



**The Brookings Institution  
Reimagine Rural podcast**

**“The unique challenge of bringing broadband to rural America”**

**June 4, 2024**

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GERALD LONG, Gen. Mgr., The Utilities Board of Tuskegee  
JOE TURNHAM, Director, Macon County Economic Development Authority  
CONNIE STEWART, Executive Director of Initiatives, Cal Poly Humboldt  
KATHY STEWART, Digital Expansion Consultant; Director of Broadband Development, Office of the (Alabama) Governor (2007-2010; 2015-17)  
TINA VAZIN, Chair, Notasulga IDB & Professor, Alabama State University  
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*Episode Summary:*

Rural America disproportionately lacks access to high-speed broadband, an essential component of modern life. Though the issue—and many attempts to address it—go back much farther, the 2021 Infrastructure Investment and Jobs Act appropriated \$42.5 billion for the Broadband Equity, Access, and Deployment (BEAD) Program to close the gap once and for all. In this episode, Tony Pipa visits Macon County, Alabama, and also talks with leaders from Jal, New Mexico, and Humboldt County, California to learn how they have overcome their challenges to bring broadband to their rural communities. And the director of the new BEAD program lays out the federal government’s broadband agenda.

**TURNHAM:** Broadband takes time, and you gotta give it time. And, you know, a lot of time, time's not your friend. Time kills deals.

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Every month and every year a rural community is not reaching its broadband deployment potential it's killing potential deals. Whether they know it or not, admit it or not, it is.

**PIPA:** Broadband. Policymakers across the political spectrum, and in both the legislative and executive branches, now see it as a key policy priority for enabling rural prosperity. Frankly, it wasn't always like that, but the widespread images during the COVID-19 pandemic of school buses acting as hotspots and of kids sitting in their parents' cars in a McDonalds parking lot to do their homework brought wider awareness to what life is like in rural places that lack broadband access.

As Joe Turnham, executive director of the Macon County Alabama Economic Development Authority, suggests, every moment that a rural community goes without high-speed internet puts a damper on its potential. But putting together all the pieces to make a broadband project happen in rural America is a unique challenge.

In this episode of *Reimagine Rural*, we'll get to hear how Joe and other partners pulled it off in east central Alabama. We'll also get perspectives from Jal, New Mexico; Humboldt County, California; and the director of the Broadband Equity Access and Deployment program, or BEAD, the signature broadband investment in the Infrastructure Investment and Jobs Act.

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I'm Tony Pipa, a senior fellow in the Center for Sustainable Development at the Brookings Institution. And welcome to *Reimagine Rural*, the podcast where I talk to local people, hear their stories of change happening in their rural communities, and explore the implications and intersections with public policy.

In this episode, we start in Macon County, Alabama, which is home to the famed Tuskegee University, one of the nation's pre-eminent historically Black colleges. It's also where the Tuskegee Airmen, the first Black military pilots, overcame discrimination and distrust to train at local Moton Field, on their way to becoming one of the most respected combat units of World War II.

The county sits among a lot of larger places: the capital Montgomery is in one direction, Columbus, Georgia in the other, and its population is just under 20,000, about 80 percent of it African American.

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[2:37]

Joe began by telling me what he loves about the place.

**TURNHAM:** Well, it's a small community. It's a sweet community. The people here are very kind. They have been very accepting of me and very appreciative of the work I do. I even write an op-ed twice a month for the *Tuskegee News*. I'm a member of the Chamber. And have just built a lot of deep, deep relationships here over the years, and I feel like a lot of these people, you know, they help you, pray for you, bake you special things to eat. They just take good care of you. And it's a passion and a calling for me to be here right now. And I've enjoyed it.

**PIPA:** That sense of community was something that was widespread when I talked to people. And, for Gerald Long, who's general manager for the Utilities Board of Tuskegee, it provides motivation for getting involved.

**LONG:** I love the small town feel of it. I love the people here. And I love the challenges that are here. There are many challenges, and I feel like I'm here to try to help us overcome some of the challenges of a small town. And because it's a small town in rural area the resources are not here in terms of the economic part of it.

**PIPA:** Gerald is also part of the Economic Development Board for the county, so he works closely with Joe. Several years ago, they made it one of their highest priorities to improve the access to high-speed internet.

**LONG:** You also want people to be able to access the broader world. And there's no better way than through the internet. And if you have dial up, you're just not going to be able to live in a community and prosper.

And so, we feel like if you got broadband internet, you can work anywhere. If you have entertainment, places to eat, places to go and have fun, security, people are interested in those things everywhere in the United States. So, that's the type of environment we're trying to create here.

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A lot of areas in the community just didn't have connectivity. If they did, they may have had cable or they may have had slow internet. And that's something that just didn't work for us. The community needed something more robust.

[5:14]

**PIPA:** Another local leader, Tina Vazin, described for me just what that lack of dependability and connectivity meant in Notasulga, a town of about 900 people that straddles Macon and adjoining Lee County. It's the birthplace of Zora Neale Hurston.

**VAZIN:** In fact, we did an assessment of the download speeds. And, like, at my house, mine was like 1.2 megabytes. So, most people's were fairly low. Working from home was very difficult, especially during the pandemic. Okay? Zoom calls were in and out, in and out, in and out. And then you log off and it would come back in. So, that was pretty difficult.

And businesses. Oh, frequently the provider that we had often not only was it slow, it was just 10 megabytes or at the most 20 megabytes that you could get, but it was frequently out. And when the internet is out, then that means the businesses here can't take cards, so it's a cash only and no one's prepared to do that anymore.

And also, the bank can't do anything. And sometimes our internet would be out for three or four or five days at a time. You couldn't make a deposit at the bank. And this was a real problem for businesses. For instance, my husband has a store here with an ATM machine. He couldn't fill the ATM machine up because he couldn't get the money out of the bank because there were no transactions that could take place.

**PIPA:** Tina described for me what it meant for schooling during the pandemic.

**VAZIN:** Our students had a really difficult time trying to access the internet at home. And City Hall, you can access their internet free, but you have to be right outside, you know, in order to do it.

[music]

So, sometimes school children would come and sit in the cars in front of City Hall and access the wi-fi. But it was still very weak. It was still very weak. And so, it really interrupted everyone's life.

[7:21]

**PIPA:** Tina's the chair of the Notasulga Industrial Development Board. So, like Gerald, the economic impacts are important to her. But both Gerald and Tina also emphasized how the lack of dependable internet decreased the overall quality of life for everyone in town, from kids being unable to play games online to elderly adults being unable to connect with loved ones or get basic entertainment.

Oh, and before you scoff at kids wanting to have their games, Tina reminded me that it's just another thing that can motivate the younger generation to leave their hometown. It also makes working from home much more difficult.

**VAZIN:** And just anything on the internet was impossible. But also working from home. There are many opportunities now. I know it's very competitive out there in the job market but working from home is something that many of our residents, especially being a rural community, are very interested in doing.

And that's what we heard at many of the meetings that we had prior to when we did the needs assessment here to see the interest, the residents, in the high-speed internet. And that's what we heard mostly from. It wasn't entertainment. Mostly was that this will help me work from home. We had people who did medical record transcriptions. We had people who did all kinds of things, and they wanted to work from home.

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And especially with childcare, it's very expensive, of course, but it's also hard to find quality childcare. So, this was something that they were very interested in doing.

[9:03]

**PIPA:** So, the lack of high-speed internet was affecting quality of life. It was affecting the opportunities that students and community members had for learning, for socializing, for entertainment, and even for opportunities to work from home. And

crucially, from Joe Turnham's perspective, it was affecting the ability of the county to attract investment and take full advantage of the economic potential that its distinctive history and sense of community offer.

**TURNHAM:** We're trying to take the traffic that exists on Interstate 85 and pull them off at one or all of our five exits and spend money and do commerce, do lodging, do trading. We've got a very rich histories, from Native American to Civil War to Civil Rights. And we're trying to capitalize and monetize that history in economic development. And the history needs to be told with or without money because it's good history and its history you can learn life lessons from.

And it's kind of a sacred trust to handle some of this because the Tuskegee brand specifically is a very valuable brand of the many hundreds and thousands of people that have come through here and changed the world.

But the deeper we dug and the more we got into due diligence on sites and places, we didn't have connectivity, and if we had it, it was bad, and it wasn't redundant, and it wasn't good. And I knew pretty quickly we may go out of business here if we don't address the broadband issue.

As an economic development authority, for all the great social impacts, and we want those, and the equity impacts, we want those,

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but from an economic development standpoint I had great sites that couldn't go 100 megs up or down. And you can't build a future like that.

[10:51]

**PIPA:** Joe turned to Kathy Stewart, a former director of the state's broadband office who served under three separate governors. Kathy immediately understood why broadband was important to Macon County.

**STEWART:** So, economic development was our first and foremost effort. The reason for that being is that Joe was having a hard time bringing businesses into the community, into industrial parks, by just saying, you come and we will make sure the infrastructure will be there. And companies were saying, no, you get the infrastructure there and then we will come. So, it was kind of one of those chicken and egg things.

**PIPA:** As they got into it, though, they realized it wouldn't be straightforward.

**TURNHAM:** And we found out how complex it really is. And everybody says all this money is running around for broadband. And there is money out there, but you've got to be very creative with how you get it, deploy it, and pay for it.

**STEWART:** When Joe and I first started on this, it was kind of trying to go back and forth and find where is funding available. What are the silos in government that might have some funding that we could bring together for this?

But when we started to find funding for these type things, we found out that public safety has some technology money. Education has some technology money. Healthcare: wide variety of silos, but they were in silos. No one was working together. The dollars had to be used for very, very specific, say, education-related efforts.

So, not only was the funding an issue, but talking about funding we really realized very quickly that so many of these funding sources required the community to have a 20, 30, 40, in some instance 50 percent match.

We're talking about a rural county that is not poor completely in the amount of resources they could bring to the table. But they definitely were very challenged in that way. So, even if you can find 60 percent of money to build a fiber network, where's that 40 percent going to come from?

Another challenge that's right along those same lines is that the county itself had to show they had skin in the game.

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But Macon County had very little skin they could actually put in the game.

[13:24]

**PIPA:** Creative partnerships—that's the key, and it's something I hear over and over from people I talk to in rural America. Forging creative partnerships is not easy, especially for a small community. One of the common obstacles to getting projects off the ground and running is capacity or, I should say, lack of capacity. Here's Joe Turnham again.

**TURNHAM:** I'm a one-person practitioner. I have a very active and dedicated all-volunteer board. My board allows me to seek professional help like Kathy Stewart, and engineers, and consultants, and even allow me to get some personal therapy along the way to to calm me down as I get frustrated. But my board is very generous, and our local elected officials have really stepped up to the plate as well.

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But we rely on relationships, partnerships, our utilities and our Alabama Department of Commerce trust us and believe in us now. And know that we try to do what we say we'll do.

**PIPA:** Finding and building creative partnerships to solve problems is a hallmark of how people in rural places get things done. It was that spirit that allowed Joe, Kathy, some interested outside parties, and a whole group of Macon County leaders to pull together the coalition of stakeholders they needed to finance and move ahead with the broadband deployment.

It gets complicated here, so bear with me. It took the county's economic development authority, an external community development organization and an external impact investor, the local public utility, a willing internet service provider, *and* state funding to put this whole thing together.

[15:19]

Here's Christa Vinson, senior program officer for broadband and infrastructure at the community development organization Rural LISC. That's LISC, L-I-S-C, which stands for Local Initiatives Support Corporation.

**VINSON:** Rural LISC had received philanthropic investment from a foundation that was concerned about providing temporary connectivity to help individuals and families move forward during the pandemic. Right? Kids were not able to connect with school, workers were not able to connect with jobs, and this foundation was looking to LISC to identify communities where we could bring high quality internet online to provide relief from the conditions that were created by COVID.

Ultimately, as we started to talk to communities about their internet needs, we were encountering a theme, which was long-term technology. Right? How do we deploy a network not just for temporary emergency relief, but for long-term economic development?

Rural LISC was in conversations for more than a year with Macon County to figure out what the blended capital solution would look like to bring their fiber broadband project online.

**PIPA:** Another partner, Connect Humanity, a non-profit impact fund focused on providing creative finance for digital equity, also got involved.

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Okay, so now we have Joe and Kathy, Christa, the folks from Connect Humanity, Gerald Long at the utilities commission—all of them working the problem. But they still needed an internet service provider, or ISP, to provide the actual broadband infrastructure and service.

And here's where it gets tricky for rural places. When internet service providers look at revenues, rural areas just don't seem like a good investment. The cost of laying fiber in a rural place is no cheaper than a suburban or urban place—and sometimes it's even complicated by the topography—but the number of customers will be fewer.

So, broadband is *not* considered nor regulated as a public utility like other essential infrastructure such as water and electricity, even though it's currently under consideration like that as part of a draft order by the Federal Communications Commission, or the FCC. But currently, broadband service is still based on the market, and so public investment plays an important role when the level of profits offers limited incentive to provide service.

[17:56]

Remember when Kathy Stewart was saying that the county needed to have skin in the game?

**STEWART:** But Macon County had very little skin they could actually put in the game.

So, we had to find internet service providers who were willing to bring their own capital, make investments in a community that they knew the return on investment was going to be lower than in some of these other areas.

I do want to give credit to Point Broadband. They were one of the initial ISPs, internet service providers, that we sat down at the table with. And one of the things I love about Point Broadband and so many others like them is this is their mission. We didn't have to go in and sell them on having a heart for an underserved rural community. That is their mission, is to make sure that they across America are serving these underserved, these poorer counties that frankly no one else is going to go into and put a lot of capital of their own.

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So, we sat down with Point, we said, we know this is what you do. This is what we need, and they said, we'll do it.

**PIPA:** Let's be clear. The pieces didn't just automatically fall into place in Macon County, Alabama, even with all these partners at the table. A series of challenges had to be solved. We'll get to those a bit later.

But as I talked to different towns about their experiences with broadband, I was reminded of that old saying, "if you've seen one rural town, you've seen ... one rural town." Along the same lines, if you've seen one rural broadband project, well, you've seen one rural broadband project.

In my conversations across rural America, as local residents and stakeholders try to bring broadband home, the local circumstances always seem to have their own unique twist.

But put those communities together, and they all add up. The remaining broadband gap in the U.S. continues to be disproportionately rural.

Now, as I mentioned at the beginning, the federal government is readying a major new investment from the bipartisan infrastructure law to close that gap: \$42.5 billion for a signature new program called the Broadband Equity Access and Deployment program, or BEAD for short.

[20:26]

But as Mayor Stephen Aldridge from Jal, New Mexico, told me, money alone won't solve the issue.

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Jal is in the far southeastern corner of the state, less than 10 miles from the Texas state line both to its south and east.

Mayor Aldridge described the same kind of problems that Tina Vazin talked about during the worst of the pandemic, with kids unable to access the internet, so going to school parking lots, and elderly residents not being able to communicate online with their families.



**ALDRIDGE:** During the coronavirus, our students, as most, were out of the classroom. If you did not have—and we did not—have good, reliable, high-speed broadband, they made it available in the parking lot at school. Well, if you think about that for a minute, that’s really not ideal, because if you have a third grader, an eighth grader, and a sophomore in your family, you put those three age groups together in the parking lot of a school? That’s not ideal.

Communications. The elderly weren’t really able to communicate face-to-face on FaceTime or other options that they had with family. It was very critical on not being able to offer the residents here what was available.

**PIPA:** City leaders had started working on broadband even before the pandemic hit, trying to woo a provider that was offering service to a nearby major industrial site.

**ALDRIDGE:** It existed up the road about 18 miles. There is a uranium enrichment plant that had it. And when it was established there, we asked for the provider to bring it on to Jal. They said they couldn’t justify the expense for the returns. And we fought that and fought that. And they were the major provider here anyway.

So, we began to look and see what our options were. We went to the state, the Department of Information and Technology—it’s called DoIT at the state level, it’s now called OBAE—trying to figure out how can we get the funding help that we needed with the state? How could we co-join with their efforts?

And the money was there, the same thing with the feds. Those people at the state level were helpful and said monies are going to be available. And then as those funds became available—

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and this happened at the federal level, too, but I’ll stay with the state for a minute—as those funds became available, they had not at that time built out distribution process. So, you have monies laying here without the ability to be distributed to those that need it.

[23:18]

**PIPA:** Mayor Aldridge and his team decided to apply to the federal government, but they were rejected three different times for different reasons. At first it was because the infrastructure program that they applied to didn’t consider broadband to be infrastructure. But even after that program definition changed and they hired someone to help them and thought they’d followed the guidance they were given, they were still unsuccessful.

**ALDRIDGE:** The first time our application was denied because at the time, the available monies were for infrastructure. And typically, infrastructure is water, sewer, wastewater treatment. Fiber optics was not considered infrastructure, which we’ve grown past. So, our application and another application were denied, but put towards the next go round. At that time, we got to the selection committee, and were denied.

And then the third time, a gentleman that we use with Southeastern New Mexico Economic Development District, or the Council of Governments, assisted us. And he

had a contact in EDA. And she hand walked us through it, very helpful. And it got to the end, and we did everything that was required, and got to the end, and the committee said, well, y'all can't do that. Man, that's frustrating, to be told by those that are making the decision, here's what you have to do, and then at the end, be told you can't do that.

And it was at that point that the revenue available to the city, to the schools, and the hospital district was such that we developed a joint powers agreement through which the hospital district put in a million-and-a-half, the schools put in a million-and-a-half, and the city put in \$500,000. Now, that doesn't seem equitable, but it is because the city had already expended a lot of money towards getting it set up and is going to be the administrator.

[25:29]

**PIPA:** Jal was lucky. During the 5 to 6 years they were putting these unsuccessful applications together, they experienced an oil and gas boom that brought in enough revenue to allow them to go it alone. They also found the right regional ISP to partner with them, Leaco, a rural telecom cooperative.

**ALDRIDGE:** They're not looking at becoming this huge entity. They're service minded. It's a co-op. I know members of their board. I coached against their kids. I coached their kids in some instances. We didn't pay much attention to colors of, we just paid attention to kids. But just trying to get through the muck at the governmental level was frustrating.

**PIPA:** And here's how these things sometimes go: Mayor Aldridge told me that once the town's consortium got underway with Leaco, the preexisting major provider in town decided to do a build out of its own.

Now, as Jal's partnership got underway, they discovered the FCC map said they already had broadband. For those who are unfamiliar, this might sound hard to believe, but actually it's a common situation for rural communities. Up until very recently, the FCC marked an entire census tract as served if just one household in the tract had access to high-speed broadband. In a rural place, that could mean miles and miles of unserved area. The FCC has since changed its methodology and gone through an entire update of the maps, but they still need corrections.

**ALDRIDGE:** We ran into a couple of things with FCC, because on their maps it showed us as having broadband available in Jal. We read in the newspaper where another provider had joined forces with DoIT, the state organization, and a major oil company to bring fiber to one of their operations out in the oil field and brought it right to the city limits. We read about it in the newspaper. What is that?

So, I started making phone calls. I wasn't real popular with any of them after the phone calls, because it was a splash headline, "Jal has fiber optics." No, we don't. Well, at the federal level, they look and see on their map that, well, Jal's not underserved, when in all actuality we are.

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**PIPA:** Mayor Aldridge is glad that through local partnerships, Jal is getting what it needs. But he recognizes that not every rural community will be able to do what Jal has done.

**ALDRIDGE:** Beyond the community of Jal, I look at other much smaller communities in New Mexico that don't have that healthy revenue stream that we had that allowed us to do for ourselves. Where are they? What do we do for them? Their kids are as important to me as the kids here in Jal, my own kids, my grandkids.

Trying to figure it out, I testified in front of the legislative finance committee year or so ago and explained to them that in a lot of ways, the city of Jal's very fortunate to be in front of curve, but still behind curve because we understood how to go after grant money. We had revenue available, funds available to do the match.

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So, that put us in front of the curve in terms of our size, but behind what was available out there. And that concerns me. It's not just about Jal.

[29:25]

**PIPA:** Connie Stewart, who's at Cal Poly Humboldt in Humboldt County California, also stressed to me that it's not all about the money. We heard from Connie in our episode about the wind farm project planned off the coast of Humboldt County, but she's also been working on getting local and tribal communities dependable high-speed internet since about 2007.

**STEWART:** The build is about 174 miles. And it covers about 25,000 people. So, there's not that many people being served. But it will ultimately provide service to about seven Native American tribes along the way. So, 16 communities are off of this. But they're small communities.

**PIPA:** Incredibly, community leaders have ended up giving public agencies their money back—twice!—on the way to getting these places connected.

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**STEWART:** The state of California came up with a policy that they would pay for 40 percent of the line. So, that company got to the 40 percent and then just sat on it. Federal programs got created. And, the company did not get an ARRA grant, but they blocked another company because once you got a grant from the state of California, they considered the community served. Why wouldn't they? And so, that company was able to say to the feds, please don't give any money to any other company. We are serving this area. However, they weren't moving forward 'cause they didn't have the 60 percent funding.

So, the community had to do something that was crazy at the time. We actually had to go to the state of California and ask them to rescind the grant. And they did.

We found another company that had built a line in Southern California. And we partnered with them, and unfortunately got a grant for, it sounds crazy, \$47-and-a-half million dollars. And they still couldn't build it. And so, we, ironically, once again had to get that grant taken away from a company, given back to the state.

And when the other private companies came in the door, I said to them, you all have other resources, you're not going to want a regulated pathway in the middle of your bigger project. You're not going to want this money. You should just build it by yourself. And they did. And they've been amazing partners with giving us an amazing community benefit.

And can you imagine—I've been in this community 40 years, I'm a former mayor of this town—can you imagine how amazing it is to be trusted when you tell your community members the only way this project is going to happen is if we give back \$47-and-a-half million dollars? I feel very honored that I'm still sitting here, but I'm proud to say that the line is 60 percent built and we're almost there.

[32:48]

**PIPA:** Connie anticipates that they will be finished and providing service in 2025. When she reflects on the experience, she identifies many factors that complicate the path to success.

**STEWART:** My biggest recommendation is, I feel kind of curmudgeonly saying this after 20 years, 'cause maybe things will change, but there is a difference between just handing money and hoping a problem gets solved and actually digging into the permitting, digging into the regulations, digging into what stops that community from actually getting that project done.

So, one of the big things that bothers me in the infrastructure money that's coming out is the tight timelines. It took us four years to get permitting on this project. One whole year was spent getting some agency to agree to take the lead, because it was such a daunting environmental project.

The other big problem with broadband is there is no central permitting agency. So, when you go out to get a permit, if that agency has never done broadband, they don't even know what to expect. I testified in front of Congress about how many permits and how many agencies were involved in some of our builds, and in some cases it's 17 different agencies that have to agree. And if you cannot get them to line up their permitting, or if it gets stuck in one place, your project is dead.

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**PIPA:** This is the context in which the BEAD program is being set up to deploy the \$42.5 billion that Congress set aside to close the gap. It's one that Evan Feinman, the director of BEAD, knows firsthand. Before coming to the National Telecommunications and Information Administration, or the NTIA, the agency that is part of the Department of Commerce and manages BEAD, he led the broadband office for the Commonwealth of Virginia.

**FEINMAN:** The unique thing about BEAD is really two things. First, this is the first federal program that has as a specific goal fully eliminating the digital divide. We are going to do our absolute best not to chip away at this problem, but to actually eliminate it and make sure that every single American home and business has access to an affordable, reliable, high-speed internet connection.

Second, and perhaps equally important, this is the first time states and local governments really have a seat at the table in this federal effort. All prior federal efforts as a model were about agreements between people sitting in Washington, D.C., and people who worked for ISPs. Local governments and state governments did not have a role in those programs. This is completely different. In this instance, we put the state broadband offices in the lead, and we encouraged them to work in partnership with their local partners and with their federal partners on our team.

Further, we gave every single local and tribal government the ability to bring forward their own plan into the state scoring process, and they have that ability by right.

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So, any local government that isn't happy with the way the private sector has been serving them so far is able to go find their own partner and bring forward that partner and that partnership to be evaluated and scored against other proposals.

[36:19]

**PIPA:** BEAD is a federal program, but it's states and U.S. territories that are identifying what projects to fund based on plans that they've developed and that are being reviewed by NTIA. Between updating the maps and creating these plans, lining all this up has taken time. So, while the Investment in Infrastructure and Jobs Act was signed into law in November of 2021, communities won't start seeing projects get funded from this once-in-a-generation investment until late in 2024.

BEAD is not just focused on rural areas but is designed to serve any place in the country that continues to lack access. But Evan recognizes that those gaps are disproportionately rural, and that rural places bring a unique set of challenges.

**FEINMAN:** Rural areas make up the bulk of those areas unserved by high-speed internet today. And the reason for that is a very simple math problem. And so, that's why it makes so much sense for the federal government and for state government partners to come in and help buy down the cost of that infrastructure so that networks can be expanded out to these areas and then operated sustainably.

There're very significant challenges deploying out into rural areas. First and foremost, many, many, many parts of this country's rural landmass is challenging topography.

Further compounding those issues are serious challenges around environmental permitting when you're doing greenfield building. Challenges with things like crossing railroads or highways, and other interactions with existing infrastructure.

And then finally, and perhaps most importantly, you have to attract an ISP that's interested in both building and then operating the network there. And in many parts

of this country ISPs are thin on the ground. And we've had to entice new market entrants so that we can make sure that there are enough partners for these public-private partnerships to work.

[38:15]

**PIPA:** And there is one other issue that's less tangible and technical than all those: trust.

**FEINMAN:** I would acknowledge that it's completely rational for people in rural communities to hear with skepticism that folks who are deep pocketed and making big promises from out of town have a great deal for them. That is something that has consistently not paid off for rural communities. And it's a very reasonable initial response to regard that with skepticism.

What I would say is, one, there are really significant differences between the way this program works and the way the federal government has done this before. That's by the way, a big part of the reason—not that anybody should trust me necessarily—but that's a big reason I'm here. I would not have been interested in yet another attempt at chipping away at the problem or another top-down solution. This is not that. This is very much a solution that is really focused on building a chain of partnerships: state and local partnerships, federal and state partnerships, public and private partnerships, partnerships between the nonprofit and the for-profit sectors, and partnerships between ISPs and communities.

**PIPA:** The decision by Congress to give such responsibility to state and territorial governments recognizes the diversity of the challenge across the country. As Evan told me, the challenge of closing the digital divide in Delaware looks a lot different from how the challenge looks in Idaho. But the program also seeks to ensure the solutions come from rural places themselves.

**FEINMAN:** Local governments are the part of government that gets stuff done. It is not optional for them as it is in so many other parts of government to say, oh, well, we'll study it or, oh, we'll take another month to get this thing done. The trash needs to be picked up when the trash needs to be picked up. The roads need to be paved. The police need to be policing the community and not awaiting a budget resolution. That is one of the reasons they're so critical.

Second, even though we have pushed much of the decision-making and implementation out of D.C. and into state governments, sitting in a state capital you are still quite remote from many of the communities that need this service, and it would be foolish to believe that you would have complete visibility into what those communities need and don't need.

And so, by making sure that local and tribal governments have a seat at the table and are deeply engaged in the conduct of this program, we're going to be able to make sure that the solutions that are brought forward are the ones that are the right ones for those communities and that we don't leave anybody behind.

[40:45]

**PIPA:** From Evan's perspective, it comes down to partnership: partnership across different levels of governance—federal, state, territorial, tribal, and local—and among different stakeholders—the community, the ISP, and the investors.

**FEINMAN:** All of those partnerships, that long chain of partnerships, is what's necessary to make sure that we can actually get a problem this big solved. It was not an easy undertaking to do rural electrification. It was not an easy undertaking to do rural telephone. And in each of those instances, what was necessary were a really wide variety of actors. Some significant self-help in the form of cooperatives that then were able to access capital through federal partnerships. Some large federal actions, like the Tennessee Valley Authority. Some investor-owned work where it was simply private funds coming and meeting demand that was there or that they believed would be there in the future.

All of those tools in the toolbox are going to be used when we take on this challenge. It's going to be a patchwork quilt. The key thing is that each patch needs to be of adequate quality, which is to say, it has to be fast enough. Every single ISP offering service must offer a low-cost service option for low-income Americans. And the coverage must be universal on a state-by-state basis.

And so, we try to offer states a ton of flexibility in the way that they approach that. And we're already seeing the laboratories of democracy working. We really do have 56 very different approaches to this problem.

[music]

Clearly there's some commonalities between different states' approaches. But there are also wide differences, and we are encouraged to see that work.

[42:32]

**PIPA:** The next 4 to 5 years will be really consequential for closing the digital divide in rural America. States and the FCC will continue to make their maps about who is and who isn't served more accurate based on input put forward by localities and households.

The BEAD program will generate a lot of construction activity to try to make sure the physical infrastructure is in place. And then there is the issue of adoption and making sure that broadband remains affordable. Another program created in response to the COVID-19 pandemic, the Affordable Connectivity Program, has been very successful in helping defray the cost of getting people online, but it's set to expire. Policymakers will continue to have a lot on their hands.

But let's go back to Macon County, Alabama. When Joe Turnham started the process, BEAD hadn't even been conceived. But that issue of trust, it was ever-present.

**TURNHAM:** There have been a lot of peddlers of broadband that have come through over the years. It's almost like the Music Man, everybody's trying to sell instruments in Macon County. And a lot of them are out of tune. They don't make sense. They're

not for real. Every kind of product. And then everybody purporting to represent a grantor. A lot of which was in my view insufficient or not real.

So, the first thing you gotta do is figure out what's real, what's not real, what's available. What you can stack together, what you can't stack together. You can't stack a federal grant on a federal grant in some of these programs. So, I can't go get two or three federal grants to make a hundred percent.

And in counties like Macon, as in probably hundreds, if not thousands of counties across the country, even a 10 or 20 percent match of several million dollars is, you know, in these communities are very hard to come up with.

[music]

So, if you can leverage private sector or foundational type grants, that's extremely strong. Extremely strong.

[44:42]

**PIPA:** Joe started with a grant from the state of Alabama. But as he explained to me, it had to be used within a certain time frame. Christa Vinson from Rural LISC explains how that necessity offered an opening for a creative partnership.

**VINSON:** In the case of Macon County, the state had made a grant that was worth about a third of the total project cost for this fiber network, a 60-mile fiber network. There was a shot clock on those dollars. Right? The grant would ultimately sunset unless the county could come up with a third of the total project cost, or the county was expected to provide a match to the state grant and then the equity investment of the internet service provider who will ultimately own the network.

And for a place like Macon County, there aren't a lot of sources of revenue that can be tapped to collateralize financing match. There aren't a lot of sources of philanthropic capital that can help subsidize the total project cost.

Rural LISC made a grant that acted like credit enhancement or earnest money to the other capital that the county collateralized with the source that was available to them. You know, the sand and gravel severance tax. And our grant made it possible for the county to borrow less money so that they could ultimately contribute to the match that would secure the total capital required by the project and bring that broadband online.

[46:11]

**PIPA:** Connect Humanity offered additional financing. And as mission-based organizations, Rural LISC and Connect Humanity were also focused on making sure the benefits were sustained. So, they pursued a community benefits agreement to enable that.

**VINSON:** So, Rural LISC grant to the project and additional financing that came from an impact investor, Connect Humanity, includes a benefits agreement designed to ensure the ISP delivers reliable broadband to all residents in the project area. Included in the agreement are reports to a committee of community stakeholders,



ensuring that connectivity needs are met, and the community's values stay at the center. So, we see it as a great example of a rural public-private partnership.

[music]

The fiber network is privately held, and Macon County residents can expect engagement from the internet provider to realize the full benefits of an internet connection.

[47:15]

**PIPA:** There was one other special twist to putting the final package together. Gerald Long explains how the Utilities Board of Tuskegee contributed.

**LONG:** Yeah, Point Broadband was making an investment here. The state was gonna invest. And one thing that we did was we have poles throughout the county. We serve 103 square miles, we have over 11,000 poles. And we allowed them to attach to our polls as an in-kind gift to them. We have others who pay for that service to attach to our poles, like AT&T, Charter.

[music]

But because we wanted broadband deployed throughout the county, and it was just a no brainer for us to offer that service to them without charge.

**PIPA:** In the end, it was lots of creativity and partnership that made it all work. Putting all these pieces together was not for the faint of heart. Remember, Joe is a one-person shop, though he got help from Kathy. But even after all of that, there were a few things that had to be pared back.

**TURNHAM:** And we've had to adjust our budget and, you know, no meat on Mondays, Wednesdays, and Fridays to be able to pay, pay that note back.

**PIPA:** The impact has been pretty immediate. In 2023, Samkee Corporation, a manufacturer of die-cast aluminum products like engine parts and a supplier to Hyundai, started building its first factory outside South Korea or China right in Macon County.

[48:59]

**TURNHAM:** We're halfway between the mothership of Hyundai and Kia, the two South Korean automotive manufacturers, one in West Point, Georgia, one in Montgomery.

And we competed with multiple states, multiple communities in those multiple states, to win the Samkee project. And one of the things that we had to do was prove and show that we had the bandwidth and the connectivity as part of the project. And we did, with this deployment we did.

So, that's kind of where we are with that. Samkee is \$130-million-dollar capital investment, 172 new jobs, average wage \$20.50 per hour. In phase one, they'll become the largest utility customer of our Utility Board of Tuskegee. They will have a

tremendous payroll, a tremendous tax base for our public school system. It's a win-win-win for everybody. [music]

And we had to provide a lot of local incentives, and it was really the Utility Board of Tuskegee and the City of Tuskegee that stepped up to the plate to get this done. And a big win for us, a generational win.

[50:06]

**PIPA:** In the midst of all the complications of putting this project together, I wondered if politics ever got in the way. Gerald Long from the utilities board offers this perspective.

**LONG:** At the local level politics is everywhere. Politics is everywhere ... *everywhere*. But we have been successful at the local level of working with our elected officials and getting things done. Like, I report to a board as elected by the people. Three of our board members are city council members, and the two others are elected at-large. And we've had great working relationships. We cast the vision to them of where we want to go. If it makes sense to them, then they follow us.

**PIPA:** Tina Vazin from Notasulga acknowledges that people who aren't from Alabama might be surprised by the state's investment.

**VAZIN:** Of course, Alabama is known for conservatism. But in terms of their views on government funding for utilities and for internet and all that, I don't think they have any reservations whatsoever in the government providing more funding for this. In fact, they feel like the government probably needs to step it up and bring it in faster. Okay? They feel like this is what government should do. And they need to be involved in making our rural areas, not just here, but of course everywhere, but our rural areas more accessible.

[51:44]

**PIPA:** Joe Turnham knows the politics here as well as anybody. He ran for Congress twice in the late '90s and early 2000s.

**TURNHAM:** Well, you can't take politics out of politics, but I have found—I've lived a political life too—and I find Democrat or Republican that I approach, and we've got both in our Alabama delegation, is that creating new jobs and new investment in communities, especially communities that have been challenged, that's pretty universal. How do you do it and the ways you do it, pretty much everything we do is public-private partnership. It's new private investment.

And I think in this podcast people that you previously interviewed have said they can separate out some of the social policies from some of the infrastructure developments. Because everybody knows you need broadband. Everybody knows you need workforce readiness. Everybody knows you need runways; you need roadways; you've got to have those things. Those are fundamental things that you have to have.

If you're doing it the right way and you're doing it transparently, we've not found a lot of resistance by party, or theology, or theocracy, or anything else. When people are

trying to help their self and they're doing it the right way transparently, that people will work for the federal agencies that work in, I think to the person they try to be helpful. And they try to coach you and work with you.

[53:14]

**PIPA:** Getting the area connected has brought in new business and jobs with Samkee. But work remains to be done, especially to make sure the downtowns that are at the heart of the communities in Macon County remain vibrant. Broadband connectivity is an important step toward that type of revitalization. Here's Gerald.

**LONG:** My hope for the future is that downtown will be bustling. I talked to a lot of people who grew up here and they described a place that was bustling and robust where there was a thriving middle class.

My hope is that we can replicate that and bring that thriving middle class back and create an environment where people want to be here.

[music]

My hope is that with Tuskegee University we can turn this into a true college town. You go to Auburn, and you see what a college town should be like. You go to Tuscaloosa, you see what a college town should be like. That's what I want to see here. A bustling community.

[54:25]

**PIPA:** Kathy Stewart feels as if they're on their way.

**STEWART:** People don't mind driving 30 miles if that's where they have to go for their needs and services to be met. But how exciting is it that now people can stay there. Children who graduate in Macon County no longer have to think that leaving the county is the only option for a bright future. People who are needing, especially an aging population, who need access to local health care, who need to be able to do telehealth, they no longer have to drive and find someone that can take them 50 miles so they can see a specialist.

So, if you just look at all these things being able to finally be met, it does my heart good.

**PIPA:** You know, some experts have called the Rural Electrification Act one of the most successful federal policies in the country's history. It helped rural electrification go from 33 percent in 1940 to 96 percent in 1956. Now, that policy was all about making sure rural America got connected to the modern economy. Today, universal access to broadband, and its adoption and affordability, is the 21st-century version of keeping rural America connected.

As you've heard, new federal programs are offering resources, but it will always be local leaders like the folks you've heard from in Macon County, Alabama—and Jal, New Mexico, and Humboldt County, California—who, alongside a whole set of partners, will be the ones to make it happen. Every project will be different, and every one will have their challenges. But as you've heard, it will be worth it.

Many thanks for listening.

[music]

*Reimagine Rural* is a production of the Brookings Podcast Network. My sincere thanks to all the people who shared their time with me for this episode.

Also, thanks to the team at Brookings who make this podcast possible, including Kuwilileni Hauwanga, supervising producer; Fred Dews, producer; Gastón Reboredo, audio engineer; and Zoe Swarzenski, project manager at the Center for Sustainable Development at Brookings; and the great promotions teams in the Brookings Office of Communications and the Brookings Global Economy and Development program. Katie Merris designed the beautiful logo.

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I'm Tony Pipa, and this is *Reimagine Rural*.