

**NWX-DOC-NTIA-OTIA**

**Moderator: Don Williams**  
**April 15, 2020**  
**16:46 CT**

Coordinator: Welcome and thank you for standing by. Your lines have been placed on a listen-only mode for the duration of today's call.

Today's conference is being recorded. If you have any objections you may disconnect at this time.

And now I'll turn the call over to Don Williams. You may begin, sir.

Don Williams: Thank you. And thank you for joining us today for BroadbandUSA's Monthly Webinar on broadband topics of interest to policymakers, decision-makers, practitioners, and consumers.

I'm Don Williams, Broadband Program Specialist at the National Telecommunication and Information Administration part of the Department of Commerce.

And I'll be moderating today's webinar. Our webinar today is on the important topic of rural broadband. And we have three service providers

discussing business models and solutions.

Rural service providers continue to deploy broadband solutions and work to close the digital divide. They're developing strong local partnerships and sustainable business models.

Our panelists represent three providers that utilize different technologies to bring broadband solutions to their rural communities.

Also, different organizational structures, they include a regional cable provider offering the triple play of video, Internet and voice in the Upper Midwest, an electric co-op from Virginia, and an independent telephone company serving rural areas in the Southeast.

Our presenters today are Justin Forde, Senior Director of Government Relations for Midco. Also, we have Renee Chapline, Vice President of Communications and Government Affairs, Prince George Electric Cooperative. And third presenter is James Garner, Vice President of Operations, Telephone Electronics Corporation.

I'd like to point out a few housekeeping items before we begin. The panelists will answer questions after the end of all the presentations. Please use the question box on the right-hand side of the screen to submit any questions or comments you may have.

The presentation along with a transcript and a recording will be available on the BroadbandUSA web site within seven days of this webinar under Event/BBUSA Webinar Archives.

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Our first presenter is Justin Forde, Director of Government Relations for Midco. As Senior Director of Government Relations for Midco Justin oversees the company's Government Affairs Teams in Kansas, Minnesota, Wisconsin, North Dakota, and South Dakota, as well as at the federal level. Justin has testified before Congress and speaks frequently about rural broadband and Midco's role in connecting the digital divide.

Before joining Midco Justin worked as a Regional Director for Senator John Hoeven's office, Development Manager for Bismarck State College and Assistant Director of Marketing for North Dakota State University. He earned his bachelor's degree from Northern State University and his master's degree from Florida State University.

Justin, we're very happy to have you here. I know you've been very busy with the virus situation and glad you're here. Please take it away Justin.

Justin Forde: Well thank you, Mr. Williams. We, Midco and I appreciate the opportunity to join everyone today and thank you to all of our listeners to this webinar who took the time out of their day to join us as well.

Obviously Midco just to start, you know, with a little bit about us, we are really a - the technology innovator on the Northern Plains. We started in the movie theater business in 1931. And then got into radio, television, cable and now, of course, the largest portion of our business by far is broadband.

We also have four world-class data centers as well and continue to diversify into other areas. But really we do that for our friends and neighbors and the people across the Northern Plains.

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Here's just obviously a look at, you know, the primary areas that we serve. We serve about 342 cities or communities mainly in the Dakotas and Minnesota, a little bit into Wisconsin and also in the Lawrence, Kansas area. We continue to grow that number of cities every year.

This year we'll build about ten more cities throughout the Upper Midwest. And we continue to expand that list every year and bring our services to more and more communities.

We use a wide variety of technologies to do that. Some of them are fiber to the home, and we also use the hybrid fiber-coax mix which is the majority of our customers that we serve.

But as you look on that map, obviously we serve some of the most rural parts of America. So we like to think of ourselves as rural broadband is what we do. We also serve some areas that are very strong in agriculture and energy really out in the heartland of America.

So next slide, please, obviously that fiber network you saw there is kind of the backbone for innovation. As I began to mention, you know, we really like try to use the technology best to deliver broadband that serves our customers. You know we use the fiber to the home technology when that's the best solution.

The majority of our customers use the hybrid fiber-coax mix. And then we also use fixed wireless to meet some of our rural areas. Just want to, you know, they're all fast, reliable and all do the job and all have their uses in reaching folks to help close the digital divide.

We've got about 400,000 customers across the five states currently. The number continues to grow. And, you know, all of our customers we try to provide that same level of speed and reliability to all of them regardless of whether they're in one of our smaller cities which could be, you know, populations under 50 up to Fargo and Sioux Falls which are the only cities that we serve that actually have populations of over 100,000.

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So while I just mentioned that a lot of our folks across our footprint have access to Gig service, that we're also investing heavily in 10 Gig service. This is 10 Gigabit service which is a little bit different than what you may hear from for 5G technology.

This is again using a hybrid fiber-cable mix to deliver 10 Gigabit speeds and we're already investing in bringing this type of technology to rural America as well.

So next slide, please, fixed wireless, the speed, reliability in fixed wireless is improving tremendously. It's an unbelievable tool in the toolbox to reach our most rural customers. When you look at this slide here you really see what that can look like in rural America and some of our less densely populated areas.

You see in the lower right-hand corner what might be a Midco city or might have a population of a town of maybe, you know, 100 people. That community may have a water tower. Maybe that elevator to the left.

We're beaming that signal at point-to-point spectrum up to maybe 8 miles

away reaching an elevator and reaching another farmstead that might be 16 miles away.

So, therefore, this is really cost-effective way for us to reach out to some of our more rural friends and neighbors and, you know, really get out to more and more rural communities.

And this is also great for things like precision agriculture when you can really begin to reach, you know, not only the farmstead, but also many of the grain dryers, water pumps. There are so many things out there what we're seeing in the agriculture sector that need that connection.

And it isn't just, you know, one point. So a farmer might be able to get multiple connections from that same thing all without the cost of running wireline out there using fixed wireless technology.

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So this is really our Edge Out strategy where we use that fiber for those strategic builds. When it makes sense to do a wireline build-out we do that.

We feed our fiber, our towers for the fixed wireless for Internet connectivity. And our Edge Out strategy is again to really Edge Out from that network to our most rural areas using fixed wireless.

Kind of our first step in that is we were awarded \$38.9 million in the Connect America Phase II Auction. We really like how that worked with the FCC because it was technology-neutral and was also done at a reverse auction.

So of course, the lowest, you know, bidder, that was a great savings to the

taxpayers using that as well and making sure that those bids were awarded.

Next slide, please.

When you look at this map you really start to see our red lines are some of the bigger fiber pipes in our network. But you see the colored circle areas there where they're really propagation maps.

And that really shows what a great visual of how you begin to start to reach, you know, really all the possible millions of locations out there when you can use fixed wireless and edge out from your wired network using that fixed wireless technology. You can really see how that begins. And you add more and more circles there that you begin to close that digital divide area.

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So the CAF locations awarded to us in that auction was actually only just under 10,000 locations around. But, this actually then brings our service past about 200,000 more homes for about \$38.9 million so the cost-effectiveness of reaching another 200,000 homes with fixed wireless versus wireline obviously a tremendous difference there especially here where there can miles between homes that are out there.

The speeds that we'll be offering are 100/20 in a phone line. Of course, many of those CAF areas as well with no data cap so that speed and reliability and throughput of fixed wireless has just improved tremendously and is just a great tool in the toolbox to reach those areas.

We have a three to six-year build-out with the FCC but we're already beginning to launch, you know, many new markets throughout that process

and we will go as fast as we can to get that service out to those new areas. This is just really kind of the first step in our fixed wireless expansion from our wired network.

Next slide, please.

So we'll continue, you know, to look at, you know, what the right strategic choice here for our continued plant in rural America, you know, whether it's fiber or HFC and do those build-outs where that makes, you know, sense economically. We'll again continue to feed those towers to make sure that fixed wireless connectivity gets out there.

And for us, this fixed wireless is just such a tremendous tool in the toolbox because you just see every day, you know, the need for that tool.

For example, you know, right now during the COVID crisis, you know, we had many, many farmsteads and folks who lacked students out there who came home and now they needed an Internet connection.

And they might've been 5, 8, 9, 10 miles from town and without that fixed wireless connection we would've never been able to get a wire out to them for their Internet connectivity wherein this we were able to hook up well using all of our technologies, several thousand students with free Internet throughout our regions so that was really exciting to be able to use that tool in the toolbox.

Of course, it's up here on the Northern Plains, you know, we still had temperatures were down around 10 degrees yesterday morning so still a lot of frozen ground up here and really for much of the year deploying, you know, wireline service is very challenging.



You know as our cities grow we opened a national grocery store chain with a fixed wireless connection over the winter so the precision agriculture as I mentioned earlier reaching those folks in rural areas has been great.

Temporary connections to folks that need it out there as well during the winter months and during the summer months is just a tremendous tool.

Obviously the terrain, you know, very different from the badlands and the western and Dakota, Western North Dakota, the Black Hills of South Dakota. You got granite cliffs and limestone in Minnesota area.

So as well as the vast majority of the kind of the central area that we serve is very sparsely populated and miles and miles of flat rolling terrain.

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We're committed to working, you know, with our states as well and local partners. And again I think it's important to mention that we use a wide variety of technologies to do that in South Dakota.

In some more sparsely populated areas, we ran some fiber to some more towers and connected some areas via fixed wireless.

In Minnesota, we used HFC to do two cities using border-to-border grants there so really again used whatever technology was best.

We like the technology-neutral aspect of programs, to use the best technology. Most importantly for the customer or the end-user and what that area particularly might be want and what might be best for them.

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Again the - here is just kind of a neat chart. You know what we're really doing is fixed wireless, is a fixed 5GLTE Network. The spectrum that's been coming available through the FCC is going to be great for fixed wireless. A lot of that is coming around through the 5G.

But we really like that for fixed wireless. And you can see here this is actually the Thompson North Dakota Elevator which is on the North Dakota, Minnesota border. It's 190 feet high. Just the examples of this really is a tree row and houses behind trees.

And you can see there, you know, at 4 miles using one type of spectrum, 2.5 Gigahertz or 3.5 and going through four rows of trees, what the speeds you get.

And you can really see with, you know, using 2.5 spectrum, there's no trees, you can reach this up to 18 miles and still provide the federally mandated broadband speed using 2.5.

So we're really excited about, you know, our fiber-fed towers and the spectrum that's becoming available to be able to reach folks that are even further from our network. Where Chairman Pai is announcing about 6 Gigahertz that they have coming up was very helpful as well.

So we'll continue to use our best form of technology and to reach folks out there that are further away and make sure that our friends and neighbors also have that fast, reliable, Internet connectivity.

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Well, thank you very much, you know, everyone, really appreciate it. This is my contact information is here. We've got a great rural broadband web site that's got a lot of videos of us doing technology stuff and reaching out to folks and some testimonials there.

So please feel free to check that out. I'm always open to visit with anybody nationally or participate in anything that we can to help folks out. Midco has been - just a long history of being a technology innovator.

And, you know, our kind of mission throughout our history has been to innovate for and empower and inspire the people in Northern Plains. And we will continue to do just that by making sure everybody has fast, reliable broadband connection.

Thank you all very much for your time. I look forward to hearing from any of you at any time. Thank you, Mr. Williams. I turn it back to you.

Don Williams: Thank you Justin, great presentation. Our next speaker is Renee Chapline. And Renee is Vice President of Communications and Government Affairs for Prince George Electric Cooperative in Southern Virginia. Renee currently serves as Prince George Electric Cooperative's Vice President of Communication and Government Affairs

And before joining Prince George Electric Co-op in January of 2018, Renee had an extensive background in global business attraction of major industries to Virginia. Also, Renee had a good history of legislative issues and working on policies related to infrastructure in the support of economic development.

Thank you very much for being here Renee. I know we spoke, and you've been very, very busy signing up new customers so that's great. Take it away Renee, thank you.

Renee Chapline: Thank you Mr. Williams and I appreciate that kind introduction. And I also appreciate our listeners taking the time to join us today.

And yes, I work for Prince George Electric Cooperative who more 40, excuse me, more than 80 years was created and began to provide electricity to rural communities that investor-owned utilities bypassed in part due to the sparse population of the area, and today we provide electricity to almost 12,000 homes, farms and businesses on 1300 miles of lines across 6 Virginia counties.

And in 2016 after a lot of consideration and internal evaluation, Prince George Electric Cooperative Enterprise, LLC, a wholly-owned subsidiary of Prince George Electric Cooperative launched a Broadband Pilot Project to answer the call for consumer-members for high-speed Internet.

And following that successful project that was undertaken with support from Prince George County several additional counties, state, federal government partnerships have emerged, which solidified the decision to step into the broadband arena.

Our broadband subsidiary, Rural Band, is well on its way to delivering the highest Internet speed available to our rural members, including the building we're in today, with a goal of reaching every member in the Southeast Virginia service territory in the next three or four years.

Slide 2, please.

Next, you'll see - go back. Yes. Next, you'll see a timeline of the history of the co-ops. We have a long history of working with communities to make life better for our citizens and bringing value to our members by really enhancing the quality of life.

And these key considerations were considered before deploying the Broadband Project. Rural areas had been in declines in population since 2010 and for the most part, this has been trending as a result of business enterprise losses and school situations.

Economic development, education, telemedicine, smart farming applications, and telework are all quality of life amenities that urban areas enjoy, and with rural broadband projects, even rural communities can share in these new innovations.

Broadband can be a major driver in economic development to attract businesses and also provide remote work opportunities for our citizens choosing a rural lifestyle.

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The Broadband Project started with a small pilot funded by Prince George County. The energy and response of the community participants was tremendous with in fact a 65% take rate on the pilot. And, the community was thrilled with the fiber service, the quality and really became quite a buzz throughout the region.

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In fact, the model of the public/private partnership approach to making this happen has been recognized by a number of local, state and national organizations.

This was the first project in the state with the public/private partnership approach, and it has been very popular with the citizens and the elected governing bodies of these communities choosing to support this project.

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In addition to the need for secure, reliable and competitively priced Internet solution in our area, Prince George Enterprise's fiber network has an internal business purpose as well.

With the addition of fiber network, PGEC will be able to better incorporate smart grid technology in our daily operations, improve integration of distributed energy resources and help lower power costs through Interactive Energy Management Programs.

By increasing the bandwidth for communication with its systems, PGEC will improve efficiency, increase reliability and expand security, and it's truly a win-win for everyone involved.

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And, today I talked a lot about partnerships. And, that has been a key to the success of this project. And as you see here in June of 2017, Prince George County Industrial Development Authority awarded Rural Band \$1 million inducement grant to assist with the further development of the high-speed access to the underserved areas of the county.

In 2018, in addition, the Virginia Tobacco Commission Revitalization, excuse me, the Virginia Tobacco Region Revitalization Commission gave Rural Band a \$1.2 million grant to connect 500 homes and then in '19 Surry County offered \$500,000 to get 250 homes hooked up.

And, then on the federal level, PGEC has been awarded \$15.4 million over 10 years from the Connect America Fund, the CAF II funding, which is the reverse auction in 2018 to provide and make available gigabit-speed broadband to 5287 locations.

In January of 2020, our governor announced a \$2.25 million grant to Rural Band from the Virginia Telecommunication Initiative for additional build-out within Surry County. This will actually be a total of \$4.5 million with the County match. So again, you see the key to this project has been partnerships.

And these partnerships cannot be overstated because PGEC is similar to other electric cooperatives across the country as a nonprofit that operates at cost.

We entered the business with no extra cash to spend on the project. This means financing with a portion of the broadband infrastructure investment, you know, will be borrowed funds.

We had resources to invest, mostly human, infrastructure and equipment. But, we would never have been able to proceed with this project without public funds. We also will not be able to extend our service area to reach additional rural Americans who don't yet have this robust service without additional public funds.

And therefore, you know, continued government funding to reduce the upfront

capital cost and help make the business case to deploy a robust, broadband service like this is necessary to achieve the widespread expansion which is needed and throughout rural America.

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So, I'd like to leave you with this quote today because I think it's very important to realize where the electric cooperatives fit into this particular realm. But, in the 1930s, we're able to connect people to electricity and how appropriate today we're connecting our members to the world.

As I have described, broadband is vital to the survival and the growth of the communities that we serve and all of rural America. Much progress on broadband has been made, been recent achievements and deployment over the last few years. And, it's important to clearly understand the challenges when undergoing a Broadband Project.

And, there are many. Electric cooperatives, in particular, are well-suited for the task. And, we are committed to deploying broadband in rural America and investing in these difficult to serve areas where other providers are not willing to serve. We have an opportunity to work together to transform rural economies and these investments in broadband.

And, I personally am excited to see our members enjoy the rural lifestyle and also reap the rewards of education and employment opportunities and the development growth that they so strive for.

I'd like to thank you for the opportunity to present today. And look forward to answering any questions. Thank you.



Don Williams: Thank you, Renee, appreciate the presentation. Our next speaker is James Garner. James is Vice President of Operations for Telephone Electronics Corporation. James, thanks for being here.

I know that you've been up very late for the last several evenings with power outages because of those deadly tornadoes that hit some of your service area so thanks for being here.

James is Vice President of Operations for TEC, the parent company of six, rural, independent telephone companies located in Alabama, Mississippi, and Tennessee. And it was a CLEC, which focused on enterprise customers throughout the Southeast. James ran TEC's Operation Department in every aspect.

James joined TEC in 1992 with a commitment to learn the business from the ground up spending his first 24 months embedded with various departments from construction to engineering to install, repair and billing.

James is a graduate of Mississippi State University with a bachelor of science degree and a master of science degree in mechanical engineering. Currently, James serves as Board member for several of TEC's subsidiaries.

He's past President of the Telecommunications Association of the Southeast and Tennessee Telecommunications Association. James is a member with the Board of Directors for both organizations. James, please take it away.

All right, thank you, Mr. Williams. I'm very happy to be here representing TEC and our unique view and maybe to help share some of our experience. We've been in this business or a part of this business since 1923. We're a family-owned organization.

And, I've had the benefit of hearing many, many stories going back to those early days. And, that really kind of shapes my view and appreciation of rural America. I grew up in rural America. Our company grew organically over the years, and we had the opportunity to acquire a handful of other telephone operations.

We now have six companies in Tennessee, Alabama, and Mississippi. We do have those networked together with leased fiber services and we run sort of a centralized Network Operation Center based in Jackson, Mississippi.

We also operate a Regional CLEC, which is a competitive provider. And, in that business, we focus on enterprise customers, and we really like to go after those banks and other larger operations who need regional broadband assistance of carrier type - carrier-grade assistance in providing networks for their business.

As even in our rural areas we see competition increasing. There are cable operators. There are more recently a number of electric cooperatives getting into the business.

And, we decided to adopt a growth strategy and aggressively overbuild our traditional copper infrastructure. We recognized that DSL speeds were quickly becoming obsolete. And, that timeline happened a little quicker than they anticipated. But, the bright side is the fiber technologies have come on strong. And the technology and pricing has become more affordable.

And even so, we find it necessary that you have to take a long view on these business models. There's really no get rich quick in rural America. You're really doing it for the service and for a longer-term investment.

And, so with that, I'm going to continue on, and I will ask for the next slide, please.

I'm going to give a disclaimer here because, you know, I'm an advocate of responsible broadband build-out. I'm still an advocate for high-speed Internet and broadband deployments. But, really my purpose today is to help you understand maybe some things that you need to watch out for.

I am in no way attempting to discourage it. I just feel that I owe it to you to present some realities that we have encountered in our experience and hopefully, you won't have to suffer through some of the same mistakes that we made early on.

So, our disclaimer is there's responsible broadband advice ahead.

So, we obviously know rural. And, it can be a successful adventure. But, you really need to appreciate some of the things that might cost you later on. In our experience, we're serving 3378 square miles. We currently have deployed 1100 miles of fiber to the home.

We still maintain 4000 miles of copper plant most of which is capable of 25/3 speeds, but we will be over the next three or four years replacing all of that copper.

There's some great operational advantages and efficiencies to be gained. And, it also gives you a viable product that frankly I don't see copper in the rural areas being viable in the long-term.

So, we want to leverage what we have. Get to where we're going. All-in-all

we have 13,000 rural subscribers. And that number is beginning to trend upward as we deploy more fiber. We're finding that our fiber - our take rates are going up.

And the reason being is that we have the ability now to offer 100 Meg Gigabit speeds and above whereas those folks were just still sitting on the fence when it was only a 25/3 offering.

So and our perspective is really from a wireline. And so we're beginning, you know, to leverage those assets. And, we've looked at wireless in the past, but 65% of our area is forest land and so wireless kind of has some issues for us. And, so we're sticking with a copper centric, I mean fiber centric business model.

So, what I would offer you is that broadband is really a journey. And by that, I mean you need to prepare. Prepare for the long-haul. And, you will arrive at your first destination or build-out but you're not going to stop. You're going to continue that journey.

We learned that recently through DSL. And, we thought for a while we had 99% coverage of DSL. We're in pretty good shape. Lo and behold the world sort of changed. The definition started changing for broadband. And now we're well into our Gigabit deployments.

At the same time, we're running trials on 10 Gig deployments. So I guess the key takeaway here is that this stuff never stops. You will constantly be talking about what your next upgrade is going to be

And like any trip, you need a plan and a map. And you should always know where you're going. And don't be afraid to change directions if you encounter

an obstacle or you see an opportunity. The technology will change. The applications will change. And customer preferences will change so keep an eye on all three of those, please.

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One of my favorite analogies three legs of the stool. In the sense of broadband, you know, obviously, you need availability and you need affordability and you need adoption. This isn't a pick 2.

This is a pick 3 operation so your success will depend on you being able to provide the availability at an affordable price. And, that can be a tough proposition in rural areas. So, plan very carefully for that.

And even if you are able to make it available, you should also understand what's driving the adoption rate or lack of adoption rate. I like to say that it's easy to sell water in the desert. And, that's true. When we deploy fiber to an area that doesn't have broadband service we've been edging out of our own territory.

And, those people will come out to the trucks. They will stop the machine in its tracks and make sure you know who they are and how to get in touch with them.

So, those sales are very easy. They're frequently, you know, on the pending order list before we even get the last piece of fiber in the ground.

Other areas can be a little more selective if they have some broadband. If they have adequate cellular coverage and enough data for what they do.

So, there's a lot of variables that really we should look at. And, devote some resources ahead of time. I do think though that providing the ubiquitous Gigabit service is going to be the game-changer for you.

And, back to affordability, you know, it's pretty obvious that in low-density rural areas it's a little challenging to make a traditional business model work without going outside to find supplemental funding resources.

In our case, we've been actively filing for USDA Reconnect Grants, actively participating in Tennessee and Alabama, where those states actually have broadband funds available. And, very well-managed I would say.

And, if you're on the call and you're part of a state considering that I would look at the Alabama and Tennessee programs. I can't say enough great things about them.

So far, we have achieved \$4.1 million in grant funds. And, all of those grants had some form of a matching funding arrangement where we put our money in. So, with that \$4.1 million in grants, we're putting in additional funds so that we are funding \$9.3 million investments in fiber broadband services.

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Secrets of success. I've said a little bit earlier, touched on earlier, understand the market you plan to serve and what the dynamics are. Particularly, you want to cultivate your relationships with local political leadership.

Let them be a part of it. Let your community business leaders be a part of it. And, it will make telling your story much easier when you do need to go and or when you do need to make an application for a local firm.

Educate your community leaders. Many of them hear just the tip of the iceberg of what broadband is and what fiber is. They understand the benefits. I think that's been very well communicated.

But, there's a perception that once you build a piece of fiber that the beginning is over. And, helping them to understand that that's really just the beginning.

What comes next is you, you know, you have to layer your services on that. You have to maintain that fiber. You have to maintain your technology so that you can keep up with these ever-increasing speed requirements.

You need to communicate frequently and clearly with your customers. What you're really running is a customer-centric service. At the base of that service and what makes it possible is a fiber asset. But, you're really in the customer service business.

Again go after, actively go after and aggressively go after all funding opportunities. And keep in mind that fiber is just glass. But, the broadband is really a service and that service takes a dedicated resource in terms of people power to keep it moving smoothly.

My closing observations, next slide, please.

So we've witnessed a remarkable evolution since 1923. And, I would say that that evolution is going to continue if not accelerate.

Hearing some of those old stories about going from party-line to single line to electronic switching to digital switching, all of those things seemed like they were going to just make the world such an easy place.

And, that you'd be done with your job. All you'd have to do is just sit back and watch it run. And each time, we learned that no, there's a new something. And it's just - it's a great thing. But, it's also something you have to plan for.

Fiber broadband and Gigabit speeds will become obsolete giving way to 10 Gig and beyond, who knows. Really nobody can see that far ahead. But, I do know that it will change.

Customer satisfaction requires effort and culture. Make sure that you've accounted for that in your organization to serve.

Another important point is that your pricing will more than likely be dictated by the market, not by what your cost and your desired margin will be.

Even if you don't have an immediate competitor rural customers will feel disrespected if they can't get the same types of services at the same competitive prices that they're exposed to from national advertisers and national players.

You know, rural Americans are proud people for the most part. And, they want the best of the best and they want to be treated fairly.

And, that puts you in a little bit of a difficult predicament because your cost to serves are higher. But, your required pricing is going to be very much in line with what the urban area is going to be.

And, keep an eye on the horizon for the next big wave. There's no crystal ball, but you certainly need to be aware of what the next trend is and get in



front of that.

So, that concludes my presentation and thank you all for your time.

Don Williams: Thank you, James, appreciate your presentation. Now is an opportunity that we have some questions from the audience. And, let's start to ask some of these questions.

Justin, couple of questions from a couple of folks in the audience for you. One of them is what is the - what is your average take rate? And, is there a difference in the take rate when you're doing fiber to the home or providing fixed wireless?

Justin Forde: Well, you know, that - every community and every area that you serve is different. Obviously, no matter what technology you deploy in an area without, you know, without broadband your take rate is of course very high.

And, sometimes you go into another community with that type of technology and there's overlap and there may be a couple other providers, you know, in that community. And, it can be less.

For us, it hasn't really - we overbuilt a community with an HFC mix, one of the larger communities in the region. And, our take rate was still over, well over 50%. And there was a good half a dozen other providers in that community. So it can really, really vary based upon the area.

Don Williams: Okay, alright.

Justin Forde: We have...

((Crosstalk))

Don Williams: Justin...

Justin Forde: ...Technology Center (unintelligible) as what's there in terms of service and competition.

Don Williams: Got you. James a question. I know people are interested in an independent telephone company. I know we spoke down in Tupelo not too long ago.

And, you were talking about some of the marketing issues you had going forward making certain that people knew that, you know, you were more than a collection of telephone companies.

And, could you talk a little bit about that?

James Garner: Oh sure. It's really kind of a two-part predicament. One is you're viewed perhaps as being the old technology.

And, getting the word out that yes, I have fiber technology available at a competitive price. And, the second part of that is how you get that message out. We really have only recently brought in-house dedicated marketing resources.

And, that has proved to be very beneficial and it's also proved to be a bit of a learning curve. It's one thing to be able to set up your technology and say here it is. Here's your tariff. Take it or leave it. Versus now going out and proactively trying to reach customers, potential customers that maybe no longer are your - that used to be your customer. They're no longer your customer. So, you don't know how to reach them anymore.

Or they never had a relationship with you so you just know that there's an address. So, being very tactical with your marketing approaches and very creative is really important.

Mailers don't necessarily have a great success rate. Everyone's fed up with phone calls from numbers they don't recognize. So, it's a lot of grassroots.

In our case, what's worked has been having employees go out and knock on doors, being present. Having good signage on our equipment. Having a web portal, things like that. I mean most folks have figured this out and so there's a lot of good examples you can find.

But, it does take some effort. And it does take leadership. Someone focused on leading that effort. So, that would be my advice in regard to that.

Don Williams: Okay. Thank you. Renee, question for you from the audience and that is, and let me try to make sure this question, I phrase it correctly here. The question is really how did the co-op, do the members vote as members to the co-op to go forward with the Broadband Project?

Renee Chapline: No. The members did not vote. This was a Board decision. And, you know, and again, it is a subsidiary of the co-op. It's a wholly-owned subsidiary of the electric cooperative.

So, it actually is completely separate. It is a cooperative as the electric side is a cooperative as well. So, it does have the same benefits as the electric side does as well.

But, it has been, you know, again the local elected people were worked with,

you know, very - it's a very inclusive project because many community people were involved of course with the pilot. The Boards of Supervisors in the area and a lot of public input from meetings where this was proposed originally. And, it was just very, very well received.

Don Williams: Okay, thank you. Thank you. Justin, a question from the audience. When Midco goes into work with municipalities and counties, do the municipalities and county governments provide Midco with a list of priority locations or institutions that need to be connected quickly or how does that work for Midco?

Justin Forde: You know for the most part we, you know, having a smaller footprint we know it pretty well. We know where the areas that there isn't services. You know we're always happy when those folks, you know, reach out to us.

But, we've got a great, you know, GIS and Mapping Team that, you know, can quickly identify areas that are close to our network that make sense for us to build.

And then, we talk to the locals about, you know, our plans and our technology and certainly, you know, working with them on, you know, their support of what we're doing and using some of the other burdens to broadband deployment. Might be access to their water tower. Might be, you know, access to right-of-away, different things like that that can help us quickly deploy that broadband is also helpful.

Don Williams: Okay, thank you. Thank you. Renee, another question for you, more of a policy question. Are you - it's different depending on the income of the consumer.

Renee Chapline: Don I missed the first part of that question.

Don Williams: Well, the question is some companies have a discount for members of the community who are not doing too well. Sometimes that's a discount based on if you're in a subsidized school lunch program. Does the co-op have anything that...

Renee Chapline: Yes.

Don Williams: ...allows for those kinds of rates?

Renee Chapline: Yes. We will be offering a Lifeline Program. That is something that we are working on currently. Not at this moment but that is something that is in the works. We also have voice as well. So, for \$11 a month you can actually get the Voice-over-IP which is a dedicated phone line as well so that is an additional service.

Don Williams: Okay, great. Great. Thank you. Justin, another question for you. That is, is there a - does Midco have a threshold for customer size to activate a fiber to home deployment in a town? And I guess that's really the question. Is there a density requirement?

Justin Forde: You know, no. I think, you know, every form of technology, you know, has its different uses. You know it's a hybrid fiber-cable mix. When it's very dense, you know, that works very well.

Certainly its ease of maintenance, you know, some of those issues. Cutting a piece of the cable, that is if there's a cut in a highly densely populated area, it's pretty easy for anybody to go in and repair that. Obviously, fiber cuts are much, much more difficult to repair.

Also, you know, if you're doing a long run, you know, that's where that fiber to the home, you know, sometimes makes more sense when you've got, you know, miles around a lake but there isn't a lot of, you know, you need to keep that fiber going to the next home, the next home with the hybrid fiber-cable mix.

If you don't have that density over, you know, a long run around a lake or something like that then that's - or a really long narrow town, then maybe that technology doesn't - the HFC doesn't work as well.

Don Williams: Okay, thank you. Thank you. Let's see. We've got a couple more questions here and more coming in as we speak.

Justin Forde: You know, the other thing is this is generally in regards to that is the cost, right. So what is the cost of that deployment? And, that's really the other factor that needs to be taken in where you're doing this because somebody still has to pay for the cost of that deployment in that community.

Don Williams: Okay. Okay, great. And, actually a question I think for all of you. And, I guess it's a question that concerns everybody, you know, trying to do a rural broadband project or pretty much any Rural Infrastructure Project.

So there are technical challenges and that's for sure. And, I guess if each one of you could answer this question which are what are the most notable political policy issues and social issues which you had resolved in deploying broadband in rural America?

Anybody like to start, that's fine.

Renee Chapline: Well, I'll be happy to start Don on that. As far as some of the social issues that we have discovered. You know, our area is extremely diverse. We do serve parts of six counties.

And some are - the demographics are much different. Some are much older communities with residents that, you know, want to understand why they even need it to begin with.

So, there's a learning curve for many parts of rural communities. And, we have discussed digital learning centers which is something that has been embraced by our local governments. And, you know, as we were in discussions before the COVID virus hit and that has slowed us down a little bit.

But, I think this will come to a reality. I think there's going to be a need. But, from a socioeconomic factor, more communities that have lower educational attainment, poverty areas, struggle with one, you know, one, the pricing and making sure that it is affordable as well.

But even two, it's a necessity. And, you know, it's - our CEO talks about, you know, it's not a nice to have service anymore. It's a must-have service anymore.

But, I think we have a responsibility to help identify how this service can change people's lives for the better. You know I talked on a high-level about the educational attainment and the telework and the opportunities from smart farming.

But, again, we have to make known how this is a game-changer for them. So, we have - that has been one of our challenges and certainly something that I

think will continue to be part of the broadband conversation going forward.

Don Williams: Thank you, Renee. Anybody else want to try to answer some of that question?

Justin Forde: You know technology changes fast. Obviously, you know, making sure that the programs, you know, stay technology-neutral.

Some of the, you know, the way that broadband is deployed is so many, you know, different ways and dealing with a lot of the regulations, still dealing with phone service regulations, still dealing with cable type regulation, you know, all those different types of things that really - when it's really all about broadband, you know, really, you know, poses some significant challenges to make sure that, you know, the work is focused where everybody wants it to be focused on. And that is, you know, bringing that faster, reliable, broadband connection to all the folks that don't have it yet.

Don Williams: Yes. I think that's very true. By the time you look at all the regulatory hurdles, the different levels, as well as access to rights-of-way, those can definitely delay construction projects. That is for certain.

Let's see. I guess we have time for one more question. And, I guess it's a question I'll start with James. James, TEC no longer has contracts for broadband. Is that correct? So it's billed month-to-month or how does that work?

James Garner: That is correct. We made the bold leap a couple years ago to no longer require contracts. And, personally I was very nervous about that. We spend close to \$1,000 in some cases putting in a drop, wiring the home, putting in the modem, the gateway and setting that customer up.



So it was kind of a big risk in my view. But, what we found was that customers were more willing to try new service, and so far we don't see as long as we do our job, we don't see a lot of customers bailing out on us.

So yes, that was something that I probably wouldn't have put on the table to do away with contracts. But, I went along with marketing advice that we were getting. And, I'm glad that I learned that lesson. And, as soon as I did so.

Don Williams: No, no that's well said. Never stop learning lessons. Listen, the webinar has come to an end. Want to thank all of you again for joining us today. And for these providers, everybody, you know, you guys are doing great work during the COVID crisis and we all appreciate your work during this. Thank you. Have a good day everyone.

James Garner: Yes, thank you.

END