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Transportation and Telecommunications Committee  
October 26, 2016

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[LR538]

The Committee on Transportation and Telecommunications met at 1:30 p.m. on Tuesday, October 26, 2016, at the Bremer Center in Aurora, Nebraska, for the purpose of conducting a public hearing on LR538. Senators present: Jim Smith, Chairperson; Curt Friesen; and Les Seiler. Senators absent: Lydia Brasch, Vice Chairperson; Al Davis; Tommy Garrett; Beau McCoy; and John Murante.

Recorder malfunction. Hearing was recorded on committee clerk's cell phone. Recording did not start until Tim Schram. [LR538]

TIM SCHRAM: (Exhibit 1) (Recorder malfunction)...reasonably comparable throughout Nebraska. As part of that directive, the commission currently administers several Universal Service Fund programs which includes a telecommunications and broadband program designed to provide comparable fixed and mobile services to high-cost areas, a telehealth program, the telephone assistance program for low-income subscribers, and a broadband adoption program aimed at increasing subscribership and digital literacy throughout the state. In 2011, the FCC began reforming federal Universal Service Fund support by creating the Connect America Fund which supports broadband services. Between 2011 and 2014, the picture of federal support was unclear. Then in 2014, after adopting a fiber-based broadband cost model, the FCC released support amounts for price cap carriers, the larger carriers for each state. Carriers were given the opportunity to elect to serve the designated census blocks, the CAF II eligible blocks. Fortunately, all Nebraska price cap carriers elected to receive this support. Approximately \$23 million in a model-based support has been earmarked in Nebraska per year. I've attached a map to my testimony so you can see where deployment is scheduled to occur from 2015 to 2020. In the rate-of-return carrier space, the FCC released an order in March of this year setting two paths for high-cost broadband support. Carriers were permitted to make a model-based election or choose legacy support with certain build-out requirements. Carriers will make their determination and then support amounts and build-out requirements will become clearer in the next few months. Also, in the last two years, the FCC has focused on increased speeds and capacity moving its definition of broadband from 4/1 to 25/3. The FCC's last broadband report included access to households at 25/3 speeds. In 2015, Nebraska had at least 344,000 households

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with access to at least 10/1 speed. Roughly 227,000 households were connected at 25/3. The NUSF support program has been targeted to provide support for broadband capable networks in rural high-cost areas since 2004. However, our work is not done. Now that federal support has become more targeted, we feel it is appropriate to make some significant changes to our programs to account for the federal support received so that we are not duplicating their efforts. There are significant areas in Nebraska that are considered too costly to support under CAF Phase II mechanism for price cap carriers. In 2011, the FCC did find support should be allocated to Remote Areas Fund, RAF, for the high-cost areas where the cost of wireline broadband service is greater than \$256 per month. However, that fund has yet to be established and there is no clear time frame for federal funding to these areas. The commission is in the process of updating distribution mechanism by targeting support to those areas not funded by the FCC through the use of more grant-based support. We are refocusing support on the need to deploy scalable networks to keep pace with the growing need for bandwidth and directing support to the specific areas that lack broadband. We believe this will provide Nebraskans with better use of state support and greater accountability from the carriers. We will be able to see the results of both the federal and the state build-out plans, and we will be able to provide consumers with better information regarding when broadband will be available where they live. On the contribution side, broadband service has been a supported service for universal service for some time. But the system remains unstable. Contributions into the fund include only revenues from telecommunications service, which is your traditional phone service. Telecommunications revenues have been declining in Nebraska since 2009. Overall, we are seeing an 18 percent decline in remittance revenues which means we're taking in around \$10 million less a year than we took in before the decline. An FCC decision currently precludes the commission from assessing broadband service. Federal and state universal service programs, however, for a long time have funded broadband service. The commission has a proceeding open to change the contribution mechanism. Our current focus is on the connections-based mechanism. We believe connections should be a more stable source than revenues going forward. A couple of issues: First, a "connection" is not a universally recognized or tracked unit. The commission needs to define "connection" in a way that is simple and competitively neutral. The commission needs to structure contributions in a way that don't unduly burden one technology or end user. A number of commenters believe we should wait on the FCC. Some feel we have waited too long. While it appears the FCC may be moving forward, we cannot be sure how long they will take. In the

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meantime, remittances have been steadily declining. We have made it a priority to move ahead. We also need to appropriately size the fund. We need to balance sufficiency with affordability when determining the scope and the size of each of the programs. The commission is currently working through various concerns and arguments and plans to release a proposal for comment soon. In high-cost areas, the commission set aside \$4 million for mobile broadband projects and is considering funding for the grant applications filed earlier this year. The commission received requests for 20 mobile broadband projects which included a total of 23 tower sites. A hearing is scheduled for November 10. Since 2008, when the program began, the commission has approved funding for 145 wireless towers or tower upgrades. Wireless funding thus far has covered more than 81,000 households in rural Nebraska. In addition to the high-cost funding through its SAM allocation process, between 2012 and 2015, the commission approved over \$14 million in grants to around 20,000 high-cost households. The commission plans to continue to provide specific targeted grant support to wireline carriers through its high-cost distribution mechanism. The commission continues to support the Telehealth program by making \$900,000 available each year. The Nebraska Statewide Telehealth Network, NSTN, connects rural and critical access hospitals across the state to hub hospitals in Grand Island, Kearney, Lincoln, Norfolk, North Platte, Omaha, and Scottsbluff. This network allows rural hospitals to remotely connect to urban facilities that have specialists in a number of the fields including trauma and radiology. The Nebraska Telephone Assistance Program, NTAP, is also undergoing reform due to changes in federal law. The FCC issued an order last April adding broadband to the list of supported services for the low-income program. The FCC plans to phase out voice-only service for this program and will emphasize the support for broadband services. The FCC also carved out a designation, the Lifeline Broadband Provider, LBP, designation and preempted states from designating these providers for lifeline support. Nebraska is one of a dozen states appealing the preemption applied by the FCC. Finally, in 2014, the commission initiated a pilot program designed to increase broadband adoption. On May 27, 2015, the commission granted support for five projects. Those projects included end-user subsidies, digital literacy training, and access to equipment. The commission also considered different geographic areas of the state, including both urban and rural areas. In 2016, the commission again allocated \$500,000 for broadband adoption projects. The commission received and approved three applications: one in Omaha which was a joint project filed by Cox and OPS, Omaha Public Schools; one in Lincoln for a joint project filed by ALLO and LPS; and one to a number of rural carriers and Consortia

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Consulting for digital literacy training in numerous communities throughout Nebraska. While much has changed, many of the goals established by the Legislature in 1997 are still relevant today. We must continue to promote and preserve universal access, public safety, consumer protection, and competition. Again, I appreciate the opportunity to be here today and I'm happy to answer any questions you may have. [LR538]

SENATOR SMITH: Thank you, Commissioner. We have questions from the committee here? So in recapping, is it appropriate to say that the federal fund has the primary role of ensuring that telecommunications are comparable and affordable in rural and urban areas, and then that the state funds are supplemental to that? [LR538]

TIM SCHRAM: That would be correct, Senator. [LR538]

SENATOR SMITH: So we have about 22 states that have elected to have the high-cost funding mechanism? [LR538]

TIM SCHRAM: Yes. [LR538]

SENATOR SMITH: So what are you seeing in the other states that have not established that high-cost funding mechanism? [LR538]

TIM SCHRAM: Iowa and South Dakota, our neighboring states, do not have state funds and they have programs and grant programs through their state general funds that they're trying to get broadband to roll out into the rural areas through the state general funds. [LR538]

SENATOR SMITH: Would you say they're struggling to develop those services that are comparable? [LR538]

TIM SCHRAM: Yes, I would. I feel we have a good model here in Nebraska because it truly is a private/public partnership. And that in many of the grants that I spoke of, not all, but many of the grants there's a 25 percent cost match by the communications carrier that leverages those public dollars. [LR538]

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SENATOR SMITH: Very good. Further questions? Seeing none, thank you, Commissioner.  
[LR538]

TIM SCHRAM: Thank you. [LR538]

SENATOR SMITH: Okay, thank you. We now open the hearing to others wishing to testify on the stated resolution. Welcome, Mr. Carstenson. [LR538]

ERIC CARSTENSON: Thank you. I just got to look at my time to make sure I stay within the parameters. [LR538]

SENATOR SMITH: We'll cut you a little slack. [LR538]

ERIC CARSTENSON: (Exhibit 2) Senator Smith and members of the Transportation and Telecommunications Committee, my name is Eric Carstenson, Eric is E-r-i-c, Carstenson is C-a-r-s-t-e-n-s-o-n. I'm president of the Nebraska Telecommunications Association. We're a trade association that represents the majority of local exchange carriers in Nebraska. The NTA members are profoundly affected by your leadership. Nebraska is becoming a leader in the evolution of telecommunications policy, but our companies base their business plans on the kind of environment you create. In the mid-1980s, Nebraska was one of the first states to deregulate rates. Then going forward, Nebraska led the nation in the development of the high-cost fund that Commissioner Schram just spoke of. One of the things that the federal act did was to eliminate implicit subsidies and ask companies to move to explicit subsidies. And Nebraska followed in developing the Nebraska Universal Service Plan. When we did that, NTA members gave up about 40 percent of their business plan as they did away with access rates. In 1997, the Nebraska Legislature authorized the Public Service Commission to develop the NUSF stating the commission shall establish a funding mechanism which supports the federal USF support mechanisms and ensures that Nebraskans, without regard to their location, have comparable accessibility to telecommunication services at affordable prices. That was a huge public policy statement. It gave us the predictability to do a business plan and put fiber in the ground and other telecommunications services knowing that it was a public policy of the state that everybody would have affordable and equal access. It also said that there would be a carrier of last resort,

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somebody that was always willing to serve even in the most remote area. Well, since 1997 until today, technology has changed and we're evolving to a broadband network, but we're still faced with that public policy decision of what do we want that deployment to be? Is there a segment of the population that we're willing to leave behind? Connectivity is central to successful economic development and the federal government expects states to continue that. In fact, let's turn to the March 2016 Connect America Order for some guidance on this. When the FCC talked about the necessity of the federal-state partnership, they said the following: Finally, we note the promotion of universal service remains a federal-state partnership. We expect and encourage states to maintain their own universal service funds, or to establish them if they haven't already done so. So Nebraska was the first to develop a high-cost fund. But why? How is it in the public interest? In 1997, it was in the public interest to have access to 911 and commerce so you can pick up the telephone and call. And there was also somebody that would always be there to serve a very remote customer, the carrier of last resort. And voice was always a component of that. Now we're looking at evolving to broadband. Now the definition of broadband has changed, and let me get my handouts out. I've given you a couple of different handouts. The first one, kind of leads us to really what is broadband? In year 2000, if somebody had a broadband connection that was better than dial-up, they needed to have 200k and that was considered maybe three or four times faster than what a dial-up connection was, and you were going fast. Well, 200k today is nearly useless. The FCC has indicated a new standard. We've evolved through several iterations: 250 meg; 4/1--4 meg up and 1 meg down. We're at a 10/1 today. The FCC has told a lot of carriers they need to move to 25/3--25 meg up, 3 meg down. But the interesting thing about that is the evolution from the year 2000 to today when we're looking at 25 meg is an increase of 125 times. Now since I know you deal with roads, too, imagine if our freeway system, if our interstate system was expanded by a factor of 125. Why would we do that? Why have we done that? Because the traffic demands that you have that much more traffic on our networks. A great deal has been done. That brings me to the second map. And I didn't see if Commissioner Schram handed the second map to you, but that shows how broadband has evolved over the last few years. If I could go back to 2000, and I don't have data on broadband deployment from back then, but if I had, if I could go back there you'd see much less broadband, but then you could accelerate enormously to see the broadband that has been deployed in Nebraska. And it's been there, because companies have been able to make the prudent business decision that, because of the guidance of the Legislature and the work of the commission, the fund and the capacity to

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recover will be there. So, and then let me take you to the next...well, I think my charts are out of order, but let me show you what the customer then gets for that when we look at what that network ends up becoming. We originally built the network in...well, when the Universal Service Fund started in 1997, that was directed toward the houses you see in the lower portion of the chart. But then that network has exploded. Now we're looking at cell towers which require wires, farms, factories, schools, even a truck stop that has Wi-Fi available. Over and over we're seeing how much the network has expanded. Then finally, it's important to keep in mind that all of this is based upon fast communication capacity. And that's why I'm showing you a map that's probably about two years old now. But if I had to show you every bit of fiber depicted in Nebraska, there would be parts of this map that would be shaded and complete because every home in some areas are connected. The important thing to keep in mind with fiber deployment is that we keep pushing it further and further out into the network, closer and closer to the consumer. For example, at my house, I don't have fiber today, I probably will in a few months, but I don't have fiber today, but I have two kids and they stream movies and I can get on the computer and I can check it while they're streaming a movie and I'll still have 30 meg down. I've got a pretty robust connection that satisfies what we need to do. That's why it's important to keep in mind that we need to further and further deploy the faster kinds of technologies because people are going to invent new ways to do things and they're going to demand that. Now, what kind of alternative technologies are out there? Satellite is one that gets mentioned and it's a very good technology and it serves its role. It also has its problems. In order to be geosynchronous, a satellite has got to be about 22,000 miles in the air. That way, it goes through space as fast as the earth turns and it's stationary. If it's that high, that creates several problems: lag, things like that which are perceptible. Also, the number of satellites that can be deployed is finite because they need about a two degree separation in this "geosync." It's a finite number. I'm contrasting that with deploying more and more fiber. We don't know how fast fiber will go and what its capacity will be. We just know it's more. Currently, by the way, satellites are full. Next possibility is wireless. Again, taking my house for an example, there's a national study that each residential home consumes about 60 gig broadband a month. So I did the math. If that was all wireless at my house, how much would that cost? Now I realize wireless companies, they have different plans, but on my plan what it would cost, and my kids are famous for going over their data limits, so at my house it would cost \$750 more per month, taking my cell phone bill about a thousand dollars a month. I don't think that's the answer either and there are other limitations on

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wireless too. Keep in mind, in order for wireless to work properly, they also have to connect somewhere back into the rest of the network, like on that map I showed you. Well, there's a lot of things that are coming forward as we get ready to look into the future. Internet of things, there are...it's amazing the kinds of things that are beginning to connect to the network: commodity trading, farmers in remote areas that are able to trade commodities from their farm house and can make better money in Nebraska doing that. Sensors on cattle can tell a farmer when an animal is sick or pregnant; drones are able to get data from the fields and then ship it back where it can be managed; smart homes where it's more convenient, doors and locks can be manipulated remotely; healthcare--pacemakers can transmit heart conditions to the medical...(recorder malfunction). ...from that study was that digital natives, those individuals from 20 to 34, are willing to move into rural areas if broadband exists. We also learned from that study that they are leaving rural areas if it doesn't exist. The important thing for Nebraska is if those digital natives leave, it will be very difficult to bring them back. So as we consider the alternatives, care should be exercised because if we divert Universal Service Fund away from deploying a network deeper and deeper, we're going to lose that incremental time that the network would have been utilized and have developed in rural areas. Stability and predictability in the Nebraska Universal Service Fund will best position Nebraska customers going forward for the benefits of broadband availability. I tried to cut out several parts, Senator; that concludes my comments. [LR538]

SENATOR SMITH: Thank you, Mr. Carstenson. I do have a couple of questions for you. Can you just highlight the focus...what you see as the focus of the state in USF and where the state high cost support dollars are directed today? [LR538]

ERIC CARSTENSON: Well, the focus always comes back to making sure that a voice-grade quality...and I hope I'm getting the question right, making sure the voice-grade quality call exists. There's a complicated formula called the Support Allocation Methodology that I can tell you what I think it does, but it took a very smart Ph.D. economist to develop it. But what it says is that we will look at the density of areas of Nebraska. And essentially, any incorporated community is too dense to receive Universal Service Fund. But about three miles out from an incorporated area, is where that fund supports high-cost development, the most expensive areas to serve in Nebraska. Did I get the point of your question? [LR538]



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SENATOR SMITH: So for the states that do not have this supplemental USF, how are they meeting these same types of needs in their rural areas? [LR538]

ERIC CARSTENSON: Well, I'm not an expert on some of the other states, but I'll give you an opinion. And there might be some folks from multistate companies that follow me that have experience there. But my opinion going forward is some of these states are going to have a difficult time because many of those states didn't do what Nebraska did in 1997. They didn't develop a high-cost fund and they kept their access rates high. The federal government has now eliminated access rates. They've been able to use some government programs and high-access rates to deploy facilities in some of those states, but they aren't going to be able to in the same fashion going forward. And that's why it's really important to us that Nebraska has created public policy that we know that it's going to be there and we can deploy and we have that reliability going forward. [LR538]

SENATOR SMITH: So what is one thing that the Legislature can do in the next couple of years to see the advancement and the further promotion of broadband development throughout our economy? [LR538]

ERIC CARSTENSON: I think that Commissioner Schram opened the door for you on something that's going to be important going forward where I think Nebraska has the capacity to lead. We need to reform the contribution methodology and make the cost causers that can...that use parts of the network and look at that chart--all different parts of that network, we need to have everybody supporting that. And we all know that the best kind of income on that...like that is the most broadly diverse in the smallest (inaudible). [LR538]

SENATOR SMITH: Very good. Do we have further questions for Mr. Carstenson? I see none. [LR538]

ERIC CARSTENSON: Thank you for your time. [LR538]

SENATOR SMITH: Thank you. Mr. Carstenson, before you leave, just let me ask you, is there something you did not get a chance to get to that you'd like to finish up for us? [LR538]

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ERIC CARSTENSON: A major point and another thought is that things are changing at the federal government very rapidly right now. We intended to have some of our...some Nebraska companies are very important leaders in what's been going on at the federal level. And we had hoped that they would be able to be here today. But because of what's going on at the federal government, they just filed an ex parte and they have...these...all the Nebraska rate of return companies have got to make an election November 1, next week, on how they're going to...what kind of methodology they're going to use at the federal government going forward. And so that's...let me assure you, there's a lot of stuff that's going on that we need to keep our ear to and bring this committee up to speed about when we can. Thank you. [LR538]

SENATOR SMITH: Great. Thank you. Welcome. [LR538]

TIM OBERMIER: (Exhibit 3) Thank you. Good afternoon. I'm Tim Obermier, just as it sounds, T-i-m O-b-e-r-m-i-e-r. I'm a professor at the University of Nebraska-Kearney. And it's a pleasure to be here and I appreciate the opportunity to share some research that I've completed that may be of assistance for the challenge that you folks have before you. We don't have a screen or a projector like I'm used to as a professor, and quite honestly, I'm seeing a lot of suits today. Normally, I see a lot of jeans and T-shirts, so this is an interesting session for me. But you have my lecture notes, so to speak. So I'll walk you through a few things here. This study was completed in the fall and the spring of 2015-2016. It has been...the manuscript has been accepted for publication and I assume that will be in print probably in the spring of '17 here. There are several studies out there that I found in the research, if you turn to page 1, the first slide, there are several studies out there that reveal broadband access, of course, is very important to economic growth, and that goes without saying. You've heard several cases of that. I see it around me. I'm a proud resident of Aurora, along with many of my family members, and I see what happens out on the farm and how farmers are using broadband technology. And we are fortunate to have the carriers that we do have in our area. We do...there is research out there showing the counties that lack access to broadband are losing population across the United States, so that's a very serious matter. That's been stated a couple of times already. The FCC continues to increase the base level bandwidth to even a projection of 100 meg down by the year 2020. There are people still unserved by broadband access. And there are studies out there that show that people don't select broadband for reasons of cost and/or lack of interest, cost being one of the bigger ones. One of

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those studies was done right here in our own state. Jumping down with all that in mind to the research questions that I pursued in this project, there's four questions...main questions that I pursued in this effort. The average cost per meg for residential Internet access in Nebraska overall, and I'll go into each one of these in detail as we look at the results here in just a second, but I wanted to normalize the speeds so that we could make some comparisons between communities to see what people were actually paying for their Internet access. The methodology that I used was to look at communities based upon the five city classes that we have in our...in statute: metropolitan, primary, first class, second class, and village. So if you skip over to the next page, that's just a quick overview of the classifications of cities. Of course, we only have one metropolitan location and one primary location. We have, exactly, as I was surprised to find out, 30 first class cities; and of the second class and village class I did a random sampling and I listed the cities there for you to see the communities that we did examine in this particular study; and also, the population that was representative of each of those classes of cities. On the next page, I, after the fact, after the study was underway and the cities were actually already selected, I did a map to see what, graphically, what this looked like. And we do have a spot out in the Sandhills that is missing some representation. If I had to do the study over again, I would probably build in a few cities from that region to make sure that geographically we were entirely covered. Methodology that I used--Internet service providers were identified for each city selected. I started with the Nebraska broadband map and used that as a base, but followed up if I found other means by which there were other ISPs in the area and made phone calls to those people, those companies if needed. The data rates and the costs were gathered. The data rates were normalized to megabits per second across the board to enable comparisons between communities and cost. The medium of delivery was also identified, including DSL, terrestrial wireless, cable, and fiber. Just some parameters so you understand what the study is and what it isn't. I was looking only at residential Internet. So the communities represented do not necessarily represent the rural areas in the state of Nebraska. I would like to replicate the study in that regard. I did not look at business class; I did not look at bundles; I did not look at special contracts, or anything like that. I didn't query residents directly as to their speeds or cost. I did not examine mobile or satellite costs or speeds--those are consistent across the entire state--were not germane to this particular study. Population counts that I received came from the Nebraska Economic Development contact down there who gave me the list of cities and population counts to work from. So here are some of the findings: On page three, slide number 13, the first research

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question--average cost for residential Internet access is \$13.84. That is per meg. So when you look at this, you will not be able to look at this and say, well, that is not mine...what I am paying. This study is not intended to be designed that way. It's designed so that we can compare communities to communities in the state. So flipping the page, we go to research question number two--average cost for residential Internet access for each classification of Nebraska municipality. So you see under metropolitan \$11.96. Again, this is per megabyte; for primary, \$14.37; for first class, \$13.29; and second class, \$14.26; village, \$15.31. On slide number 15 is research question number three and that's the average cost for residential Internet access by delivery method. So we look at DSL, terrestrial wireless, fiber, and cable. And there you start to see some differences coming up: \$16.32 for DSL; \$25.85 for terrestrial wireless; \$8.16 for fiber; and \$5.03 for cable. Again, this is per megabyte, just to be clear. So I wanted to take a look at the cost for the definition of broadband and so I looked at 4/1, four down/one up, and so what's the average cost for residential broadband Internet access? And I'm not going to read all those numbers to you, they're there in the chart. You can see the four megabyte down and one meg up chart. And there's some striking findings within that chart that I'm going to call out here in just a little bit. While the study was underway, the FCC announced that they were projecting to go to a 25 meg down, 3 meg up. Fortunately, the way my data was structured, I was able to bring my data out so I could take a look and see what we had available. So at least in the sampling areas that the chart represents what was found in the sampling areas, and of course, primarily residing...those data rates primarily residing in the metropolitan area with a few occasional instances in the other cities, but at a very limited basis. So now some of the additional findings that kind of ferreted out from this study, if we look on slide number 17--residents of first class, second class, and village combined...if we combine those, pay on average 8.5 percent more than the residents of primary and metropolitan combined. And that is across all delivery speeds and...and that includes DSL, terrestrial wireless, fiber, and cable. So that's the averages for all of those delivery methods for all delivery speeds. Okay? That's anything that was out there, anything from 512k up to 50 meg or 60 meg, whatever services might be out there. On the next page, a couple more striking findings--looking just at broadband, so 4 meg down, 1 meg up--residents of first class, second class, and village combined pay on average 63 percent more than residents of primary and metropolitan combined for 4 meg/1 meg broadband access. And that's across all delivery means: DSL, terrestrial wireless, fiber, and cable. Okay? That's important to note in that particular chart. Now, one other little tidbit here that's important, as I was looking

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through my data again for the umpteenth time, 4 meg...in the category of 4 meg is, essentially, anything that's up to, but not including 25 meg. So it was broadband service that provided anything at 4 meg or up until 25 meg. And I broke that...I know that's a little confusing. Hopefully I can make that a little bit more clear for you. The next slide looks just at digital subscriber line. And here's where we see one of our most striking findings. Residents of first class, second class, and village combined pay on average 170 percent more than residents of primary and metropolitan combined. And that's for 4 meg/1 meg broadband access just in digital subscriber line service. Those are the results of this study. I'm working on other projects currently. I just wrapped up some numbers on a project just yesterday that are too premature to release yet, but I'm working on some additional in-depth review of digital subscriber line service. Hopefully, I'll be able to make that available to the committee at some point in time in the future for your decision-making purposes. So thank you. [LR538]

SENATOR SMITH: Thank you for that information. Do we have questions for Mr. Obermier? Senator Friesen. [LR538]

SENATOR FRIESEN: Thank you, Senator Smith. Mr. Obermier, I guess when I first looked at the...like on page 3, the cost per megabyte for just a resident Internet access. And the primary city pays more than the metropolitan or first or second class cities. Why would that be? [LR538]

TIM OBERMIER: You know, I honestly can't answer that. The data is what the data is. I looked and found all the Internet service providers out there. And once I tallied all of them, that's what you got. [LR538]

SENATOR FRIESEN: Just surprised to see that. I guess I thought it would be in order of size. [LR538]

TIM OBERMIER: I thought so too. And I (inaudible). [LR538]

SENATOR FRIESEN: Something peculiar about the way the cities operate or something. Okay. Thank you. [LR538]

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SENATOR SMITH: Further questions? Just a little background...who commissioned you to do this particular study? [LR538]

TIM OBERMIER: There was no commissioning. It was just myself; it's a curiosity of mine. I've been teaching in an information networking/telecom program for quite a number of years. And, you know, I have some personal interest in it. I live in a rural area, right here in Aurora, and I'm served quite well by digital subscriber line service and my natural curiosity got the best of me. [LR538]

SENATOR SMITH: Have you seen this type of study done before in recent years? [LR538]

TIM OBERMIER: I have not, no. [LR538]

SENATOR SMITH: Well, great; appreciate you doing this. It's good information. [LR538]

TIM OBERMIER: Sure. You're most welcome. Thank you. [LR538]

SENATOR SMITH: Hi. Welcome. [LR538]

KELSEY BERGEN: (Exhibit 4) Hello everyone. I'm Kelsey Bergen, that's K-e-l-s-e-y B-e-r-g-e-n, and I'm the director of the Henderson Chamber of Commerce. I wanted to talk briefly today about the importance of telecommunications, and specifically, broadband Internet access to rural communities of Nebraska, specifically how it affects me as a consumer, as well as through my job at the chamber when working with economic development. First, I want to talk about the importance of telecommunication to me as a consumer. To give you some perspective, I live on a farm near Stockham, Nebraska, population of 44 people, and that's just ten miles south of here. And I currently work in Henderson, a town of just under 1,000 people. My husband is a farmer and we have 3.5-year-old twin boys. We are lucky enough to be located, like Curt, in the Mainstay Communications service area giving us access to fiber to the home and as much broadband as we currently need. Thanks to Mainstay's forward-thinking steps a few years ago, every home in Henderson, as well as the rural service area was connected to fiber. To people my age and younger, being connected to the Internet is almost as necessary as having access to water

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and electricity. Now I know that seems really extreme for me to say, but I really think that is pretty true and I'll give you a couple examples why. As a farmer, one of the last things that my husband does before going to bed at night is check the markets. He reads e-mails from his marketing consultant and the local cooperative where he's a board of director. And he also updates his breakeven numbers on apps like GrainBridge. Before he gets out of bed in the morning, he is doing the same thing, making grain sales and buying various purchases through his phone and computer before he's even dressed. For him, farming is a 24/7 job. And even though many of the service providers are closed out of the 8:00 to 5:00 workday, he is still working through the Internet. In our personal lives, a few months ago we made the choice to drop Direct TV. So besides a large antenna that I put on our roof just for the news and weather, we stream all of our television through the Internet. We watch Amazon Prime TV, Hulu, Netflix, CBS All Access, and Sling TV. So between our televisions, our phones, our computers, and our iPads, I would say that we are constantly using the Internet in some shape or form as soon as we walk through the door of our house until we fall asleep and then we use our phone to wake us up in the morning because it is constant. We have actually been working with Mainstay over the last few weeks to update our Internet router in our house so that we can stream videos in every room of the house including the bathroom, because Internet and the computer has become so integrated into our lives that even our children use the apps to know how long to brush their teeth or for potty training. Our sons at age three do not understand why there is no Internet in the car or at great-grandma and grandma's house. And we haven't even hit the world of gaming yet. This is the importance of Internet and telecommunications in our daily lives and I anticipate that our usage and the importance of the Internet to our family will only continue to grow as our boys become more active in school and we see more technology integration in the farm. I also see the importance of access to broadband in my work at the chamber. I don't know how many economic development meetings I've sat through in the last couple of years in rural Nebraska and one of the biggest concerns is always Internet because there's such a huge impact on the businesses and the quality of life (inaudible) Internet. By offering fiber in Henderson, we have created a unique asset that sets us apart from many of the other rural communities. For example, we have two start-up businesses that started in the last five years that are solely ran on the Internet. The first is [HeartlandBeat.com](http://HeartlandBeat.com). They have an on-line community newspaper. And the second is Striv, which is dedicated to providing high schools in Nebraska with the tools to live stream their school events. This company started in 2012 with one employee and now they serve over 70 schools

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across the state and they have six employees. So why is it important for them to be located in rural Nebraska? Because of location. They can drive to either end of the state in a few hours because they are located in the middle of Nebraska. But there is no way that their business would even exist if it wasn't for the broadband available in our community. With fiber in every business, Henderson is also the perfect place to run an on-line store because you can have low rental and utility costs with most main street business fronts renting for less than \$400 a month and you can ship your product anywhere in the world through on-line stores like Etsy and Amazon. In the same way, Internet has become something that we market for quality of life. If you remember how much my family uses the Internet on a daily basis, you can see why an individual or a family may choose a town based on the Internet access that they have. At a strategic planning meeting that I went to last fall in nearby York, they raised a concern about families because they couldn't access the Internet in the evening because the system was so bogged down with everybody logging in after work and after school at the same time. Our group from Henderson actually kind of sat back and smiled because that entire discussion really didn't apply to us because we all have really great Internet access and we have better Internet than some towns our size and even bigger like York. So when you start to talk about employee recruitment and retention, Internet is going to play a huge part in that decision, especially as many of our business owners are moving towards retirement and want to pass their business on to the next generation. Broadband in our community also continues to play a role in our home-based businesses and for spousal employment allowing residents to work for companies in different towns or even in different states. A new family that moved from Indiana this summer, to be closer to family, is one such example as the husband continues to work for an organization in Indiana through e-mail and video conferencing. This family would not have moved here if they did not have access to Internet; and every family we can bring to rural America is benefiting our local businesses, our school systems, and our rural communities in profound ways. So in closing, I just want to emphasize the importance of broadband in rural Nebraska and acknowledge the fact that the Nebraska Universal Service Fund has made it possible for Mainstay Communications to install and maintain telecommunications infrastructure that is not only necessary but vital to Henderson and the rest of rural Nebraska. Do you guys have any questions (inaudible)? [LR538]



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SENATOR SMITH: Thank you, Ms. Bergen. I see no questions. Thank you for sharing that story; that's very impressive how you use the Internet yourself and also speaking kind of on behalf of the chamber of commerce because it applies to a lot of businesses in this area, so thank you. [LR538]

KELSEY BERGEN: Um-hum. Thanks. [LR538]

SENATOR SMITH: Welcome. [LR538]

CALVIN STRONG: Mr. Chairman and committee, my name is Calvin Strong, that's C-a-l-v-i-n, last name is S-t-r-o-n-g. Thank you for having me today. I'm a local business owner; have about ten employees. We have an employee benefit company. And broadband service is going to become more integral part of our business as we go on. We really do business in about a 50-mile radius of Aurora and we operate about 130 different employee benefit programs with 130 companies. And so our ability to communicate with them via the Internet or via video communications has become very, very important; travel time, all those kind of things become important. But we've really, over the last couple of years, seen a lot of benefit to controlling the health costs as well. Earlier was mentioned that telehealth was able to...and part of the hospital programs, now it's become direct contact to the individual. So today we offer programs within health plans where...in our self-funded plans that you can actually pick up the phone, video conference, and get a sore throat taken care of without leaving your home. That cost is significantly lower in the marketplace today. For example, the local cost within about a 50-mile radius of Aurora is about \$180 an office visit. The plans are doing this for about \$39 an office visit, significant different cost over time. And so what we're starting to see is with people becoming more aware and more user-friendly with the Internet, those services are becoming more utilized. We've got moms that are working throughout the day and they work 8:00 to 5:00, come home, child's got a sore throat, what do they do? Well, it's not wise to go to the ER, so they wait through the night, try to get a clinic visit, miss work. These services are very, very important going forward for families to be able to access services and get their healthcare very readily available. So I just wanted to make you aware of that. Didn't know if you were aware of those services that were out there being on a direct basis. As a small business owner in rural America,

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this is extremely important to us: the broadband service and the availability for us as business owners here. [LR538]

SENATOR SMITH: Thank you for your testimony. Do you have counterparts in other towns that may be underserved by telecommunications and broadband or is that nonexistent because of the underservice? [LR538]

CALVIN STRONG: It's nonexistent. When you don't have service, you just don't get it. So, yeah, so...but we're having more and more people...more and more clients that are western Nebraska that are not getting the services we offer and they're calling us and so we're trying to do that via video back and forth and on-line applications so we don't...we only have to travel four hours to the western part of the country to get those apps. So it's making...it's more convenient if we have access to it. [LR538]

SENATOR SMITH: Fantastic. Thank you for your story. [LR538]

CALVIN STRONG: Thank you. [LR538]

SENATOR SMITH: Welcome. [LR538]

JARAD FALK: (Exhibit 5) Thank you. Senator Smith, members of the Transportation and Telecommunications Committee, thank you for the opportunity to testify today. My name is Jarad Falk, that's J-a-r-a-d F-a-l-k. I'm the director of government affairs for Charter Communications and the vice president of the National (sic-Nebraska) Cable Communications Association, or NCCA. NCCA members include Cable ONE; Charter, which now includes Time Warner Cable; Cox; and Great Plains Communications. We serve more than 400,000 households in Nebraska providing not only cable television, but broadband Internet and telephone service through V-o-I-P, or VoIP. NCCA member companies employ almost 1,900 Nebraskans in skilled technology sector jobs and invested \$17 million in infrastructure statewide in 2015. From the beginning of 2014 to the end of the second quarter this year on a pro forma basis, or if Charter, Time Warner Cable, and Bright House Networks had been a combined company, Charter has invested over \$15 billion on infrastructure and technology nationwide. These investments have

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been focused on expanding our service footprint, improving network reliability, and increasing broadband speeds for customers. NCCA member companies also paid more than \$25 million in state and local taxes last year. We not only pride ourselves on our economic impact in Nebraska, but our member companies and our employers also take pride in giving back to the communities we serve, contributing over a million dollars to hundreds of local charities in 2015. As a cable broadband provider, Charter's relationship and our customers begins in their home. To ensure more Americans are able to live in safe and healthy homes, in 2014, Charter launched Charter Our Community which will be renamed Spectrum Community Impact. By the way, Spectrum is the name that Charter uses to brand its services. Through this effort we provide education, resources, and financial support with the goal of improving 25,000 unsafe and unhealthy homes across our service footprint by 2020. None of the NCCA member companies receive funds from the Universal Service Fund and all the investments we make in Nebraska come from within our companies without state aid. We appreciate the freedom the Nebraska Statutes give us to do business without burdensome regulation allowing us to rapidly respond to changing technology without constant updates to the law and allowing our customers to enjoy our services without the undue burden of additional taxation. After merging with Time Warner Cable in May, Charter now serves 89 municipalities in Nebraska from Falls City in the southeast to Box Butte County in the northwest. Some of these communities are large cities and towns; they include Lincoln, Grand Island, Kearney, Columbus, Fremont, and Hastings. But Charter also serves many, many small communities in rural Nebraska including Morrill, Mitchell, Melbeta, Pawnee City, Pleasanton, and nearby Phillips. Charter is doing its part to ensure communities have access to the infrastructure needed to keep them strong and growing. Last year, Charter built out approximately 71,000 residential line extensions and the three companies--Charter, Time Warner Cable, and Bright House Networks--combined to build out to over 325,000 homes. In the next five years, Charter plans to expand its network to over 2 million homes nationwide, including 1 million line extensions outside our current service footprint. In fact, later today my colleague and I have a meeting with the Hampton Village Board to discuss a franchise to provide Charter's cable, broadband, and telephone services in that community. Charter is also focused on providing a superior customer service. Since 2012, we've added 7,000 jobs nationwide, most of those in customer care. Looking ahead, Charter is committed to bringing 20,000 American workers...I'm sorry, hiring 20,000 American workers in addition to the 90,000 employees we currently have. That plan includes bringing legacy Time Warner Cable's overseas call centers back to the United

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States. Whether we are sign or service (inaudible) customers, we want our Charter employee to handle these interactions. Not only will this strengthen America's work force and enable us to help grow our economy, it allows us to provide the best possible experience for our customers. Next month, Charter will roll out its Spectrum pricing and packaging to legacy Time Warner areas of Nebraska. So what does this mean for the residents of these areas? Basically, it means simple packaging and pricing of Charter services; delivering the industry's fastest base broadband speed of 60 megabits down, and more value to the customer. In addition, Spectrum TV will be offered on three levels: select, silver, and gold; and starting as low as \$29.99 when bundled with our broadband and voice service. Because Charter is committed to making broadband more affordable to all Americans and recognizing that price is often a hindrance to broadband adoption, Charter will soon be offering a high-speed, low-cost broadband service to low-income families and seniors. The service will deliver the highest speeds of any comparable industry offering and is the first to offer broadband to low-income seniors in addition to low-income families throughout its entire footprint. The service will deliver 30 megabits down and 4 megabits up for \$14.99 a month making it the only low-cost Internet service for low-income populations that exceeds the FCC's definition of high-speed broadband. Thank you for your time today. If you have any questions, I'd be happy to try and answer those. [LR538]

SENATOR SMITH: Thank you, Mr. Falk. Questions from the committee? I see none. [LR538]

JARAD FALK: Thank you for your time. [LR538]

SENATOR SMITH: Sounds like the children are enjoying themselves (background noise). [LR538]

ANN PROCKISH: Yes, it does. I almost want to go over there and see what's going on. [LR538]

SENATOR SMITH: Welcome. [LR538]

ANN PROCKISH: (Exhibits 6 and 7) Thank you. Good afternoon, Chairman Smith, and members of the Transportation and Telecommunications Committee. My name is Ann Prockish, that's spelled A-n-n P-r-o-c-k-i-s-h, and I am the regulatory and legislative affairs director for

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CenturyLink for the state of Nebraska. Thirty years ago, the Nebraska Legislature led the nation by taking the first steps towards deregulation of the telecommunications industry. At that time, the Legislature eliminated the requirement for incumbent local exchange carriers to undergo time-consuming, costly, and burdensome rate cases needed to gain the necessary regulatory approval for a rate increase and replaced that process with a requirement for a 90-day notice through a first-class letter and public meetings where customers could discuss any concerns regarding proposed rate increases with the company and representatives of the Public Service Commission. Much has changed in the telecommunications industry in the last 30 years. The Telecommunications Act of 1996 introduced competition into the local markets. That competition is now pervasive as incumbent providers now hold a minority market share in the retail voice market across the nation. In addition, massive technological change has occurred. Wireless voice service, which was virtually nonexistent in 1987, is now nearly ubiquitous in state and has become the dominant retail voice provider in large part due to the choices that consumers are making for their communications needs. The evolution of the Internet, along with burgeoning competition in the video market, has enabled more choices from more providers than ever. As of June 2015, the latest date for which information is available, the National Center for Health Statistics' report on wireless substitution shows that nearly 49 percent of Nebraska consumers are wireless only and approximately another 16 percent are wireless mostly, in that they have a landline phone, but use wireless almost exclusively for their telecommunications needs. The wireless share of the market has doubled since 2008 when wireless held approximately 24 percent of the market, with that share coming at the expense of incumbent local exchange carriers. Nearly every consumer in the state has access to wireless service. The remaining 51 percent of the market is split between incumbent local exchange carriers, with approximately 28 percent of the market, and competitive local exchange carriers, including cable companies, with approximately 23 percent of the market. The Public Service Commission in its 2016 annual report to the Legislature reports that 93 percent of the access lines in Nebraska have competitive landline alternatives. The regulatory construct has failed to keep pace to the detriment of Nebraska consumers. For example, the statutes continue to require incumbent local exchange carriers to provide 90-day notice to their customers of a proposed rate increase for basic voice service and hold public meetings. Contrast this with the events of last summer when Verizon Wireless announced an overhaul of its retail voice plans, including an increase in rates. That announcement was made on a Wednesday with the changes going into effect the next day.

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There was no 90-day notice to customers, nor were public meetings held, because Verizon Wireless was not required to do these things. However, earlier this year, when CenturyLink increased rates for its basic voice service for the first time in nearly 20 years in some exchanges in western Nebraska, the customers had to be notified through a letter and public meetings were held--a meeting, by the way, that no one attended. It's time to modernize the Nebraska Statutes to reflect the current robust competitive environment in the telecommunications industry that will level the playing field among all the providers where all compete equally for customers based on price, product, and service. Regulating a minority portion of the market is unfair and creates competitive disparities; the regulatory framework created during the monopoly era now chooses winners and losers in the age of competition and rapid technological change. On a national level, Nebraska has fallen behind. CenturyLink has local operations in 37 states; 22 of those states have deregulated prices and 18 have deregulated service quality. Rapid competitive and technological change necessitates the changes to the telecommunications statutes. Updating the Nebraska telecommunications statutes makes sense given that those companies that fall under the existing statutes serve less than 30 percent of the retail voice market. Today, the consumer has choices for telecommunications service and makes decisions based on price, quality, and technology. If a customer is dissatisfied with the rate he is paying or the quality of service he is receiving, he can choose to receive service from one of the other providers in the market. In none of the 22 states where CenturyLink's rates are deregulated has there been a significant increase in rates since deregulation and in none of these states has the state reconsidered its decision to implement deregulation. Given the massive change to the competitive and technological landscape, I recommend the committee make it one of their priority bills for 2017 to update and modernize the telecommunications statutes to reflect the current competitive environment in the telecommunications industry and level the playing field among all participants and, most importantly, create a framework that will allow for private companies to invest in technologies that consumers want in a competitively neutral manner. Thank you for the opportunity to present to you today. I'm happy to take any questions. [LR538]

SENATOR SMITH: Thank you, Ms. Prockish. I'm going to ask you some questions and I think we're probably going to repeat...your answers will probably repeat part of your testimony.  
[LR538]

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ANN PROCKISH: Okay. [LR538]

SENATOR SMITH: But I assume that you subscribe to the notion that regulation is appropriate and often necessary where there is an absence of competition. [LR538]

ANN PROCKISH: Yes, that's correct. [LR538]

SENATOR SMITH: And so you're sharing with us that you feel that there's a healthy amount of competition currently in the voice services. So do you see...are there any areas of the state where you believe that there's not a healthy amount of competition that needs to have some level of regulation? [LR538]

ANN PROCKISH: There are some areas in the state that don't have as much competition as other areas; obviously, Omaha and Lincoln are going to have lots of competition. Some very rural areas of the state where it's more expensive to provide service are not going to see that same level of competition. Those are also the areas where high cost of (inaudible) service support is provided to companies. I can foresee a framework of establishing...trying to balance the need to provide service to these areas with the help of the Nebraska Universal Service Fund and continuing to maintain some regulatory oversight at a lower level than currently in those areas. [LR538]

SENATOR SMITH: Where those funds are used,... [LR538]

ANN PROCKISH: Correct. [LR538]

SENATOR SMITH: ...applied, okay. So if a marketplace is competitive, does the presence of government regulation affect innovation growth? What is the impact? [LR538]

ANN PROCKISH: It can affect the innovation and growth at the companies that are regulated. When you've got some industry purchase, one set of regulated and others that aren't, it creates disparity within the competitive marketplace that makes it more difficult for those companies that are regulated to be able to compete effectively. [LR538]

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SENATOR SMITH: Your peers in the industry, generally speaking, what are their thoughts on this? [LR538]

ANN PROCKISH: Within Nebraska itself or general? [LR538]

SENATOR SMITH: Within Nebraska. [LR538]

ANN PROCKISH: Within Nebraska itself, I've had some conversations with them, some that are nervous about what CenturyLink is proposing. [LR538]

SENATOR SMITH: Okay. All right. Very good. Thank you very much for your time today. Any other questions from the committee? I see none. Thank you. [LR538]

ANN PROCKISH: Thank you. [LR538]

SENATOR SMITH: Welcome, Mr. Meradith. [LR538]

STEVE MERADITH: Thank you, Chairman Smith. Looks like I get to be last today, possibly, only thing standing between you and getting out of here. [LR538]

SENATOR SMITH: I don't know, we'll see. [LR538]

STEVE MERADITH: (Exhibit 8) Chairman Smith, members of the Transportation Committee, my name is Steve Meradith, S-t-e-v-e M-e-r-a-d-i-t-h, and I'm regional vice president for state government affairs for Windstream in Nebraska. I also cover a couple of other states as well-- Iowa and Mexico--in my spare time. Thanks for the opportunity to appear before you today. Thanks also for the reminder to silence my cell phone. I had an issue with that yesterday during the commission's open meeting, so appreciate that. Nationally, Windstream is a leading provider of telecommunications services and we have the sixth largest fiber network in the country at approximately 125,000 miles. We provide service in 48 states on our national IP backbone and employ approximately 13,000 people throughout the country. Windstream's incumbent local exchange company (sic: carrier), or ILEC, affiliates offer broadband, phone, and digital TV



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services to homes, businesses, and government offices primarily in rural areas of 18 states, including Nebraska. Here in Nebraska, the company employs approximately 300 employees to serve 141 exchanges in 22 counties in the southeast part of the state. In addition, we provide services as a competitive local exchange carrier, CLEC, in Omaha, Fremont, Grand Island, Kearney, and North Platte. In many of those areas, we established that business in 1997 right after the Telecommunications Act of 1996. We have deep roots in Nebraska going back to 1904 when our predecessor company, the Lincoln Telephone and Telegraph Company, was formed. We take great pride in delivering service, reliable voice communication service to connect Nebraska's Capitol and many of the rural communities in the state. Windstream was one of the first companies in the state to offer Internet service. Of course, the economy has changed dramatically since the days of dial-up, as we talked about before. Today, we offer high-speed broadband access which is critical to the way we work, learn, and entertain ourselves. The demand for Internet bandwidth, as we all know, has exploded. People are running businesses, taking classes, streaming movies, participating in multiplayer games, among other uses. According to a recent company survey, and this is a Windstream survey, Windstream customers on average have nine devices connected to the Internet that are used at least once a week. Most people don't realize that--nine devices. And the demand for bandwidth doubles; in our company it doubles every 18 months. And I was going to use the same example about think about that in terms of highway traffic, but Eric already stole my thunder on that one. That's a tremendous amount of growth to try to keep up with. To meet the exploding demand, we've invested and continue to invest in the state in our network, and we've invested in excess of \$250 million over the last three years in the state of Nebraska, and we've driven fiber deeper into the network and added high-capacity Ethernet backhaul. We're also proud to have been the first company to provide One GIG service in Lincoln earlier this year. And although Windstream has been providing "fiber to the 'prem'" service in new housing areas in Lincoln, a couple of our smaller communities, for a number of years we began overbuilding a number of existing neighborhoods in Lincoln with "fiber to the 'prem'" technology just recently. Then that is intended to support a higher broadband speed, as well as our Kinetic TV product which is an IP-based video service. And we have committed \$5 million in 2016 to provide this service to 5,500 additional households with more dollars, more service coming in 2017, yet to be determined. Across the network in Nebraska, 96 percent of our Windstream customers are served by fiber-fed nodes, which, essentially, think of a little garage, a little, small storage building with Ethernet uplinks.

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And we're in the process of upgrading or installing additional fiber nodes in the state. We chose that and we use that approach to bring broadband to most neighborhoods in our 18 ILEC states and the reason is because we feel it's the most efficient way to bring the faster Internet speeds to the greatest number of customers. Due to our aggressive deployment, we now have 2,875 miles of fiber across the state of Nebraska, mostly in the southeast portion. Eighty-seven percent of our customers qualify for speeds of 10 meg or higher. And we also offer premium speeds at 50, 75, 100 meg to about 39 percent of our customers in the state. With that said, distance from the network-serving device to the customer location will remain an issue for rural and remote parts of our exchanges. It's sometimes impossible to build a rational business case for expanding the network just because of the lack of density and so few customers spread out over a large area. So in an effort to help those customers last year, Windstream...you heard this earlier, from Eric, Windstream and other price cap companies which were considered in the state accepted Phase II of the FCC's Connect America Fund, or CAF Fund. And by accepting that funding, we agreed to provide broadband service at speeds of 10 down, 1 up to a certain number of locations in those states. And by the end of 2020, we're obligated to provide 10/1 to at least 21,500 locations in eligible census blocks in Nebraska as selected and specified by the FCC. So that funding supports capital costs for network facilities as well as operation...as well as ongoing operations and maintenance. And consistent with FCC rules, we are continuing to formulate our CAF-II plans which include detailed engineering design, aligning with construction contractors, budgets, and marketing rollouts. However, by the FCC's design, CAF will still not fund the most remote locations in the state. You heard about the RAF (Remote Areas Fund) fund earlier from Commissioner Schram. While Windstream wants to be able to make faster speeds available, the reality is there will continue to be rural locations in Nebraska where there is no rational economic case to support upgrading the network. And that's absent universal service support. In its December 18, 2014, CAF Order, the FCC recognized the important role that states play in advancing universal service goals. The FCC welcomed and encouraged states to supplement federal funding through state universal service funds or other mechanisms. And we're lucky to live in Nebraska where the commission with its State Universal Service Fund has served as a great example of that cooperation for many years. Windstream has participated in that program to upgrade our network for the benefit of our customers. In fact, we're just completing an application for the 2016 funding year which, if approved, will fund five broadband projects in our service area in southeast Nebraska rural areas. Our hope is that we can continue to utilize

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state universal service support to complement the federal funding mechanism to continue to build out our rural broadband network. Finally, in closing, Windstream does...we concur with CenturyLink that the committee at least look at updating and modernizing the telecom statutes in the state of Nebraska, particularly to reflect the state of competition in the retail marketplace. The statutes haven't undergone any meaningful reform for 30 years, roughly. I concur also with what Ann Prockish said. I've had examples, also, the 90-day notification for the letters and the 90-day notice to customers of proposed rate increases. We've held meetings, never had a customer show up yet at one of those meetings. But just given the level of retail competition today and the fact that many competitors have no similar requirements, this seems like a waste of time and resources to do that, so we believe it needs to be eliminated. In conclusion, Windstream is committed to providing quality, reliable broadband service to our customers throughout our service territory in Nebraska. We continue to execute a "network first" strategy, driving fiber deeper into our rural areas to deliver speed and reliability our customers deserve and expect. State support through the Nebraska Universal Service Fund, in addition to federal support, will continue to be critical to achieving the goal of expanding the availability of broadband in Windstream's rural areas. And with that I conclude my testimony and be happy to answer any questions. [LR538]

SENATOR SMITH: Thank you, Mr. Meradith. What is...I'm going to ask you a question I'd asked Mr. Carstenson earlier. What is the one thing that the Legislature can do in the next couple of years in your opinion to advance and promote investment in expansion of broadband in all aspects of the economy in Nebraska? [LR538]

STEVE MERADITH: Oh I would probably refer back to continue to support the commission's efforts on their Universal Service Fund. I think we've made a lot of progress in the state over the years. For example, I might share with you--I just thought about this while I was listening earlier--we are a multistate company, 18 ILEC states. Nebraska, actually, has become a model in terms of universal service. I heard Eric say that earlier. And as evidence, in New Mexico for example, we're undergoing the U.S. Universal Service Fund rule making and one of the things that they're looking at is adopting the Nebraska model as far as broadband deployment. I have counterparts in Pennsylvania that have done the same thing, they've advocated that to legislative committees; the same thing in Georgia. Looking back, what...broadband grants in particular, we

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started out with a small amount of money. But you look at over a period of years, and I think if you look at the latest commission annual report to the Legislature it shows that from 2008 there's...from 2008 on, and I don't remember the number of projects, but the commission has dedicated \$51 million to support broadband in the state of Nebraska. And so you might start slowly, it's a big deal. And so I think...I just think the continued emphasis put in the commission do the job through the Universal Service Fund will help a lot to continue to deploy broadband in rural areas. [LR538]

SENATOR SMITH: Would you say then maybe second to that would be revisiting the PSC regulations of the wire line voice telecommunications? [LR538]

STEVE MERADITH: I think that's important, yes, sir. One of the things that didn't come out today that's problematic to the price cap companies, so we took the CAF funding in the state of Nebraska and what...that money is intended to build out broadband throughout the state of Nebraska. What it replaced was federal universal high-cost support that we used to get for our voice network. So we have areas now that we're going to build out the CAF areas with broadband; but those areas outside of that that used to get support, federal support, for voice service, will no longer get that support. So I mean I think...I think there's a need also for a portion of the fund to support operations and maintenance to continue to support the voice service in those outlying areas. [LR538]

SENATOR SMITH: Very good. Any further questions for Mr. Meradith? I see none. Thank you for your time. [LR538]

STEVE MERADITH: Thank you very much. [LR538]

SENATOR SMITH: Welcome. [LR538]

DAMON McDONALD: Good afternoon, Senators. My name is Damon, D-a-m-o-n, McDonald, M-c-D-o-n-a-l-d. I am the superintendent in Aurora Public Schools and I appreciate the opportunity to be in front of you this afternoon and give you a little background in regards to the way Universal Service Funds affects our students within our school system. First and foremost, it

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obviously provides an affordable cost to Internet services for not only our students, as I represent 250 students each and every year in regards to our school system. And not only does it provide affordable cost as far as Internet and fiber services to our school, but also those households that we reach out to every day because of the amount of opportunities to provide for our students with the devices each and every day in our learning opportunities. Just to give you a little bit of background, when I first started--this is my sixth year here as superintendent of schools--I believe we started out with 1 megabyte that we were using and that has grown from 1 to 10 and then from 10 to 250 and now we have 1 gigabyte of bandwidth that we are utilizing each and every day and that continues to grow, that's not going to slow down. What we were finding is the more opportunities that we were providing for our students and staff, the more that they were taking that by leaps and bounds and using that and we were getting bogged down even as we increased with the megabytes. We're finding out that that...the reliability wasn't there, it wasn't fast enough and it continues to grow as we continue to grow and provide opportunities for our students. I just wanted to share briefly that, you know, how does it affect our kids at the school. Universal Service Funds affects our students because we continue to grow the number of blended learning opportunities that we provide for our students, and that includes all of our technology and all of those advancements. It includes the ability to offer, obviously, we're offering more devices, so as we start to offer more devices through this process and one-to-one initiatives within our high school, then that trickles down to our middle school. And then it obviously trickles down to our elementary and now it even trickles down into our early childhood programs as well because they see the benefit of what those devices and what the capabilities and what the Internet provides to do that. The other area that maybe gets overlooked, it provides the quality security measures for our school and provides quality distant education opportunities for our students. It provides more flexibility and more opportunities for all of our learners at the school, not just a select group. But I certainly believe it levels the playing field for all of our students. And as we progress and we're looking at different revision process with Nebraska Department of Education is certainly going to expand our opportunities for our career and technology education pathways for graduating seniors as they look at their life after graduation as well. So this is a brief testimony, but I would say that in conclusion I just believe that the Universal Service Funds, they provide an affordable lifestyle for our students and those families and it certainly enhances the curriculum of all of our learners at the school and I truly believe that and I believe

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that it's only going to continue to increase and expand. So I thank you again for allowing me to testify this afternoon. I would be happy to take any questions that you might have. [LR538]

SENATOR SMITH: Thank you, Mr. McDonald. Any questions from the committee? I see none. Thank you for your testimony. [LR538]

DAMON McDONALD: Thank you. [LR538]

SENATOR SMITH: Welcome. [LR538]

CHRIS HOLLIDAY: Good afternoon, gentlemen. My name is Chris Holliday, C-h-r-i-s H-o-l-l-i-d-a-y. I represent the Aurora Cooperative today. We represent 70 locations all over rural Nebraska, as well as six other states beyond Nebraska. First of all, thank you very much for your service. I can tell you from our experience firsthand we've seen bandwidth prices and performance improve as we continue to do business in rural Nebraska. At the Aurora Cooperative, our ability to serve our farmer owners, their equity, and the communities that we're a part of are of the utmost importance to us. We covet the opportunity to represent the Nebraska farmer and those communities by providing premier agricultural services and marketing opportunities in the global market space. Bandwidth required for our processes is ever an increasing demand. The activity across the enterprise creates opportunity for our business decisions to occur in real time at a pace and tempo that the marketplace demands both in respect to remaining competitive and independent in an ever-consolidating industry and further serve our obligations to the American farmer, and participating in commodity trading globally, supporting top tier business operations and analysis, safety systems for our employees, as well as our guests, as well as communications. Despite the improvements that can be found all over rural Nebraska and in the communities that we serve, there's still incredible disparity in price, both in the price and performance, as I mentioned earlier, in these Internet connections. I can tell you, for example in our experience, we have a 100 meg Internet connection to a co-located data center in Omaha that costs us just as much as a 3X3 Ethernet over Internet connection to one of our rural locations. Beyond the obvious need for competitive Internet service for our business processes, our systems are necessary to our growth as we take great pride in being able to provide employment to over 700 Nebraskans, as well as continue to strive to attract young talent back to

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these rural communities. In conclusion, thank you very much for the opportunity to sit before you this afternoon. Your work and the Universal Service Funds enable companies such as ours to serve rural Nebraska and the agricultural sector that supports this great state to the best of our ability. [LR538]

SENATOR SMITH: Thank you, Mr. Holliday. I know that the committee had a chance to come out to your facility, the co-op, last year and you gave us a tour. [LR538]

CHRIS HOLLIDAY: Yes. [LR538]

SENATOR SMITH: And it's really an amazing center for technology. [LR538]

CHRIS HOLLIDAY: Well, thank you very much. We're pleased to do it and pleased because I get some good representation (inaudible). [LR538]

SENATOR SMITH: Any questions for Mr. Holliday? I see none. Thank you for your time today. [LR538]

CHRIS HOLLIDAY: Thank you very much. [LR538]

SENATOR SMITH: Any further testimony? I see none. That will conclude our hearing today on LR538. Thank you, again, for your time. And thank you to the city of Aurora and the business leaders and citizens from Aurora that showed up today to testify. Appreciate the hospitality. [LR538]