This is an unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker.

RPTR WARREN

EDTR ROSEN

PERSPECTIVE FROM THE FIELDS: THE

STATE OF RURAL BROADBAND IN AMERICA

FRIDAY, MAY 10, 2024,

House of Representatives,

Subcommittee on Communications

and Technology,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to notice, at 10:05 a.m. Pacific Time, in Mechanics Bank Arena, Theater & Convention Center, Potato Room, 1001 Truxton Ave., Bakersfield, California, Hon. Bob Latta [chairman of the subcommittee] presiding.

Present: Representatives Weber, Fulcher, and Obernolte.

Mr. Weber. Well, good morning.

The Subcommittee on Communications and Technology will now come to order.

The chair now recognizes himself for 5 minutes for an opening statement.

Well, good morning. And welcome to Bakersfield, California's shining star. So we are glad to be here for today's hearing to discuss the importance of rural broadband. We will be focusing mostly today on precision agriculture, but the transformative power, as you all know, of connectivity, is way wider.

I would like to start by thanking our witnesses for being here today. They are all integral parts of this community, here to talk about the unique opportunities that internet connectivity provides for the great people of Bakersfield, as well as other communities across the country.

I would also like to thank Representative Valadao.

Where did you line up, David? Thank you. We appreciate you hosting us.

Give him hand. Can we do that?

His gracious invitation to engage with his district on this issue will let us all hear directly from Americans in their own hometown.

And we appreciate you buying lunch for everybody after this is over.

No, no, that is not in the script. I am sorry.

We are in the early stages of an unprecedented effort to close the digital divide funded by the American taxpayer to the tune of $100 billion with a "B" dollars.

The goal of each of these programs, quite frankly, is to connect all Americans, especially those in rural America, who have been disconnected for so many decades. The government has to stay out of the way to allow the private sector to give each unique

community the tailored approach that they deserve.

Broadband connectivity enables some of the greatest technology that we have today. Precision agriculture is increasing crop yield, as well as decreasing the resources required for all sorts of farming.

Access to broadband internet is providing new opportunities to rural communities for innovation, from drones used to monitor crop health to autonomous tractors.

My worry is that shortsighted programmatic requirements, workforce shortages, and permitting delays could jeopardize the once-in-a-lifetime investment being made by the American taxpayer. We have to find creative solutions to connect every single acre of the United States, and there cannot be a one-size-fits-all approach.

Satellites, as most of you-all know, have been playing a key role in precision agriculture, originating with imagery and analysis of crop coverage, or water research for that matter. Now with low-earth orbit systems in the mix, satellite internet provides reliable, high-speed connectivity, even in the most remote corners of farmland.

This committee is conducting the necessary oversight to ensure that the agencies administering this funding are coordinating, staying on task, as well as focusing on the primary purpose of this funding and that is connecting the unserved.

Next week we will have an oversight hearing with Allen Davidson, the Assistant Secretary of the National Telecommunications and Information Administration. But today I want to hear from "y'all," that is a Texas term, "y'all," about what we can do to help ensure that you are benefiting from the Federal programs which are actually designed to benefit you.

For far too long, rural America has borne the brunt of the digital divide. We have the chance to change that. I look forward to hearing from members of this community

about their stories, and about the impact of bringing broadband to rural communities.

And thank you. With that, I am going to yield back.

And now, as the designated -- designee of the full committee chair, the chair now recognizes our subcommittee, from California, Mr. Obernolte, for 5 minutes for an opening statement.

Mr. Obernolte. Well, thank you very much, Chairman Weber.

And it is an honor to be here today in my home State of California. As a member of this subcommittee, I care very deeply about not only rural America, but solving this problem of the digital divide.

If you don't know me, I am Congressman Jay Obernolte. I represent the 23rd District which comes right up here on a little bit of Kern County, but most of my district is the county of San Bernardino and a little bit of Los Angeles.

One thing that we all have in common up here is that we represent very rural districts. So our conversation, when we talk about internet accessibility and the accessibility to technology, is one that is deeply personal to us, because rather than talking about the speed of someone's connection, we are talking about whether or not you have access to the internet at all. And this is an incredibly important issue.

I am also chairman of the House Artificial Intelligence Task Force, and one of the things that has become abundantly clear is that AI will be pivotal to increasing worker productivity in the next 100 years. Our young people need to have access to the technology to allow them to learn about AI and to learn about how to incorporate AI into the work that they do every day and to learn about how to make AI make them more productive, and they cannot do that unless they have access to the technology.

So we have been working at this for 10 years now. The good news is that

meaningful progress is being made. We have got the attention of a lot of different agencies. We have
catalyzed the investment of over $100 billion into the expansion of broadband into rural communities across America.

But the bad news is that a lot of work still needs to be done. If you look at a heat map of where high-speed internet is available here in California, you will see it very starkly demonstrated all the communities that just don't have access to it.

One of the challenges that we have is that sometimes the way that funding is allocated shows what I think is a failure of imagination. We are focused, I believe, too much on traditional fiber, and not enough on some emerging technologies that can really be game changers for us in rural California in bringing internet to the folks that don't have access to it.

And the chairman alluded to a couple those. Certainly low-Earth orbit satellites has the potential to very inexpensively bring internet to communities that don't have it with a very minimal investment for terrestrial equipment, but also, wide-area networks have the potential to bring internet to entire communities at a fraction of the infrastructure investment as traditional fiber.

So this is a problem we have, particularly with the BEAD program that is being administered by NTIA. That is a substantial portion of the funding that has been allocated, over $40 billion just to BEAD. And yet BEAD is heavily, heavily focused on just traditional fiber and not any of these emerging technologies that could really change the landscape of -- for our rural communities here in California.

So just to underscore the importance of this issue, our children are not going to succeed in 21st century America unless we equip them with the knowledge necessary,

and the job skills necessary to compete in the economy that there will be -- they will be competing in, and we are not going to be able to do that without finishing the job of extending broadband to rural America.

So that is why this hearing is so important. That is why it is important that you are here. And I am really looking forward to our distinguished panels and asking some questions.

So I will yield back, Mr. Chairman.

Mr. Weber. The gentleman yields back.

I yield the remaining time to the gentleman from Idaho, Mr. Fulcher.

Mr. Fulcher. Thank you, Mr. Chairman.

And to the panelists, thank you for being here and everyone else for being part of this hearing, to my colleagues.

This is a time for to us learn, and I love the idea of remote hearings, because that means that we get to hear from a cast of stakeholders that we don't normally get to hear from. So thank you for your participation and being here.

Precision agriculture is a big part of the topic today, how critical and necessary that is. My colleague, Mr. Obernolte, talked about that.

But for the efficiency needs and whatnot, you have got to have the rural broadband that provides the access to be able to do that. And that has got to be something that is sustainable. That is where government comes in, sometimes, maybe not. And so, there is part of the other component of the dialogue there.

What is the proper role of government in all this? And where do we help? Where do we hinder? That is where we can learn from you all.

Mr. Chairman, I yield back.

Mr. Weber. I thank the gentleman.

And I want to thank the witnesses, all of you, for being here today and taking time to testify before the subcommittee.

Our witnesses today are Mr. Eric Votaw, CEO of Varcomm Holdings, Incorporated; Mr. Don Cameron, Vice President and General Manager of Terranova Ranch; Mr. Morgan Trembush, Integrated Solutions Manager for Kern Machinery; and Mr. Troy Klinger, Director of Network Operations for Unwired Broadband, LLC.

So per committee practice, each witness will have the opportunity for a 5-minute opening statement, followed by a round of questions from the members. The light on the timer in front of you will turn from green to yellow when you have one minute left.

I now recognize Mr. Votaw for 5 minutes to give an opening statement.

STATEMENTS OF ERIC VOTAW, CEO, VARCOMM HOLDINGS, INC.; DON CAMERON, VICE PRESIDENT/GENERAL MANAGER, TERRANOVA RANCH; TROY KLINGER, DIRECTOR OF NETWORK OPERATION, UNWIRED BROADBAND, LLC; MORGAN TREMBUSH, INTEGRATED SOLUTIONS MANAGER, KERN MACHINERY.

STATEMENT OF ERIC VOTAW

Mr. Votaw. Good morning.

I would like to thank the committee for this opportunity to speak about the state of rural broadband in America and, in particular, here in California.

I am the CEO and chairman of Varcomm Holdings, and I operate an ILEC, a CLEC, and an ISP in California and Oregon. I am the first Mexican American to own and operate a local telephone company in California. Together with Jennifer Velluchi, my CFO and President, we are 100 percent minority-owned and 100 percent committed to providing rural broadband to California.

We provide services on just about all platforms, including fiber optics, copper, coax, and fixed wireless. Varcomm operates in the most remote parts of California where cellular service and commercial power are not available.

Many of my subscribers are working-poor Latino farmers, farm workers with over 50 percent of my subscribers on Lifeline. The median household income in Ducor is roughly $43,000, where in California, the average median income is $76,000.

It is critical that State and Federal decisionmakers continue to provide universal service in all of these rural areas. Federal support programs like USF continue to

support rural providers' development of fiber. State USF further supplements deployment of fiber in rural areas.

I hold out hope that U.S. Senate Bill 3321, Lowering Broadband and Cost to Consumer Act of 2023, is enacted to stop the largest edge providers from getting a free ride on the networks built by companies like mine.

Affordable broadband is important, and ACP provides a critical 30-dollar discount to subscribers. ACP has been instrumental in closing the digital divide. It is unfortunate that ACP is no longer being funded. I strongly encourage Congress to reenact ACP. Once it is reenacted, it needs to be turned over to the FCC so it becomes part of the Lifeline program.

States must also do their part when it comes to making broadband affordable. I encourage the California Public Utilities Commission to do three things to make broadband affordable. Make Lifeline in California portable to broadband, do not tie State broadband to Federal programs, and create an efficient way for ISPs to become eligible telecommunications providers.

Congress has given us a once-in-a-lifetime opportunity to get broadband deployed. As companies gear up for these grants, it is important to note that many commercial companies are discouraged from applying for grants because of the income taxes there are imposed on these grant awards.

I recommend Congress pass the Broadband Grant Tax Act to exclude broadband grants from gross income taxes and maximize the impact of those grants on every dollar granted for broadband.

I also urge Congress to pass the Farm Bill. I believe that the Farm Bill will help protect our farmers and ranchers, and also provide rural are broadband through the

USDA ReConnect Program.

The FCC's recent order on Title II regulations to broadband is the right step in the direction of broadband. I agree that broadband service is a telecommunications service and should be 100 percent within the Federal jurisdiction.

Regarding this Title II order, the order allows FCC to reinstate a nationwide framework of rules for broadband providers, and to preempt State and local measures that interfere or are incompatible with the Federal regulatory framework.

I have to caution the California Public Utilities Commission that it has already adopted rules, along with California advocates office, CalPA, of the CPUC. They have also imposed additional requirements on rural broadband providers.

The CPUC has implemented rules that confiscate 100 percent of the profits of rural ISPs. CalPA has also -- has also proposed that rural ISPs provide unfunded broadband to low-income customers, and CalPA has also proposed to disallow investments that we, as rural telephone broadband providers, put into the network. They propose to disallow it. I urge the FCC to step in and put some brakes on the California Public Utility Commission.

I thank you for this opportunity to speak. I applaud what the Federal Government has done so far on broadband. It is important that Congress move quickly and make sure that we have broadband for all of our farmers and subscribe -- and low-income subscribers in California and Oregon.

Thank you very much.

[The prepared statement of Mr. Votaw follows:]

******** COMMITTEE INSERT ********

Mr. Weber. I thank the gentleman.

I now recognize Mr. Don Cameron for 5 minutes.

STATEMENT OF DON CAMERON

Mr. Cameron. Well, good morning. It is a pleasure to be here, Chairman Weber and members.

Terranova Ranch, we farm a very diverse group of, mix of crops, 20 specialty crops in the San Joaquin Valley, about 30 miles southwest of Fresno. And we are within 100 miles of the Silicon Valley, the technology capital of the U.S.A. and the world. At Terranova, we are known for being innovating, cutting-edge with technology and automation, and are usually the first ones to try and advance a new concept in agriculture.

Our struggle over the years has been communication of all kinds. We had our hard wires abandoned by our telephone company. It forced us to go to voiceover internet. We had internet that was, at best, 5 megabits down, 5 megabits up, paying a lot of money for that.

We finally were able to get a little faster speed but at a much higher price. My home, I sit and try to watch a movie in the -- with 7 megabits down and have no luck. So we have come a long way from there.

We have a long-haul fiber cable a mile from our office, but we can't touch it because it is off-limits because of the long-haul nature of it.

So we have been trying to get by for several years with broadband, high-speed

broadband. Two years ago we were able to put Starlink in which was a big -- a big increase in speed and ability to do work. But, you know, $550 for the equipment, plus the subscription fees, we had to have several. A year ago, due to our reputation and wanting to be on the cutting-edge with technology, we were given the opportunity to receive broadband service from a local provider, Cal.net. And we are now getting 100 down and 100 up, which is pretty amazing for our area.

You know, after being conducted, we used the Cal.net's expertise in doing something I dreamed about for years, automating our irrigation system, getting row crops, using broadband, crops that only are in the ground for a short period, 150 days or less, processing tomatoes and some of the other crops.

And to do this, we installed automatic controls on our wells. We had valves in our field that were solar -- they had solar to operate them, and we hooked them all up with a LoRaWAN system that went back into our broadband so that we could go to the cloud with it, get it on our laptop and our tablets in our field for our guys.

And so last year, we automated about 80 acres to see if we could make this work. This year we are looking at 7 fields, 420 acres, and next year we are going to continue expansion.

With the LoRaWAN connections, we can operate everything from our office. And what this does, we are allowed -- we are able to put on soil moisture meters, pressure sensors, flowmeters. We can measure the underground water supply. We can connect everything up, and none of it would be possible without broadband and high-speed broadband. We know that this is just the start. We are going to continue with additional things other than some of these systems that we have currently.

So what does that mean for our farm? We now have precise control of our

irrigation water. It is applied to the crops only when the crops need it, and rather than having someone out there day and night trying to open manual valve. And this is a 24-hour job to do that.

So we know that there is a long way to go. We think we are going down the right road. We know that labor is always an issue. This should help during that period. But we can also shut down our systems when electric prices are high. We can save water. We can save money by not operating and let other people use that electricity during high-demand periods.

We also subscribe to aerial photos that we are able to bring up with our broadband, now that we have it, and that doesn't take 15 minutes to load a photo. And that checks on the moisture and the health benefits of our crops and see if we have issues ongoing.

You know, our guys in the field can use this because they have access. Unfortunately, other farms in our area don't have this access. And they are relying on systems that just are slow and undependable. We are very fortunate to be able to have this.

And when we talk about on-farm technology for irrigation, high-speed internet, you know, we now have security cameras to prevent farm theft which we weren't able to do before. Our mechanics can order parts online. They can watch a YouTube video and learn how to fix the tractor if they are not familiar with it.

You know, COVID put the spotlight on the limited access to broadband in the San Joaquin Valley rural areas. Our farm workers' children tried to connect their tablets that they were given to their school to a cell phone, two cell phones -- or two tablets on one cell phone. They did not get their education because it didn't work. Some of

them, if they had the wherewithal to travel to a local library, connected when the library was closed so they could get their schoolwork. But it was a travesty that they didn't get their education.

We know that telemedicine continues to be critical in the isolated areas, communities where healthcare is very limited.

So, we know that with our rural setting, you know, we are not the target for many of these internet companies. They want to get to the cities. They want to have high-speed internet. I get really upset when I drive through San Francisco or Los Angeles. I see advertisements for one gigabyte at $25, $30. It just completely irks me. We have left behind. We need internet. We need high-speed internet.

Thank you.

[The prepared statement of Mr. Cameron follows:]

******** COMMITTEE INSERT ********

Mr. Weber. Thank you, sir.

Mr. Trembush, you are now recognized for 5 minutes.

STATEMENT OF MORGAN TREMBUSH

Mr. Trembush. Good morning, everyone.

My name is Morgan Trembush. My educational background is in biomechanical engineering, complemented by a master's in mechanical engineering.

I started farming in 2020 for a large farming organization where I helped to implement their Precision Ag technologies across a 40,000-acre operation. In 2022, I joined Kern Machinery as our integrated solutions manager where I support our customers and our internal departments with Precision Ag.

On behalf Kern Machinery and our farmers, I would like to thank everyone for letting us tell our story today.

The Camp family started their farming journey in 1917 when the USDA hired W.B. Camp to teach California farmers how to grow cotton for the war effort. He eventually started farming on his own in 1936. When the California Aqueduct opened the west side of the central valley to farming, his son, DM Camp, had the opportunity to open a John Deere dealership -- oh, sorry -- to grow cotton. He eventually started farming on his own in 1936.

In 1969, DM Camp had the opportunity to start a John Deere dealership which is now the four -- the start of four John Deere dealers. In 1979, the Camp family expanded their machinery footprint, becoming a John Deere engine distributorship that now spans

across five States.

Farming, family, and faith are the three most important things to the Camps. As a fourth-generation farming family in this industry, they have seen many transitions in agriculture from 1917 to today, which is now full of Precision Ag opportunities. Combined with John Deere's efforts and ingenuity, they proudly represent the best in the business.

As a John Deere dealer, Kern Machinery strives to provide equipment solutions to those who work the land. We are a distributor for several Precision Ag products that help our farmers combat the daily challenges and pain points they face.

Ultimately, if we cannot provide solutions to our customers that reduce their inputs, increase their yields, and protect the environment, then we have failed in Precision Ag. A few of the technologies we support that meet these needs fall into the categories of material application products, autonomous air-blast sprayers, or the management of material -- or the management tools available to us through John Deere.

Kern Machinery has embraced Precision Ag since the inception of auto-steer systems in the nineties. And since 2013, Kern Machinery has had a department dedicated to Precision Ag in supporting our customers in this sector.

John Deere references the term technology stack when discussing the components needed to unlock Precision Ag technologies, and at the foundation of that technology stack is the connectivity of equipment. This allows growers to create a digital copy of their operation where they can view machines and fields through mobile and web-based application.

As a dealership, we are partnered with 189 customers, encompassing 1,359 machines. Our customers have created these partnerships with us so we can more

easily help them with their Precision Ag needs.

Having machines connected allows the data that they generate during farming passes to be sent directly to the customers' John Deere Operations Center in real time. This will enable farmers to make timely field decisions, and to look at past field history in order to make more informed data-driven decisions for future cropping cycles.

Many of our customers farm in rural areas where machine connectivity is degraded. They rely on connectivity to view real-time operational data for planting and material application.

Material application is such a big part of every farm's operation, and our farmers strive to be good stewards of the land by applying material only when and where it is needed. Some of the technologies farmers use to reduce material include input -- include rate controllers, vision systems for crop detection, and spot sprayers for precise amendment application.

If the data collected during these application processes cannot be viewed in real time, then timely decisions that affect change cannot be made. And that can have the potential for major losses to the grower. Many of our customers use Precision Ag technologies in their everyday operation, and they also want more. Though we continue to make connections with our customers and support them in their Precision Ag ventures, there are areas for improvement.

Technology advancements in this space of Precision Ag are coming at us faster than ever, and we are so excited the future of Precision Ag, especially with the development of autonomous tillage equipment and See & Spray technology, both utilizing cellular coverage and artificial intelligence.

We ask that you place great value on strengthening our connectivity foundation so

we can better support our customers on their journey to success in Precision Ag.

[The prepared statement of Mr. Trembush follows:]

******** COMMITTEE INSERT ********

Mr. Weber. The gentleman yields back. All right.

Mr. Klinger, you are now recognized for 5 minutes.

STATEMENT OF TROY KLINGER

Mr. Klinger. Thank you, Chairman Weber and members of the subcommittee. I appreciate the opportunity to speak with you today.

My name is Troy Klinger. I am the director of network operations at Unwired Broadband. Unwired Broadband is a California ISP that operates in rural regions of the State. We provide broadband access to over 29,000 subscribers, spread across 18,000 square miles in rural California. Unwired provides broadband services utilizing a combination of fixed wireless, microwave, and, beginning later this year, fiberoptic services.

For over 20 years, Unwired Broadband has connected residents, businesses, and vital institutions in the Central Valley. Over the last 4 years, we have seen a surge in both demand for service, and increased bandwidth usage.

Initially spurred by COVID, we are continuing to see high demand due to increased remote working, online learning, and telehealth services. Along with residential broadband access, we have seen a tremendous increase in requests for connectivity within the ag industry. In addition to connectivity for general business purposes in the offices, shops, and packing sheds, many of the valley farms require connectivity to manage water resources, soil quality, crop health, and maintaining proper feeding and health of livestock.

While fiberoptic cable is a great solution for densely populated areas, it is too frequently said to be the only or the best way to provide reliable broadband. Unfortunately, building fiber networks in rural areas can be extremely expensive and time-consuming.

Thankfully, fixed wireless technology offers a faster and more cost-effective solution in these areas. Recent advancements in fixed wireless by technology companies Tarana and Peraso have enabled fixed wireless providers to deliver reliable internet access to remote, sparsely populated rural areas at speeds well over the 100 by 20 benchmark. We are proud of our partnership with Tarana, a company using innovative chip sets to provide high-speed connectivity at significantly lower costs when compared to fiber.

Yesterday, Tarana released a software upgrade that has the potential to double the platforms' capabilities, increasing customer wireless speeds to over 1 gigabit per second. With Tarana's continued development and its software-defined radios, I know that our partnership will continue to bridge the digital divide in rural areas quickly and cost effectively.

Many of the rural communities that still lack access to high-speed broadband are farming communities with lower household incomes. Low take rates relative to the cost of providing services can make this a high-risk investment for any service provider.

Without additional assistance, many of these areas may never see affordable broadband options. It is these areas where government and private partnerships are the most important. These are also the areas most likely to be serviced by a fixed wireless service provider, or WISP, today. It is the small WISP who is partnering with local farms and the local community that best knows these remote areas and

understands what is required to provide access to these small communities where fiber infrastructure will remain too costly to build.

Unlike fiber -- Unwired Broadband, who recently made significant investments to manage regulatory compliance and grant applications, many smaller WISPs in rural areas have a staff of maybe five to 10 employees, and cannot navigate the complexity of grant applications and compliance.

I urge the members to find ways to simplify access to funds for these small but vital companies who are already working to serve the most underserved rural areas of our country.

Along with private partnerships, we still need more help overcoming obstacles to the deployment of broadband technologies. Regulatory hurdles and extended permitting processes, approvals, and costs, delay the deployment of both fiber and wireless solutions.

Access to power from local utilities can be complicated and, in some cases, take over a year, even where power infrastructure exists. Access to RF spectrum is difficult to obtain for smaller companies that cannot compete with Tier I providers at auction. Much of the spectrum purchased by large carriers goes unused in the rural areas. Finding a way to make that spectrum available to small providers will provide new tools to the small ISPs and spur innovation with radio manufacturers.

In closing, I would like to thank you for your commitment to providing connectivity to every community, regardless of size or location. Continue to work -- continue to work -- both remove red tape and as well as simplifying the regulatory process, providing access to needed resources, and continued partnerships between businesses and Federal, State, and local agencies will ensure ISPs can quickly and efficiently deploy the right tools

to solve the issue of digital equity.

Thank you.

[The prepared statement of Mr. Klinger follows:]

******** COMMITTEE INSERT ********

Mr. Weber. Thank you, Mr. Klinger.

I want to thank you all for your testimony.

We will now move into the question-and-answer portion of the hearing.

This is an official congressional hearing. So unlike a town hall, we will only have questions from the Members of Congress today.

I will begin the questioning and recognize myself for 5 minutes.

Mr. Cameron, what was the purpose, or what was the process like for getting to deploy -- getting a company to actually come in and deploy a wireless service to your farm? When did it start? Can you give us time from how long did it take?

Mr. Cameron. You mean the most recent --

Mr. Weber. Well, start from the beginning.

Mr. Cameron. Oh, so, in the beginning we were -- we had to find a company that would actually provide wireless to us. And there was a wireless company that we did hook up with, but our service was poor. It wasn't consistent. Our phones would be offline constantly. We didn't have enough bandwidth. And that started probably about 7, 8 years ago when our hardwired phones were essentially disconnected. We were told they are gone. They wouldn't provide service.

So we -- we increasingly got a little higher speeds, a little better service. But it was a very slow process. And, you know, it is hard to run a business, hard to run a farm when you can't communicate, and you can't access information for your business. And just, like I say, in the last 2 years when we did get Starlink, and then we moved to additional high-speed internet, but it was a very slow process.

And I have been advocating, at length, for -- to fill the digital divide in the rural

communities. It is just atrocious.

Mr. Weber. Did you say 6 or 7 years ago?

Mr. Cameron. That is correct.

Mr. Weber. And you have been in business how long?

Mr. Cameron. I have been farming 43 years now.

Mr. Weber. Wow, okay.

I am going to stay with you. Has your access -- well, I want to go back to what you said. You were told that your hardwiring phones were going away.

Mr. Cameron. Correct.

Mr. Weber. Who told you that?

Mr. Cameron. Our local telephone company. I think it was either Pack-Bell or AT&T.

Mr. Weber. And then they just disconnected your service.

Mr. Cameron. They said they would not repair the lines any longer. They wouldn't replace lines, they were bad, and they said find another solution.

Mr. Weber. Okay. So obviously, your access to broadband internet increased the efficiency and effectiveness of your farm. Has it grown? Can you describe that for us?

Mr. Cameron. Yeah, being able to, just recently being able to start accessing technology and putting it in place on farms is making a huge difference.

Not only are we able to control our irrigation systems, our fertilizer systems, but we are also implementing electronic timecards for our employees. Now that we have good service, they are able to download their daily work, going into our computers. We can print checks directly from the input that we get from them, so timesaving, more

efficient, and more accurate.

Mr. Weber. Has your workforce number increased?

Mr. Cameron. Our workforce is fairly consistent over the years, and even this year, even with the increase in technology. And we are training some of our workers to be able to use the technology in the field by just giving them the training and the capability so that they can actually earn more money and really be better employees.

Mr. Weber. Okay. Well, thank you for that.

Mr. Klinger, how is fixed wireless access unique in its ability to increase service in rural places like Bakersfield?

Mr. Klinger. I would say it is unique in the speed with which we can deploy, and at the -- the cost. I have a background or a history in fiberoptic and microwave systems. For the last 30-ish years sore, I have been working in the industry.

At Unwired, we are able to work very quickly if we can find a vertical asset in an area, and then we can broadcast within a radius of 5 to 10 miles to cover the needs of the community. I would say that that has changed significantly in the last couple of years to the new technology advancements.

Some of the experiences Mr. Cameron and others have had with fixed wireless providers in the past were due to the lack of appropriate technology to meet the modern demand.

Mr. Weber. When you say vertical asset, you are talking about a tower, a radio tower, antenna? Did you find an abundance of those?

Mr. Klinger. We find anything and everything we can. The WISP industry does a great job of partnering with other community members, the farms themselves, the silos, towers frequently, tall buildings, anything that we can put some equipment on and

broadcast from. And if needs are there, we can erect new towers as well.

We generally partner with other companies that own those assets. It is more efficient and faster to market than trying to erect a tower because of the permitting processes.

Mr. Weber. Okay. I am a little over my time.

Mr. Votaw, very quickly to you, with billions of dollars in Federal funding headed toward broadband, exactly how are you tracking that, or how are you looking into this funding?

Mr. Votaw. Well, we are looking at -- well, a couple of ways we are looking at it. There is money that has been a allocated to the State level through Middle Mile Grant applications and awards, as well as Last Mile.

One of the things we have to be really cognizant of and make sure that we don't do when we are looking at BEAD and Last Mile and Middle Mile is fund where we have duplicative programs, and it is really imperative that the Feds and the State work together to make sure that we are not putting money out where broadband is already being deployed.

So we look at areas where there is not going to be overlap.

Mr. Weber. Well, thank you for that.

And hopefully you have a good Congressman that will help you with that.

Mr. Votaw. I do. He is right there.

Mr. Weber. I know that.

Mr. Votaw. Well, I actually have two. I have LaMalfa up in Tehama County, too. So I am lucky. I have two.

Mr. Weber. We call him the bearded wonder.

All right. Well, thank you very much.

I now recognize Mr. Obernolte for 5 minutes.

Mr. Obernolte. Well, thank you, Mr. Chairman.

Thanks to all our witnesses. This has been a really informative hearing.

Mr. Votaw, you have brought up in your testimony your opinion that Congress ought to refund and reauthorize the Affordable Connectivity Program. And I wanted to have a more fulsome discussion about that with you, because this is a topic of intense debate in Congress.

And let me -- I just would like to talk about some of the issues that are in play here and how you reacted to them, if we could, because ACP is fundamentally different from some of these other programs we have been talking about, such as BEAD where we are trying to provide rural broadband infrastructure in places that don't have it at all. So that would enable someone to buy broadband that otherwise, absent this funding, would not have that option.

And also to make another point, it is a one-time investment where you build the infrastructure and then the infrastructure is there and can be used, whereas ACP is fundamentally different. This is subsidizing access for people.

And just to make the point, ACP was a COVID-era program. It was a result of schools being closed and fear that there would be some learning loss if people, students didn't have access to broadband. And it turns out that there was substantial learning loss. And, I mean, I don't think it is controversial to say the learning loss would be much greater if we didn't have ACP.

But, you know, now we are being asked to reauthorize it. And Milton Friedman once famously remarked that nothing is more permanent than a temporary government

program. And that seems to be case here.

Let me also make the point that -- this is something I would like your opinion on. There were a lot of providers that had low-cost plans before ACP. In fact, there were a lot of providers here in California that had $10-a-month plans, but ACP will reimburse up to $40 a month. And so, guess what? All the low-cost plans went away and there were no plans available for less than $40, you know, magically when ACP, you know, came to pass.

And then, you know, the last point is, you know, this is the problem when we are talking about ongoing funding rather than one-time funding. We are running an almost 30 percent deficit at the Federal level. We will borrow about $100,000 a second this year.

So any time we talk about increasing ongoing funding, every single one of those dollars is adding to our national debt. And our national debt already this year, we are going to spend almost as much on interest as we do on our entire national defense budget. And the Budget Office says that is going to get much worse. In fact, this is the existential crisis that faces us. So this is the problem with ongoing funding like the ACP, as opposed to infrastructure like BEAD.

So what is your reaction to that?

Mr. Votaw. Well, I appreciate the opportunity to respond, and I have a couple of comments on that.

When we look at programs like BEAD and Last Mile funding and Middle Mile funding, I agree. These are once-in-a-lifetime opportunities to get broadband out there. But we have to remember this isn't a build-it-and-forget-it. So we have to make sure that there is maintenance that takes place, and so, we have to make sure that we have

funding and that we have viable business plans that are out there.

So we need to make sure that we continue to serve people that can't afford to get broadband at a normal rate. I a hundred percent agree with you there were a lot of large carriers that took advantage of ACP.

I have to tell you. I am the second smallest telephone company in the State of California. So I am not with the big guys. I am providing services to rural people. I have less than 1,000 access lines, but I have a solution for ACP. Refund it right now. Reauthorize it. And we need to enact the Senate Bill 3321, Lowering Broadband Costs for Consumers Act of 2023.

The cost causers of the use of broadband isn't the end user. It is Netflix. It is Google. Those people need to pay their fair share into the USF program, and then there is no cost to the government. This is money that is collected from the big businesses that are causing the costs to go through, and they are getting a free ride at my cost, at the expense of me and at the cost of my subscribers.

I can't afford to lower my rates because my Middle Mile costs are so high. I have to operate two different -- actually, three different networks. So I need some help, and that is where ACP comes in. Otherwise, if I were going to provide access to everybody, we are looking at me having to charge hundreds of dollars a month because I am such a small carrier.

Mr. Obernolte. Sure. Yeah, we had the same discussion when we are talking about net neutrality, you know, about how to allocate costs.

But, you know, unfortunately, as a conservative, I feel like it is very rare that government intervenes and says, Okay, here is how the costs should be allocated that actually end up working right with no downstream consequences.

And then I see I am out of time.

So just one last point. You know, we have affordable -- affordability programs in other forms of telecommunication for better or for worse. But they are subsidized by other consumers, you know, by a surcharge on consumer bills. They are not subsidized by the government. And that is fundamentally different than the way that ACP is structured.

So, anyway, I appreciate your testimony.

I yield back, Mr. Chairman.

Mr. Weber. I thank the gentleman.

The gentleman from Idaho, Mr. Fulcher, is recognized for 5 minutes.

Mr. Fulcher. Thank you, Mr. Chairman. I am going to go -- try to go quickly here.

Mr. Trembush, I want to ask you to define something for me. We throw this term "precision agriculture" out there a lot, right, and how it is so dependent on rural broadband.

Can you -- let's understand the scope of what does that really include? What is precision agriculture? And can you do that briefly?

And then I am going to go to Mr. Cameron for a follow-up.

So what is Precision Ag?

Mr. Trembush. So Precision Ag, at its foundation, is a farmer's ability to do more with less. We use technology in order to use less material in order to increase yields.

And so the connectivity aspect of that is that if a supervisor is in the field, managing a group of machines, that they can see what machines are putting out in real time in order to make a change in real time that would impact that planting cycle.

So if they are putting out a starter fertilizer on some potatoes, and the starter fertilizer is not being applied, then you are not going to have a yield quality of that section of the field --

Mr. Fulcher. Okay.

Mr. Trembush. -- that would be acceptable.

Mr. Fulcher. Okay. Thank you.

Mr. Cameron, given that, have you done any quantitative analysis? How much increase in efficiency, how much increase in productivity would you say is attributable to Precision Ag techniques?

Mr. Cameron. I know that when we converted from flood irrigation to subsurface strip irrigation on our -- many of our crops, including tomatoes, our water use went down 25 percent, our yield went up 25 to 30 percent.

Mr. Fulcher. Okay. So we are talking a mammoth impact.

Mr. Cameron. Huge impact.

Mr. Fulcher. Okay. So I want to go to Mr. Klinger.

On that front, wireless, it makes perfect sense, especially in rural areas. And by the way, like my colleagues on both sides, I got a lot of rural space in my State, in my district.

Congressman Obernolte brought up the uniqueness and the difference between BEAD which is a fixed cost infrastructure program, and ACP, which is an ongoing one.

For a wireless -- for a wireless business, for wireless solutions, what do you need? What is the backbone you need in order to proliferate wireless communications so Precision Ag can be executed?

Mr. Klinger. Middle Mile is one of the big things that we are looking at, and I

know California has their Middle Mile Program they are working on. We are hopeful that that will be successful so we can partner with them in the future.

Access to the funds to get things up quickly onto the towers is kind of a hurdle we have right now. A lot of this new technology that come -- that has become available to us recently is more expensive than the WISPs are accustomed to dealing with. So we are able to deploy it, but we are not able to deploy it as quickly as we like without some additional capital.

Where ACP comes in is a lot of these farming communities, as Mr. Votaw said, is the maintenance of the networks afterwards, we have to charge enough of a fee on these services to maintain those networks. Even the wireless networks pay for that Middle Mile backhaul, pay for that infrastructure, if you will, to where we would see that a program, not necessarily ACP, but something that helps some of the lowest cost -- lowest-income Americans help afford those services so that we can continue to maintain the networks and provide a reliable solution.

Mr. Fulcher. So what I am trying to get to is -- I will reflect back and share a conversation with you.

Not long ago, within the last couple of months, I had a conversation with Michael Powell, who is the chairman of the National Cable and Telecom Association. He made a statement, and he said any kind of rural broadband program or rural broadband funding will have a tendency to migrate to urban areas because that is the only place that it makes sense to be sustainable over the course of time.

What I am trying to get an understanding of, is if the Federal Government helps use taxpayer money to establish an infrastructure -- and I am talking more about the BEAD approach as opposed to the ongoing -- can the wireless providers -- and, Mr. Votaw,

I am going to ask you next and don't have much time left.

Can you be sustainable on your own without ongoing revenue from -- through taxpayer Federal funds?

Mr. Klinger. I think it is a pretty easy one for me to answer. Unwired Broadband has been in business for over 20 years, and so far, we have been entirely self-funded. So getting additional capital will help us grow more quickly to help us serve these areas that don't have service today, absolutely we would be sustainable --

Mr. Fulcher. Okay.

Mr. Klinger. -- afterwards.

Mr. Fulcher. All right. Thank you.

Mr. Votaw, sorry, quickly.

Ms. Votaw. Sure.

Mr. Fulcher. If you have got that infrastructure, can you be self-sustaining?

Mr. Votaw. My company is over a hundred years old and, no, we cannot. We need to make sure that we reform USF so that the cost causers pay into that and it is not a tax that is coming from the general fund of the Federal Government.

Mr. Fulcher. Thank you.

Mr. Votaw. USF reform is the answer.

Mr. Fulcher. Thank you.

Mr. Chairman, I yield back.

Mr. Weber. All right. The gentleman yields back.

I would like to thank all the witnesses again for being here today. Members may have additional written questions for you-all that they will get sent to you.

Oh, well, yeah, sure. Thank you.

Well, the question is, I am going to make a unanimous consent motion to go ahead and have a second round of questions if everybody is okay with that.

All good? All right.

So ordered.

So let's go back to questions one more time.

Thank you, Slate.

Mr. Trembush, let me go back to something that you-all said just when you talk about technology, talk about John Deere's. John Deere's headquarters is in Moline -- is it Iowa?

Mr. Trembush. Yes.

Mr. Weber. Have you been there?

Mr. Trembush. I have not been there, no.

Mr. Weber. Okay. Have you ever been to a field where they plow it, whether it might be for corn or beans or whatever and you are driving down a highway and you talking about acres and acres and acres and you see those rows?

I have often wondered, and this is way before I got into Congress, how they get them so straight, you know, because it is unbelievable how straight they get them.

And I come to find out, the answer is, when you are seeing some of these John Deere tractors -- and you know that some of those wheels are taller -- bigger than we are tall. And we see a lot those in my district where they produce cotton and where they produce, you know, corn, those kinds of things.

They do it with technology because they take GPS. And they program that tractor, if you will, to hit that spot down there. And they never have to look back.

So I am just glad that, you know, those companies, American companies like John

Deere are around.

What precision agricultural technologies are being deployed? You mentioned a couple in the field right now, but I would like for you to kind of expand on that, if you can.

Mr. Trembush. Sure. So John Deere is -- has a lot of work going on in the space of Precision Ag, and they have been focusing on that heavily the last several years.

John Deere uses the term technology stack in a triangular pattern. So the foundation of that needs cellular connectivity. You need a display in the cab for an operator to view. And we have receivers that give you your GPS guidance lines, and then we have our web and mobile-based applications.

So having that foundation there allows you to move to the next level, whether your tractor is driving itself with the person in the cab or advancing, even higher to that, to autonomous tractors performing tillage, or more advanced technologies like a See & Spray system where it is using artificial intelligence to scan a planted field, detect the different between a weed and a crop in order to spray weeds.

Mr. Weber. You know, that brings up an interesting question for me about John Deere.

I guess they have an app for farmers?

Mr. Trembush. Yes, so John Deere uses the John Deere Operations Center, which is your -- think of it like your operating system on your phone. You have either Android or iOS. And so they are basically saying John Deere Operations Center is our operating system where everybody else can plug into that using an API.

Mr. Weber. And so John Deere will take that information, all provided again by good internet, if you will, broadband, and they will actually -- you may or may not know this question. How many subscribers do they have? Any idea on that app?

Mr. Trembush. So I don't know how many users are on the app with John Deere.

The nice thing about John Deere setting apart on the app is that the app is a free app for customers. There are no additional add-on costs for them. Tractors are now coming with modems, cell modems attached to them. And there is no cost to the customer on that. There are no recurrals.

Mr. Weber. Well, what brings to my mind is, it can literally host a plethora of inform -- house information that can then be spread out across this great country of ours. And the experience, the farmers' experience and the things they share what will -- what will work and what won't work, actually it would be a great service.

Mr. Votaw, let me go back to you. You deploy both in California and Oregon. And I think you said less than 1,000 customers.

Mr. Votaw. Uh-huh.

Mr. Weber. Okay.

Mr. Votaw. Correct.

Mr. Weber. Okay. Oregon's BEAD program is managed by the Oregon Broadband Office, while California's is managed by the California PUC. I am sure you are painfully aware.

Mr. Votaw. Oh, yes, I am.

Mr. Weber. Yeah?

Mr. Votaw. Not a fan of the CPUC.

Mr. Weber. So I couldn't tell.

And so would you like take this opportunity to speak to the difference in the regulations between those two entities?

Mr. Votaw. Sure. The big thing, the big difference is in Oregon, the State

broadband office has been very collaborative with the providers, not just the ILEX, not just the ISPs and the WISPs. They have taken a very collaborative approach to get buy-off very quickly, and they got government out of the way. First and foremost, they got government out of the way.

The California Public Utility Commission -- and, unfortunately, I am going through a general rate case right now. So they may not like what I am going to say.

Mr. Weber. We won't tell anybody.

Mr. Votaw. I appreciate that.

They can't get their act together. They want to regulate everything to death, and they are just starting to get some of their volumes of rules out right now. And they are just an inefficient organization to be able to administer BEAD. And they are not the right place. That is not the right organization to administer BEAD in the State of California.

Mr. Weber. Have you had to hire -- and I don't mean to pry -- I guess another employee compliance people, we might call it, in order to respond to their rules?

Mr. Votaw. I am the CEO and chief compliance officer of my company, but you bring up a very good point. I have to hire attorneys and consultants to help manage the compliance that I have. Again, I am the second smallest telephone company in the State. I spend a half a million dollars a year being compliant with the State of California. I spend maybe $10,000 a year in Oregon. Big difference.

Mr. Weber. So -- and I don't mean to pry. But if you weren't having to spend that half a million dollars a year, would that be plowed back into your business?

Mr. Votaw. Absolutely it would be. I am spending $1 million just on my general rate case to ask for $1.5 million. That makes no sense.

Mr. Weber. Well, Mr. Klinger, let me jump over to you.

How has the BEAD program affected the prices of broadband equipment and your ability to expand coverage at this time? I think some of that is going to depend on your other comments. But you can actually piggyback, if that is not the right term, on towers and high -- even said high buildings, I think. But how has that affected you?

Mr. Klinger. So far, the -- Unwired has had to hire someone and invest in attorneys and so forth to make sure that we are aware of the BEAD program.

We are undetermined if we are going to participate in this point or not. We are certainly watching it closely. But as Mr. Votaw said, here in California, we don't know where that stands right now.

We are proceeding using our own funding to continue to grow our network. We haven't seen any significant changes so far with the fixed wireless equipment as a result of BEAD. However, we are a hybrid provider.

We are working to add fibers to one of the community here in California today. And I do know that the availability of products and the price of some of those has gone up as a result of BEAD, as well.

So all that funding that the Federal Government has provided has increased the cost of a lot of the equipment that we utilize in order to try and solve these programs.

RPTR BRYANT

EDTR ROSEN

[11:03 a.m.]

Mr. Weber. Maybe a bit more on the ground -- I am running out of time, way over my time, I apologize -- is when there are wildfires, when there are things like that that affect California, does that affect your ability to do business?

Mr. Klinger. It can have an impact only in that our towers can be in the path of a wildfire. So far, we have been fortunate that none of ours have been impacted other than loss of power.

Mr. Weber. And I am sure it does for the phone system. I know it does for farms too, because if you are in that path, it is a problem.

I am going to yield back my time. I recognize the gentleman from Idaho, Mr. Fulcher.

Mr. Fulcher. Thank you, Mr. Chairman.

And I would like to shift gears just a little bit and ask for your input, information, and potentially counsel on something called permitting.

Mr. Klinger, my suspicion is that part of your business model has to do with the ability to get permits to do certain things versus not.

Can you just speak to that, speak to what the necessary permits are for you to function and where you may have roadblocks. And is it Federal, is it State, or is it both?

Mr. Klinger. I am fortunate that I have a peer within my organization who handles all of that for me, so I don't personally have to deal with the issues of permitting.

However, every time we add something to a vertical asset, if we are putting it on a tower, a structural analysis for that tower has to be done and a permit has to be pulled.

And that process can vary significantly throughout our areas of coverage, depending on the county or the municipality.

Mr. Fulcher. In terms of time or cost or both?

Mr. Klinger. Both. In some communities, I have heard we have been as fast as maybe 4 to 6 weeks to be able to pull a permit to add an attachment to a tower. And in some cases, that is several months and thousands of dollars every time between structural analysis and the actual permit itself.

Mr. Fulcher. Thank you.

Mr. Votaw, can you speak to the same issue? What are the challenges that you have on the permitting front, and where do they come from?

Mr. Votaw. Sure. We are in the process right now of deploying roughly 47 miles of fiber throughout Tulare County, which is just north of here. And I am fortunate enough to be in Tulare County where the county is very pro business.

But when we are dealing with the State of California and CEQA requirements, they are just atrocious. They add a lot to the bill. In particular, I went for -- I was about to get a USDA loan to build 30 miles of fiber in the Sierra Nevada Mountains.

At the time, the cost of the build was somewhere around $8 million. Of that $8 million, almost 3 million was going to be for permitting and surveys that needed to take place, which just drives up my cost.

Mr. Fulcher. And educate me a little bit, because I am not intimate with the area. Is that Federal? Is that private? Is it both? The land, the land.

Mr. Votaw. CEQA was coming from the Federal Government.

Mr. Fulcher. Okay. All right. Thank you.

Mr. Votaw. And so I had to reject the loan, because that is not a good use of

money to spend $3 million on permitting. I found alternative routes to get up to the -- my exchange is 7,000 feet up in the Sierra Nevadas. So I used fixed wire -- or microwave to get up there, and I avoided it.

So everything I do at this point is I try to avoid areas where I am going to have excessive permitting requirements, and survey sample or soil samples that need to take place. There is just so much red tape that goes along --

Mr. Fulcher. Which would be affiliated with the NEPA process?

Mr. Votaw. Yes, NEPA is a big one. And even dealing with Caltrans in California here, it can take up to 3 years to get a permit from the State of California to go along a State highway. So there, the State sometimes is the biggest impediment to its own success.

Mr. Fulcher. All right. Thank you for that. That, unfortunately, validates some of my thoughts and fears at the same time. So thank you for that.

In my remaining time, I want to go back to Mr. Trembush and expand just a little bit more on this Precision Ag line of thoughts and questioning.

Even though, as we learned from Mr. Cameron and from yourself, that this is a tremendous boost to efficiency and production, there is still going to be a capital outlay. There is still going to be a certain amount of investment that is necessary.

How do you go about -- and not every single item is going to make sense on the business end. How do you go about identifying a business model to say, Okay, here are the components of technology or investment that you need to make in order to make that cost investment worthwhile?

Mr. Trembush. So a couple of things. Well, let's talk a year ago. On the hardware side, it would have been 100 percent upfront cost from the customer, and then

their return on that could have been 5 years to get back what they got in the technology and the hardware.

Now, there are programs through John Deere. So customers can take advantage of hardware at a lower upfront cost, but licensing on those units would not be permanent licensing. They are recurring licenses.

And so, that is how we are -- John Deere is taking that hit up front, and then there is a recurring license that will go on for years to come that they are going to get their payback.

Mr. Fulcher. Thank you. Thank you all.

Mr. Chairman, I yield back.

Mr. Weber. I thank the gentleman. The gentleman yields back.

I now recognize the gentleman from California, Mr. Obernolte, for 5 minutes.

Mr. Obernolte. Thank you, Mr. Chairman.

Mr. Klinger, you said something in your testimony that I found very poignant, which is to make the point that there is no way that a small provider can access these grants when there are all of these different concomitant requirements, because you just don't have the staff.

What can we do to fix that? What can we do to make more rural providers be able to access grants from places like BEAD?

Mr. Klinger. Two things: One is, fortunately, Unwired is not what I consider a small WISP. We actually have the resources internally or recently hired them so that we can start looking into these things. We don't have a history of pursuing grants, so I am still learning about the complexities. However, I have been on a lot of calls with attorneys, specialists in the field, grant writers. And those resources all cost money and

are difficult to find initially. Knowing who you need to talk to is a real problem.

Some sort of program that would allow the smaller organizations access to those resources. Without having -- you know, a single source that they could go to that provided them the information and the resources they need to apply for these grants would probably go a long way towards helping them access those funds.

Mr. Obernolte. I think you are right. I think too often, these grant programs are structured in such a way that it requires some organizational sophistication to be able to access it.

And, you know, unfortunately, that is the way that bureaucracies are set up. They are all about risk avoidance. And sometimes we foreclose the ability for small providers to access those funds when it is exactly those small providers that can most benefit.

Mr. Votaw, I enjoyed your comments about the CPUC. You raised some concerns that I very much share. We are in the middle of a dispute with the CPUC right now over the way that they are administering BEAD because, as you are aware, we gave a lot of flexibility to the States in the way that they administer BEAD.

And what the CPUC has proposed to do in the case of low-income access is to require providers to accept a certain rate structure if they accept a BEAD grant in those areas. And I have a big problem with that, because we were very explicit with the authorization language for BEAD that it not be used as a surrogate for rate regulation.

And I think that is what the CPUC is attempting to do. And, in fact, I had a conversation with the NTIA administrator earlier this week about this exact issue, because the NTIA has not approved that part of the CPUC's plan for that reason.

So what do you think? Would it be a concern if the CPUC were to set rates in

this area?

Mr. Votaw. Well, I have to tell you, they are doing it. CPUC seems to have its own agenda and buck the system. I have a problem with that. It is going to make it almost impossible for me to apply for BEAD.

The CPUC is pushing providers to have these unfunded mandates of lower broadband, and it is the wrong way to go. We will not be able to do it. In fact, what the CPUC has done through the ARPA funding through the Last-Mile -- and I applied for an ARPA grant and I am hoping I am going to get it. I probably won't after today with my comments on the CPUC. But if I get this Last-Mile grant, I am being forced to offer a lower broadband plan out there that is unfunded.

Mr. Obernolte. If you want some unsolicited advice, if you don't get the grant as a result of your testimony today, call yourself a whistleblower. That seems to be popular.

All right. I have a minute left.

Mr. Trembush, I have to ask, as you were talking about the See & Spray system, which to me, as a nonfarmer, seems like something my cat uses. Tell me, what is that?

Mr. Trembush. So See & Spray is a system that uses cameras to take thousands of pictures of the field. It categorizes the difference between a weed and a crop and is able to apply material where it is needed in the field rather than just a full broadcast spray. So, on average, you could be saving 50 percent of your material cost.

Mr. Obernolte. That is amazing. You know, I have had the opportunity to be demonstrated some of the new John Deere equipment, and it is unbelievable how technology is improving the efficiency of the way that farming is done.

So I am almost out of time, but thank you all for your testimony.

Okay, Mr. Cameron.

Mr. Cameron. Yes, I just wanted to go on on that same topic. We have had a laser weeder on farm that will actually zap weeds with lasers. And the same idea, does the photography and learns what is a weed, what is your crop.

So we are coming a long way. Things are really changing quickly.

Mr. Obernolte. I would like one of those for my yard. Thank you very much.

I yield back, Mr. Chairman.

Mr. Weber. You can get his cell phone number later.

So we want to thank the witnesses for being here today. We are going to transition to our next panel of government witnesses. And thank you again for your testimony. The witnesses are now excused.

Okay, thank you, gentlemen. Our witnesses today are Congressman David Valadao, representing California's 22nd District; Mr. Burgess Owens, representing Utah's Fourth District; and Congressman John Duarte, representing California's 13th District.

And I will now recognize Mr. Valadao for 5 minutes.

STATEMENT OF THE HON. DAVID VALADAO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Valadao. Thank you, Chairman.

Good morning. I am Congressman David Valadao. Thank you all for being here today.

I want to first thank Congressman Randy Weber from Texas for bringing his colleagues on the Energy and Commerce Committee to Bakersfield for this field hearing. This is the third visit to my district this Congress, and I think this is a big deal for our community that is all too often overlooked. So thank you, I appreciate it.

I also want to thank the Western Caucus and Chairman Dan Newhouse for leading this trip. Sadly, Dan couldn't be here today because of a family matter, but I appreciate all his work to make the Central Valley a priority for the Caucus.

Thank you to all the witnesses here today for taking the time to testify. You each are the ones spending every day on this issue, and hearing directly from you helps us, as Members of Congress, to know what programs are working and which ones aren't.

As we heard from our witnesses today, rural communities, like many in the Central Valley, are being left behind without access to reliable high-speed internet.

The COVID-19 pandemic only brought the digital divide even into greater focus, with more and more Americans trading classrooms and offices for their computer screens.

As we continue to rely on the internet for so many parts of our daily lives, ensuring rural and lower income communities stay connected is one of my top priorities.

Internet connectivity is a necessity for nearly everything, from healthcare, work, school, and even modern farming applications, as was pointed out today.

I know we have heard a lot today about the different things Congress can do to help expand internet access and keep these communities connected, including the Affordable Connectivity Program, or ACP.

This program started out during the COVID pandemic to provide a monthly voucher directly to the broadband providers to help make the cost of a home internet plan more affordable for low-income consumers who needed to work or learn remotely.

I have learned from thousands of constituents over the last few months about the concerns over this program ending because the one-time funding has run out.

While I support the bipartisan efforts to extend funding for ACP through the end of the year, I also believe Congress must work toward a more sustainable solution.

Finding a long-term revenue stream and ensuring this funding is being targeted to those who truly need it most are the things we, as Congress, need to do to keep this program viable. I believe there are bipartisan solutions within reach in this issue, and I am hopeful we can find consensus to keep these households connected.

But the ACP is just one of many Federal programs that exist to connect rural and underserved communities. USDA's ReConnect Program has provided targeted loans and grants to rural areas where at least 90 percent of households lack broadband service, focusing its funding in necessary regions and making sure duplicative funding does not lead to overbuilding.

I also want to reiterate the importance of what Mr. Votaw said today in his testimony about the farm bill's role in rural development and the deployment of rural broadband.

We need to pass the farm bill this year to make improvements to the Rural Development Title and ensure these types of programs continue to function.

In addition to the investments by the Federal Government, the private sector also has a role to play here. Collaborative efforts between the private sector investment and State and local and Federal Government programs will help close the digital divide and ensure we are not leaving our rural communities behind.

These investments will ensure these smaller communities I have the honor of representing have the technology, infrastructure, and resources needed to create opportunities for people that live here.

I am looking forward to taking some of what we heard here today back to Washington and working on long-term solutions to ensure Central Valley farm families have access to affordable and reliable broadband services.

Thank you again to the subcommittee and members of the Western Caucus for coming to Bakersfield for this very timely and important hearing.

Thank you, and I yield back.

[The prepared statement of Mr. Valadao follows:]

******** COMMITTEE INSERT ********

Mr. Weber. I thank the gentleman.

Mr. Owens, you are now recognized for 5 minutes.

STATEMENT OF THE HON. BURGESS OWENS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Mr. Owens. Thank you.

I want to start off by saying the focus of this trip for me was to get educated. I have been really blessed to have been exposed to rural communities all my life. My granddad was a very successful farmer in Texas. My dad was an agronomist, did research, had his own farm.

I have had so much respect for this culture. And I will say this: It is this culture that defines our American way. These folks, that they are going to take the risk. They have a vision. They have tremendous faith, because they know they can't control everything. They believe in having a legacy, a name being passed down from one generation to the next.

That is really what our country has always been about. When we have an issue, we preserve and protect that so we can continue to expand that back out to our country again.

My purpose here was really just to, again, get educated. I will say that I have, this last go-round, in my district, a much larger rural area, which I am excited about servicing. We have the benefit of being a State that is very innovative. We collaborate very well. We think outside the box, and we have a goal. One goal is to make sure we

can hold onto our culture, which is faith, family, free market and education; and the other goal is to make sure we hold onto our kids.

And when you start thinking about what is happening here, what I just appreciated about this last panel is seeing the experience of, what, 43 years and then a young man. I am not sure how old you are, but I consider you young.

This is what we have to do to keep our kids. They have to know there is a benefit of making money, to have a passion they can put into what they are doing, and also, be educated to the point where they know they can be excited about what they are doing.

And the, what is it, the See & Spray, I had a chance to hear about that not long ago. It is remarkable. And to see how intergenerational that works. I heard about this in a different State in which they had the kind of broadband they needed.

The dad was an old school worker, hard worker. The grandson, because of what the son had done, he was able to, at midnight, go online, watch a tractor going up and down without a driver. And when the granddad saw that, he realized that he could maybe look at retirement. He knew that he was handing it over to a remarkable next generation that was thinking outside the box.

So to have these type of conversations to me is very, very exciting. I will say this. Utah, because it is a very innovative State. We collaborate tremendously well. We are the fastest growing State in the country right now.

One of the things that we benefited from was the Olympics in 2002. Because of that, they were able to set up conduits throughout the State. So when it came down to COVID, we were fortunate to have school districts throughout, urban and rural, that had access to some type of a broadband.

Unfortunately, throughout our country, we can't say that across the board. In

most urban places, it was too expensive, and most rural places they just didn't have accessibility.

For us to have a country that is going to grow and prosper and be the very best, it should be a national issue that every community, no matter what ZIP Code, can get the very best education and their business can grow.

Because it is the small business owners, it is your family farm, family businesses that want to pass their farm down to the next generation, that is what powers our middle class. And our middle class is what powers the freedom and the individual concepts we have. The idea of individual options and no dependency, that is where it begins. So we make sure we continue that happening.

I will just say this: I am excited about being here today. I am excited to hear some concerns. One of the things we know about the government, either it helps or it hinders. Unfortunately, today it is hindering more than ever before.

And I will just say this: Your industry is under attack. So is every other industry at this point from this administration. The things, the rules that are coming down the pike, it is just unconscionable. It makes no sense, unless the goal is to stop the middle class from growing and business owners like yourself from growing.

Just know we have a new sheriff in town. We have a Republican Conference who believes in the middle class, who believes in business ownership, believes in having the American Dream and growing with it.

So we are going to be on your side. We just have to grow our Conference a little more so we have, let's call it chaos. With less chaos, more governing, we are going to be okay.

So I am excited about being part of this panel. Just know that we are going to

continue to read up, get ourselves experienced so we can really know how to help you best. And a big piece of that will be how can we bring this Federal process down and allow the power to go back to those of you guys, the innovators that make this work.

Last thought: My class was 117th. 117th, 118th, and I think the ones coming on board this year are probably the most innovative legislators that I have ever seen. What we need to make sure we do our job right is innovators like yourselves letting us know what does it look like to have the runway, the takeoff that you need to really think long term.

And we will then, in turn, because we have a commitment to America First, we will start giving you innovative legislation that will let you do your job and do your work. And that is what I am looking forward to being part of.

So, with that, I yield back.

[The statement of Mr. Owens follows:]

******** COMMITTEE INSERT ********

Mr. Weber. Thank you, sir.

Mr. Duarte, you are recognized for 5 minutes.

STATEMENT OF THE HON. JOHN DUARTE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Duarte. Well, thank you, Randy.

I thank Chairman Weber for having us here today. I would like to again thank the Western Caucus and very much like to thank the panel.

Even being a farmer and businessman and, you know, as much as anything we deal with in Congress, this is probably my bailiwick, but nonetheless, when you join Congress, when you become a Congressman, you are dealing with something new every day, and, really, it is a commitment to being the dumbest guy in the room every day.

There is always, always, new information, new subtleties, new insights that we need your help to guide us through, that we need your reality on the ground and that we need your input, as we got today, both in the morning Energy briefing as well as the hearing here today.

And I thank you for that, and I thank my colleagues for all they bring. This has been a great day to slow down off Capitol Hill and really understand what is on the ground out here on the farms. And so, I won't be able to talk specifically to your needs and issues without pixelating, but we can see this through today's meetings in a very clear picture.

Natural resources are important for our farms, for our rural communities. We are resource industries, whether it be logging, farming, energy, minerals. These are

things we need to do well, and we need to do them in a way that is globally competitive, and we need the natural resources and commercial infrastructure around them, around us to do them well.

Just as energy is a core factor in our competitiveness, in our ability, so is bandwidth. There really isn't a fundamental difference between our need for access in bandwidth to our need for access in energy.

In energy, we have new competitive frontiers. We have social media, AI engines mining cat videos to feed people whatever keeps them engaged on their cell phones and cell eyeballs.

And we compete with that. We have bitcoin mining and crypto mining that is a huge sink of our energy resources globally. And unless America is a competitive energy producer, we are not going to have those server farms and that energy to crunch those server farms and cloud computing that we need.

And along with AI and social media mining and crypto, we now have cutting-edge opportunities in machine learning. I mean, if you talk to the guys at John Deere, if you talk to David and Doug LaMalfa who put an EQIP grant bill for field automation, this is all going to demand on-the-edge, real-time machine learning and for automation and mechanization of agriculture, the plant and field sensing.

So I think the things that we can be sure of is that we need to be agnostic. We get concerned that we don't want carbon, but we care where the electrons come from and how they were produced and when the investments were made when we want hydrogen to fuel our green energy needs.

And this is ridiculous, and this is something that we can step into and more carefully legislate, to make sure that we are agnostic about how these problems are

solved, that we let the dynamic of the free market continue to do what it does best, and that we retain our humility in listening to those on the front lines, to make sure that whether it is bandwidth in a remote area, or it is bandwidth that gets delivered to a tractor, or field mechanization technology, that we get out of the way.

And if we can provide government resources to help a highly dynamic technological frontier like bandwidth delivery evolve, make the capital investments that may be obsolete within 3 or 4 years as the next great thing comes along, we nonetheless need to make sure that investments can be made to deliver that bandwidth to the front line.

We also need to make sure that we are open-minded about energy alternatives. But unless we protect the core sources of our energy today, we will not be globally competitive in many ways here in America and the affordability, the opportunity, the innovation, and the business investment will not happen here in America to benefit working families in our rural districts as well as urban, but they will, in fact, happen elsewhere where energy supply and energy resources are put in place that compete us out of business and compete the American worker out of a job.

So I am thankful to be here today, and I look forward to the panel's questions.

[The statement of Mr. Duarte follows:]

******** COMMITTEE INSERT ********

Mr. Fulcher. [Presiding.] Thank you to the panel for that.

And I would like to recognize myself for 5 minutes for questions.

And I am going to address all three of you with just a couple of general questions that I would like to get your insight on and perhaps flesh out some of the previous conversations we have had on a couple of areas.

And so I am going to start with Congressman Valadao.

I heard a lot about precision agriculture today. From your vantage point -- and then we will go down the line here -- from your vantage point, how is this shaping the agriculture industry, or reshaping the agriculture industry, not just in California, but across America, and what is the impact that you foresee that having on the world?

Mr. Valadao. Well, one, we are going to have a cleaner product. The thing that agriculture always deals with is with all the attacks from people implying that we are always looking for ways to put more inputs, put more fertilizer, put more other products into the ground and pollutions and all those other things.

Some of the technology that is being developed -- I mean, I was looking at a piece of equipment just the other day on the Mall in Washington, D.C., where they had brought a sprayer in. And the camera was not only identifying a weed to a plant, but actually the types of weeds, and then they were focusing on spray just in that area.

So if you take a field, let's say you plant corn at 38,000 seeds per acre, that is 38,000 plants. You are not going to have an equal number of weeds out there. You are really going to focus on making sure that you are putting just the right amount of product on that weed to kill that weed or, as was mentioned by Don, where they are using a laser.

But you also have the data to come back and know what weed pressures you are dealing with, what you are having to combat with, and continuing to develop either the seed technology to make sure it is used to whatever that weed pressure is, or whatever chemicals you are using.

But you are able to grow a more affordable, a cleaner, and more product per acre than ever before. And this is something that I don't think we have ever dreamed of.

Mr. Fulcher. Thank you for that.

Congressman Owens.

Mr. Owens. Again, I want to go back to the panel I was looking at. I was kind of going down the row and thinking how Utah, it looked to me. When I say Utah, it is innovation. It is innovators. It is folks who think outside the box. It is entrepreneurial attitudes of how can I overcome this one obstacle and get to a next one?

That is actually what we need in every sector of our country, particularly when it comes down to food security, particularly when it comes down to bring the very best young minds to an industry that we are losing.

One of the biggest problems we had in Utah, go through the different shepherds, or whatever it might be, is how can we hold onto our kids when they realize how tough it is. They watch their parents struggling and trying to pay their bills, and not having the technology, access to technology that gets them excited about the next step.

By us approaching this correctly, allow the innovators to tell us what it looks like. Be humble, which, unfortunately, the Federal Government has a real problem with that. Bureaucrats don't know what that really means, but we have to make sure that, as a Conference, we can bring that back.

Allow innovation to go. Allow the dream, the big dream power to go. And not

only will we get our food security back, we will have, again, a generation of young people willing to help us move forward.

Mr. Fulcher. Thank you for that.

Congressman Duarte.

Mr. Duarte. Yes. Thank you, Representative Fulcher.

That is the crux of the question. We are losing our produce industries. If you look at the imports of produce from Mexico, they were about 4 million tons a year in 2000. They are well over 20 million tons a year today.

My family company has been at the center of it. We sell almond and pistachio trees, which are generally mechanized crops. Unless we can implement some of these cutting-edge machine learning, beyond precision agriculture to actually mechanizing the hand labor in our crops, and make it a capital investment in technology forum rather than a raw field-level forum, we are not going to retain these specialty crops in California. We won't retain the nurseries. We won't retain the box plants. We won't retain the cold storages, the exports.

Just like when we lose our manufacturing for lack of fossil fuels, we will lose our food base in many, many ways beyond just the farm for a lack of the on-farm production of these commodities.

Mr. Fulcher. Thank you for that.

And I am just about out of time here, so I am going to recognize my colleague, Congressman Obernolte, for 5 minutes of questions.

Mr. Obernolte. Thank you very much for your testimony. One thing I was struck by, listening to all three of you, is how deeply passionate you are, obviously, about the issue of rural broadband and making sure that we close the digital divide that exists in

this country.

Congressman Valadao, we had a kind of a robust discussion about the CPUC and the fact that in many ways, the CPUC is actually hindering the deployment of broadband infrastructure in rural California.

What can we, as California Representatives, do to push back on that?

Mr. Valadao. It is the same issue we deal with on almost every front. It is always permitting. It is always government slowing down the process.

The more competition we have out there, the lower the cost it will be to the consumer, and allowing more infrastructure investment to be made, if it is fiberoptic cables to be put along our freeways and our roads to go to the different towers and feeding internet into our communities.

But all these things that every time government gets involved and they create another bureaucratic mess where it just makes it more difficult for someone to get their product or their project built, it slows down progress and ultimately raises prices on consumers.

Mr. Obernolte. Congressman Owens, I was reflecting when you were speaking about the fact that we represent very different districts in different parts of the country, and yet our districts have so many similarities.

Could you talk about the similarities we have, in terms of access to rural broadband in your district?

Mr. Owens. I think the key to it, if the innovator is allowed to have access to unfettered dreams, unfettered opportunities, where they are sitting down and trying to just make every single hour count on how to stop the rulemaking coming in, the things we could do would be remarkable.

I think our very best of our culture is going to come out of our rural community. And right now, we are fighting the free market. Those folks, whether they are business owners or they have appreciation of business owners, they want to make sure they live the American Dream, free market. And, of course, those going against the bureaucrats who love centralized government, who love to take their belief of an industry and push it down. And we have to make sure we don't let that happen.

Mr. Obernolte. I will tell you one similarity our districts don't have, which is that my constituents, Representative, can't wear a Superbowl ring.

Mr. Owens. Raiders are trying to figure that one out again, so we are still getting it.

Mr. Obernolte. Congressman Duarte, we had a really robust discussion here in the previous panel on funding, and I know it has come up a couple of times here in the testimony on this panel.

We have got, you know, these incredible poignant, critically important needs on the one hand, and on the other hand a government that has spent profligately, for the last 20 years, and is now $35 trillion in debt.

So how do we balance those two ideas that are in tension? On one hand, we want to solve all these problems. On the other hand, we want to avoid passing this incredible legacy of debt onto our children.

Mr. Duarte. That is the core question. When government is run well, as we have seen before, interest rates are low. We can afford tax incentives and write-offs and bonus depreciation that makes investment very, very attractive. And the consumers are on their feet, not having suffered food inflation and other types of living cost inflation. They can buy the products, and we have a dynamic and active and

thriving economy.

When we put, as Representative Owens just alluded to, the globalists in charge, the agencies that aren't responsive to the voters, that aren't responsive to the needs of consumers and businesses and free market actors that supply each other's needs efficiently, we see all that wane. And that is what we are seeing today.

So, I think the first answer is freedom. The first answer is Tax Codes that encourage investments and the ultimately economic policies that lower interest rates and make investments just fundamentally easier.

And then if there is a need to fill some certain gaps with government programs that are hopefully technology and player agnostic and not market manipulating forces that tend to create dependency and rent-seekers, then I am more happy with them.

Mr. Obernolte. Thanks very much for everyone's testimony.

I yield back, Mr. Chairman.

Mr. Fulcher. Well, thank you to the panelists today, and also just a special thanks to the E&C staff, Energy and Commerce staff, for putting this together, Western Caucus as well, and to the attendees for your participation and being here today.

This is an attempt to try to do some of these hearings remotely, bring government closer to the people. And please understand that I know that you know, but we want you to know that we know that so much of the struggles that we have today have solutions, and those solutions come from our constituency.

And many of you may not be in a situation to where you can attend some of these hearings in Washington, D.C., but everybody here has an office and a regional staff in different places, and please know that it is part of our job to communicate to you. The phones will be answered and the meetings will be accepted. And you are very much

appreciated, and your input is very much coveted. So a special thank you to everyone for that.

So I thank the witnesses, both panels, for being here today. Members may have additional questions for you all, and members have up to 10 business days to submit those additional questions for the record.

I ask that the witnesses do their best to submit the responses within 10 business days upon receipt of those questions.

I ask unanimous consent to insert in the record the documents included on the staff hearing documents list. Without objection, that will be the order.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Fulcher. And, without objection, the subcommittee is adjourned.

[Whereupon, at 11:40 a.m., the subcommittee was adjourned.]