streaming video. CenturyLink and other large rural providers have the opportunity to reach nearly 80 percent of those who do not have broadband today. Fiber-fed broadband brings the capacity that will be needed

to meet the service demands of both wireline and wireless customers for the foreseeable future.

In the last several years, Federal policies have sought to address these challenges in a number of ways. As a result of market realities and the reform process, we now believe there is broad consensus for the following four guiding principles:

First, we must target support on a granular level to places where market forces would not otherwise make broadband available.

Second, we must ensure that support goes only to those uneconomic places and where there is not an unsubsidized competitor providing adequate service.

Third, we must ensure that support and services are reasonably equivalent to those available in urban markets, in features, quality, price.

And, finally, we must match support and obligations to serve. Obligations cannot exceed the available support, and they should be limited to the supported areas.

In the near term, the challenge is to keep reaching unserved households and bring more consumers and communities into the broadband economy. A critical feature of the FCC's broadband deployment plan is the interim support component of the Connect America Fund, frequently referred to as CAF-1—C-A-F-1. This fund is intended to jumpstart the unserved deployment process by allocating approximately \$300 million in 2012 and 2013 to the deployment of broadband services in high-cost, unserved areas. These funds have already been collected from customers, as directed by the FCC.

Unfortunately, only a small fraction of the dollars targeted for unserved markets have been put to use. The states and local markets that will benefit from this funding are eager to see the release and use of these CAF-1 funds to build broadband networks and take part in the services that will be provided. With spring's arrival, the time for providers to build new networks is now.

Unsurprisingly, support for moving forward with this approach has been bipartisan and widespread across both urban and rural affiliations. Nearly 100 Members of Congress, including members of this committee, have contacted the FCC within the last 90 days about completing its work on CAF-1 incremental support. The good news is that it appears the FCC is listening and is ready to move forward on this important initiative. CenturyLink will continue to work with the FCC and the industry to achieve good broadband outcomes for unserved areas.

Too often, conversations in rural America take place among neighbors, family, and friends about helpful technologies and advances that they have witnessed in other parts of the country. Sadly, they are accustomed to waiting many years for these advances to be available in their part of the country. The challenge of bringing robust broadband services to rural America is not an easy one, as members of this committee can attest, but it's an important one, and we look forward to working with the FCC and the Congress, in 2013 and beyond, to continue improving the state of rural communications.

Thank you.

[The prepared statement of Mr. Davis follows:]

PREPARED STATEMENT OF STEVE DAVIS, EXECUTIVE VICE PRESIDENT, PUBLIC POLICY
AND GOVERNMENT RELATIONS, CENTURYLINK

Good morning, Mr. Chairman and Members of the Committee. My name is Steve Davis, and I am Executive Vice President for Public Policy and Government Relations for CenturyLink. CenturyLink offers communications services to over 14 million homes and businesses in all 50 states and select international markets. Our services include voice, broadband, video entertainment and data, as well as fiber backhaul, cloud computing and managed security solutions.

We appreciate your leadership in calling today's hearing on "The State of Rural Communications." In our view, the central issue in rural communications is the availability of broadband access and the challenge of bringing it to markets with low population densities and often challenging terrain. In the 21st Century economy, being connected has become an integral part of nearly everything we do, in work, education, medicine, agriculture and numerous other pursuits. And for rural communities seeking economic development, a robust broadband infrastructure is often a prerequisite before any business, large or small, will consider moving to that area.

CenturyLink's local service territory encompasses 37 states, with a handful of major urban areas, numerous smaller cities and towns, vast plains of rural agricultural communities, national parks and forests, tribal lands, mountainous and desert regions, and areas with a great number of lakes. In other words, our service footprint is representative of the various markets in your respective states. CenturyLink serves thousands of rural communities, often with household densities below 15 people per square mile, many of which do not have access to any other provider of voice or terrestrial broadband. By comparison, the population of the greater Washington, D.C. metropolitan area is about 13,000 people per square mile.

Over the past five years, under the current system of Universal Service and inter-carrier compensation, CenturyLink has invested more than \$4 billion of its own capital to bring broadband access to every corner of our service territory where it is economically feasible. And despite the rural nature of our markets, we are making high speed Internet service available to more than 91 percent of the homes and businesses in our local service areas. This includes many places where CenturyLink is the only terrestrial broadband provider and where, without such support, the investment would not be sustainable.

America is a vast country, however, and there are many far-flung places, away from town centers and spread over challenging terrain, where the cost of investment is too great and terrestrial broadband availability simply won't be feasible under today's system. According to the Federal Communications Commission (FCC), nearly 18 million consumers in rural areas still do not have access to broadband and, as such, aren't even at the table in today's digital economy. This is a scope and scale problem that can be largely addressed through targeted investments to areas where the greatest opportunities lie to reach hundreds of thousands of Americans as quickly as possible. CenturyLink and other large rural providers have the opportunity to reach nearly 80 percent of those who do not have broadband today. In addition, the fiber-fed broadband we deploy is important to the provision of both fixed and mobile broadband services. Wireless broadband is generally provided today with fiber connections to the towers that communicate with handsets.

In the last several years, Federal policies have sought to address these challenges in a number of ways, through the FCC's National Broadband Plan, various policies to eliminate barriers to deployment, and the USF/ICC Transformation Order. Broadband availability has definitely increased, but more must be done. As the FCC and rural providers of every stripe have worked together, several guiding principles that have emerged over time:

- We must target support on a granular basis, to places where market forces would not otherwise make it available.
- We must ensure that support goes only to those uneconomic places and where there is not an unsubsidized competitor providing adequate service.
- We must ensure that supported services are reasonably equivalent to those available in urban markets, in features, quality and price.
- We must match support and obligations to serve—obligations cannot exceed the available support and they should be limited to the supported areas.

In the near term, the challenge is to keep reaching unserved households and bring more consumers and communities into the broadband economy. A critical feature of the FCC's broadband deployment plan is the interim support component of the Connect America Fund (frequently referred to as CAF I). This fund is intended to jumpstart the unserved deployment process by allocating approximately \$300 mil-

lion annually to the deployment of broadband services in high cost, unserved areas. These funds have already been collected from customers, as directed by the FCC.

Unfortunately, only a small portion of these CAF I funds have been allocated for use. Specifically, only \$115 million of the \$600 million targeted for unserved markets has been accepted for deployment in the field. The states and local markets that will benefit from this funding are eager to see the release and use of these CAF I funds to build broadband networks and take part in the services that will be provided. With spring's arrival, the time for providers to build networks is now. Most of us in this room know there are hundreds of thousands of consumers who are still unserved, and are eager to be connected.

Unsurprisingly, support for moving forward with this approach has been bipartisan and widespread across both urban and rural affiliations. Nearly 100 members of Congress, including members of this Committee, have contacted the FCC within the last 90 days about completing its work on CAF I incremental support. Governors, mayors, business owners and consumers from across the country have also weighed in with their letters and words of support. Timely FCC action could significantly narrow the rural digital divide, and faster broadband speeds and greater availability of broadband services will give rural consumers access to new educational opportunities, cloud computing services, healthcare applications, IP television, streaming video and faster wireless speeds. These are just some of the important components you must consider in determining the true "State of Rural Communications."

The good news is that it appears the FCC is ready to move forward on this important initiative. We believe and hope that the FCC is prepared to adopt an order which would lay the groundwork for use of these CAF I dollars sooner rather than later. For the hundreds of thousands of households and businesses that have little hope of receiving high speed Internet services today, a speedy decision by the FCC would be a welcome and meaningful action from Washington that would improve both lives and economies in these markets for years to come.

You should also be aware of the accountability aspects of the CAF I funding process. The ability of CenturyLink and other large rural providers to invest millions of dollars of their own capital demonstrates both a willingness and a firm commitment to help our country close its broadband gaps and accelerate the deployment of these high speed networks in areas where it would not otherwise be economically efficient to do so and others will not serve.

Because this hearing focuses on the State of Rural Communications in America, we must also talk about the country's long-term broadband deployment goals and challenges. The FCC is also working on Phase II of Connect America Fund (CAF II) support for high-cost areas served by large rural carriers where there are no unsubsidized competitors and where broadband will not exist without support.

We are hopeful this program will move forward successfully, with most of the funding being accepted and put to work supporting expanded broadband availability in high-cost rural areas where remaining gaps still exist. For this to happen, the cost model must provide adequate support, while also avoiding overpayment. In this regard, CenturyLink supports a forward-looking, or "greenfield" approach, which is the approach the FCC has consistently adopted for cost modeling extending back at least to passage of the 1996 Act.

We must also acknowledge America's rural broadband challenges are greater than any one provider or group of companies. At CenturyLink, we recognize the challenges faced by our smaller industry contemporaries, particularly those operating under rate-of-return regulation in high cost areas. The different forms of regulation have created different incentives and obligations for many years, and this disparate treatment has only increased with recent reforms. However, consumers who do not have broadband service today do not care about obscure regulatory regimes that may delay deployment in their areas. We believe the FCC should work with rate-of-return carriers to address their concerns and can do so in a way that does not slow the benefits of reform for the 80 percent of rural customers served by CenturyLink and other large rural carriers. Small carriers and large carriers receive support from separate USF mechanisms. Moving forward on one does not hurt the other. The "greater good" is bringing as many people online as quickly as possible and remaining focused on helping the rest as quickly as possible.

Too often, conversations in rural America take place among neighbors, family and friends about helpful technologies and advances that they have witnessed in other parts of the country. Sadly, they are accustomed to waiting many years for these advances to be available in their part of the country. The challenge of bringing robust broadband services to rural America is not an easy one, as members of this committee can attest, but it's an important one, and we look forward to working

with the FCC and Congress in 2013 and beyond to continue improving the state of rural communications.

Senator PRYOR. Thank you.
Mr. Carlson.

**STATEMENT OF LeROY T. CARLSON, JR., CHAIRMAN.
UNITED STATES CELLULAR CORPORATION**

Mr. CARLSON. Yes, thank you. Chairman Pryor, Ranking Member Wicker, and—excuse me, we'll get that. Thank you very much. Chairman Pryor, Ranking Member Wicker, and members of the Subcommittee, good morning, and thank you for this opportunity to speak with you today about the challenges confronting those companies that want to serve rural America.

At U.S. Cellular, we focus on having the world's best customer service and delivering industry-leading innovations across our entire territory. We are expanding our world-class 4G LTE high-speed broadband network and will cover 87 percent of our customers with this network by the end of this year.

So, as a company that serves West Virginia, Missouri, Washington, Nebraska, New Hampshire, Indiana, Wisconsin, Minnesota, Virginia, and many other states, I can affirm our commitment to excellent service. I'm also proud of the fact that U.S. Cellular has served these rural areas and been recognized with awards for offering the, "highest network quality performance among wireless cell phone users," as well as being identified as the, "best place to buy a cell phone." In short, what this means is that rural customers can be provided with the best elements of a 21st century network, and that being rural doesn't have to equate to being left behind.

Providing those services in less densely populated areas does present a different set of business and regulatory challenges. We believe there are several core principles, in addition to the ones that have been mentioned here, that should guide your efforts to improve rural communications in this country.

First, the government must ensure that sufficient spectrum is made available to a broad range of wireless carriers, including midsized and smaller carriers operating in rural America. Spectrum is the raw material of the wireless industry. Without sufficient spectrum, calls won't be completed, and consumers' demand for high-speed mobile broadband will go unmet.

In regard to the upcoming incentive auctions, the FCC must adopt small geographic area sizes that will allow carriers, such as U.S. Cellular, to compete for spectrum in the areas that they serve, without being required to bid against national carriers for giant cities. For the same reason, package bidding needs to be rejected by the FCC. National carriers shouldn't be allowed to foreclose midsize and smaller carriers from access to spectrum in rural markets by tying those markets to more expensive licenses for big urban markets.

Second, FCC rules must provide for interoperability across spectrum bands to ensure consumer needs, such as roaming and device portability, are met. A huge problem exists today in the 700 megahertz band, which was auctioned several years ago. Decisions by national carriers to deploy handsets that used customized designer bands, subset bands, has led to handsets that only work on one or

two carriers' networks, which suppresses intercarrier roaming opportunities for 4G service and effectively assures that customers are locked into a large carrier's network.

Today's increasingly concentrated wireless industry does pose a threat to competition. The FCC must fix this problem in the 700 megahertz band and restore interoperability by adopting proposals to solve this problem. And the FCC should act before the 600 megahertz auction repeats this problem, because the 600 megahertz band also is very essential to providing service in rural areas.

Third, we must acknowledge that consumers desire both wireless and wireline services, and the distribution of support under the Federal Universal Service Program needs to appropriately balance those interests. We did not agree with all of the decisions the FCC made, and we're actively asking the Commission to fine-tune the mobility fund programs, going forward. Consumer demand for mobile broadband continues to skyrocket at a time when deployment to the most rural areas of the country remains uneconomic and, thus, still incomplete. Unfortunately, the FCC's Mobility Fund fails to allocate sufficient resources to wireless. Less than 10 percent of the overall funding is going to wireless.

In conclusion, the challenges that we face in rural America are not insurmountable. The issue is how to ensure that the regulatory regime is sensitive to the business challenges of serving rural markets for equipment that could serve 250,000 people in an urban market has to see its costs spread over maybe 5,000 or 10,000 people in a rural area. Government support is necessary, in some instances, where the economics will never work for the private sector to invest alone.

Your urgent attention to these three major issues is kindly requested by our company and by other companies that are like us that intend to serve rural America to the best of our abilities.

Thank you for the opportunity to testify.

[The prepared statement of Mr. Carlson follows:]

PREPARED STATEMENT OF LEROY T. CARLSON, JR., CHAIRMAN,
UNITED STATES CELLULAR CORPORATION

Chairman Pryor, Ranking Member Wicker and members of the Subcommittee, I am Ted Carlson, Chairman of United States Cellular Corporation. Thank you for the opportunity to speak with you today. I am pleased to provide you with my observations on the state of rural communications and the challenges we face in serving the people of rural America.

Introduction

At U.S. Cellular, we deliver a world class customer experience and industry-leading innovations across our entire territory, not just in densely populated urban markets. We are expanding our state of the art 4G LTE network and will cover 87 percent of our customers by the end of this year. As the Chairman of a company that serves West Virginia, Missouri, Washington, Nebraska, New Hampshire, Indiana, Wisconsin, Minnesota, Virginia, and many other states, I can affirm that our commitment to a superior network and excellent customer service not only rivals, but beats, what is provided to consumers in urban areas. We are proud of the fact that, despite challenges of serving rural markets, U.S. Cellular has been recognized with awards for offering the "Highest Network Quality Performance Among Wireless Cell Phone Users" as well as being identified by various sources as the "Best Place to Buy a Cell Phone" and the "Number One Large Company to Work For." We have proven that rural consumers don't have to settle for second best and that being "rural" doesn't equate to being left behind.

But providing those services in less densely populated areas does present a different set of business and regulatory challenges that urban providers don't encoun-

ter. That is why we appreciate the Committee's willingness to take the time today to examine those differences and, we hope, consider effective solutions to them.

For nearly thirty years, U.S. Cellular has been a leader in providing high-quality mobile wireless telecommunications and information services in rural America. Today, we operate in over 150 FCC-licensed markets throughout the nation, serving over 5 million customers, employing approximately 8000 associates, deploying the latest 4G mobile broadband technology and providing our customers with excellent service.

Providing an outstanding customer experience is an integral part of our success and should reassure you that "rural" can also mean "excellence" when it comes to communications services. We have won the J.D. Power Award for Highest Network Quality in the North Central Region of the United States for fifteen consecutive periods over eight years. We scored first in Forrester's 2013 Customer Experience Index for wireless providers, surpassing the "big four" wireless carriers by a wide margin.¹ For the last three years, Consumer Reports has named U.S. Cellular the top service provider amongst post paid wireless carriers.²

Despite our consistently high performance, the wireless industry remains very challenging, especially for mid-sized and smaller carriers like us who tend to focus on rural areas. Let me provide some observations on what we're seeing in the marketplace, the challenges we face as rural wireless providers, and some solutions.

Lower 700 MHz Interoperability

First, as wireless providers deploy services in new spectrum bands, FCC rules must provide for interoperability across those bands in order to ensure that consumer needs such as roaming and device portability are met. A huge problem exists today in the 700 MHz Band. Decisions by national carriers to deploy handsets using customized designer band classes, have fractured the handset ecosystem, suppressed inter-carrier roaming opportunities for 4G service and locked customers into large carrier networks. Interoperability in the wireless industry is a pro-competitive concept that was first adopted by the Reagan-era FCC which recognized the potential for the then-dominant wireline companies to exclude non-affiliated cellular providers from the emerging wireless equipment ecosystem. The FCC must return to these principles, fix the problem in 700 MHz, and once again restore interoperability and, thus, competition and broader consumer choice, by adopting the proposals made by our Company, The Competitive Carriers Association ("CCA"), and the Interoperability Alliance. The FCC must also act to avoid a repeat of this problem as it considers the rules for 600 MHz incentive auctions. Failure to do so would undermine the competitive marketplace and have a significant adverse impact on auction revenues in the incentive auctions. Wireless interoperability was established by the Reagan era FCC at the start of the industry in order to foster a level playing field and to drive the development of roaming and a robust device ecosystem.

Fast forwarding to today, we face a world where a lack of device interoperability across the Lower 700 MHz band has largely prevented Lower 700 MHz A Block licensees from gaining access to consumer devices capable of operating on their spectrum. In turn, this lack of available devices has significantly hindered network deployments by these licensees. Notably, because "a significant number of Lower A Block licenses are held by smaller, rural, and regional licensees,"³ these deployment difficulties have had a disproportionate negative effect on consumers in rural and unserved areas.

This lack of interoperability arose because the 3rd Generation Partnership Project ("3GPP") developed two separate, duplicative, and incompatible band classes for Long-Term Evolution ("LTE") wireless broadband operations in the Lower 700 MHz band. Specifically, Band 12 covers operations in the Lower A, B, and C Blocks, whereas Band 17 only covers operations in the Lower B and C Blocks. AT&T, the only national carrier providing service in the Lower 700 MHz band, operates in the Lower 700 MHz using only Band 17 equipment, which cannot be used by Lower A Block licensees. Because AT&T is the only licensee operating in Lower 700 MHz band which is large enough to be capable of driving the device ecosystem, the Lower A Block licensees have found themselves with essentially no LTE mobile devices to sell to their existing and prospective subscribers. The lone exception is U.S. Cellular, which, through great effort, managed to secure a small portfolio of LTE de-

¹ See Forrester Research, <http://www.forrester.com/home> (registration required); See also, "Nintendo, Fios, U.S. Cellular Top Forrester's Consumer Rankings," http://news.cnet.com/8301-1023_3-57565208-93/nintendo-fios-us-cellular-top-forrester-consumer-rankings/.

² www.consumerreports.org/cro/phoneplans0113.htm

³ *Promoting Interoperability in the 700 MHz Commercial Spectrum*, Notice of Proposed Rulemaking, 27 FCC Red 3521, 3532 (2012) ("Interoperability NPRM").

vices capable of operating on band 12 and thus utilizing the Lower A Block spectrum. The 2012 launch of LTE service by U.S. Cellular in conjunction with its partner, King Street Wireless, remains the only Band 12 network launch since Lower 700 MHz licenses were auctioned in 2008. However, U.S. Cellular is the exception, and even it remains constrained in its ability to gain access to a wide variety of LTE-capable devices. Notably, because of the ongoing lack of interoperability between Band 12 and Band 17 in the Lower 700 MHz band, a number of Lower A Block licensees were compelled to request an extension of their interim construction benchmark deadlines, which the FCC recently granted.⁴

The industry has been actively seeking intervention by the FCC since 2009. Back in September of that year, after discovering that AT&T had begun to issue Requests for Proposals that specified Band 17-only equipment, an alliance of Lower 700 MHz A Block licensees (the “Good Faith Alliance”) filed a petition for rulemaking asking the FCC to adopt an interoperability requirement for the Lower 700 MHz band.⁵ In doing so, the Good Faith Alliance warned the FCC that various public interest harms would arise if it failed to prohibit AT&T from deploying Band 17-only devices. The FCC sought comment on this petition in 2010.⁶ Commenters in support of the petition included small and regional 700 MHz licensees, a coalition including Sprint Nextel and T-Mobile, trade associations representing rural and smaller providers, a coalition of public interest groups, and public safety associations. Nevertheless, the FCC took no further action regarding the lack of interoperability in the Lower 700 MHz band until March 2012, when it released a Notice of Proposed Rulemaking seeking additional comment on the issue.⁷ Once again, the vast majority of commenters, representing various carriers and organizations, urged the FCC to adopt an interoperability requirement. Unfortunately, although it has been more than three and a half years since the Good Faith Alliance filed its petition, the FCC still has not adopted an order in that proceeding. And this is despite the fact that the FCC has acknowledged that “a unified band class across the Lower 700 MHz band has the potential to yield significant benefits for all licensees.”⁸

Interoperability across the Lower 700 MHz band would greatly benefit the public. For instance, as noted, the current and ongoing lack of interoperability has severely impeded the competitive roll-out of LTE broadband coverage by Lower A Block licensees because the lack of interoperability undermines the business case for smaller carriers to deploy networks. In turn, the lack of interoperability has impeded access to broadband services in the many parts of the U.S. not served by AT&T. In other words, consumers across the country are being deprived of the substantial benefits of broadband access due to the lack of interoperability in the Lower 700 MHz bands.

More broadly, the difficulties faced by Lower A Block licensees decrease competition in the wireless marketplace to the detriment of consumers. This is because significant opportunities for small and regional carriers—who otherwise would be in a position to provide robust competition to the dominant national carriers—have been lost due to the artificial barriers created by their inability to obtain devices capable of operating on their spectrum holdings. The importance of continuing to advance robust competition is especially crucial at this time given that the wireless industry is in its most precarious competitive state in over a decade. For instance, in its most recent Competition Report issued in March, the FCC, for the third straight year, was unable to find the existence of “effective competition” in the wireless industry.⁹ In fact, the weighted average of the FCC’s Herfindahl-Hirschman Index (“HHI”) calculations increased to 2873 since the FCC’s previous report.¹⁰ Notably, an HHI exceeding 2500 indicates that a market is “highly concentrated.”¹¹ The FCC also noted that, from 2003 to year-end 2011, the average HHI has in-

⁴See *Wireless Telecommunications Bureau Extends 700 MHz A Block Licensee Interim Construction Benchmark Deadline Until December 13, 2013*, Public Notice, DA 13-210 (rel. Feb. 13, 2013).

⁵See *Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operation on All Paired Commercial 700 MHz Frequency Blocks*, 700 MHz Block A Good Faith Purchasers Alliance, RM-11592 (filed Sept. 29, 2009).

⁶See *Wireless Telecommunications Bureau Seeks Comment on Petition for Rulemaking Regarding 700 MHz Band Mobile Equipment Design and Procurement Practices*, Public Notice, 25 FCC Rcd 1464 (2010).

⁷See *Interoperability NPRM*, 27 FCC Rcd 3521 (2012).

⁸See *id.* at 3522.

⁹See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Sixteenth Report, WT Docket No. 11-186, FCC 13-34, ¶ 2 (rel. Mar. 21, 2013) (“*Sixteenth Competition Report*”).

¹⁰See *id.* ¶ 59.

¹¹See *id.* at ¶ 54.

creased from 2151 to 2873, which represents a 33.6 percent increase in market concentration over this time.¹² If Lower A Block licensees are provided a level playing field, they could help to correct this competitive imbalance. Unfortunately, at this time, the potential for Lower 700 MHz A Block deployments to spur increased competition has not come to fruition because additional competitive carrier LTE deployments have been delayed and/or limited by the continued fragmentation of the Lower 700 MHz spectrum band.

Moreover, absent interoperability, Lower A Block licensees likely will never be capable of providing effective competition because they will not be able to provide the quantity and quality of devices necessary to attract a substantial customer base. As the Commission recognized in the *Sixteenth Competition Report*, mobile handsets and devices “directly affect the quality of a consumer’s mobile wireless experience and can factor into a consumer’s choice of a wireless provider.”¹³ As such, a carrier’s “portfolio of handsets and devices may be a significant non-price factor affecting its ability to compete for customers.”¹⁴

To date, Lower A Block licensees have found themselves with essentially no LTE mobile devices to sell to their existing and prospective customers, which is not surprising considering that vendors seek first to serve the demands of their largest possible customers, where volume (and profitability) is greatest. Smaller carriers simply cannot drive handset development. Moreover, even if smaller carriers manage to gain access to some devices, those devices will cost more because these carriers lack the economies of scale necessary to reduce costs. These higher device costs for Lower A Block licensees must either be passed on to the consumer (in the form of higher retail prices, which most consumers will not pay if given the choice of service providers), or absorbed by the Lower A Block licensee if it chooses to instead price LTE devices comparably to similar devices offered by the national operators. The consequences of this latter approach, however, would be unsustainable. Because device subsidies result in slim—or in some cases nonexistent or negative—profit margins, Lower A Block licensees may become unprofitable and could eventually be forced out of business, which results in even less marketplace competition.

In addition to increasing their negotiating leverage and economies of scale, volume purchases afford the larger carriers with considerable market power *vis-à-vis* handset manufacturers, which can be used to demand particular customer features, compel prioritization of proprietary specifications, and achieve exclusive or extended first-to-market positions. As a result, even if additional Band 12 devices become available, they likely will be delayed for months or years after the introduction and refinement of multiple Band 13¹⁵ and Band 17 devices. Lower A Block licensees therefore will not have available to them all of the “cutting edge” phones, further entrenching the largest carriers’ dominant market positions. In sum, Lower A Block licensees, like all carriers, require a sufficient *quantity* and *variety* of handsets to meet consumer demand.¹⁶ However, the lack of interoperability has produced a device ecosystem in which widely available, economically reasonable handsets cannot function on the Lower A Block spectrum. The resulting higher device costs and the associated lack of a device ecosystem for Band 12 devices slows deployment by Lower A Block licensees and puts these carriers at an even greater competitive disadvantage.¹⁷

Moreover, even if most Lower A Block licensees managed to obtain a sufficient quantity and quality of handsets and could find a way to cost-justify deploying their networks, they would find themselves at a serious competitive disadvantage because large carriers already will have established a substantial customer base that, absent interoperability, will not be able to take their phones and switch to competitors, no matter how much better or less expensive the competing service may be. Thus, in addition to conflicting with consumers’ expectations, the inability of a subscriber to seamlessly switch to another carrier further exacerbates the “head-start advantage” large carriers already enjoy because consumers will be less willing or likely to seek

¹² See *id.* at ¶ 59.

¹³ *Id.* at 83.

¹⁴ *Id.*

¹⁵ Band 13 supports the Upper 700 MHz C Block, the vast majority of which is licensed to Verizon Wireless.

¹⁶ See *id.* at ¶ 220 (“In addition to competing on price and network quality, mobile wireless providers continue to compete by offering consumers a variety of different mobile wireless devices with innovative features.”).

¹⁷ See *id.* at ¶ 184 (“When competing mobile wireless service providers deploy compatible network technologies, greater economies of scale in the production of both end-user devices and network infrastructure equipment can result, lowering the unit cost of handsets, chipsets, and other network equipment. This, in turn, may promote more rapid adoption of mobile wireless services, a greater variety of handsets, and more price competition.”).

service from Lower A Block licensees for a considerable period of time. As a result, unless the FCC promptly adopts an interoperability requirement, the harms to both Lower A Block licensees and, more importantly, the consumers they serve, will be baked into the competitive landscape and will continue indefinitely.

The current, and potentially future, dearth of rural LTE networks will be problematic not only for potential customers and for commercial licensees in rural markets, but also for public safety users who may desire to roam on commercial systems in those areas. This is significant because FirstNet, the First Responder Network, is required to enter into roaming agreements with commercial providers to ensure nationwide coverage, and the nature of any interoperability requirement for commercial users will have a profound impact on the ability of FirstNet and the FCC to meet these roaming obligations. Moreover, because Lower A Block licensees include many rural carriers, the areas they serve are exactly the places where public safety may most need to roam onto commercial networks. A lack of interoperability therefore could impede first responders' ability to respond to emergencies.

Likewise, absent an interoperability requirement, roaming options for Lower A Block licensees will remain severely limited because they still would be prevented from roaming on AT&T's network. And, because AT&T is the only carrier that can be expected to operate a nationwide LTE network using Lower 700 MHz spectrum, the result will be that Lower A Block licensees will have no potential nationwide roaming partner. In other words, the existence of Band 17 has the effect of denying any carrier using Band 12 access to nationwide roaming on the Lower 700 MHz spectrum.¹⁸ As the FCC recently acknowledged, "roaming remains particularly important for small and regional providers with limited network population coverage to remain competitive by meeting their customers' needs for nationwide service."¹⁹ Thus, the absence of nationwide roaming likely will cause many consumers to avoid regional A Block licensees in favor of the national networks of AT&T or Verizon.

Although the FCC would prefer an industry solution to the current lack of interoperability in the Lower 700 MHz band,²⁰ no industry solution has been forthcoming since this issue was identified over three and a half years ago. And there is no reason to believe that the industry will change its course absent a regulatory requirement. In a highly concentrated market, large carriers gain little, and could potentially lose much, by voluntarily agreeing to interoperability. Large carriers derive little or no benefit from affording their customers the ability to roam on rival networks because these carriers own geographically extensive networks, making the potential incremental coverage available to them (and to their customers) via roaming quite small. Moreover, interoperability would enhance the competitiveness of rival carriers by affording them the ability to offer their customers a variety of cutting edge devices and comparable geographic coverage.

Ensuring that the core principles and rules that support interoperability are maintained also would reduce customer switching costs, and thus enhance the potential for increased churn by making it easier for customers to migrate to rival providers. In sum, the current competitive state of the wireless industry, as well as ongoing resistance to interoperability in the Lower 700 MHz band by the largest carriers, demonstrates that the possibility of a voluntary industry solution is highly unlikely. As a consequence, Commission action is necessary.

In terms of a regulatory solution, U.S. Cellular has offered a measured and incremental proposal to the FCC in order to restore interoperability across the Lower 700 MHz band while minimizing the impact on existing network deployments by AT&T. Specifically, the FCC should require that, within six months of the FCC's adoption of an order in its interoperability proceeding, all Lower 700 MHz licensees provide only devices that are capable of operating on all paired Lower 700 MHz bands. The only hardware design change required by this approach is replacing, *on newly ordered devices*, the Band 17 duplexer and RX filter with Band 12 components as well as a simple software update that would be required to support both Band 12 and Band 17. These new devices deployed going forward would be able to operate on Band 12 or Band 17 networks. In other words, network upgrades would not be required. Such a regulatory requirement would be consistent with the Commission's "longstanding interest in promoting the interoperability of mobile user equipment in a variety of contexts as a means to promote the widest possible deployment of

¹⁸ See *id.* at ¶208 ("Many of these non-nationwide providers are able to offer voice coverage and service plans that are national in scope through roaming agreements with other mobile wireless providers.").

¹⁹ *Id.*

²⁰ See *Interoperability NPRM*, 27 FCC Rcd at 3543.

mobile services, ensure the most efficient use of spectrum, and protect and promote competition.”²¹

In the early 1980s the FCC wisely perceived the potential risks to competition if the wireline incumbents were permitted to build an exclusive ecosystem that lacked interoperability with their “non-wireline” competitors. As competition blossomed in the wireless industry, the market ensured continued interoperability as, by necessity, the industry worked together to foster a vibrant ecosystem. As the wireless industry has again reached high levels of concentration, preserving the viability of strong, rural-focused competitors demands that we restore interoperability.

600 MHz

In addition to restoring broad interoperability of networks and user devices, the government must ensure that the primary “raw material” of the wireless industry, licensed spectrum, is made available to a broad range of wireless carriers, including smaller carriers focused on rural America. Without sufficient spectrum, consumers’ insatiable demand for high speed broadband will go unmet. U.S. Cellular wholeheartedly congratulates this Committee for its efforts and success in the 2012 Middle Class Tax Relief and Jobs Creation Act (“Spectrum Act”)²² to identify and free up additional commercial spectrum.

The FCC must auction spectrum using geographic area sizes that allow smaller, non-national carriers to compete. There are a number of benefits enabled by this. First, smaller geographic areas will increase the number of bidders, which has been proven to generate more revenue. Second, smaller license areas ensure that rural markets that are won at auction will see faster build out than if those areas are the merely the most sparsely populated zones within larger regions. A build out requirement, applied to each license, will result in the urban areas being built long before the more rural areas see any attention.

For the same reason, package bidding must be rejected by the FCC. Smaller carriers whose aspirations are rural should not be handicapped in the bidding process simply because they don’t have business plans that allow them to bid on a large aggregation of licenses.

A third core principle is that the government should endeavor to maximize the amount of spectrum auctioned not only in order to meet consumer demand and foster competition, but also to raise revenues and provide funding for FirstNet, which is a national priority.

While these efforts will help address the increasing demand for spectrum, we also know that even more spectrum will need to be repurposed to keep up with consumer demands. Therefore, further work needs to be done to identify additional spectrum, some of which is currently used by Federal agencies including the Department of Defense.

So how should the government approach this situation? We believe the 600 MHz incentive auction provides a unique opportunity to address our Nation’s skyrocketing spectrum demands, and meeting those spectrum needs “is essential to continuing U.S. leadership in technological innovation, growing our economy, and maintaining our global competitiveness.”²³ Led by the efforts of CTIA, CCA, and others, many in the wireless industry are devoting significant efforts towards making this auction a success. In response to the FCC’s *Incentive Auction NPRM*, U.S. Cellular focused on several issues critical to ensuring that the substantial public interest benefits made possible by the Spectrum Act’s grant of incentive auction authority are fully realized. For instance, U.S. Cellular urged the FCC to maximize the amount of paired spectrum made available in the forward auction for wireless broadband services, which will greatly promote the availability of wireless broadband services in rural locations. The excellent propagation characteristics of the 600 MHz band make this spectrum particularly well-suited for the rapid and efficient deployment of mobile and other advanced services in high-cost rural areas. This is true because sub-1 GHz frequencies travel farther at a given power level, which enables a larger area to be served from a single cell site. In other words, the superior propagation performance of this spectrum means that fewer towers will be needed to serve a given area, and thus networks can be deployed at lower cost. Accordingly, the 600 MHz band provides a particularly valuable opportunity for licensees to provide cost-effective services in rural and underserved areas.

²¹ *Id.* at 3523, n. 5.

²² See Pub. L. No 112–96, 125 Stat 156 (2012).

²³ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, 12358 (2012) (“*Incentive Auction NPRM*”).

But identifying, repurposing, and auctioning the spectrum is only part of the story. It is also critically important that, the FCC adopt interoperability requirements for the 600 MHz band. Otherwise, it would risk a situation like that in the Lower 700 MHz band, which has stranded investment in spectrum licenses and drastically delayed the deployment of advanced services to many rural and underserved areas. As detailed in this testimony, an interoperability requirement would expand roaming opportunities, enhance economies of scale, promote network deployment, and increase competition in the wireless industry, which would spur investment and innovation and lower costs for consumers. Also as noted, absent an interoperability requirement, the financial incentives of the largest carriers, which drive device development, would drastically reduce the likelihood of an interoperable 600 MHz band. For that reason, interoperability in the 600 MHz band, and the substantial benefits it would create, will only become a reality through an express requirement. Adopting an interoperability rule at this stage also is necessary so that potential bidders that are not large enough to drive device development will know in advance that the 600 MHz band will conform to the FCC's traditional model of full interoperability. In other words, if the FCC declines to adopt an interoperability requirement, this failure would deter auction participation by all but the largest carriers, and thus harm the competitiveness of the forward auction.

Several licensing and auction rules also are critical to ensure adequate opportunities for small and regional carriers to purchase 600 MHz licenses and thereafter deploy rural networks. Providing such opportunities to these carriers is critical in light of the current state of sub-1 GHz spectrum holdings. Specifically, when measured on a licensed MHz-POP basis, Verizon Wireless holds approximately 45 percent of the currently licensed sub-1 GHz spectrum, while AT&T holds approximately 39 percent.²⁴

In this respect, U.S. Cellular urged the FCC to license the 600 MHz band on the basis of geographic license areas no larger than Economic Areas ("EAs"). Only by offering smaller license areas can the FCC preserve opportunities for small and regional carriers, as well as new entrants, to provide an important source of competition, variety, and diversity in rural and less densely populated areas. Small license areas permit entities which are only interested in serving rural areas to acquire licenses for these areas alone and avoid acquiring licenses covering high population areas that would be prohibitively expensive for these carriers.

Of vital relevance to today's hearing, licensing the 600 MHz band using service areas no larger than EAs therefore would be the most effective means for the FCC to foster the prompt availability of competitive wireless broadband services to rural markets. At the same time, all carriers would benefit because small license areas would allow more targeted spectrum acquisitions, while not discriminating in favor of any single business plan.

In contrast, nationwide or super regional license areas, which U.S. Cellular strongly opposes, would significantly disadvantage small and regional carriers, as well as consumers in small and rural markets, to the benefit of the already dominant national carriers. The use of these large service areas skews auctions in favor of large financially stronger bidders, effectively foreclosing smaller bidders from participating in an auction. Not only do small carriers lack the need for large swaths of territory, they lack the financial resources to compete for nationwide or large regional licenses. Unlike the national carriers, smaller carriers cannot afford to acquire and "warehouse" spectrum for future use that does not meet their near-term business objectives. Thus, the practical effect of having a band plan that includes very large market areas is to place a significant portion of the auctioned spectrum in the hands of the few national carriers, which historically have not given priority to small and rural markets. As a consequence, rural deployment of the innovative and advanced types of services made possible by the 600 MHz spectrum would likely be significantly delayed, if not precluded entirely, if the FCC licenses this spectrum on a nationwide or large regional basis. At the same time, larger carriers would not be disadvantaged by the use of smaller license areas because they would still have realistic opportunities to aggregate licenses individually.²⁵ In other words, auctioning small license areas benefits all carriers by allowing them to take a building block approach and assemble as much coverage area as is needed.

U.S. Cellular further urged the FCC to ensure that smaller carriers are adequately protected if the FCC decides to auction generic licenses in the forward auction. For instance, the generic licenses should be as similar and technically interchangeable as possible, and the FCC should establish only two classes of generic li-

²⁴ See *id.* at ¶ 129.

²⁵ See *Incentive Auction NPRM*, 27 FCC Rcd at 12411 ("EAs nest within and may be aggregated up to larger license areas . . . for operators seeking larger service areas.").

censes—those for paired spectrum blocks and those for supplemental, downlink-only blocks. Not only would additional subdivisions further complicate the auction, they would make interoperability less likely because the largest carriers could dominate a particular subdivision to the exclusion of other bidders. In addition, the subsequent license assignment process must be entirely random. If the FCC instead incorporates any preferences into this process, it would greatly advantage the largest carriers, which will be both more likely to have multiple blocks in the same market and licenses in adjacent markets. The result could be to force all other 600 MHz licensees into distinct portions of the 600 MHz band that are devoid of the largest carriers and their ability to drive the device ecosystem. Even more important, under no circumstances should the FCC establish an allocation process that involves additional bids. Such a process would leave bidders who have already made financial commitments subject to an uncertain further commitment and would increase the likelihood of relegating smaller carriers to spectrum assignments which lack any of the largest carriers and a device ecosystem.

Another action necessary to ensure adequate opportunities for small and regional carriers is for the FCC to adopt an auction-specific spectrum aggregation limit that prohibits any applicant from acquiring more than 25 percent of the 600 MHz spectrum made available in a single geographic market. Absent such a limit, the FCC would risk another Auction 73, which was dominated by the two largest carriers and which resulted in a lack of interoperability among Lower 700 MHz band handsets and the “stranding” of 700 MHz A Block licenses. Such a limit also would be consistent with the mandate of Section 309(j)(3)(B) of the Communications Act²⁶ to “avoid excessive concentration of licenses” and to disseminate licenses among “a wide variety of applicants.”²⁷ The FCC should impose this limit in advance of the forward auction, which would deter applicants from acquiring more spectrum than they can use and preventing smaller bidders from acquiring the spectrum. Allowing post-auction divestitures is not really a solution because this would enable the largest carriers to choose among the competitors to which to divest their spectrum, which could further harm competition. U.S. Cellular does not ask for a ban on the ability of the largest carriers to participate, but only a reasonable limit on how much spectrum one carrier may acquire. Prohibiting the use of combinatorial, or “package,” bidding is another action necessary to ensure adequate competition during the auction by small and regional carriers. Permitting combinatorial bidding for any portion of the 600 MHz licenses would harm small, rural and regional carriers, as well as prospective new entrants, while benefiting only the largest carriers. Combinatorial bidding would add unnecessary complexity to what is already likely to be the most complicated spectrum auction in the Nation’s history. The burden of such complexity and the increased risk it creates, would fall disproportionately on smaller bidders and could deter their participation. The lesson of past auctions is clear. The rules required to enable combinatorial bidding create unintended opportunities for larger bidders to enhance their bidding power, exploit the rules, and ultimately win licenses at lower prices. Even absent the use of “strategic bidding”, combinatorial bidding would increase the likelihood that large bidders will tie-up multiple licenses in nationwide or super-regional package bids, and thereby exclude smaller carriers with targeted business plans from acquiring the spectrum necessary to serve rural areas. The benefits achieved by offering small geographic license areas can be undone by package bidding rules.

Further, unlike a license-by-license aggregation strategy, combinatorial bidding could create a situation where the FCC is forced to accept a package bid for a group of licenses even though small or rural carriers may have placed higher bids, on a per-pop basis, for one or more of the licenses included in the package. The result is that combinatorial bidding biases auction results in favor of the combination bid, disadvantaging all but the largest bidders and likely excluding small bidders from any meaningful auction success. These adverse consequences of combinatorial bidding raise legal issues as to whether the Commission has actually granted licenses to the parties that valued them most highly. Moreover, the bias against all but the largest bidders potentially has the effect of forcing all other bidders to bid more aggressively on the remaining licenses that are not included in any package. This distortion would increase the prices of these licenses, resulting in an extra burden on smaller bidders that may easily deprive them of licenses. At the same time, package bidding is unnecessary because adequate spectrum aggregation opportunities are available under the FCC’s standard auction procedures.

Similarly, if the FCC is seeking a robust auction that will truly allow the spectrum to be sold at its highest value, all participants should know the identities of

²⁶ 47 U.S.C. § 309(j)(3)(B).

²⁷ See *Incentive Auction NRPM*, 27 FCC Rod at 12484.

the other bidders, their bid amounts, and their eligibility. Particularly for smaller bidders, license valuations are based on certain factors that are dependent on the business plans of other licensees, who together provide the scale to support an interoperable ecosystem of devices, network equipment, and roaming arrangements. While a large bidder may be able to “go it alone” and may in fact be advantaged by an exclusive ecosystem, smaller bidders need to know they will have help building that ecosystem. Because these opportunities are essential for a smaller carrier’s network to be economically viable, a lack of such information would create substantial risks for these bidders, likely reducing or eliminating their participation in the forward auction.

A transparent auction process is particularly important for small and regional carriers for other reasons as well. For instance, the process of valuing spectrum is extremely complex and challenging, all the more so here because of the uncertainty about what spectrum will be available in the forward auction. In this way, smaller bidders face additional risks from the use of blind bidding because they lack the more sophisticated market intelligence and analytical capabilities of the larger bidders. An open auction therefore would help to level the playing field, as well as to provide information that is uniquely beneficial to smaller bidders. For instance, because smaller bidders may have less experience with spectrum auctions and lack the resources used by large carriers in making valuation decisions, smaller bidders often find it helpful to take note of how larger carriers value spectrum. Smaller bidders also may assign a lower value to a market in a region dominated by a few larger carriers, compared to a region with several other smaller carriers. Because blind bidding prevents these carriers from knowing this information, they face greater risks in the auction process compared to large bidders, and therefore rationally reduce their level of participation and the size of their bids. For these reasons, the information disparities created by blind bidding will have a disproportionately adverse effect on smaller bidders.

Further, while blind bidding gives rise to substantial public interest harms, its advantages are largely theoretical and marginal, making blind bidding unnecessary. There have been no serious allegations of collusive bidding in recent auctions and, since the early auctions that were affected by collusion, the FCC and the Department of Justice have revised their standards and pursued enforcement actions. Moreover, publicly disclosing bidding information actually assists the FCC with enforcing its anti-collusion rules because the FCC is most likely to learn of collusive behavior by being alerted to suspicious activity by other auction participants. In contrast, when participants are denied bidding information, they are less likely to be able to identify and disclose suspicious bidding patterns.

Additional Federal and Non-Federal Auction Spectrum

As the FCC recently noted, it is critical that additional spectrum be made available for mobile broadband in order to “help ensure that the speed, capacity, and ubiquity of the Nation’s wireless networks keeps pace with the skyrocketing demand for mobile service.”²⁸ It is for this reason that the Spectrum Act required the FCC and NTIA to take a number of actions to make additional wireless broadband spectrum available for commercial licensed use. Specifically, the Spectrum Act identified the spectrum to be withdrawn from Federal uses so that it could be allocated, auctioned, and licensed by the FCC for commercial use. It also required the FCC to auction and license additional non-Federal bands and set a February 2015 deadline by which the auctioning and licensing of all such Federal and non-Federal spectrum must be completed.

The FCC is currently preparing to hold the auctions involving three sets of spectrum that must be auctioned and licensed before the February 2015 statutory deadline, including: (i) an auction of AWS-2/H Block non-Federal spectrum commencing possibly late in 2013; (ii) 1.6 GHz reallocated Federal spectrum to be paired with unidentified spectrum commencing in 2014; and (iii) a proposed auction of 1.7 GHz reallocated Federal spectrum to be paired with AWS-3/Upper J Block non-Federal spectrum to be held in late 2014/early 2015. The following table provides additional detail regarding these auctions, which likely will be completed prior to the 600 MHz incentive auction, which is not subject to the same statutory deadline.

²⁸ See *Service Rules for the Advanced Wireless Services H Block—Implementing Section 6401 of the Middle Class Tax Relief and Job Creation Act of 2012 Related to the 1915–1920 MHz and 1995–2000 MHz Bands*, Notice of Proposed Rulemaking, 27 FCC Rcd 16258, 16259 (2012).

Service	Auction/ Date Sequence (Estimate)	Frequency	Bureau /Rule
Auction of AWS-2/H Block PCS	4th Qtr. 2013 Subject to resolution of technical interference issues affecting PCS spectrum	1915–1920 MHz and 1995–2000 MHz	WTB/Part 27
Auction of 1.6 GHz paired with 15 MHz of spectrum to be identified by FCC	2014 NTIA Recommended Federal Reallocation of 1695–1710 (per Spectrum Act); FCC has not identified 15 MHz for this pairing (2095–2110 MHz is an option)	1695–1710 MHz, and (as determined by FCC)	WTB/Part 27
Auction of 1.7 GHz paired with 2.1 GHz (Proposed Pairing Supported by FCC) ²⁹	Late 2014/Early 2015 Contingent on Federal Reallocation which is currently under consideration by NTIA	1755–1780 MHz, 2155–2180 MHz	WTB/Part 27

Considering the skyrocketing demand for mobile broadband services and the fact that the last FCC auction for commercial mobile spectrum took place more than five years ago, deployment of the spectrum to be offered in these upcoming FCC auctions is expected to play a critical role in ensuring that rural carriers, as well as other wireless providers, meet rising consumer demand and continue to provide the public with transformative innovations. This spectrum is particularly well-suited for mobile broadband as it is adjacent to the widely-deployed PCS and AWS bands, which are used by carriers of various sizes to offer mobile service across the Nation. The fact that this spectrum can be auctioned and made available for deployment sooner than the 600 MHz band also makes this spectrum uniquely valuable to rural and regional providers in meeting their near-term needs, considering that they have not been able to meet their spectrum needs through auction purchases for many years.

For the same reasons discussed above in connection with the 600 MHz incentive auction, U.S. Cellular strongly supports the competitive participation of rural and regional providers in each of these three upcoming spectrum auctions. The spectrum blocks to be offered in these auctions should not be so large as to make them unaffordable by the smaller rural and regional providers. The H Block already has a 2x5 MHz pairing, which is suitable. We recommend that a similar 2x5 MHz channel block size be uniformly implemented as the basic spectrum block size to be offered in the other two upcoming auctions. U.S. Cellular also supports small geographic license areas, such as CMAs, that match the service needs of rural and regional providers, and opposes any license area size larger than EAs. We also reiterate our opposition to the use of package bidding and blind bidding procedures in these auctions.

Universal Service Support is Critical to Improving Service in Rural Areas

We must acknowledge that consumers desire both wired and wireline services and the distribution of support under the Federal Universal Service Program needs to appropriately balance those interests in areas that are simply uneconomic to serve without effectively managed support mechanisms. The FCC's underlying goals to reform the Universal Service Program back in 2011 are to be applauded. Although we supported the FCC's overall goals, we did not agree with all of the decisions the FCC made, and are actively asking the Commission to fine tune the Mobility Fund programs going forward. As we have stated before, consumer demand for mobile broadband continues to skyrocket. Unfortunately, the FCC's Mobility Fund auction failed to allocate sufficient resources to wireless (less than 10 percent of overall funding) and two-thirds less than was allocated under the legacy program that is currently being phased out. Even though it is readily apparent that consumers suffer from inadequate coverage in many rural areas across the country, the Commission failed to allocate any funding to a number of states including a significant number of the states represented on this Committee. This resulted in an unfair and uneven distribution of funds that may not reflect the true needs of consumers. Those

²⁹ The 1.7 GHz portion of the 1.7–2.1 GHz pairing will only be available for auction if it is repurposed from Federal to non-Federal uses, which the FCC requested that NTIA consider in a recent FCC letter to The Honorable Lawrence E. Strickling dated March 20, 2013. The upper half of this pairing particularly AWS-3 is required by statute to be auctioned before February of 2015.

oversights must be addressed if we hope to address the needs of rural consumers everywhere.

In late 2011 the FCC revamped the Federal universal service program. Market participants from all quarters have praised and criticized the FCC's decision, and it will be another year before the U.S. Court of Appeals for the Tenth Circuit decides its fate. Today, our focus is on what the program has done, and can do going forward, to improve mobile coverage in rural areas.

How Universal Service Has Helped Rural Areas We Serve

Historically, our government has furthered the societal benefit of ensuring that basic services are made available to all of our citizens. We are a stronger country when everyone has access to modern services. A high-quality mobile wireless network is critical to public safety, it accelerates economic development, and it ensures the viability of rural areas in the same way that water, electricity and basic telephone service did in the last century.

We have strongly endorsed the universal service program and our use of funding support over the years has delivered high-quality services to rural areas that would not otherwise have had them. To summarize, in 1997, we began applying for eligibility to participate in the universal service fund and by 2008 we were eligible in sixteen states. Using Federal support, we have built well over 1000 new towers and upgraded many more in areas where we would not otherwise have built, and in areas that oftentimes had no access to wireless service. We built towers in places with just a few hundred residents. We built in remote areas of West Virginia, in eastern Washington, eastern Oregon, central Maine, central Virginia, northern Wisconsin, central and northern Missouri, central Nebraska, and many more.

In some of these areas, Federal funding has helped us keep cell sites on the air when customer revenue was insufficient. We have also used universal service funds to build links between cell sites and add power generators in remote areas, providing critical redundancies that ensure continuous service during catastrophes. In every state where we are eligible, our coverage and service quality has improved commensurate with the support we received. As you might expect, we invested more in areas where we received significant amounts of support. Wherever support was made available, our rural networks are now demonstrably better as a result, and our customers see it. I also truly believe a significant part of the company's success in J.D. Power network and Forrester customer experience satisfaction surveys is the high-quality network experience we provide in rural areas.

Investments made possible with support generate additional economic activity from local businesses. This is known as the multiplier effect. When we enter a community, it takes people to perform a myriad of jobs. Among other things, people build networks, construct stores, sell devices, and advertise our services. These are high-quality, good paying jobs. In addition, local businesses use mobile wireless service to become more efficient and to access markets around the world. This creates more jobs and local economic activity. Every place we construct a cell site is now a candidate to attract investment from business owners considering a potential move away from areas that lack sufficient telecommunications infrastructure.

The FCC's discontinued mechanism is phasing out support to participating carriers. As of July 1, 2013, our support will be reduced by 40 percent and by July 1 of 2016 our support will be gone. As a result of the reduction in support, we are adjusting our investments in new cell sites accordingly, reducing our capital expenditures and using remaining funds to cover operating expenses in existing rural areas we serve. At its peak in the latter part of the last decade, we were building over 200 cell sites per year with this support. This year, we're planning to construct only 35 sites and as of this date we have no plans to build additional universal service sites in areas funded by the legacy program after 2013 due to this reduction of the program's funds. We have made that painful decision because we know there simply is no business rationale to build in areas that will never be profitable even though we know from conversations with Federal officials, local officials, and consumers that there is a desperate need for those services.

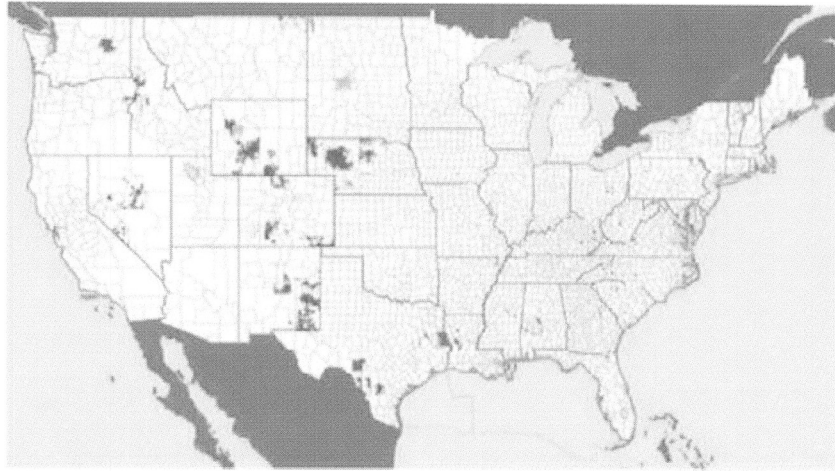
In our experience, the FCC's now discontinued Federal universal service mechanism was very effective in enabling us to build telecommunications facilities in rural areas. We embraced that program and successfully expanded service in ways that would not otherwise have been possible, to the benefit of rural citizens. As discussed below, we are now turning to the new FCC Mobility Fund to assist us in constructing 4G networks in rural areas.

Observations on the FCC's Mobility Fund

We participated in the FCC's first auction of mobility fund support, held in September of 2012. This auction provided \$300 million in "one time" support for eligible

carriers to invest in modern 3G and 4G networks. We won the right to access approximately \$40 million in Federal support, which must be used to serve 2,162 total road miles in 10 states. We anticipate that the FCC will grant our applications in the near future and we intend to implement 4G mobile broadband service in all of those eligible areas. This is a very exciting time for us as a builder of rural networks, to be able to tell rural communities that high-quality mobile broadband service is on the way.

It is important for this Committee to understand the magnitude of the task at hand for our nation. The map below, taken from the FCC's website, illustrates where Mobility Fund Support was awarded in the Continental United States.³⁰ As you can see from the FCC's mapping software, the blue areas represent how small are areas that the \$300 million in Mobility Fund will cover infilling in dead zones.



When you compare this map to the one above, you get a sense of the magnitude of the gap to be bridged. The FCC's National Broadband Plan estimated that \$24 billion is needed to provide access to terrestrial broadband infrastructure for the 14 million people who currently do not have such access. If half of that gap were filled by private investment, then the FCC could finish the job of providing access in twelve years by allocating \$1 billion per year to the task. That is roughly 30 percent less than the FCC was providing to mobile carriers under the legacy universal service program.

My observation here is that the task of finishing ubiquitous deployment is too large for the amount of funding that the FCC allocated to mobile broadband. Rural communities can't wait twenty more years. If the Committee believes as I do that mobile broadband is so critical, then we must bring to bear sufficient resources to cover substantially all of the area where rural people live, work and travel.

Moreover, the current Mobility Fund auction mechanism was designed to provide funds to the lowest-cost areas first, in order to maximize the number of road miles covered. While we do not dispute that there is value in the FCC's choice of how to distribute funds, it has left behind the highest-cost areas. For example, none of our bids to cover rural New Hampshire were selected, simply because we had to bid more per road mile to cover more mountainous areas in the central and northern areas of the state.

Within the next year, the FCC is expected to conduct Phase II of the Mobility Fund. It proposes to distribute up to \$500 million per year, dedicated to construction and operational support for mobile broadband infrastructure. We are active in the FCC's rulemaking proceeding that will finalize rules for how support is distributed.

We continue to oppose the use of auctions to distribute support, because while auctions may create competition in the auction room, they drive out competition in the markets themselves. We believe the better course is for the FCC to use a forward-looking cost model, as they are proposing to do in the Connect America Fund, to determine how much support is needed in a particular area, and then permit car-

³⁰Support was also awarded in Alaska, however, we have not included a map here. Suffice it to say there remain significant unserved areas in places where Alaskans live, work and travel.

riers to compete for that support in the marketplace, with the same construction obligations currently expected of all carriers receiving funds. In our experience, providing support only to the service providers that consumers choose drives greater efficiency, investment and competition. We support a mechanism where carriers charge a market price and consumers receive a credit for any service they choose. The carrier with the most efficient cost structure, lowest prices, and best services would have the advantage, as they should in a normally functioning marketplace.

In sum, our observation is that basic economic forces apply here. It costs more to serve some areas and policy makers must seek efficient providers to deliver services at the lowest possible cost. Without additional funding and increased efficiency, the higher cost areas are going to be left behind for a substantial period of time. We therefore urge both the Congress and the FCC to reassess the task at hand and set a goal to deliver mobile wireless coverage to substantially all of rural America within ten years.

Suggestions for Increasing Program Efficiency

At the outset, it is important to note that the FCC has decided to reduce universal service funding for mobile broadband by two-thirds, at a time when consumer demand for mobility is skyrocketing and when the coverage maps show much work left to be done.

We are mindful of the program's financial constraints and competing policy interests. So, we are suggesting ways to increase funding for mobile networks without increasing the overall fund.

First, there is approximately \$185 million of unused support from the Connect America Fund Phase I program. Some \$300 million was offered to telephone companies and only \$115 million was accepted. The rejected funding lies fallow. The FCC could easily add that \$185 million to the Mobility Fund, where wireless carriers are ready, willing and able to deploy service to rural areas and their bids to serve additional areas of Rural America went unfunded. We ask for your support in getting those funds invested in rural areas at the earliest possible date.

Second, we would support the same result for any funds that may be rejected by winners of the Mobility Fund Phase I auction. If any winning bidder does not follow on auction bids, the funding can be distributed to fund the bids that were not accepted at the initial auction. Rural areas where bidders, including us, sought funding to construct would see immediate benefits.

Third, in the new Connect America Fund for wireline carriers, the FCC adopted a Right of First Refusal ("RoFR") which allows the largest carriers to accept an amount of support offered by the FCC for five years, without competition. We have opposed this from the very beginning, because reserving support for one class of carrier for five years will inevitably confer enormous market power on that carrier.

Here is the worst thing about the RoFR: *A large wireline carrier that also owns wireless licenses can meet its wireline build out obligations by building a 4G wireless network.* That is, the FCC will provide exclusive support to a wireline carrier based on the costs of building a wireline network, but if it is more cost effective to use 4G wireless, the carrier is free to do so and to pocket the windfall. Ironically, the FCC just rejected this methodology for distributing support when it did away with the identical support rule for wireless carriers.

There is no public benefit to segregating support to one carrier in a market, and then allowing that carrier to build without competition. As explained by William P. Rogerson, Professor of Economics at Northwestern University and formerly the FCC's Chief Economist, limiting universal service support to a single carrier in a market may create:

very powerful competition *for* the market that can be used to drive down the price of the subsidy that government pays. However, the cost of creating this very powerful competition *for* the market is that after a winner is declared, there will be a significant reduction in competition *within* the market for customers. . . . It is local competition among competing carriers that creates powerful ongoing incentives for firms to charge lower prices, to improve their quality of service and level of coverage, and to introduce new advanced services as rapidly as possible.³¹

³¹ Ex Parte Letter from David A. LaFuria, Counsel to U.S. Cellular, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51, *et al.*, filed Jan. 28, 2010, Enclosure, William P. Rogerson, "Problems with Using Reverse Auctions To Determine Universal Service Subsidies for Wireless Carriers," Jan. 14, 2010 (prepared for U.S. Cellular) at 6-7 (emphasis in original). <http://apps.fcc.gov/ecfs/document/view?id=7020384141>

Our position represents healthy competition policy because it extracts efficiency from the marketplace: The FCC should immediately do away with the RoFR and allow any carrier willing to take on the universal service obligations to compete for customers and support. If a competitor can deliver broadband to an area for less money than another carrier, why should the government fund the less efficient provider?

There is no valid public policy rationale supporting the FCC's RoFR decision and we urge the committee to ask the FCC to reconsider this policy, as a way of stretching program dollars much farther in rural areas and ensuring that universal service mechanisms do not drive out competition in rural areas. The costs of imposing antiquated monopoly-era price regulation in areas where competition fails are very high and in the end consumers are not well-served.

Infrastructure Built With Support Can Be Leveraged to Accelerate Construction of a Nationwide Interoperable Public Safety Network

All of the above actions we recommend are intended to increase construction of new towers in rural areas. They will also accelerate deployment of a nationwide interoperable public safety network. For U.S. Cellular's part, we want to see the public safety network constructed as soon as possible, and we can help. The FCC has mandated that all towers we build with support must be made available for collocation—that is—we must permit others to install antennas on our towers at a reasonable cost. In rural areas, we can think of no better way to leverage the government's investment in our towers through universal service than to collocate public safety transmitters that will enable first responders to deliver critical health and safety benefits to rural citizens.

In closing my testimony on universal service, we urge Congress to continue to support policies that promote access to high-quality mobile networks so that rural citizens receive the public safety and economic development benefits already available to urban citizens. Although we sometimes disagree with how the FCC has implemented the National Broadband Plan, we agree completely that Federal universal service funds must be used to invest in our Nation's broadband infrastructure, both mobile and fixed. With these investments, rural areas will have access to the most powerful economic development tools of the new century. Without them, there will be a flight of capital and talent toward only those areas that are connected.

Infrastructure Deployment is Critical to Rural Citizens

The era of mobile broadband is now exploding upon us, with an incredible array of devices enabling our citizens to do truly amazing things. Throughout the country, wireless carriers are deploying 4G networks that enable our citizens to access e-mail, applications and the Internet at download speeds that are supersonic compared to the 2G networks deployed a decade ago. Even faster speeds are on the near-term horizon.

Anyone who owns one of the latest 4G enabled smartphones knows how amazing they are at these speeds. But this growth in appeal and usage presents a critical challenge as well: In the U.S., wireless data traffic has increased by 486 percent from the second half of 2009 to the first half of 2012 and demands for capacity are going to continue to escalate, meaning we cannot rest on our current achievements or infrastructure. We must continually build and upgrade to keep the U.S. consumer at the cutting edge of technology and innovation.

Smartphones are increasingly considered to be a necessity by consumers across the country. Over the past three years, American smartphone adoption has increased from 16.9 percent to 54.9 percent, and smartphones currently account for 133 million of these devices. By 2014, the number of smartphones used by consumers in the United States is projected to exceed the number of consumers' personal computers by more than 200 million units.

Widespread consumer adoption of mobile broadband has also fueled rapid growth and innovation in mobile applications. For example, the number of applications available at the iPhone App Store has grown 1,900 percent from April 2009 to September 2012, and the number of Android applications reached 700,000 in the fourth quarter of last year. To take another example, a recent study forecasts that within the next five years about 50 percent of all new car radios sold in the North American market will feature downloadable apps.

Among low-income households, many of whom cannot afford multiple subscriptions, the primary means to access the Internet is a high-speed mobile device. For example, the Center for Disease Control's June 2012 report shows that 51.4 percent of adults living in poverty lived in households with only wireless telephones, com-

pared with 39.6 percent of adults living near poverty and 28.9 percent of higher income adults.

These are startling facts which begs one of the main questions we confront as a company and government must confront in its policy analysis. How can we ensure that these high-speed networks and incredible devices are not available only in urban and suburban areas? I'm sure each member of this committee has traveled in rural areas within your respective states where coverage is lacking, service quality is poor, and modern 4G service is unavailable.

As you know, rural economic development increasingly depends upon the availability of high-speed mobile broadband. Just a few weeks ago at the Mobile World Congress in Barcelona, one of the keynote speakers reported that in developing countries a 10 percent increase in mobile data penetration is associated with a 1.21 to 1.38 percent increase in GDP. Every 4G cell we build multiplies economic activity and increases consumer welfare in its coverage area. In areas receiving improved coverage, E911 and location-based services save lives and enable critical communications. In areas where a competitor enters, consumers receive improved service and greater choices.

As shown in the FCC's National Broadband Map, high-speed mobile wireless service (>6 MBps) is now available in many urban areas, but not in most rural areas. There remains a lot of work to do to provide rural citizens with service quality that is reasonably comparable to that which is available in urban areas, as envisioned by the 1996 Telecom Act. Many communities can receive service from only one wireless provider and citizens living in these areas do not receive the benefit of competitive choice. We therefore urge the adoption of policies that could increase competition and reduce the need for monopoly-era regulatory structures. These better policies include allocation of more spectrum, the use of small geographic license areas, promoting market-based universal service mechanisms, increasing interoperability of devices, as well as other reforms which we have not focused on here today but which are important, including interconnection rights and special access reform.

Conclusion

In conclusion, the challenges that we face are not insurmountable. Companies like U.S. Cellular have it in their business DNA to bring great communications services to the people of rural America. The issue is how we can ensure that the regulatory regime that governs the market place is sensitive to the business challenges of serving markets where a piece of equipment that might serve 250,000 people in an urban market may serve just a few thousand or a few hundred. Government support may be necessary in some instances where the economics will never work for the private sector to invest alone, but ensuring that rural service providers have meaningful access to spectrum, have interoperability standards that make devices truly affordable, and that middle mile and backhaul services are at reasonable rates, all play a critical role in maintaining a healthy and robust industry.

Your time and attention to each of these items is extremely important for your constituents and our consumers and I thank you for inviting me to appear before you today.

Senator PRYOR. Thank you.
Ms. Boyers.

STATEMENT OF PATRICIA JO BOYERS, PRESIDENT AND CHIEF EXECUTIVE OFFICER, BOYCOM CABLEVISION, INC. AND BOARD MEMBER, AMERICAN CABLE ASSOCIATION

Ms. BOYERS. Well, good morning. Thank you for giving me the opportunity to tell my story.

My husband and I started our small cable business in 1993. With our own money, we built our first system to serve consumers in the foothills of the Ozark Mountains of southeast Missouri. Real close to you, Senator. To stay competitive, we continuously reinvest in our network to provide digital and advanced services. Because banks aren't eager to lend to small rural providers and getting RUS loans as a cable operator is nearly impossible, we did it on our own, which meant taking out a second mortgage on our home and our farm as collateral for our capital investment.

Now, we've always said that we have done so much for so long with so little that we are absolutely qualified to do everything with nothing at all. So, we obtained our broadband equipment and services through the National Cable TV Cooperative. We can secure better prices from vendors who can—before we could obtain than on our own. We provide broadband to about 3,000 residential subscribers. We also provide broadband to local businesses and anchor institutions, including free service to our middle and elementary schools. Our private investments have allowed us to offer broadband speeds comparable to those in the urban areas. With the new—the DOCSIS 3.0 technology, BOYCOM will cost-effectively deliver 100 megabytes over our existing networks, and we continually seek to push our services out to unserved markets, wherever possible.

Now, when I say “rural,” we have a population density of 18 homes per mile passed. All eight of our core systems are located in what Missouri calls “perpetually impoverished counties,” which means they have been below the poverty line consistently since the 1960 census. Now, when combined, these statistics mean we have a very price-sensitive population that is expensive to reach in those end-of-the-world-and-turn-left-places. Now, that said, BOYCOM has not had a rate increase in 4 years, because our customers just simply can't afford it.

Now, despite these significant challenges, small cable operators are delivering broadband services in rural areas. We've benefited from the historic light touch of broadband regulation. Now, this must continue. We need flexibility in the way we manage our networks and that we charge our customers. It's also vital that the government not subsidize the buildout of broadband networks in areas where unsubsidized companies already provide that service. When we spend private capital to bring broadband to communities, there's no reason for the government to step in and aid others. The FCC is now fixing this problem regarding USF, but it continues to be a problem with RUS.

As the Committee with the oversight responsibility over the implementation of the Connect America Fund, there are three policies that are essential to be part of this program:

First, no support should go where competitive providers are already offering that service.

Second, support must be distributed efficiently, and only in the amounts necessary to deliver the level of service required by the FCC.

Third, all providers, including cable operators, should be able to participate when the FCC holds the reverse auctions.

Therefore, we urge you to exercise your oversight, because the unintended consequences are severe for rural consumers.

Now, there are targeted areas where government can play an important role. The government needs to address the cost of middle-mile transport facilities that carry local broadband traffic to an Internet backbone access point. Now, due to the distance traveled and the lack of competitive choice, the middle-mile cost for rural providers is significantly higher. As consumer demand for broadband capacity increases, the cost differential will only get worse.

We also need to revisit that 1978 Pole Attachment Act to expand the FCC's authority to address the practices of the exempt electric cooperatives and municipalities. The unregulated co-ops charge us between \$12.50 and \$15 a pole per year, while others just charge us 3 bucks. While not particularly sexy, pole attachment rates are one of the core issues that affect our deployment. As I said earlier, I've got a population of 18 homes per mile passed. Now, that's a lot of poles to reach those folks. Government must also be sensitive to the reality that there are rules and regulations that cannot be borne by small providers. Even well-intentioned regulations often fail to take account of our size.

Now, due in large part to increased regulatory costs like these, on December 31, 2011, my company shut down 13 rural systems, causing these communities to go black. And once a small cable system shuts down, it eliminates the prospect of future broadband connections to the Internet from the system.

Finally, skyrocketing program costs are reducing available capital for broadband. The video programming market for pay-TV providers is becoming unviable, particularly for smaller ones. The market is governed by outdated rules and regulations that were enacted before residential broadband even existed. So, therefore, we urge you to revisit these rules and ensure that regulations reflect marketplace realities. My company is offering service to rural areas, but the business is tough. What we've accomplished so far has been with brains, balls, and bald money, not necessarily in that order.

[Laughter.]

Ms. BOYERS. Now, all I can really ask is that y'all continue to keep a heightened awareness of the challenges that rural providers face, and remember that those solutions that address the concerns of St. Louis would not work in the Ozarks.

Thanks, y'all.

[The prepared statement of Ms. Boyers follows:]

PREPARED STATEMENT OF PATRICIA JO BOYERS, PRESIDENT AND CHIEF EXECUTIVE OFFICER, BOYCOM CABLEVISION, INC. AND BOARD MEMBER, AMERICAN CABLE ASSOCIATION

BOYCOM Cablevision and the other small and medium-sized cable operator members of the American Cable Association (ACA) provide three vital services throughout smaller markets and rural areas—video, voice and broadband Internet. Often, we serve very rural areas—those “end-of-the-World-and-turn-left” areas that no large company wants to touch. I am proud of what BOYCOM and other small cable operators have brought to their communities in these past decades, and there continues to be opportunity for us to invest private capital to maintain and expand our state-of-the-art communications networks and services.

When my husband and I started our business in 1993, many people thought we were crazy. We faced a new law, the 1992 Cable Act, which imposed a lot of regulations on the cable industry. There was plenty of doom and gloom in those days. Still we built our first system in rural Missouri. Today we have 5 core systems in the region that provide video to about 2,000 subscribers and broadband to 3,000. However, it hasn't been easy. We've always said that “we have done so much, for so long, with so little that we are now qualified to do absolutely everything with nothing at all.”

Our story is similar to other small cable operators who have invested huge amounts of their own money in rural areas to build, maintain, upgrade, and expand their networks. In fact, we actually have a second mortgage on our personal residence as collateral for our capital investment. The industry initially invested billions to deliver analog cable service throughout the country, and then in the 1990s, we

reinvested billions more to upgrade our plant to provide more advanced services. The cable industry is still in the midst of this great privately funded evolution. As a result of all our investment, cable today is the best catalyst for broadband growth.

Cable Operators are the Country's Leaders in Broadband

Today the cable industry offers access to broadband service to 95 percent of the country with nearly all cable operators providing download speeds of at least 4 Mbps and upload speeds of at least 1. With the advent of DOCSIS 3.0, these operators can deliver speeds of 100 Mbps over their existing fiber/coaxial networks. The next generation, DOCSIS 3.1, which is moving from the lab to market, will provide even greater capabilities. By keeping pace with technological change and investing in our networks, we have become the country's leaders in broadband deployment. The recent Federal Communications Commission (FCC) report "Measuring Broadband America" once again demonstrated that when it comes to broadband, cable operators deliver what they promise.

I know the President wants to get broadband into "the rural-est of rurals," and small cable operators, like my company, are key to achieving that goal. It's not only the larger operators in urban areas making these investments, but I'm proud to say that BOYCOM and nearly 850 other small and medium-sized members of ACA are investing to bring these capabilities to small and rural markets. For instance, BOYCOM is deploying fiber-to-the-home in all of our core systems. This will ensure that our customers will have the broadband performance capabilities they need for their businesses, education, health-care, as well as for just interacting with each other. For rural areas, this capability is critical to their future viability. We are not the exception. There are many ACA companies like ours, with fewer than 5,000 total subscribers, serving smaller markets and rural areas, which now have the opportunity to be full participants in the Nation's broadband future.

Of course, as smaller operators in rural areas, we sometimes need to be more creative in addressing the needs of our customers and overcoming some of the market disadvantages we face. The National Cable Television Cooperative (NCTC), a national buying group serving all ACA members, helps in this regard. By providing market efficiencies to broadband equipment manufacturers and service providers, the NCTC can negotiate lower prices from these vendors than individual broadband providers can on their own. Members, like BOYCOM, can then opt into NCTC's master agreements, which enable us to lower the costs of broadband services. NCTC is an important actor in independent cable's broadband deployment story and will continue to play an important role in the future.

The cable story is not just about upgrading our existing infrastructure. Small cable operators like BOYCOM are also expanding their footprint to provide broadband to previously unserved areas.

In the foothills of the Ozarks, as you know, that presents a challenge. But we have developed an efficient way to build plant using a combination of fiber and wireless. We take fiber all the way out as far as it is economical and then install a wireless tower. This provides coverage to those folks that are still in those "hills and hollers where you have to have your own Tom Cat if you want kittens," and it is working really well.

Cable operators in rural areas also are expanding in other ways. We have found that demand from owners of cell towers for fiber backhaul connections presents new business opportunities to deploy fiber into less densely populated communities. Once the connections to cell towers are made, the cost to branch off the installed fiber to residences is lower. It provides an economic means to provide high speed Internet to the households along the fiber route, enabling us to serve previously unserved areas, and to do so without any government support.

And our story is not just about providing households with our state-of-the-art networks. Many of us have also moved into providing dedicated broadband services and other related services to business customers. Moreover, we're helping to connect anchor institutions, such as K-12 schools, universities, libraries, hospitals/emergency medical facilities, and public safety facilities. These are great opportunities for us, especially as our old video business model changes.

All of us understand that our networks provide an incredible platform for our future. Our networks allow us to innovate in ways unthinkable just a short time ago, enabling us to respond to our customers and create new services that meet their needs. Our networks are not only our fundamental asset. They are a fundamental asset for our communities. They enable people and local institutions to interact. They enable businesses to develop and grow. They enable community discussion and political debate.

Because we understand the tremendous value of our networks, we continue to invest to upgrade them with new capabilities and to build them out to new areas.

Challenges Facing Small Cable Operators Serving Rural Areas

That said, smaller cable operators serving rural areas still face significant challenges. Some of these are also faced by big companies serving urban areas, but some are unique to small rural providers.

When it comes to broadband Internet service, upon which our customers rely increasingly for essential activities, we are constantly working to ensure a great experience for all. That sometimes means we need to control those few customers who use excessive amounts of bandwidth through reasonable network management and billing practices. We also need to be able to tailor our broadband service to unique customer needs by offering specialized or “managed” services. As someone who oversees our networks, develops our services, and works with our customers, I need to emphasize how critically important it is that Congress and the FCC continue its historic “light touch” regulation of broadband Internet services. In an industry that is so dynamic, that has so many competitors, and that requires continuing and significant levels of investment, it would be counterproductive for the government to impose any greater regulation, particularly on small rural providers, like BOYCOM.

Moreover, as some Senators have already recognized, it is vital that the government not subsidize competitors to build their networks in areas where our companies already provide broadband. When we spend our own capital to bring broadband and other services to communities, there is absolutely no reason for the government to step in and aid others. Not only does this discourage private investment, it is a waste of taxpayer dollars.

This is not to say the government should not work to bring broadband to all communities. Many ACA members, which include rate-of-return and price cap carriers, are the sole providers of broadband in high-cost areas. These are places where it will never be economically viable for the private sector to fully shoulder the financing of buildout because the cost to do so cannot be recovered in these markets. Some partnership with the Federal Government may be necessary in these places. However, if support is given, we need to make sure that support is targeted to only areas that lack an unsubsidized broadband provider and that it is distributed efficiently. This has been a problem with the old universal service fund, and other government programs, but recently the FCC has correctly recognized that the world has changed, and the universal service program must change along with it. It is critical that the FCC hold true to its stated goals and that other programs that support broadband deployment, like the U.S. Department of Agriculture’s (USDA) Rural Broadband Loan Program that is administered by the Rural Utilities Service (RUS), are changed to make sure the government does not subsidize competitors to privately funded broadband providers.

The FCC’s Implementation of the Connect America Fund

With respect to the implementation of the FCC’s reform of the universal service fund and establishment of the broadband Connect America Fund (CAF), there are three principles that must be followed. First, as I just indicated, no support should be provided in areas where competitive providers already offer broadband service. Second, support should be distributed efficiently, that is, support should be only the amount necessary to deliver the level of broadband service required by the Commission. Third, all broadband providers, including cable operators, should have a fair opportunity to access support when the Commission holds reverse auctions.

Let me elaborate on how these principles should be implemented by the FCC with respect to the development of the cost model for CAF Phase II, the program that will be used to award \$9 billion in support over 5 years in high-cost areas served by the larger telephone companies, the so-called price cap telephone carriers. The purpose of the cost model is to precisely estimate the amount of support that would be required to build baseline broadband (4/1 Mbps) in areas unserved by any competitor. As a consumer who contributes to the USF program, and as a small cable operator who competes against a price cap carrier, it is critical that the FCC gets the model right. Otherwise, the American consumer could be paying in excess of hundreds of millions of dollars per year for something but getting nothing in return. As a rural cable operator, my concern is that this excessive support, could be used to compete with me and other ACA members. We urge this Committee to exercise its oversight authority regarding this matter.

Another important part of CAF implementation is the plan to hold reverse auctions to provide broadband services in areas where the large price cap telephone companies do not accept CAF Phase II funding. We support the use of reverse auctions. This process can result in the selection of the best and most efficient providers if as many broadband providers as possible can participate, including cable operators. However, there is a major barrier standing in the way—under the law today, only an “Eligible Telecommunications Carrier” (ETC) can participate. Few cable op-

erators are ETCs because the state-run process to become an ETC is so onerous, and ETC status comes with burdensome requirements. Quite frankly, ETC status is irrelevant to reverse auction participation because it is the FCC who establishes all the requirements to obtain CAF support. The FCC can remedy this problem. We ask that Congress encourage the FCC to take steps to make it easier and less burdensome for cable operators to become ETCs so that they may participate in the reverse auctions when such auctions are used.

In addition to the issues associated with the CAF implementation, there are four specific areas where government has an important role to play in helping ensure that broadband is brought to all Americans: the lack of middle mile infrastructure and rising middle-mile costs; outdated pole access attachment regulations that result in both higher fees and delayed access; challenges to obtaining public and private rights-of-way; and decreasing resources available to small cable operators to offer broadband due to the imposition of onerous regulations and declining video margins.

The Lack of Middle Mile Infrastructure and Rising Middle-Mile Costs

First, the marketplace is rapidly changing—demand for bandwidth has been rising exponentially over recent years as consumers expect increasingly fast connection speeds to access new services such as streaming video. And this is expected to continue, with U.S. broadband speeds estimated to more than triple by 2016. While this trend holds true in urban and rural areas alike, it is significantly more difficult for smaller cable operators to meet this new demand than it is for larger operators with scale. That is, the high cost to serve rural areas with essential facilities is getting higher.

As our customers increase their use of broadband service, we need to upgrade not only our last-mile connections to the home, but also the “middle-mile” pipes which carry traffic from our local networks to an Internet backbone access point. This presents a number of challenges for ACA members. The FCC has recognized that middle-mile costs increase as the distance from the network to the backbone access point grows, and rural providers generally operate networks that are among the farthest from these access points.

Additionally, unlike in urban areas, there may be few middle-mile links available. In fact in many rural areas there may be only a single link. And many of these links use outdated technologies, which means we often can only access lower capacity pipes—this in turn limits the data speeds we can provide to our customers. It also means we often pay much higher prices for each byte we transmit.

Some of us have explored constructing our own middle-mile links, but because the distances involved are extremely long and the density of our users too low, the cost is prohibitive. As our subscribers continue to expect faster connection speeds, poor middle mile infrastructure and rising middle-mile costs make it more difficult for us to maintain current prices, upgrade our services, and build out to new locations.

In its National Broadband Plan, the FCC identified the lack of adequate middle-mile infrastructure and the high costs of access to be a significant problem. The FCC is examining the issue in a further rulemaking with respect to CAF implementation. The record in this proceeding closed one year ago, and we urge the FCC to conclude its work shortly and issue a decision. Where prices are too high, it should use its regulatory authority to ensure they are consistent with competitive market rates. Where capacity is inadequate, it should use the CAF to support the deployment of middle-mile capacity.

Outdated Pole Attachment Regulations That Result in Both Higher Fees and Delayed Access

Second, smaller operators generally serve less dense areas, which necessitates that to reach each location their networks must attach to many more poles than larger operators serving more urban areas. While the FCC has done much to improve the cost and speed of pole access, the 1978 Pole Attachment Act stands in the way of the Commission addressing some significant problems in the market. For instance, it does not contemplate access for standalone broadband service. It only permits the FCC to regulate via national rules where states decline to act. Moreover, it does not cover cooperative and municipal pole owners, who remain exempt from any regulation, allowing them to set much higher fees and delay access. All of this drives up costs and makes broadband deployment even more uneconomical in rural areas.

The FCC’s National Broadband Plan wisely suggested that Congress should eliminate the exemption for cooperatives and municipalities to restore fairness and competitive rates to the market. We encourage Congress to take action to deal with the obvious shortcomings in the existing law.

Challenges Obtaining Public and Private Rights-of-Way That Hinder Broadband Deployment

Third, ACA members face many restrictions, delays, excessive fees, and competitively discriminatory policies imposed by private and public entities when they seek to extend service to new communities. These problems stem from public and private entities that control rights-of-way. ACA members like BOYCOM generally do not have teams of lawyers and consultants to deal with all these “gatekeepers” and so are particularly vulnerable to unfair, unreasonable and discriminatory treatment.

We were pleased last year when the President issued an executive order requiring Federal agencies to develop new uniform policies and practices for accessing the Federal Government’s assets for the purpose of broadband deployment. It included the “dig once” provision, a smart idea that was previously recognized by some Senators and Representatives, which would require the deployment of conduit for broadband facilities in conjunction with Federal or federally assisted highway construction whenever possible.

However, the executive order only applies to Federal lands, buildings, and rights of way, federally assisted highways, and tribal and individual Indian trust lands (tribal lands). More needs to be done. We need the government’s assistance to ensure we are treated fairly and reasonably when seeking access to all rights-of-ways.

Decreasing Resources Available to Small Cable Operators to Offer Broadband Due to Onerous Regulations and Declining Video Margins

Fourth, many smaller operators face increasing burdens stemming from new regulatory compliance obligations and decreasing video margins which cut into the financial resources available to build, maintain, upgrade, and expand broadband.

Despite the commendable efforts of the FCC to minimize the burdens on smaller operators regarding some new rules and regulations, smaller operators have been unable to obtain exemptions to avoid being forced to upgrade their Emergency Alert Service (EAS) equipment; participate in the National EAS test and associated reporting requirements; comply with new Communications and Video Accessibility Act of 2010 (“CVAA”) requirements and recordkeeping obligations; and to satisfy new Open Internet disclosure requirements. In addition, the FCC is considering imposing additional compliance obligations on small operators, such as the FCC’s recent comprehensive and mandatory special access data collection and requirements to include home networking functionalities in deployed two-way HD set top boxes. Moreover, there are additional CVAA related obligations on the horizon. While such efforts seek to achieve commendable public policy goals, the cost of these many separate compliance obligations adds up, straining the resources of smaller operators, and making the offering of broadband services at reasonable prices more difficult.

For decades, cable operators supported infrastructure and service investment through revenues derived solely from the provision of video services. However, a lot has changed in the last twenty years. In 1992, cable was the dominant provider of video service in their markets. It was a time before direct broadcast satellite and before telephone companies launched video. It was before the Internet and over-the-top video providers such as Netflix and Hulu. Today, cable faces robust competition across the country, and its share of the market has steadily decreased. In many rural areas, satellite TV has more subscribers than cable, and Internet video traffic represents the majority of overall Internet traffic. At the same time, the cost of video programming has increased sharply, particularly for retransmission consent and sports networks offered regionally and nationally. While video revenue has increased for most cable operators, video expenses have grown faster, sending video margins to historic lows five years running, according to respected industry analyst SNL Kagan. The story is a little bit different for BOYCOM. The state of Missouri has seventeen “Perpetually Impoverished Counties”—counties with an average income below the national poverty level since the 1960 Census. BOYCOM services are available in five Missouri counties and all five counties are “Perpetually Impoverished.” As such, BOYCOM has not been able to have a rate increase in four years. Our subscriber base simply cannot afford to pay another dime. We’re eating the cost increases. The reduced profit from video puts pressure on cable operators, particularly smaller ones, and reduces available capital for broadband. This is one area where the sad irony of competition at the retail video level has resulted in higher wholesale programming prices as new entrants have been willing to “pay up” simply to enter the market. Making matters worse, the video market continues to be governed by outdated rules and regulations passed decades earlier. We urge Congress to revisit these rules, and ensure that regulation reflects marketplace realities.

For cable operators, all of these problems are driving many to shut down their smallest systems. For the FCC’s 14th Annual Report on Video Competition, ACA presented data showing that the number of cable systems has significantly de-

creased over the past five years. Using the FCC's own data, ACA calculated that since October 2005, the number of cable systems has declined by 26 percent (from 7,208 to 5,312) and that for systems with fewer than 10,000 subscribers, the percentage drop in the number of systems was even greater. ACA also has presented data from the NCTC that shows similar results. During the last five years, NCTC members closed a total of 793 small and rural cable systems serving a total of more than 35,000 customers. BOYCOM is a perfect example of this harsh reality. On December 31, 2011 we were forced to shut down thirteen very small rural systems in Southeast and South Central Missouri—causing these communities to “go dark.” Congress must take notice of the changing landscape for facilities-based operators because when a small cable system serving a rural area shuts down, it not only results in the loss of multichannel video service, including local TV service, but also the prospect of future broadband connections to the Internet.

The Government Can Help Small Cable Bring Comparable Broadband to More Rural Areas

These concerns—the lack of middle mile infrastructure and rising middle-mile costs; outdated pole access attachment regulations that result in both higher fees and delayed access; challenges to obtaining public and private rights-of-way; decreasing resources available to small cable operators to offer broadband due to the imposition of onerous regulations and declining video margins—each require Congress' attention so that small cable operators like BOYCOM can continue to compete and can invest in modern networks that are capable of providing faster broadband to greater numbers of rural communities.

Senator PRYOR. All right. Well, thank you.

Mr. Strode, let me go ahead and ask you the first question.

By the way, we're going to do 5-minute rounds. I was not planning on doing a second round, but if anyone wants to stay until the end and ask some cleanup questions, we'll be glad to do that.

So, Mr. Strode, let me start with you. And I would just like to hear a little bit more from you on USF and how your company has relied on it, and how your customers have benefited over the years from USF. And then also—you laid out some of the things that we need to make sure, on USF, as we go forward, and I'd just like to get a sense from you of how you think it's working right now, and how we can make it better, going forward.

Mr. STRODE. Yes, Senator.

The Universal Service Fund has worked well. In the rural areas where we serve, we are able to provide broadband to 95 percent of the customers that we provide voice services to. That has been through a lot of effort, a lot of investment, both recovery from Universal Service Fund, but a lot of private investment in there, as well. And the system has worked well, so far. But, the uncertainty that we have now, because of the factors I mentioned, especially the regression analysis, has put us in a position where it's hard for us to plan, hard for us to know what investments to make, because the recovery is—a part of that recovery is uncertain. The regression analysis has drawn a hard line at 90 percent. Companies that are above the 90th percentile in costs of similarly situated companies are penalized; their recovery is capped at that 90th percentile level, with no examination of why they're above the 90th percentile. There are legitimate reasons that companies are—have costs that are above the 90th percentile. You know, some of the service territories—very, very expensive to serve in. And you're familiar with some of our service territory, the—80 miles of the Buffalo River runs through our service territory. That's rugged terrain.

The regression analysis—I'll make a real, hopefully, quick, simple analogy—imagine 10 cars going down the highway. State police

stop all 10 of them, say, "We measured your speed, a couple of miles back down the road, and, car number 3, you were the fastest, so we're going to write you a ticket." Doesn't matter whether they were over the speed limit or not; they were the fastest, so they get a ticket. And then they say, "We're going to check you again further down the road, and whoever is fastest is going to get another ticket." And so, everybody slows down. But, still, somebody is going to be the fastest. You can't see the other cars; you don't know how fast they're going. And so, somebody gets a ticket after the next checkpoint. And so on and so on as they go down the road. So, that's what the FCC's doing. They're saying, "Somebody's most expensive, somebody's in the top 10 percent of costs. We're going to penalize them, with no indication that they've done anything wrong."

At the same time, the FCC's requiring us to provide 5-year plans of the investments we're going to make to push broadband further out into our networks, and, every year, update that 5-year plan and report on the progress that we've made. So, while, on one hand, we're being pushed to make more investment, on the other hand, we don't know which investment is going to be penalized, put us over the limit.

Senator PRYOR. All right. I'm going to reserve some of my time for the end.

Senator Wicker?

Senator WICKER. Thank you very much.

Mr. Davis, when the FCC created the Connect America Fund, which we'll call CAF-1, they really had companies like CenturyLink in mind. You state, in your testimony, that, unfortunately, only a small part of these CAF-1 funds have been allocated for use; specifically, only \$115 million targeted for unserved markets has been accepted for deployment in the field. Did CenturyLink accept these funds?

Mr. DAVIS. Senator, that's an important question. And the answer is that CenturyLink accepted a portion of the funds that were available to us. The FCC set a benchmark as to how the funds would be allocated per customer household or business. And the benchmark they set was insufficient for CenturyLink and many other companies to deploy broadband into the higher-cost area. So, some areas that were relatively lower-cost still—substantially above the benchmark, because we add a substantial of our own capital, as did the other companies. So, we did use some of the money to get to the next tier of areas. But, what we need to do now is look at the customers that still don't have broadband and can't be served, even with private capital on that benchmark, to create another standard so we can get broadband out to those areas.

Senator WICKER. How much did you accept?

Mr. DAVIS. I believe we accepted about \$35 million, Senator.

Senator WICKER. OK. And explain, then, if you will, the problem with the benchmarks, specifically.

Mr. DAVIS. OK. So, what the FCC did—

Senator WICKER. For example.

Mr. DAVIS. For example, the FCC said, "We will contribute \$775 per household for deploying broadband to new areas that are unserved." And the certain amount was made available to different

companies. So, we looked at that, and we said, "Well, we can afford to put in this much of our own capital," and so, we added our own capital to it, and were able to use about 300—about \$35 million of their capital, a significant amount of our own capital, and, together, that's how far we could go. But, when you go to the next tier, broadband can—becomes more expensive and more expensive. So, the FCC needs to re-address the benchmark so we get it further out, and look at it from a customer perspective, in how we get service to customers.

Senator WICKER. Is it your understanding that the FCC is moving in that direction with CAF-2?

Mr. DAVIS. Based upon the public comments that we've seen and the conversations we have, we're hopeful that they're moving that direction to complete CAF-1, and we're also simultaneously working on CAF-2, and we're hopeful that they're moving forward on both of those. I believe that CAF-1—completing CAF-1 is immediate and will create additional substantial investment in rural America, and then CAF-2 will be a long-term solution that will continue that and provide additional service to additional households.

Senator WICKER. But, in the meantime, it's not working so great.

Mr. DAVIS. CAF-1 has not worked the way we intended. I don't think it's worked the way the FCC intended. But, I believe we can—we're on track to fix that, if we just move forward.

Senator WICKER. OK. Now, are you on the same page with Mrs. Boyers—where, in her testimony, she says, "Three principles must be followed with the Connect America Fund: First, no support should be provided in areas where competitive providers offer broadband services. Second, support should be distributed efficiently. And, third, all broadband providers, including cable operators, should have fair opportunity to access support when the Commission holds reverse auctions"? Do you differ from Mrs. Boyers position?

Mr. DAVIS. I don't believe so. I think those were the principles that I announced, as well, is that we need to target the money to places that don't have service, where there's not an unsubsidized competitor, and—and I do agree that, when there's a competitive bidding process, allow all technologies to compete, so long as they provide the level of service that is deemed appropriate and necessary for that particular area or for that customer.

Senator WICKER. Mrs. Boyers, has Mr. Davis pretty well outlined it correctly, or would you like to elaborate?

Ms. BOYERS. Yes, he has. But, one of the most important things is the oversight of that. You know, the FCC is moving toward what they are calling "greenfield approach," which means—greenfield means building it from day 1, from the ground up. What will be done initially with these CAF dollars, it's my understanding, is that they will be upgrading existing systems, which is called the "brownfield approach." And so, the FCC has been bantering back and forth with this, and seem to be leaning toward green field. But, whenever the price-cap companies, who are the only providers allowed access to these CAF-1/CAF-2 funds—whenever they get that money for greenfield, and then they use it to upgrade existing, what happens to the excess money? That's what I—that's where

the oversight comes in. That's where I want to know how I can be assured that, in my Van Buren, Missouri, system, on the current river of the Scenic Ozark National Riverways, that they're not coming in there, CenturyLink, which we compete with them in that market—they've been great competitors, great competitors, very respectful of our plant, we're respectful of their plant, but we're just a little small mom-and-pop. I'm the mom. The pop's sitting two rows behind me.

[Laughter.]

Ms. BOYERS. So, we can't compete with those big guys.

We can't compete with government-subsidized money. We just simply—

Senator WICKER. I'm not going to ask which of those three aspects he's supplying, there.

[Laughter.]

Ms. BOYERS. I'll be glad to speak with you after the hearing.

Senator WICKER. Let me just say—my time is out, and—

Ms. BOYERS. We just want the oversight. We believe it when they—

Senator WICKER. We're going to need all four of you to help us with follow-up testimony for the record as to how we can make CAF-1 and CAF-2 work better for rural America.

Ms. BOYERS. Thank you.

Senator WICKER. Thank you very much.

Senator PRYOR. Thank you.

And we've been joined by our Ranking Member, Senator Thune, and I'll go ahead and recognize you now for your questions.

Thank you.

STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM SOUTH DAKOTA

Senator THUNE. Thank you, Mr. Chairman.

I appreciate you, Mr. Chairman, and Ranking Member Wicker, having this hearing and leading off with a very ambitious agenda for the Communications Subcommittee, and particularly focusing on rural areas, which you know is very important to me.

And I am interested, not only in deployment in rural areas, but also adoption, and trying to do more to get people to adopt broadband services in rural areas. And that is something I address in an opening statement, which I'd like to have included for the record, if I might, Mr. Chairman.

[The prepared statement of Senator Thune follows:]

PREPARED STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM SOUTH DAKOTA

Chairman Pryor, thank you and Ranking Member Wicker for working together on an ambitious agenda for the Communications Subcommittee and for leading things off with a hearing focused on rural America, something that is obviously very important to me.

The Commerce Committee has several new members, and I know we will all benefit from an up-to-date look at today's communications landscape.

I do think, however, that the Committee could have been served well by also hearing from a satellite provider today.

For many households, satellite is their only option for video and Internet services.

While satellite broadband has a reputation of being the option of last resort, my understanding is that a new generation of satellites may offer many Americans a competitive alternative to wired broadband choices.

To tackle the so-called “digital divide,” we should seek to understand the entire communications experience in rural areas, and satellite is certainly part of that story.

As the subcommittee begins its work, we have an opportunity to examine these critical issues from many angles.

For example, policymakers have spent a lot of time focusing on deploying networks in unserved areas, which is certainly very important, but I also think it is necessary for us to examine broadband *adoption* in rural communities.

Census Bureau surveys show that nearly 60 percent of rural households not connected to the Internet say they either do not need it or it is too expensive; lack of availability is cited by less than 6 percent of rural non-adopters.

But even when rural Americans see the benefit of the Internet, sometimes they still do not go online.

In a recent survey of South Dakota farmers, 85 percent said that the Internet adds value to their agricultural operations but only 69 percent actually use the Internet.

Even though these folks can get online to check commodities prices, pay bills, or research new agricultural products, they are choosing not to do so despite the acknowledged benefits.

What is keeping these people off the Internet? And are the broadband adoption challenges in rural America unique from the issues seen in the big cities? We should explore the answers to those questions.

Thanks to companies like CenturyLink, South Dakota is one of the national leaders in fiber deployment, ranking third amongst the states with nearly 70 percent availability according to the National Broadband Map.

But the tremendous benefit of that kind of connectivity may be wasted if people aren’t taking advantage of it.

I hope that the witnesses today will spend some time talking about the demand side of rural communications and that we further explore the actual experiences of rural broadband users in future hearings.

Thank you.

Senator THUNE. But, if I could just ask a quick question and have you react to it, if you would.

For those of you who compete head to head with other providers of voice, video, and Internet services, do you feel that you are competing on an even regulatory playing field with your competitors? And, if not, could you identify what you believe are the main regulatory disparities?

Anybody want to take—feel free. Mr. Carlson.

Mr. CARLSON. Well, I’ll—thank you very much. I will speak to the wireless area. And one of the key areas that we feel there is not a level playing field today is the 700 megahertz and the issue of the lower 700 megahertz band interoperability. We, like many midsized and smaller carriers, went into the auction, 3 years ago, acquired licenses on the A block, only to find, after the auction, that one—the two largest companies in the Nation changed the way the frequency allocations were aggregated to effectively exclude the A block from their handsets. As a result of that, manufacturers—many manufacturers will not produce handsets that include the lower 700 megahertz A block, which means that our handset selection at U.S. Cellular is not as extensive as other carriers. In fact, some of the most popular handsets in America, we cannot get access to for our newly launched LTE broadband network on 700 megahertz. We can’t get access to that. So, that’s a lack of consumer choice that was created because the FCC did not require interoperability across the lower 700 megahertz band.

That’s very, very important to correct. The FCC, to their credit, has a proceeding in front of them to correct that. We would hope that, as soon as the new leadership of the Commission is settled,

that they will get that across the finish line. And we would ask for your help in doing that.

Senator THUNE. Anything else?

Mr. DAVIS. Senator, I—as an incumbent telephone company, we are subject to substantial regulations regarding the provision of service, obligations to serve, unbundling of our networks. So, there are a number of obligations that are imposed on incumbent telephone companies that don't apply to cable or don't apply to wireless. And so, the regulatory field is not level; it has different bumps and bruises, but it's not level.

The one thing I would also just mention very briefly about adoption, which you raised, is that we find that when we bring broadband to a community, there is a great need for it and a great desire for it. And so, adoption does occur very rapidly across a very broad base. We also offer a discounted \$9.95 broadband offer for low income customers. So, we're trying to do things to address adoption through various communications, but as well as looking at lower income customers and deciding if there's something we can do there.

Mr. STRODE. If I may.

Senator THUNE. Go ahead.

Mr. STRODE. Not necessarily in areas where we're competing, but just the regulatory burden on small companies, particularly companies like ours, and smaller than ours, the regulatory burden is very heavy. You know, the company I work for, we're fortunate—we're actually large, in the realm of some small companies, but I can tell you that the regulatory burden is difficult for us to comply with. We spend—it takes a great deal of my time, and our staff, trying to comply with the reports that are required of us, both as an incumbent telephone provider and as a cable and broadband provider. And for smaller companies, I can't imagine how they are able to keep up. I know it's a terrible challenge for them.

On adoption, we have engaged in making some promotional offerings. A couple of schools in the areas we serve got grants to provide children, in one grade, laptop computers.

We offered a promotional broadband offering to those students' families so that they could make complete use of those computers. We have worked with community organizations, trying to provide Internet education, broadband education, classes for adults. A problem—a common problem is the—their children know more about the Internet than they do, and they're concerned about the things that are out there in the world. They want to keep their children safe. And we've tried to develop some programs to help educate them so they can engage in monitoring their children's usage and being able to keep them—have some comfort that their children are safe.

Senator THUNE. Thank you, Mr. Chairman.

I thank all of you for your input and perspective.

Senator PRYOR. Thank you.

Senator Begich.

**STATEMENT OF HON. MARK BEGICH,
U.S. SENATOR FROM ALASKA**

Senator BEGICH. Thank you very much, Mr. Chairman. Thank you for holding this hearing and an opportunity to kind of explore the issues of remote areas.

And I use the word "remote" because, in Alaska, rural is one thing, but remote is clearly what we are, with 200 villages off the road system, almost 600,000 square miles of land, when you think of the size. It's enormous. And some of you have mentioned how hard it is to do some of your areas; you can imagine what it is in Alaska.

And I know, Mr. Strode, in your written testimony, you noted, I think, Barrow, if I remember right, in the North Slope. And so, I thank you for that.

You know, we've been fortunate, with some work with the USF fund, the RUS loan program, the stimulus program, to start to reach out and make some efforts. But, some of your testimony is pointing out some areas we still need to go.

So, I want to start, if I can, Mr. Strode, in your comments. And I—and, as you know, Congress retired the NTIA to develop a—with assistance from the FCC—a national broadband map. And, you know, we hear rumblings, a little bit, of our accurate the map is, but can you give me a little feedback on how you see this map and how accurate their broadband map is, at this point?

Mr. STRODE. We have diligently tried to provide information to the organization that's doing the mapping for our States, and tried to make sure that the map was accurately—accurately reflects where we provide service.

I believe the method that's used is—presents a—perhaps an uneven picture of the ability of our—of where we have service.

Senator BEGICH. Is it fair to say it's not that accurate?

Mr. STRODE. Well, it's just not—

Senator BEGICH. In the rural areas.

Mr. STRODE. It's—it—we have—as you're, I'm sure, familiar with, there—if you look at the map, it looks like there are great unserved areas. And the reason it's—some of those areas are unserved is because there's no one there.

Senator BEGICH. Right.

Mr. STRODE. There's no one there to provide service to. I have concerns that the map does not accurately reflect the service that's available from some of our competitors. I think it perhaps overstates what some of the competitors can do.

Senator BEGICH. Do you think they're being—do you think they'll be receptive, or not, in trying to get these maps more accurate? Because it is important for the consumer to know where the service is and where it's not.

Mr. STRODE. It's very important. And, like I said, we've worked with the organization that's doing the mapping in our State, and I think it pretty accurately reflects where we are; and they've been good to work with, in trying to do that. Like I said, I—one of my concerns is that it overstates what some of our competitors can provide and do provide.

Senator BEGICH. I understand.

Let me ask you another question, on intercarrier compensation. As you know what the purpose of this is. It's money the telephone company is paid to transport and—and as that continues to go down, which pretty much almost nothing at some point, what are you doing, as a company, to try to compensate what that—particularly where USF is kind of stagnant or lacking in its capacity? What do you do, as a company, to compensate for that?

Mr. STRODE. Well, we have made staff reductions. We've engaged in taking a hard look at our expenses, trying to control costs. We are looking at other lines of business, other ways to expand our business. We've been fortunate to get into the transport business. We're providing back haul for cellular companies from their towers. Looking at other ways to provide revenue to replace that lost revenue.

Senator BEGICH. Gotcha. Let me ask you—and this will—one area that I want to ask you particularly about, and then I'm going to broaden it to the 700 megahertz issue—and that is the issue of roaming agreements. Tell me just kind of your ability or fairness, or what's—how do you see that?

Mr. STRODE. I don't have direct experience. Our company's not a provider of wireless services, but I know other companies that are similarly situated to us have problems getting roaming agreements that let their customers be able to use their service at reasonable prices when they travel outside of their home area. It's a—it is a major problem for—

Senator BEGICH. It's a big challenge.

Mr. STRODE.—small/mid-sized carriers.

Senator BEGICH. Very good.

Mr. Carlson, I'm going to ask you this, because you mentioned it. First, on the 700 megahertz, I—that's very good testimony, and I—I'm hopeful that they'll get through their next order. You mentioned that they're in the process. And I always get concerned about how long FCC takes on these orders. They—it seems like a never-ending cycle. But, you mentioned the 600 megahertz issue that—to make sure we don't repeat the problem. I don't—I may have expanded the verbiage there, but explain that to me, just so I understand.

I understand the 700. We've got some issues there. And hopefully the order will help rectify that. And it sounds like they're moving that way. But, my worry is always, again, FCC moving in a timely manner. But, the 600, tell me what your issue there was.

Mr. CARLSON. Well, the 600 megahertz auction will be even larger, in terms of—at least many people think it will be—in terms of spectrum availability, than the 700 megahertz auction was. And the 600 megahertz auction is expected to come either late 2014 or early 2015. And the rules for 600 megahertz are probably going to be written this year by the FCC. So, it's very important to get those rules right.

So, we believe, as do many midsized and small companies, that we need to have interoperability standards established at the beginning—

Senator BEGICH. Instead of what we did with the 700.

Mr. CARLSON. Exactly.

Senator BEGICH. Gotcha.

Mr. CARLSON. Before the auction instead of after the auction.

Senator BEGICH. And do you think the FCC is responsive to that?

Mr. CARLSON. Well, I would certainly hope so. I think so. At the staff—

Senator BEGICH. I knew you were going to say “hope so.” Let me—

Mr. CARLSON. No, I will say this. I think many of the staff members are responsive—

Senator BEGICH. OK.

Mr. CARLSON.—to that. And, of course, you know, the commissioners, you know, are—I would hope they would be responsive. And we’ll do our best to educate them. But, the old kind of oversight that Patty talked about is wonderful and—to make sure that they realize that, you know, that’s part of their responsibility, too.

Senator BEGICH. OK, let—thank you very much. My time has run out.

Mr. Chairman, that is obviously—because the 700 megahertz has taught us some lessons. It may be worthwhile, as the Committee just—this is one of those issues we should dog to make sure we’re not here, 2 years from now, having this same panel, having the same conversation. Just food for thought.

But, thank you all very much.

Senator PRYOR. Thank you. And we are keeping the record open for 2 weeks, so if you want to submit additional questions—

Senator BEGICH. Excellent. I have a couple more. I’ll do that.

Senator PRYOR. Great.

Senator BEGICH. Thank you.

Senator PRYOR. Senator Blunt.

STATEMENT OF HON. ROY BLUNT, U.S. SENATOR FROM MISSOURI

Senator BLUNT. Thank you, Mr. Chairman. And thanks, to you and Senator Wicker, for holding this hearing.

You know, when we had the commissioners in the other day, I asked them specifically about the underserved, unserved, how we really focus on people who don’t have service out—Ms. Boyers, I know, of course, you and Steve well. I’m glad you’re both here today. I know you’re also involved in the American Cable Association. And, from that perspective, do you think it’s possible for the FCC to develop a set of rules that really allow money to be spent only as it’s targeted toward people who don’t currently have service? How—what kind of advice would you give there as to how they should set these standards?

Ms. BOYERS. I certainly think that it’s possible. I just don’t know if the focus will be there. Because if the money is allocated and goes out the door first, then it’s really hard to close the barn door after the cows have already gotten out. I mean, it just really is. Once the money goes out and they decide that it’s going to be spent in greenfield components rather than brownfield, and before they would have to present plans—or even the way RUS does it on a loan—you have to spend the money before they give you the money. So, maybe an—I don’t know how they would do that, Senator, but I do know that it must be done, because little people like

us—and I say “little people,” figuratively speaking—little folks like us have no recourse, you know.

I understand USF. I understand—I get that. I get the CAF fund. I get that. Because I understand where we’re at in the concept of the—of “but for.” But for United Service Fund, you couldn’t call your grandmother in Blue Eye, Missouri, if you lived in New York City. That’s what universal service is all about. The Connect America Fund is the same thing. But, you can’t use those funds, much like RUS has done in the past, to subsidize someone else to overbuild a suburban area, where an unregulated company that’s using private company, unsubsidized, is already serving. That’s where the rubber meets the road for the BOYCOMs of the United States.

Senator BLUNT. Right.

Ms. BOYERS. Because we have no recourse, we have no voice but y’all.

Senator BLUNT. Thank you. Thank you all for—that you for that comment.

Mr. Davis and Mr. Carlson, both, you know, we really haven’t had any buildout in Missouri, based on the USF reform order. Do you have a sense as to why that is and what can be done to further encourage buildout in the parts of the country that haven’t had it yet?

Mr. Davis first.

Mr. DAVIS. Well, I think that—first of all, I do absolutely agree that subsidies should not go to areas where there’s an unsubsidized competitor providing adequate service. And so, I agree with that concept. And I think part of the problem with the current round of the CAF–1 funding that the FCC has authorized is that it was insufficient to allow companies like ours to go to the higher-cost areas. And so, the purpose of the fund is to do that, to get us to the higher-cost areas. So, we need a new benchmark. We need the FCC to readdress the CAF–1 funding, which we are hopeful and believe they are trying to do. But, they need to look at the—how much it costs to get to some of these areas. And it’s not without additional capital from private companies, also, but to recognize that these areas are very expensive, and getting that broadband out there benefits those customers, but also benefits everybody across the country, to have everyone engaged in the digital economy.

Senator BLUNT. Yes.

Mr. Carlson?

Mr. CARLSON. Yes. So, in the wireless world, the way the FCC has organized the new Mobility Fund, which is the one that did not provide funding for Missouri, is that that fund is targeted at those highway miles that are the least expensive to serve that have not yet been covered by good service. So, it has a very specific targeting. And the amount of the fund being only \$300 million, compared to \$1.2 billion per year of funding under the prior Universal Service Program for wireless, meant that the fund availability was much, much smaller.

So, areas like Missouri, which is—are more difficult to serve per highway mile, under the current FCC regime will be forced to wait—and we don’t know how long—until the areas that are the

least expensive to serve of the unserved areas are served and we work our way up to the more expensive areas to serve.

This was not one of our ideas as a company. We wanted to continue with a system which allocated funds based on all areas that had high cost, which would have covered states like your own, sir, states like New Hampshire and other states. But, this is what the FCC currently has decided to do.

We would recommend that more funding be provided for mobility and that the FCC take a new look at this method of funding that only targets the least expensive areas to serve.

Senator BLUNT. Right.

My time's up. I'm going to submit a question—Mr. Carlson, you reminded me, there in your comment, of whether that 300 million was all subscribed, and, if it was subscribed, if it's all, then, being used, or do we have some idle money sitting around that was designed for a specific purpose that's not being used for that purpose of connecting these highway miles. And I'll submit that in writing.

Thank you, Chairman.

Senator PRYOR. Thank you.

Senator Fischer.

**STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM NEBRASKA**

Senator FISCHER. Thank you, Mr. Chairman.

I'd like to focus on a concern that many companies in my state have problems with. They believe it's hindering their goal to meet the needs of their customers. And that's the QRA. They're concerned about the formula, which we've talked about, and also about the unpredictability of the year-to-year caps.

And, Mr. Strode, I'd like to ask you some questions on that. With your experience, how do you believe that these QRA caps are affecting the companies that you represent? And I'd like you to talk about the planning process and the problems that some of these companies may have in even forming a business plan because of that unpredictability. And you mentioned, I think, earlier in your testimony, about a 5-year plan. And is that required?

Mr. STRODE. Thank you, Senator. Yes. The FCC requires from us a 5-year plan, starting this year, on July 1. By July 1, we have to submit a 5-year plan of how we're going to make broadband available in areas where it's not available now or increase bandwidth in areas where it is available today. So, it's investment in broadband services. We are required to make that plan, provide some other information, in terms of unfulfilled requests, if there are any, for broadband services, and submit that plan by July 1, describing how we're using Universal Service funds that we receive.

A year from now, or in July 2014, we're going to have to submit another 5-year plan, update, you know, prospective 5-year plan, and report on the progress that we've made on the 5-year plan that we presented the year before.

In a environment in which we don't know, are unable to accurately predict what our recovery is going to be on investments that we make because of the QRA, the regression analysis, we don't know what companies are in the same group with us. We can't—

we don't know how we're investing, in comparison to them. We don't know if we're making investments that are going to push us over the 90 percentile, or not. It's very difficult to make plans, to know that this investment is going to—what recovery, what revenues we will receive from the Universal Service Fund on that investment. And so, it makes it difficult to look into the future for 5 years and make plans, not knowing what's next, in terms of recovery. And, as I said, the Commission is still considering further caps and cuts in the fund, and we don't know what impacts those will have. So, trying to make a 5-year plan is extremely difficult.

Senator FISCHER. You know, I have a company in my state that—in their plan, I believe it is, that they need a million dollars for investment, and they received, I think, \$125,000. How would you suggest a company can plan, unless we change it? Should the Commission be looking at maybe a—at regions instead of the entire country with regards to the formula to look—instead of having such diverse companies involved in trying to divvy out the money that way, should you look more for companies that are alike, at least in the regions that they serve?

Mr. STRODE. My understanding is that the companies that are in the sample, or that are in the regression analysis with our companies, are companies that are similarly situated, have similar terrain, similar customer densities. My recommendation is that the FCC use the regression analysis, not as a hard cut, at 90th percentile, but use that as a method to identify companies that need further investigation. Rather than saying, "Because you're above the 90th percentile, we're going to limit you," look at the companies that are above the 90th percentile and say, "Okay, why is it expensive to serve in that area? Show us what you've done. Justify these costs to us." And if a company can't justify the costs, then limit their receipts.

But, if the company is spending that money in a good faith effort to provide broadband to customers in its service territory who aren't going to get it otherwise, in many cases, then they shouldn't be penalized simply because the areas where they serve is very expensive to serve in.

Senator FISCHER. Thank you very much.

Mr. STRODE. Thank you.

Senator PRYOR. Thank you.

Senator Klobuchar.

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Thank you very much, Chairman Pryor.

Thank you, to our witnesses. I'm—this is incredibly important to my state and other states here. I truly believe people that grow up, kids that grow up, in rural Minnesota should be able to stay in rural Minnesota. And, in today's world, that means they have to have Internet that works, they have to have phone service that works. And this is truly our rural electrification issue of our century, and that means expanding broadband. And I'm going to put some questions on the record on that, especially with the middle-mile issue.

But, there are two things I want to focus on today. First, the call-completion issue, which, I have to tell you, was a complete surprise to me, about a year ago, when I was visiting a town that was almost decimated by a tornado, and all they wanted—they missed the tornado, but all they wanted to talk about was their “phone tornado,” which was that their calls were not being completed.

And, just recently, we’ve had an uptick in call-completion complaints, and I know the FCC is making progress, that there was a settlement with one company, with Level 3. But, in Minnesota, businesses like Up North Sports, in Bemidji, John Deere dealers that sell \$300,000 worth of tractors in Hoffman, they depend on quality phone service. And, bizarrely, I guess to save money, some of these companies are not just—they’re just bumping these calls and not completing them, because it costs too much. And they literally have shown me graphs of when this happens.

Mr. STRODE, do you want to comment about this and what your experience is and what you hear from customers and businesses?

Mr. STRODE. Yes, Senator, thank you.

We have experienced call-completion issues in our service territories. A manufacturing plant in Marked Tree, Arkansas, one of our exchanges, was unable to receive calls either from customers or suppliers. They were—they called us, desperate. They were complaining that, “You’ve got to come over here and fix this problem.” And when they described the problem to us, we said, “It’s not our problem. We’ll be glad”—and we went to them and worked with them to show them that it’s not our fault—

Senator KLOBUCHAR. Right.

Mr. STRODE.—that the problem is on the originating end.

Senator KLOBUCHAR. I understand.

Mr. STRODE. And we were able to create a workaround for them, create—we set up a number, in another area that was not having call-completion issues, and let them give that number out, then we route that across our network to deliver it to their facility so that they could get those calls. They’re a major employer in our service territory, and we were trying to help them be able to continue in business.

I appreciate what the FCC’s done on—in their settlement with Level 3. However, we don’t—have not seen a significant change—

Senator KLOBUCHAR. Agree.

Mr. STRODE.—in the amount of call-completion issues we have.

Senator KLOBUCHAR. Yes.

Mr. STRODE. I confirmed that yesterday. I was—

Senator KLOBUCHAR. Thank you.

Mr. STRODE.—in contact with one of our offices, and they confirmed that we’re still having problems. Had two calls yesterday—

Senator KLOBUCHAR. It’s—

Mr. STRODE.—from customers—

Senator KLOBUCHAR. I think people, in this day and age, would be shocked that we can’t have high enough quality service—and it’s not because we don’t have the capability, it’s because they’re choosing to shut them off.

And I just wanted to read one letter, and then go on to one last issue, from one of our small phone companies. And they said, “The

level of frustration has reached such a height that, rather than enforcing, educating, and assisting rural customers and companies, our regulatory bodies are informing a customer to switch their local provider to a bigger company, even though the local provider," as you pointed out, Mr Strode, "has no control of the situation and is fully compliant with FCC rules."

So, I know that we've had a bipartisan letter on this with a large number of Senators, and I think we're going to have to do something more. The Level 3 settlement was good, but it's clearly not enough, when, in response, we're now seeing an uptick.

Mr. STRODE. Yes. It—we actually, in working with that manufacturing plan in Marked Tree, they told the people who were trying to call them, you know, that the problem was on their end. And when the callers contacted their phone company, they were told that the problem was because the manufacturing plant was in an area that was served by a small telephone company that just did not have—

Senator KLOBUCHAR. No, this just—

Mr. STRODE.—the facilities to provide that service.

Senator KLOBUCHAR. Right. This just can't be how business works in America, "Sorry, you have a small carrier, so you don't get service," even though it's not their fault. That's what they're saying.

OK, the second thing is unlocking of cell phone service, something that—there are a number of bills out there right now, coming out of a recent issue, which is too detailed, legally, to go into right now. I'm a strong believer in unlocking. I think it'll lead to more competition. I have a bill with Senator Mike Lee to require the FCC to put rules forth so that, basically, and especially in rural areas, that you're not locked into your carrier when you have a phone, and that you can keep your number, and that you can—if you're—move or if you are in another part of your—especially a rural area, where the phone service isn't working, you don't have to change your phone.

I guess I would start with you, Mr. Carlson, if you agree that unlocking is an impediment for consumers choosing to switch carriers, and, therefore, a barrier to competition.

Mr. CARLSON. Yes, Senator, we would agree with you, that unlocking is something that is a good thing to do, and is a necessary thing to do.

The only thing we would add is that if you unlock and you have not gotten interoperability, then the unlocking may not really have any effect, in certain cases.

Senator KLOBUCHAR. Right. Could you just follow up on that? And then, I'm out of time; I'll do the rest on the record, here. But, how does the lack of interoperability impact the rollout of, say, 4G service to rural areas?

Mr. CARLSON. Right. Well, to give you another example, many of the licenses in the 700 megahertz were won by companies smaller than ourselves, and they, frankly, were not able to get any manufacturers to produce phones for them. So, as a result, a large percentage of the 700 megahertz A-block licenses, which probably, in aggregate, are worth hundreds of millions, if not billions, of dollars are sitting unused today, even though that's clean spectrum, good

spectrum that could be put to work in rural America for the benefit of the public, all because we lack interoperability.

Senator KLOBUCHAR. OK, very good.

I want to thank all of you and just put everyone on notice, here, that you just can't mess around with rural areas by not completing calls. This is not going to work, so there must be a better solution. And that I think there's a lot of hope here, and bipartisan interest, in doing something on unlocking.

Thank you.

Senator PRYOR. Thank you.

Senator Ayotte.

**STATEMENT OF HON. KELLY AYOTTE,
U.S. SENATOR FROM NEW HAMPSHIRE**

Senator AYOTTE. Thank you, Mr. Chairman.

I want to thank the witnesses for being here.

And, Ms. Boyers, I wanted to follow up on some of the questions you were asked by Senator Blunt. I've had a lot of concerns about the Universal Service Fund. You know, New Hampshire's a \$25 million annual net donor to this fund, yet we've got areas of New Hampshire that are rural, particularly in Coos and Grafton Counties, that are not getting the capacity that would provide very needed economic development and broadband access. So, as I look at your experience, you are receiving no government subsidies, and yet, in many instances, you're having to compete your distinction between greenfields of money not, for example, going to places where, because of the rural nature, we do need the assistance to build capacity. Instead, it's going to brownfields to upgrade systems where there already are systems in place and where competition would take care of itself.

So, I'm really concerned about that. I appreciate your testimony. And one of the ideas I wanted to get your thought on is, since we give the money up front, is there a phased way we could give the money? Is there a way that we can make sure that—you said FCC oversight, that this money doesn't go to brownfields to subsidize areas where—for example, you're competing against them with no subsidies? There are areas that are underserved that really exemplify the purpose of the Universal Service Fund. What thoughts do you have on how we could have greater oversight on how funding is allocated? Because it seems to me, that would be the greatest area of oversight we could push forward.

Ms. BOYERS. Well, thank you, Senator. One of the benchmarks that the FCC has set forth is a 4 megahertz availability for downstreaming, and upstreaming of 1 megabyte. So, that is the—that says this area is underserved or it's unserved. So, if you have a system that already exists, and you're only offering 3 megabytes, and that's the max that you can offer, they will go in, and they're going to get money to rebuild the whole thing, but they're just going to—just going to revamp it so that they can get it up to the level that the FCC is requiring, which is the 4 megabytes, but then you've got the rest of this money out there. That gets—

Senator AYOTTE. But, tell that to the people that don't have any access.

Ms. BOYERS. That's exactly right. If you are truly building brand new plant in areas where there is absolutely no one serving, then greenfield is the only way to go, because it truly is greenfield. But, that's where the oversight comes in. That's where the FCC—and, quite frankly, I have been the recipient of a \$9.3 million RUS loan, of which we sent back—we didn't send it back—we only took \$1.5 million of it, and then adjusted our loan documents so that that's all that we took from them, because of the laborious process that we have to reprove our loan every time. We get to a next—new point of our project, we have to present all the invoices, then we get our money.

I have no problem with the FCC making that happen with the CAF fund. That's accountability. You know? Put your money where your mouth is, and then we'll reimburse you. But, that's the way—that's the way most construction loans—for a home, you get your money, there it sits. You go in, you present your invoices and your lien waivers from your carpenters, and everybody signs off, they get their check. I don't have a problem with that. I think that would be an excellent way to do it. That's the way I've been required to do it with an RUS loan, so why not do that with the RUS stimulus money or with the CAF fund?

Senator AYOTTE. That way, we know it's going to places where we really need it.

Ms. BOYERS. Absolutely.

Senator AYOTTE. I appreciate your advice on that.

And, Mr. Davis, I know that, when it comes to New Hampshire, we're similarly situated to Missouri, in that we did not receive any of the Connect America funds. And, in fact, as I understand it, there certainly have been applications that were denied for New Hampshire because of the cost of a mountainous terrain. It's a beautiful state, but the areas that aren't covered, there's a reason why they're not covered: the geography and the nature of those areas. Yet, there is huge economic capability there if we could have broadband access. So, what do we need to do for states like New Hampshire?

Mr. DAVIS. Well, yes. And I think one of the changes the FCC is making, or is intending to make as they move from the Universal Service Fund to the Connect America Fund, is to fund only areas which they've identified, through a national broadband map or through whatever research they have, as not having service. So, find areas that don't have adequate service, and only provide support in those areas.

But, what we need to do, what the FCC needs to do is—they've set a benchmark, and that benchmark allowed a limited amount of funding to be used, and of broadband to be deployed. And what we need is—in the CAF-1 process, is to refine the benchmark. The benchmark needs to be changed so that we get more money out there, we get more broadband deployed, and we bring it to areas of rural Massachusetts, rural Missouri, of all 50 states, where we don't have broadband.

Senator AYOTTE. And can we combine that with a proposal to make sure that it goes to the areas that really need it: the greenfields capacity? Because, I do think it ends up being unfair that

you're subsidizing competitors, where there are places that don't have capacity.

Mr. DAVIS. Yes. Right. I agree that we should not be subsidizing a competitor where another competitor is already providing adequate service. I absolutely agree with that. The greenfield/brownfield discussion goes into the cost model that the FCC is looking at, with respect to the long-term CAF funding and how do you base that model. The FCC has always looked at a greenfield model. They did so when they adopted the unbundled network elements, because that was the cheapest way to price those. So, it's a more difficult discussion regarding cost modeling, which we can have, but that's kind of the greenfield/brownfield. It's not that we're in any way suggesting subsidies of areas where someone's already providing broadband service.

Senator AYOTTE. Thank you.

And I may have some follow-up questions for the record, but I want to thank all of our witnesses for being here for this important issue.

Senator PRYOR. Thank you.

Senator FISCHER.

Senator FISCHER. Thank you, Mr. Chairman.

I have—just have a couple of questions I wanted to follow up on since we have a few minutes left.

Mr. Davis, when Senator Wicker and, I think, Senator Blunt also was asking you about the CAF-1 question, and the money that was accepted—I think it was \$115 million, is that correct?—and that—

Mr. DAVIS. That's correct.

Senator FISCHER.—was out of \$300 million?

Mr. DAVIS. That's correct.

Senator FISCHER. Can you tell me how many carriers accepted the money?

Mr. DAVIS. I don't know the actual number. We can provide that for you, though.

Senator FISCHER. OK. And do you know how many were turned down?

Mr. DAVIS. The—

Senator FISCHER. Were there any?

Mr. DAVIS. It was not as much "turned down" as the—the commitment would be to build to a certain number of households for every \$775 received. And so, I don't believe any were, per se, turned down. Proposals that companies made to provide different benchmarks were turned down.

Senator FISCHER. By the companies that didn't receive the money, correct?

Mr. DAVIS. By companies who had the option to receive the money but could not make—

Senator FISCHER. They didn't—

Mr. DAVIS.—\$775 work for their rural constituents.

Senator FISCHER. They didn't reach the benchmarks that were set. Were those benchmarks realistic?

Mr. DAVIS. The benchmark, as it turns out, was not realistic for most rural customers. And so, it was set too low to serve the vast majority of rural unserved customers.

Senator FISCHER. Have you or any of the other companies given suggestions on how those benchmarks might be changed?

Mr. DAVIS. We have. We've had extensive discussions with the FCC about creating new benchmarks that allows us to put this money to use. It's just sitting on the sidelines. And we are hopeful—and I—and members of this committee and the Congress have weighed in and said, "Let's get this money and put it to use and build broadband in unserved parts of America." And we're hopeful that the FCC is moving that direction.

Senator FISCHER. OK, thank you.

And then, Mr. Strode, a follow-up question for you. You outlined three steps in—that the FCC should take to uphold the legal requirement, that the funds should support sufficient—that fund support should be sufficient, predictable, and specific. So, what are the steps that you think need to be phased in for the caps over a longer period of time in order to meet those?

Mr. STRODE. Well, the QRA analysis, the regression analysis, should be clarified and used, as I said earlier, as a tool rather than—it should be used as a tool to identify areas that need further examination. The FCC should not implement any new changes until they evaluate the changes that have been made and see what impact they've had, see if they've helped.

The FCC needs to also define a clear path, a plan for the broadband for rural areas that is understandable and achievable, and that gives rural—people in rural areas a realistic opportunity to receive broadband services that work, that are comparable—reasonably comparable to what's available in the urban areas.

Senator FISCHER. Right. But, do you believe that the FCC should phase in those caps over a certain amount of time? And what kind of timeline would you give them?

Mr. STRODE. I'm—I don't agree that the caps are necessarily appropriate. Like I said, there are legitimate reasons that companies' costs are high. And I—while I understand that the FCC has set a budget and is trying to work with that budget, I think they've got the regulatory cart before the horse. They set a budget before they knew what the real cost to provide broadband to people in rural areas is.

You know, it's—I don't agree that caps are necessary or that they're even useful if they prevent people in rural areas from getting broadband services.

Senator FISCHER. OK, thank you.

Thank you, Mr. Chair.

Senator PRYOR. Thank you.

I do have just a very few follow-ups, as well.

Mr. Strode, let me start with you. Earlier in your testimony, and in response to a question, you talked about the regulatory burden. And, just for clarification, is that regulatory burden coming from the Federal Government, State governments, or local governments, or all of the above?

Mr. STRODE. Primarily from the Federal Government. The regulatory burden at the State level is much less than it was at one time. Regulatory burden from local governments is very small. It's primarily from the Federal Government, from the FCC.

Senator PRYOR. Thank you.

And, Mr. Carlson, I do want to follow up on a couple of the questions that my colleagues have asked, and that is about interoperability, and also data roaming. Are those issues different in a rural setting compared to a more urban or suburban setting, or are they sort of the same wherever you are?

Mr. CARLSON. Well, I think the interoperability is particularly acute in a rural setting, because the 700 and 600 megahertz licenses are particularly useful in rural areas. In other words, those spectrum bands, the signal travels farther and can be used to serve rural areas effectively. And those are two bands that the FCC can really do something about in the near term. So, I would say there is something different there.

In terms of data roaming, I think the data roaming need is universal. Fortunately, there was a court decision that upheld the FCC on roaming. And so, we—we're very encouraged by that. But, that will need continual oversight, from all of you here in the Senate, to make sure that the FCC continues to be aggressive in making sure that roaming is possible between carriers.

Senator PRYOR. OK. I want to say thank you to our entire panel.

We are going to leave the record open for 2 weeks. And, by the way, we know that we had a very small sliver of the industry here today, and I don't want to create a myth, here, that it's only small carriers that serve rural America. If the larger carriers were here, they'd tell you they've invested billions in rural America to try to provide service, as well. But, we would love for the Senators to submit further questions, if they have them. We also would welcome any comments from the public to be part of this record.

And I just want to say thank you very much to all of our panelists today. We're going to leave the record open for 2 weeks. And I just want to, again, say thank you all for coming. Some of you traveled a great distance to be here.

Thank you.

[Whereupon, at 12 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM NEW JERSEY

Mr. Chairman, our nation's telecommunications networks are some of our most valuable assets. Wide access to broadband, in addition to voice and video, is critical to spreading economic growth and opportunity to every corner of the country. But far too many Americans, including some in New Jersey, live in areas where there is no broadband access. Too many others live in areas where there may as well be no access because broadband is so expensive. So we must continue to look for ways to ensure that residents in rural and low-income areas have affordable broadband access.

In underserved areas, we need to look beyond traditional means to make sure everyone has access to broadband. For example, we should consider the role that municipal governments can play in providing access. Municipal broadband can help lower costs and expand access in areas that currently lack service, or where service is insufficient or unaffordable. The United States should be encouraging these innovative networks. Yet, many states have already passed laws that restrict municipal broadband access. Instead of creating obstacles for municipalities that want to provide affordable broadband access, we should be working to ensure everyone has access to the Internet.

Another important issue is improving how we fund the extension of broadband access. I have long supported the Universal Service Fund. But as it stands, states like New Jersey—large net-contributor states—bear too much of the financial burden, donating nearly \$200 million a year to the fund. We certainly recognize the value and importance of the USF, but if we are to make it a sustainable program that helps make universal broadband access a reality, we must reassess the way we contribute to the fund. As the Federal Communications Commission works towards contribution reform efforts, it must consider the impact of any reform proposals on net contributor states.

I thank the Chairman for calling this hearing on our telecommunications network, which is important to this country's continued growth, and I thank the witnesses for speaking about the communications needs of the Nation.

PREPARED STATEMENT OF ALBERT S.N. HEE, PRESIDENT, SANDWICH ISLES COMMUNICATIONS, INC.

Chairman Pryor, Ranking Member Wicker, and distinguished members of the Committee, thank you for holding this hearing to address the State of Rural Communications. My name is Al Hee and I am the Founder and President of Sandwich Isles Communications, Inc. (SIC), the *only* Rural Local Exchange Carrier (RLEC) located in Hawaii. SIC provides service to Hawaii's indigenous people on Hawaiian Home Lands (HHL), Hawaii's "tribal lands", which were created by Congress through the Hawaiian Homes Commission Act of 1921 (HHCA). The Hawaiian Homes Commission (HHC) approached me twenty-five (25) years ago to insure the lands set aside by Congress by the HHCA would have adequate communications services. SIC is a beneficiary owned RLEC which has provided advanced telecommunications services since 1995.

Prior to SIC, the only HHL areas receiving telephone service from the monopoly incumbent local exchange carrier (ILEC) were those where HHL paid for the infrastructure improvements. This resulted in the vast majority of HHL not having service. SIC worked with the Department of Agriculture, Rural Utilities Service (RUS) to design and build communications infrastructure capable of delivering both voice and broadband. Repayment of the loans is dependent on receiving Universal Service Funds (USF). SIC then borrowed the money from RUS to pay for the infrastructure. These plans were reviewed and approved by RUS and all information about the plans submitted to the FCC. SIC is audited every year and has had numerous an-

nual and special reviews by both the RUS and FCC since beginning to provide service.

SIC provided comments in the numerous efforts leading up to the final Transformation Order finalized in December 2011. However, the final Transformation Order differs from the draft(s) substantially. We viewed the Transformation Order as pivotal in keeping up with the changes that are occurring in communications. These changes are not only technological, but more importantly the changes are societal. In its' Transformation Order, the FCC took great pains to meet the requirements of the underlying statute in particular Section 254 of the statute specifying that "support must be sufficient and predictable." The Transformation Order contains a "waiver" to meet the "sufficient and predictable" statutory requirement.¹ In addition to the waiver, the Transformation Order contains a 45 day timetable to act on the waiver petition when the petitioner is serving Tribal Lands.

Ten months ago, I testified before the Senate Committee on Indian Affairs about the devastating impacts the FCC's Transformation Order issued in December 2011 had and would continue to have on insuring Tribal Lands obtained advanced communications services. At that time, I believed the impacts were unintended. However, today it is difficult for me to understand how the devastating impacts can be anything other than intentional.

SIC was the first to file a petition for waiver in December 2011. We are now sixteen months from our petition date and we have not received a ruling despite the 45 day rule. We have however, learned the following: i) the FCC does not believe it has any obligation to continue to support any legal financial obligations a company made under the previous rules; and, ii) any waiver will not be retroactive regardless of when the petition was filed or when the ruling should have been made.

Communications infrastructure requires millions of dollars of loans that are paid back over a period of 20 plus years. Furthermore, utilities customarily enter into long term obligations to lease facilities, real estate and rights of ways. SIC did all of these and based our waiver petition on fulfilling *only* the obligations made under the old rules. Before the Transformation Order SIC met these obligations primarily through the USF payments received under the FCC's rules. SIC has been told it must renegotiate these obligations before the waiver can be acted upon. SIC does business with several affiliate companies. All of the necessary transactions are in accordance with existing FCC rules and reviewable. SIC has never been told these transactions are in violation of rules, fraudulent or unethical. However, SIC has been told to eliminate all affiliate transactions including those which are necessary to continue to provide service. You heard oral testimony about the Regression Analysis singling out the company receiving the most support, regardless of whether that support is justified. Rural companies are therefore not making any future investments. Despite overwhelming evidence that the cost of doing business in Hawaii is more expensive than in the continental US, the regression analysis does not account for this. Therefore, SIC cannot make future investments nor can it meet its obligations for investments made under the old rules.

Not only has the FCC not acted as per the 45 day period, SIC is now being told any action will not be retroactive. We are now approaching 500 days since SIC filed its waiver petition. SIC filed the waiver petition quickly in hopes of averting the devastating financial impact of the Transformation Order. SIC has been using its own monies, not paying some creditors, reducing the number of employees and where possible deferring payments. SIC has also tried to use those portions of the Transformation Order to increase its revenues by serving more customers with its existing infrastructure. The Order contains a streamlined process to expand a carrier's study area, a process that normally takes years and requires voluminous filings and comments. SIC has been planning for years to expand its study area to include all of HHL however, has not done so because of the time and expense it takes under the old rules. SIC filed to expand its study area under this streamlined provision in the Order however, because the FCC has not acted on SIC waiver petition, the streamlined process of expanding SIC's study area is not available to SIC.

In issuing the new Order, the FCC seems to have forgotten the reason this universal service program exists. There are and always will be high cost areas that the incumbent exchange carriers will not serve. If Congress continues to believe that all citizens deserve a universal level of communications, then the Transformation Order must be amended.

Thank you for the opportunity to submit comments.

¹In Re: FCC 11-161; On Petitions for Review of an Order of the FCC; U.S. Tenth Circuit Court of Appeals; No. 11-9900; *Federal Respondents' Uncited Response to Tribal Carriers' Principal Brief*, March 20, 2013.

[Each of these people individually submitted the following memorandum.]

Jon Saunders, General Manager, SECOM, Inc.

Vince Kropp, CEO/GM, PC Telecom

Thomas J. Kern, President, Northwest Colorado Broadband, Inc.

To: United States Senate Committee on Commerce, Science, and Transportation,
Subcommittee on Communications, Technology and the Internet

Re: April 9, 2013 hearing entitled “State of Rural Communications”

“Broadband is *the* great infrastructure challenge of the early 21st century.”
See, Federal Communications Commission, *National Broadband Plan*, Introduction, p. 19 (2010) (available at <http://download.broadband.gov/plan/national-broadband-planchapter-1-introduction.pdf> (emphasis in original).

By way of introduction, Colorado is the Nation’s eighth largest state covering more than 104,000 square miles. It could contain the states of Maryland, Virginia, West Virginia, New Jersey, Connecticut, Delaware and Rhode Island and still have more than 4,000 square miles to spare. Several of Colorado’s counties are the size of small states. And Colorado is the Nation’s most mountainous state, boasting 54 peaks over 14,000 feet in elevation, 1,000 peaks over 10,000 feet in elevation and the highest mean elevation (6,800 feet) of any state in the Nation. Colorado also is the only U.S. state that lies entirely above 1,000 meters (3,281 feet) elevation. The lowest point (3,317 feet) in the state is higher than the highest elevation point of 18 states and Washington, D.C. As a result, Colorado’s topography presents unique infrastructure challenges. This is especially true in mountainous areas where population densities are extremely low, construction windows narrow due to mountain weather, and construction methods extremely difficult due to topography.

Silverton Colorado, for example, lies at 10,000 feet above sea level. Travel in and out of Silverton is accomplished via two routes one of them being Red Mountain pass, known as the “million dollar highway” as it was carved right into the side of near vertical rock walls and cost a million dollars a mile to build at the time. Right now Silverton relies on long haul microwave relay systems built decades ago. Other towns like Steamboat and Craig are served by only a single fiber optic route spanning hundreds of miles and may pay up to \$100 per megabit for Internet connectivity when urban networks charge less than a 1/10th of that. Mountain towns throughout Colorado have suffered lengthy and extensive outages because any fault or cut along the route renders entire counties without any means of communication to the outside world for up to a day at a time. One need not think for long to imagine the crippling economic impact that can have in today’s always-on, location independent, hyperconnected world.

At the same time, there are private market providing 100mbps down/50mbps capacities across areas the size of West Virginia at prices competitive with Denverites receiving 20mbps down/6mpbs up capacities. Carriers have built very high capacity networks in the world’s highest alpine valley the San Luis Valley—including six diverse routes in and out of that area and offer 50mpbt capacities or better.

Still, intense challenges remain in mountain communities and with the recent extensive overbuilds by the NTIA’s BTOP-funded entity EagleNet Alliance (ENA), including complete duplication of several rural fiber optic networks and entry into these markets as a government-backed competitor, means that this state’s rural broadband connectivity challenges have been exacerbated rather than improved by ENA. The American Recovery and Reinvestment Act of 2009 appropriated funds to the NTIA to provide broadband infrastructure and services to unserved and underserved parts of rural America. In September, 2010, NTIA awarded \$100.6 million to Colorado’s EAGLE-Net Alliance (ENA) to build broadband to parts of rural Colorado that lack the high-speed Internet service needed by schools, businesses and Colorado residents. ENA has committed roughly \$70 million of that \$100 million. Coloradans statewide are working very hard to see this money redeployed to where it is needed.

What the state has learned from its rural broadband failures and successes, however, is the following:

1. Rural telecommunications providers have successfully provided fiber optic and high speed dedicated connections statewide. Overbuilding these carriers irreparably impairs rural connectivity and harms local economies.
2. Rural connectivity is a difficult and expensive undertaking. Funds must be prioritized for unserved and underserved areas. Any thought that government funds would be used to create competition are severely damaging, misguided and result in wasteful duplicative spending.

3. Government funds must be accountable to local interests. Throughout the state of Colorado local communities have worked hand in hand with their local providers to identify places lacking connectivity. These are precisely the areas where money can be efficiently spent.
4. Where there is direct government investment, it should be limited to infrastructure—conduit and cable—and leave the complexities and economic bets on rapidly changing private markets to the private market.
5. Given the apparent failure of ENA to build where there is true need, the network must be turned over to carrier and community control. New funds must be apportioned to address the broadband limitations in the truly unserved western slope communities.

On a statewide basis, rural carriers and communities statewide recommend an infrastructure-based approach to locally controlled and supported public/private partnerships. While the rules may be state or national level, implementation and accountability must occur on the ground at the local level. This avoids the government entering into and disrupting through use of taxpayer money very complex and rapidly changing private markets. It allows government to lower barriers to entry in high cost/low density rural markets while simultaneously invigorating local private investment.

We recommend that the United States Senate Committee on Commerce, Science and Technology, Subcommittee on Communications, Technology and the Internet adopt policies along these lines and recommend to the FCC and NTIA both that an infrastructure-based approach to government investment in unserved and underserved communities leverages the best of what the government has to offer, empowers local private markets and ensures long-term viability of local community economies.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO
JOHN STRODE

Question 1. How is Ritter Communications approaching the industry-wide transition from time-division multiplexing (TDM) to Internet Protocol (IP) based communications?

Answer. Ritter has embraced the transition from TDM to IP in order to improve network efficiency and gain the survivability inherent to IP based communications systems. While clearly the dominant protocol utilized by our customer base, we are deploying Ethernet/packet-based transport to provide a more flexible foundation to support IP services than the complexity introduced by going to all IP.

We have made significant investments over the last 5 years to transition our service and access platforms (voice switching, DSL, GPON, etc.) to IP or Ethernet based systems. In our opinion this is the necessary first step in transitioning the entire infrastructure to efficiently support current and future IP demands.

At this point, our service platforms are 75 percent transitioned to IP and our access infrastructure remains approximately 40 percent TDM. We are continuing to make investments in 2013 and 2014 to complete the transition of these components to 100 percent packet-based.

We are also continuing to make investments in our backbone/core to convert the remaining 60 percent to packet-based transport by the end of 2014.

Question 2. In your comments, you state that Ritter Communications is not as adversely affected as many other rural telecommunications providers by the FCC's recent changes to the Universal Service Fund and intercarrier compensation. Which categories of telecommunications providers are most—and least—affected by changes to USF and intercarrier compensation?

Answer. The telecommunications industry embraces many categories of providers. For purposes of this discussion, I will address two categories of providers who provide services in rural areas. They are, specifically, locally-owned and operated rural providers (RLECs) and large, national providers (e.g., AT&T, Verizon and others).

The RLECs were very concerned as the FCC publicized notice of potential changes to the USF and ICC structures, and during the periods leading up to and following publication of the final rules, the RLEC industry alerted policymakers to the adverse impacts certain changes would precipitate. Unfortunately, those predictions have proven correct as the combination of retroactively-applied rules and regulatory uncertainty has depressed investor confidence.

These assertions are not mere rhetoric. In February 2013, the Honorable Thomas J. Vilsack, Secretary of the U.S. Department of Agriculture, informed then FCC Chairman Julius Genachowski that demand for RUS loan funds dropped to roughly

37 percent of the total amount of loan funds appropriated by Congress in FY 2012. Current and prospective RUS borrowers have communicated their hesitation to increase their outstanding debt and move forward with planned construction due to the recently implemented reductions in USF support and Inter-Carrier Compensation (ICC) payments.” See, Connect America Fund; National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing a Unified Inter-carrier Compensation Regime; Federal-State Joint Board on Universal Service; Universal Service Reform Mobility Fund: Ex Parte Presentation of United States Department of Agriculture, Rural Development, Docket Nos. 10–90, 09–51, 07–135, 05–337, 01–92, 10–208 (Feb. 15, 2013) (available at <http://apps.fcc.gov/ecfs/document/view?id=7022122067>).

It should be noted that RUS telecom borrowers have a sterling record of repayment, and that these programs actually generate income to the Federal Treasury. The slowdown in these loans results in diminished revenues for the Federal Government, and the potential for repayment failures could result in a negative impact on the Federal budget.

Decreased interest in investment can be viewed from another National perspective, as well. A survey of NTCA members in January 2013 found that 69 percent of respondents had postponed or cancelled fixed network upgrades as a result of the uncertainty surrounding the FCC’s on-going USF and ICC reform. The total aggregate value of those postponed or cancelled projects was \$492 million. The average was \$4.9 million; the median was \$2.0 million; the high was \$145 million; and, the low was \$80,000. These impacts are especially disturbing given the impact of the rural telecom industry on the National economy. A 2011 study found the rural telecom industry generates \$14.4 billion in economic activity, translating to more than 70,000 jobs (based on 2009 data). Notably, 66 percent of the economic activity (\$9.5 billion) and 45.7 percent of the jobs (32,385) were found to accrue to urban areas, demonstrating that rural telecom policy affects the entire Nation. See, “The Economic Impact of Rural Telecommunications: The Greater Gains,” Hanns Kuttner, Hudson Institute, Washington, D.C. (2011) (available at <http://www.frs.org/images/documents/hudson-study-paper.pdf>).

A recently-released study found that in Iowa alone, changes to the USF and ICC regulations will result in a decrease of \$47.1 million to Iowa RLECs from 2012–2017. During this period, that reduced cost recovery will result in a direct loss of employment of 9.7 percent, translating to a direct loss of \$14.9 million in wages among the companies. The indirect impacts show a total statewide wage loss of approximately \$25.8 million and an estimated \$2.3 million decrease in sales and tax revenues during that period. See, “Impact Analysis of the USF Transformation Order on the State of Iowa,” Center for Economic Development and Business Research, W. Frank Barton School of Business, Wichita State University (2013) (available at http://cymcdn.com/sites/www.broadband4iowa.com/resource/resmgr/newsletter/usf_impact_study_may_2013_fi.pdf).

Although Ritter Communications has not had the same level of immediate support cuts as many other RLECs, the regulatory uncertainty arising out of the FCC’s reforms has affected Ritter (and every other RLEC) adversely. As I said in my testimony, the FCC’s Quantile Regression Analysis (QRA) caps prevent any company from having a clear picture of their standing within the model, or how other companies’ investments could alter their USF receipts over time. In fact, because of the way the USF and the QRA are structured, investments that RLECs made two years ago determine the amount of USF they are eligible for going forward. Additionally, regardless of what the companies in the industry do to prevent cuts from occurring, they will occur to at least 10 percent of them. This is because the very nature of a QRA is that 10 percent (or whatever percentage the FCC picks) will be cast as outliers, regardless of the actual investment or cuts made by an individual company. It is because of the potentially ever-shifting nature of the QRA, together with the prospect of the FCC dropping even more retroactive changes atop the USF and ICC support mechanisms upon which we rely, that investment in the RLEC sector of the telecommunications industry has ground to a halt.

While the USF/ICC changes have precipitated negative impacts on the RLECs, corollary impacts arising out of ICC reductions have accrued to the Nation’s largest carriers that will be required to pay diminishing amounts of ICC compensation to the rural carriers. Over the first six years of the transition alone, the FCC has estimated the total ICC “savings” to be realized by long distance and wireless carriers at \$9 billion—with no specific commitment for those billions of dollars in “savings” to flow through to consumers or to be reinvested in broadband-capable networks in rural or other hard-to-serve areas.

Question 2a. How is Ritter Communications adapting or planning to adapt to these changes?

Answer. Ritter Communications has taken several steps to adapt to the changes in the USF/ICC mechanisms and expects to make more moves in the future. Ritter recognized several years ago that changes were going to come at some point and began expanding into different lines of business in the communications sector. Ritter has started a CLEC, invested in cable television systems and made significant investments in transport facilities in an effort to spread overheads, gain operational synergies and access wholesale markets more directly to reduce costs of Internet access and long distance termination. Ritter has also provided incentives to employees to retire/leave to reduce payroll expenses.

Ritter continues to review its operations and anticipated revenues/expenses to identify changes necessitated by the expected impacts of the USF/ICC transformation.

Question 3. For years, rural telephone consumers across the country have been reporting that they frequently experience dropped calls and poor call quality. The FCC is currently investigating the causes of these problems. Has Ritter Communications received similar complaints from its subscribers?

Answer. Yes, Ritter has had numerous complaints from customers who were experiencing call completion problems.

Question 3a. What is the extent of the rural call completion problem in the communities you serve?

Answer. Call completion problems have been experienced by customers of Ritter Communications at both ILECs operated by Ritter in Arkansas. It is difficult to quantify because there are likely many more problems than get reported to Ritter. Suffice it to say that it is significant and that even one call dropped because a carrier doesn't want to pay lawful access charges to complete the call is one too many.

Question 3b. How has Ritter Communications responded to rural call completion issues?

Answer. Ritter customer service representatives have spent a great deal of time with customers trying to explain to them what causes the problem and in many cases helping the customer prove that the problem is not caused by any problem in the Ritter system. In addition, we have worked with businesses to either establish toll-free numbers for their vendors and customers to call or implementing work-arounds that involve giving the customer a number in another exchange served by Ritter's CLEC and forwarding calls to that number across Ritter's network to deliver them to the manufacturing facility that is a major employer in Ritter's rural service area. We have also, unfortunately, spent time responding to inquiries from the FCC and the Arkansas Public Service Commission trying to help them understand that the problem lies with underlying long distance carriers and is not a problem in the network of Ritter Communications of other similarly situated rural carriers.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
JOHN STRODE

Question 1. Middle mile projects that connect the backbone of the network to the hubs are an underappreciated aspect of broadband expansion projects. Every communications service from wireless to cable needs a strong backbone, which means investing in middle mile lines in order to bring higher speeds and quality to rural consumers. How does access to middle-mile facilities affect your business model?

Answer. Access to middle mile facilities plays a major role in managing the cost of our services, as well as the overall performance for our customers. With limited access to middle mile suppliers, we see this component contributing as high as 60 percent to the cost of our services.

Question 1a. Mr. Strode—Can you speak to the importance of middle mile investment and discuss any barriers to investing in upgrading or building out?

Answer. Ritter is making investments to build many of our middle mile connections in order to see a cost reduction over our current leased facilities over the next 5 years. While this is feasible in some of our serving areas, the cost to construct will not provide a return in our more rural properties. These rural properties continue to require leased facilities from a limited amount of suppliers which keeps the lease costs of these facilities anchored at a very high price point.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO
JOHN STRODE

Question 1. Lifeline Program and Broadband Adoption. Your companies and the FCC have been working very hard to expand the *availability* of broadband access across the country. Yet, while more homes have broadband available to them, the actual *adoption* of the service seems to have stagnated of the past several years. This seems to especially be the case in rural areas. According the FCC, only 36.8 percent of rural Americans with broadband service available have actually purchased the service. In the past, when the Commerce Department has studied the issue of adoption they have found two major obstacles—digital literacy and the cost of service.

Mr. Strode, what can your companies do to make broadband service more affordable for households that have yet to adopt the service? What can the FCC do to help increase adoption?

Answer. There are many steps both individual companies like Ritter Communications and the FCC can take to ensure increased adoption rates across the country. It is worth noting in the first instance that the high-cost portion of the universal service fund (USF) program supports both availability and adoption. This is often overlooked—especially in recent years as people focus on using USF support to build out in “unserved” areas—but the fact is that high-cost USF support helps to ensure that rates are “reasonably comparable” in rural and urban areas. Without sufficient USF support, consumers in high-cost rural areas would need to pay far in excess of what consumers in urban areas pay for the same service. Thus, high-cost USF should be seen as the primary adoption program in rural America.

The FCC should therefore seek out ways to ensure regulatory certainty through more predictable and sufficient support mechanisms for high-cost areas. Consumers in rural America will not be able to see the full benefits of a robust, reasonably comparable broadband connection if companies that serve these high-cost areas face cuts, caps, and constraints in the form of ever-changing models and further proposals to reduce USF support. Additionally, the FCC should seek out ways to ensure that regulatory burdens do not push the cost of broadband further upwards, pricing many groups out of the market.

RLECs, on the other hand, can and do take their own steps to promote adoption of their services and productive use of their networks. Specifically, RLECs are able to identify unique ways to serve their communities because the employees also live in their service territory. For example, a company can work with the local community college, library, or school district to design a series of classes on computer basics tailored to fit an individual community’s needs. Additionally, the local telecom provider can work with a local hospital to provide remote monitoring or telemedicine services targeted towards senior citizens or other population groups which might not see the relevance of broadband until they learn about uses beyond accessing the World Wide Web.

Question 1a. Mr. Strode, in your assessment, would low income households benefit from an expansion of the Lifeline and Linkup programs to broadband services? What has been the experience of rural telecommunications companies with the FCC’s Lifeline Broadband Pilot program?

Answer. The FCC’s Lifeline Broadband Pilot program is in the very beginning stages of implementation. NTCA—The Rural Broadband Association, an association representing nearly 900 companies of which Ritter Communications is a member, has 11 participating member companies in the Pilot. In much of the research surrounding barriers to adoption, cost of Internet has been identified by reluctant broadband adopters. This program should assist both the FCC and telecommunications providers create best practices to ensure that as the Lifeline fund shifts towards broadband network support the program will be able to target adoption efforts to proven strategies and techniques. But it is also worth noting once again that rural networks will not be built in the first instance, and reasonably priced services will not be available to rural consumers in the first instance, without an underlying high-cost program that is sufficient and predictable as well.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO
STEVE DAVIS

Question 1. How has CenturyLink been affected by the FCC's recent changes to the Universal Service Fund and intercarrier compensation?

Answer. The FCC's November 2011 "USF/ICC Transformation Order" and subsequent implementation have had a significant impact on the way companies like CenturyLink provide voice and broadband service to rural, high-cost communities, bringing long-needed reform to the Universal Service Fund.

Most significantly, the order created the Connect America Fund (CAF) to support broadband service on a targeted, granular basis in those places where it would not be available without such support. By supporting broadband explicitly and targeting support on a granular basis, the Order sought to bring broadband access to many places that were left behind under the previous rules, while avoiding those places where unsubsidized competitors were already providing service.

So far, CenturyLink has been awarded roughly \$87 million under the CAF Interim Support ("CAF 1") program, enabling us to begin extending service to more than 250,000 previously unserved customers. The Connect America Fund implementation process is still ongoing, and we are working with the FCC to ensure its success. Once the final "CAF 2" changes are implemented, we'll be able to provide a complete picture of its impact on CenturyLink and our customers.

Question 2. Do you believe it is necessary for the contribution base for the Universal Service Fund to be broadened?

Answer. Yes, we believe the contribution base for the Universal Service Fund should be broadened in a way that is competitively neutral, sufficient to fund program's goals, and administratively efficient.

Question 3. According to the FCC, approximately one third of Americans who have access to broadband do not to subscribe to the service, and the broadband adoption rate in non-urban areas is significantly lower than in urban areas. In your experience, what are the barriers to broadband adoption in the United States?

Answer. While broadband adoption has risen steadily in recent years, we understand from leading studies by the Pew Foundation and others, that the most common barriers to broadband adoption are the cost of service, the perceived relevance to individual users, the level of digital literacy among users, and the availability of broadband access.

Question 3a. Which of these barriers to broadband adoption contribute most to the gap between urban and non-urban adoption rates?

Answer. Because areas of low population density are generally more expensive to serve, a higher percentage of rural households do not have broadband access to begin with. Among those who do have broadband access, surveys by the Pew Foundation and others indicate that broadband adoption rates are generally higher among younger customers and those with higher household incomes, while the population demographics in rural communities generally skew toward older consumers and lower income households.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
STEVE DAVIS

Question 1. Middle mile projects that connect the backbone of the network to the hubs are an underappreciated aspect of broadband expansion projects. Every communications service from wireless to cable needs a strong backbone, which means investing in middle mile lines in order to bring higher speeds and quality to rural consumers. How does access to middle-mile facilities affect your business model?

Answer. Middle mile facilities are a significant part of the company's capital investment, and like all parts of our network, must be justified by a reasonable cost recovery outlook.

Question 2. As CenturyLink is a provider of middle mile backbone you acknowledge that the fiber-fed broadband you deploy is important to the provision of both fixed and mobile broadband services. How do you determine where to invest in middle mile and what are some of the barriers you and other carriers face in building out middle mile?

Answer. CenturyLink generally bases its decisions to invest in middle mile and other facilities on the outlook for cost recovery, which is affected by the cost of investment, the number of potential customers, the likely adoption rate, the presence of anchor institutions, the danger of adverse price regulation, and the availability of additional sources of support, such as the Connect America Fund.

Some of the barriers we face in building out middle mile infrastructure include the longer routes and fewer customers in rural areas, permitting and right-of-way access, as well as weather and difficult terrain conditions in some regions.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. RICHARD BLUMENTHAL TO
STEVE DAVIS

Question. Lifeline Program and Broadband Adoption. Your companies and the FCC have been working very hard to expand the availability of broadband access across the country. Yet, while more homes have broadband available to them, the actual adoption of the service seems to have stagnated of the past several years. This seems to especially be the case in rural areas. According the FCC, only 36.8 percent of rural Americans with broadband service available have actually purchased the service. In the past, when the Commerce Department has studied the issue of adoption they have found two major obstacles—digital literacy and the cost of service.

Mr. Davis, what can your companies do to make broadband service more affordable for households that have yet to adopt the service? What can the FCC do to help increase adoption?

Answer. CenturyLink has already taken measures to make broadband more affordable to low-income households through our “Internet Basics” program. Through this program, any household that qualifies for the FCC’s Lifeline program can also receive discounted broadband service for \$9.95 per month for up to three years and a discounted netbook computer for \$150.

The FCC has so far encouraged broadband providers to pursue a variety of approaches to boost broadband adoption and eliminate barriers to adoption. Continuing this flexible approach can help increase adoption as providers are able to observe each other’s successes and setbacks and use the lessons to improve their own approaches.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO
LEROY T. CARLSON, JR.

Question 1. Last month, the FCC released its Sixteenth Mobile Competition Report, which states that, based on its Herfindahl-Hirschman Index calculations, wireless market concentration has increased by 33.6 percent since 2003. In your comments, you note that many consumers have access to only one wireless provider and recommend the adoption of policies to increase competition among wireless providers. In your experience, is there effective competition in the wireless market?

Answer. For the last three years, the Commission has concluded that the wireless industry is highly concentrated, and becoming more concentrated. That trend unfortunately continues, to the detriment of competitive carriers, and ultimately consumers. The Commission should use its latest analysis of wireless competition as a springboard to focus more intensely on developing and implementing pro-competitive, pro-consumer policies that reduce concentration, restore competition, and ensure that competitive carriers have a level playing field to compete with the super-carriers. Specifically, the overly concentrated status of the wireless sector has caused scarce spectrum to be amassed in the hands of the two largest carriers, to the detriment of smaller rivals. In addition, the market power enjoyed by the two largest super carriers has enabled them to thwart interoperability across the 700 MHz band. Non-interoperability, coupled with exclusivity arrangements for cutting-edge devices, has hindered deployment by competitive carriers. Unless the Commission acts to restore competition and creates a regulatory structure that will protect all carriers’ access to these critical inputs, competition will suffer.

Question 1a. If not, how has the lack of competition affected consumers?

Answer. For consumers, effective competition offers greater innovation for applications and devices, lower prices, and better quality network service. In markets where consumers are captured by the two major providers it means there is less pressure to control costs of service and devices. A competitive marketplace creates essential incentives for companies to invest in their networks while keeping prices as low as possible.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
LEROY T. CARLSON, JR.

Question 1. Middle mile projects that connect the backbone of the network to the hubs are an underappreciated aspect of broadband expansion projects. Every communications service from wireless to cable needs a strong backbone, which means investing in middle mile lines in order to bring higher speeds and quality to rural consumers. How does access to middle-mile facilities affect your business model?

Answer. Middle mile, also referred to as special access, is essential for deploying rural wireless broadband service. It is a significant operating expense for regional wireless carriers. Excessive special access charges divert funds from network expansion and broadband upgrades. Middle mile lacks competitive alternatives in many rural areas which lead to higher costs. Middle mile cost can be 25 times higher in rural than urban areas. With the dramatic reductions in universal service support for wireless carriers occurring under the FCC's USF Reform Order, the cost of middle mile facilities is becoming a bigger impediment to not only maintaining existing network coverage but to expanding it. The FCC is evaluating the proper regulatory framework to adopt for special access service pricing, which is necessary to protect consumers, spur market entry and foster competition. Such evaluation needs to consider the implications of the conversion of traditional special access back haul facilities to IP based transmission facilities which are key to the expansion of broadband services supporting 4G technology we support robust reform of special access regulations.

Question 2. Mr. Carlson—Many people don't realize that wireless service is built on a wired network. How does larger and faster capacity middle mile to your towers impact the service that consumers get?

Answer. Access to high capacity middle mile is crucial to providing LTE services. Consumer demand for mobile broadband is expected to reach nine times current levels by 2016. U.S. Cellular is launching LTE service throughout the country, but in order for our customers to receive the significant benefits of LTE capacity and speed, our advanced LTE radio systems must be accompanied by robust, high capacity backhaul and core networks. Without sufficient middle mile capacity, the powerful innovation engine of LTE is simply not possible. Our challenge is to build out both the wireless and wired infrastructure in the most rural areas of the country. Our commitment to our customers is to provide the most advanced service no matter where they live in our service areas. Sufficient middle mile capacity from wired networks, as well as the use of fixed microwave are each important components of providing LTE to consumers.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. KELLY AYOTTE TO
LEROY T. CARLSON, JR.

Question. Mr. Carlson, in your testimony you state that none of your bids to cover rural New Hampshire were selected, simply because you had to bid more per road mile to cover more mountainous areas in the central and northern areas of my state. How do you suggest the mobility fund be structured in Phase II to account for these challenges that companies such as yours face?

Answer. Senator Ayotte, it was a privilege to testify before the Committee and I thank you for the question. Our company competes with the Nation's largest carriers by building high-quality networks and delivering superior service. In areas that are sparsely populated and difficult to serve, assistance from Federal and state universal service mechanisms are critical to building new cell towers.

In Phase I of the FCC's new Mobility Fund, the FCC awarded bids based on the cost per road mile served. This mechanism was designed to stretch the limited funds available to cover the most road miles. As a result, the lowest-cost rural areas were awarded support first, while the higher-cost areas were not. Mountains and trees in rural New Hampshire limit a cell site's coverage, increasing costs to serve. As a result, our bids in New Hampshire were higher than other areas, and they fell "below the line" in the FCC's auction process. That is, the \$300 million in funding ran out before our bids were reached. For your reference, a copy of the bids as posted by the FCC is attached hereto as Exhibit A.

This is not the first time that the State of New Hampshire has drawn the short straw in obtaining access to Universal Service funding. In 2008, the FCC implemented a cap to the original universal service program for wireless carriers which froze funding at whatever amount an individual state was receiving at the time. As a consequence of this policy decision by the FCC, New Hampshire continued to receive annual funding of approximately \$250,000. That amount is enough to build

New Hampshire one new cell site every two years and is a tiny fraction of the overall universal service fund for rural areas, \$4.3 billion. New Hampshire's citizens, who have paid into the fund since its inception, have never received the benefits that Congress intended for the program to deliver.

In Phase II, the FCC will award \$400 million each year (plus another \$100 million to tribal lands) in Mobility Fund support and I fear that New Hampshire, an undeniably rural state, may fare no better than it has in the past. There are, however, numerous things the FCC can do to ensure that rural areas such as those in New Hampshire participate in a meaningful way in the program. Below, I discuss just a few.

1. Repurpose CAF I Funds That Large Carriers Refused to Invest

In Phase I of the FCC's Connect America Fund ("CAF") program, the Commission awarded \$300 million to the Nation's largest wireline carriers, to build broadband in rural areas.

This \$300 million in funding became available because the FCC reduced support to wireless carriers by nearly \$1 billion per year.

Of the \$300 million offered, carriers declined over \$180 million of that amount, ostensibly because it was insufficient. This suggests that a more efficient alternative should be considered.

The FCC could rapidly accelerate investment in rural areas, including in New Hampshire, by quickly repurposing the \$180 million of rejected funds over to Mobility Fund Phase I. When you look at Exhibit A, you can see that a number of bids, including those in New Hampshire, did not win an award because funding ran out. It is well within the FCC's authority to decide to repurpose the rejected funding and award it to Mobility Fund bidders, who have declared themselves ready to construct networks at the prices bid. Alternatively, the funds could be added to the FCC's upcoming Mobility Phase II auction.

Instead, the FCC just last month proposed to offer the largest wireline carriers an additional \$480 million in Phase I support, representing \$300 million plus the funds previously declined by such carriers. And the Commission proposed to relax the standards for such companies to receive this funding.

It may be too late to reverse this decision without a court action, however it is bad policy that short changes rural Americans who live, work and travel in areas with poor mobile broadband service. Unquestionably, the fastest way to increase access to broadband in rural America today is through the rapid deployment of fast, 4G LTE broadband services. If the FCC is not willing to reverse its decision, then they should simply increase the amount of funding within the existing program for the services that provide the most bang for the buck and which consumers want most. Unquestionably that is mobile broadband.

2. Require Some Baseline Level of Funding for Each State

Every citizen who incurs charges for interstate or international calling pays into the Federal universal service fund. For over a decade, the FCC's formula for providing support to rural New Hampshire yielded enough funding to build a single cell site approximately every 18 months. Other states saw many millions in support flow in, resulting in higher quality wireless networks that give such places a competitive advantage. This is not fair to New Hampshire's rural citizens, who pay into the fund but do not get the benefits that Congress intended in the 1996 Act (*i.e.*, access to reasonably comparable services and prices as are available in our Nation's urban areas).

The FCC could make a rule that every state must receive some baseline amount of support, based on a formula such as the percentage of state road miles or households that are unserved or underserved in that state. It could serve to ensure that difficult to serve places such as rural New England and the Appalachian region receive investment sufficient to achieve meaningful infrastructure improvement.

3. Reverse the Right of First Refusal

Perhaps the most regressive decision made by the FCC in its CAF Order was to allow the Nation's largest wireline carriers to have a "right of first refusal" ("RoFR") for five years in the CAF Phase II process. This means, the carriers may file an election with the FCC, allowing them to be the sole recipient of support in the states they serve. This prevents any other carrier from competing with them for support for five years. In year six, they will have a huge advantage when competition for support is permitted, having built a subsidized network free from competitive forces.

In addition to providing this five year set aside, the FCC has bestowed a potentially large windfall on the largest wireline carriers who also own wireless networks. The FCC intends to provide support in CAF Phase II based on the modeled cost of providing wireline service in a rural area. That is, when a wireline carrier builds

in an area, the amount of support is not determined by its actual costs, but on what it should cost, as determined by a model. That model estimates the cost of building wireline broadband.

Here is the problem: The FCC will allow a wireline carrier to use mobile broadband to meet its build out obligations. Thus, a wireline carrier can build an efficient mobile broadband network that potentially costs much less, while at the same time receiving support based on the higher cost of building a wireline network. There is no downward adjustment in support when a wireline carrier does this.

Essentially, this is the continuation of the FCC's "identical support rule," which it did away with in the CAF Order for wireless carriers. Worse yet, it is identical support without the possibility of competition.

To sum up:

- Support will be reserved for one class of carrier for five years.
- Independent wireless companies seeking to compete in the broadband market will now face subsidized competition from the Nation's largest telecommunications companies for five years, potentially freezing new investments.
- The largest wireline carriers are free to build lower-cost wireless facilities while receiving support based on the cost of building wireline networks.

There is no reason why support should be reserved for one class of carrier, and we have appealed this decision to the courts. It is not too late for the FCC to reverse itself and permit any company willing to participate in the CAF Phase II process to compete for the funding needed to build out rural high-cost areas with modern broadband infrastructure.

4. Target Scarce Public Dollars to Mobile Broadband Service

Prior to the adoption of the FCC's 2011 Connect America Fund Order, the FCC provided mobile wireless carriers with \$1.4 billion per year construct wireless networks in rural areas. This amount was twenty percent of the total universal service fund of \$7 billion. The Connect America Fund Order reduced funding for mobility to a mere \$400 million, while funding available for wireline deployment is being increased to over \$3 billion.

Given the substantial abandonment of wireline services by "cord cutters" over the past decade—where according to the CDC's latest data nearly 40 percent of households use wireless communications exclusively, this is exactly backwards policy. The FCC should restore balance to funding for mobile services and restore the \$1B in annual mobility funding which has been redirected to wireline networks that consumers continue to abandon in droves. This is the surest way to ensure that states like New Hampshire and its residents receive their fair share of a fund that they have been paying into for almost twenty years.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO PATRICIA JO BOYERS

Question 1. How is BOYCOM Cablevision approaching the industry-wide transition from time-division multiplexing (TDM) to Internet Protocol (IP) based communications?

Answer. Although TDM networks remain widely in use, particularly by Incumbent Local Exchange Carriers (ILECs), BOYCOM Cablevision launched voice services over a Cable Modem Termination System (CMTS) with an advanced symmetrical Ethernet IP service—it's an Internet Protocol (IP) based communications network. Provided that the interconnection rules continue to apply to telecommunications providers whether they employ TDM or IP based communications, we have no concerns with ILECs transitioning from TDM to IP networks.

Question 2. In your comments, you state that "the video market continues to be governed by outdated rules and regulations passed decades earlier." How have the FCC's regulations governing video providers adversely affected BOYCOM Cablevision?

Answer. First and foremost, outdated retransmission consent rules have adversely affected our company and its customers. BOYCOM's retransmission costs have increased an average of 133 percent between January 2008 and January 2012, and because of escalation clauses in our existing contracts, our per-subscriber rates for individual broadcast stations will continue to increase through December 2014. Comparatively, a sampling of satellite delivered programming in one of our systems increased an average of 29.3 percent from January 2008 to January 2012.

Second, rules intended to assure the commercial availability of cable set-top boxes have adversely affected our company and customers. The FCC's integration ban,

which prohibits cable operators from providing consumers with boxes in which the security functions are integrated with other functions, was adopted in 2007. As a result of this regulation, the price of set-top boxes increased significantly. Although imposing the integration ban on only the largest cable operators would have been sufficient to achieve the FCC's public policy goals, the FCC imposed this regulation on all cable operators. There were no exemptions for small cable operators. The integration ban adversely affected BOYCOM and its customers because it needlessly increased the costs of our set-top boxes. Moreover, the higher costs delayed our company's digital transition plans, stalling the reclamation of bandwidth that could be used for broadband and other advanced services.

Finally, while the FCC has done much to improve the cost and speed of pole access, the 1978 Pole Attachment Act stands in the way of the FCC's addressing some significant problems in the market. In particular, the Act does not cover cooperative and municipal pole owners, who remain exempt from any regulation and leverage it to set much higher fees and delay access. In areas where BOYCOM provides service, our company must rely upon poles that are owned by cooperatives, and the lack of regulation adversely affects our company and our customers.

Question 2a. In what ways do these regulations need to be updated?

Answer. Retransmission consent rules should be updated in at least the following three ways:

First, Congress or the FCC should prohibit separately owned, same market broadcasters from coordinating their retransmission consent negotiations. Small cable operators have documented separately owned broadcasters operating in the same market colluding in the sale of retransmission consent in at least 43 television markets. Available evidence shows that when broadcasters engage in this anticompetitive conduct, they can extract at least 22 percent higher fees than if they negotiate separately. To put this price increase in perspective, anti-trust authorities are generally concerned whenever horizontal consolidation results in price increases greater than 5 percent. These price increases are passed along to consumers, who end up paying for them in higher costs.

Second, Congress should eliminate the basic service tier buy through obligation imposed on cable operators. Cable operators are required by regulation to offer a basic service tier that must include all local broadcast television stations that all subscribers must purchase before subscribing to additional video programming. Tier placement and subscriber penetration levels are critical terms of negotiation between cable operators and non-broadcast programmers. Non-broadcast programmers highly value lower tier placement and higher subscriber penetration, and cable operators who provide lower tier placement and higher subscriber penetration pay lower carriage fees. By providing broadcasters who elect retransmission consent an automatic right to appear on the basic service tier and obtain 100 percent cable subscriber penetration, Congress has taken off the table a critical term of negotiation that cable operators could leverage with broadcasters to obtain lower rates.

Third, Congress should prevent broadcasters from pulling signals from cable operators during sweeps periods if the retransmission consent agreement expires during sweeps, or other times *important to consumers* as Congress deems appropriate (*i.e.*, marquee events). In 2012, millions of Americans went without access to their local broadcast signals after station owners cut off programming 91 times. This was a 78 percent increase over '11, and even more over '10. Existing law prevents a cable operator from pulling a station during the sweeps period if its retransmission consent agreement expires during sweeps. Such periods are the four national four-week ratings periods—generally including February, May, July and November. While cable operators are prohibited from pulling broadcast signals during periods of time *financially important to broadcasters*, there is no constraint on broadcasters pulling signals from cable operators during these same periods or other times *important to consumers* (*i.e.*, marquee events). In fact, broadcasters often pull signals from cable operators during periods of time *important to consumers* in order to extract higher fees from cable operators (*e.g.*, ABC pulled its signal from Cablevision prior to the Academy Awards; Fox pulled its signal from Cablevision during baseball playoffs.)

With respect to the FCC's integration ban, Congress should repeal Section 629 of the Communications Act—Competitive Availability of Navigation Devices—or at least limit application of the provision to the extent it applies to small MVPDs through statute or direction to the FCC.

Finally, the FCC's National Broadband Plan wisely suggested that Congress should eliminate the exemption for cooperatives and municipalities to restore fair-

ness and competitive rates to the market. We encourage Congress to take action to deal with the obvious shortcomings in the existing law.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. AMY KLOBUCHAR TO
PATRICIA JO BOYERS

Question 1. Middle mile projects that connect the backbone of the network to the hubs are an underappreciated aspect of broadband expansion projects. Every communications service from wireless to cable needs a strong backbone, which means investing in middle mile lines in order to bring higher speeds and quality to rural consumers. How does access to middle-mile facilities affect your business model?

Answer. As our subscribers continue to expect faster connection speeds, poor middle mile infrastructure and rising middle-mile costs—a particular problem in rural areas—make it more difficult for BOYCOM to maintain current broadband prices, provide speeds that meet consumer demand, and build out to new locations.

Question 2. Ms. Boyers—Can you speak to the importance of middle mile investment and discuss any barriers to investing in upgrading or building out?

Answer. As discussed above, in order to keep broadband pricing at current levels, deliver speeds that meet subscriber demand, and deploy services to new areas, especially those that are unserved, it is important to have access to capable middle mile infrastructure at reasonable costs. The need to upgrade the middle mile pipes that BOYCOM uses to carry traffic from our local networks to an Internet backbone access point is not unique: nearly all broadband providers will need to obtain higher capacity pipes in the years ahead. However, obtaining access to robust pipes at reasonable costs is more difficult for smaller broadband providers serving rural areas than for larger operators in urban areas. Middle-mile costs increase as the distance from the network to the backbone access point grows, and rural providers generally operate networks that are among the farthest from these access points. It means rural providers using these pipes often pay much higher prices for each byte transmitted. Additionally, unlike in urban areas, there are often few middle-mile links available. In fact, in many rural areas there may be only a single link. And many of these links use outdated technologies, meaning there is often access only to lower capacity pipes—which in turn limits the data speeds that can be provided to customers. Some broadband providers, including BOYCOM, have explored constructing our own middlemile links, but because the distances involved are extremely long and the density of our users too low, the cost is prohibitive without outside support.

In its National Broadband Plan, the FCC identified the lack of adequate middle-mile infrastructure and the high costs of access to be a significant problem. The FCC is examining the issue in a further rulemaking with respect to the Connect America Fund. The record in this proceeding closed one year ago, and we urge the FCC to conclude its work shortly and issue a decision. Where capacity is inadequate, it should use the CAF to support the deployment of middlemile capacity. Further, where prices are too high, it should use its regulatory authority to ensure they are consistent with competitive market rates.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. RICHARD BLUMENTHAL TO
PATRICIA JO BOYERS

Question. Lifeline Program and Broadband Adoption. Your companies and the FCC have been working very hard to expand the *availability* of broadband access across the country. Yet, while more homes have broadband available to them, the actual *adoption* of the service seems to have stagnated over the past several years.

This seems to especially be the case in rural areas. According to the FCC, only 36.8 percent of rural Americans with broadband service available have actually purchased the service. In the past, when the Commerce Department has studied the issue of adoption it has found two major obstacles—digital literacy and the cost of service.

Ms. Boyers, what can your company do to make broadband service more affordable for households that have yet to adopt the service? What can the FCC do to help increase adoption?

Answer. Broadband services and current prices for consumers in rural areas are highly dependent on the availability and cost of bulk bandwidth from middlemile providers. Although technology continues to improve and advanced broadband services become more available and affordable to households, the “cost” of bandwidth is still one of the biggest expenses in delivering these advanced services.

The FCC should use its regulatory authority to ensure that middle-mile rates are consistent with competitive market rates. If we can get the cost of middle-mile broadband services reduced, the price to the end user will become more economical. Moreover, the FCC can focus on increasing digital literacy among consumers that have not yet adopted broadband, and consider other competitively neutral strategies.

