22° Home / News / State News

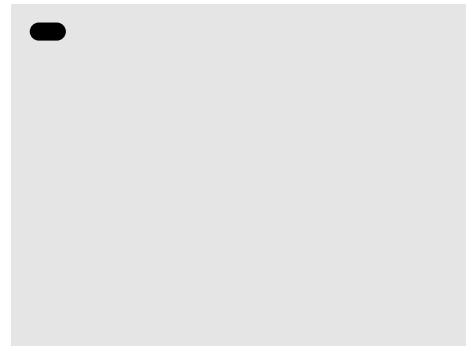**HERMITAGE, Missouri**

On a bad day, Cindy Gilmore walks outside to the gas pumps at her convenience store in Flemington and reluctantly puts signs over the credit card machines to let people know they are out of service.

When the doors of the TNT Quick Shop open, she's greeted by equally upset customers who say, "You're kidding me — again? The internet is down?"

They hand Gilmore a credit or debit card — or cash, but not too many people carry cash nowadays. When they pay with a card, Gilmore has to rely on a Square card reader. She pays 2.75 percent in fees each time she resorts to this backup measure.

The lack of broadband in rural areas of the state have put Missouri behind and affects residents in many ways. Access the Missourian's full report here.

Even then, it's common for the credit card information to fail to process when the internet starts working again, Gilmore said. She then has to track down the people who spent money at her store, or take a loss. This has been a problem since she and her husband, Randy, purchased the store six and a half years ago.
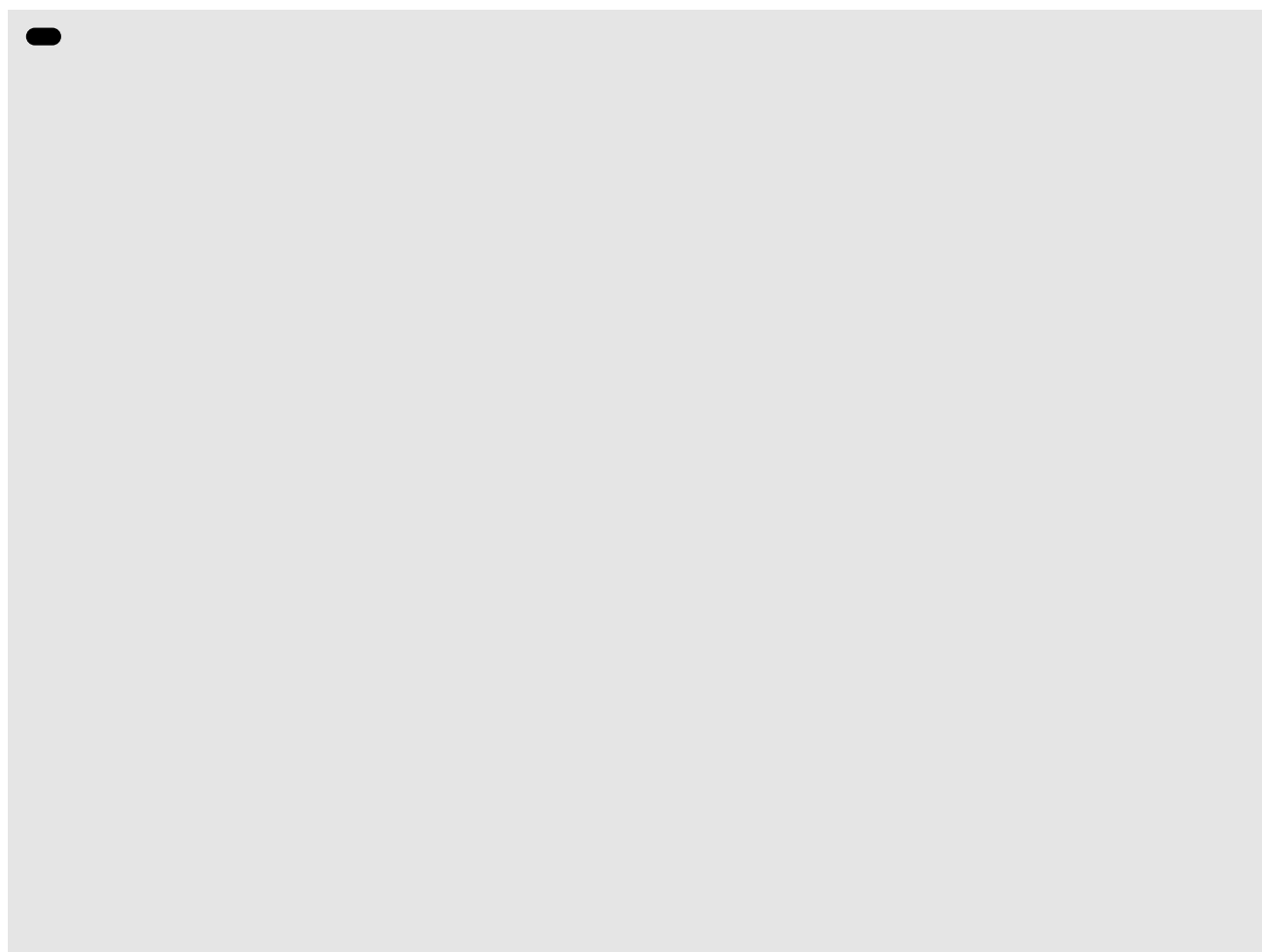
Poor broadband service is not uncommon for the Hermitage area or the county. Hickory County ranks 92nd out of 115 in broadband speed in Missouri counties, according to data from the Federal Communications Commission, or FCC.

When you're in Hermitage, which is home to just over 450 people, you can have decent cell service and Wi-Fi access because the broadband hub is in the center of the city. But as you travel 10 to 15 miles to the outer towns — Elkton, Flemington or Wheatland — you're lucky to make a phone call or load an internet page in less than five minutes.

The Hermitage area experienced a 27-hour internet service outage in November. Business owners, like Gilmore, were affected financially and were unable to do their jobs.

With only one broadband provider available to the entire city, CenturyLink, the bandwidth is oversubscribed, which leads to poor internet service.

In a world that is becoming more dependent on technology in everyday life, rural Americans without access to the proper resources are falling behind. Businesses, in particular, are kept from growing without access to broadband, which many consider now to be vital infrastructure.

In rural Missouri, broadband is a daily challenge for local businesses. "If you're in a rural area like we are, you're not gonna get internet," said Larry Lightfoot, a Missouri business owner. "We're that little white spot on the United States map that doesn't

have service." The difficulty of unreliable broadband means businesses struggle to operate, serve customers and grow. Living in rural Missouri, the few active local stores are the only resource for most of the customers who call that community home, and stores frequently have to turn them away because of inadequate internet access. "It's impossible to determine the number of sales lost due to customers choosing to go elsewhere," said Cindy Gilmore, owner of a local convenience store in mid-Missouri. Fiber optic internet cables, which spiral around the telephone line wire, are sporadically located in rural cities. To gain access to the faster internet through fiber optics, businesses would have to pay $6,000 and pay a monthly $600 fee, according to Lightfoot.

WHITNEY MATEWE

Broadband expectations versus reality

Broadband is the bandwidth that allows users to access high-speed internet at a faster speed than traditional "dial-up" services. The connection can be offered through a digital subscriber line, or DSL, a cable modem, fiber, wireless or satellite service.

Different platforms provide different speeds. The necessary broadband speeds vary based on activities, technology and the number of users on the bandwidth. The speed is measured in megabits per second, or Mbps.

In Missouri, there is not a state agency or department that regulates broadband. Instead, Missouri's broadband resources and funding are managed by the FCC.

The FCC suggests a download speed minimum of 1 Mbps to send emails or browse the internet. For students, it recommends a minimum speed of anywhere from 5 to 25 Mbps. And to download files, someone would need at least 10 Mbps, according to the FCC's broadband speed guide.

But Gilmore and other CenturyLink subscribers in the Hermitage area are paying for "up

What is broadband?

Broadband is the bandwidth that allows users to access high-speed internet at a faster speed than traditional dial-up services. The connection can be offered through a digital subscriber line (DSL), a cable modem, fiber, wireless or satellite service.

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to" 1.5 Mbps each month. This means they are not guaranteed 1.5 Mbps.

Gilmore ran a speed test on her computer on random days from July to late November in 2017.

In July, she received a download speed of 0.87 to 0.99 Mbps, which she said she considers good service.

On Nov. 12, the speed was 0.5 Mbps download. She was surprised two weeks later to have a speed of 1.5 Mbps, which is what she pays $89 a month for. But just two days later, the speed dropped to 0.4 Mbps. When this happens, she can't access the internet for credit card transactions, look up order numbers for supply orders or do work from her office.

Gilmore has submitted requests to the Attorney General's Office, but has been told there is nothing the state can do.
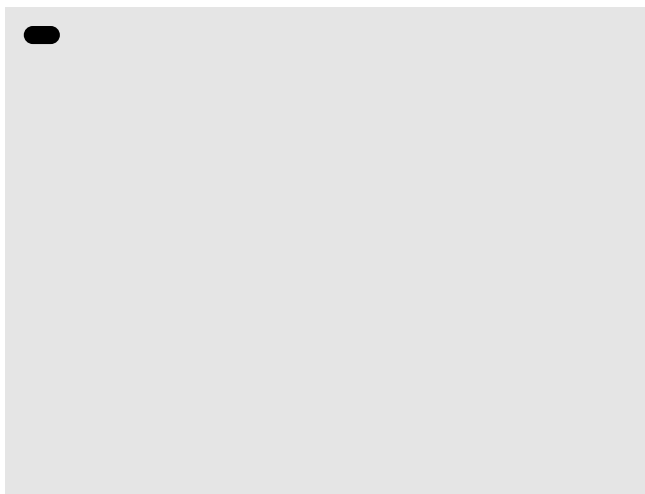
Janie Dunning recently retired as Missouri's rural development director in Missouri. Dunning spent 49 years serving Missouri rural communities. She said broadband is a "vital resource" not just for everyday lives, but for running businesses and supporting an economy.

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Overall, in a 2016 report, the FCC describes a speed benchmark of 25 Mbps download speed and 3 Mbps upload speed for fixed (not mobile) services.

Some internet pastimes require more megabits to be transmitted per second than others, which can sometimes strain rural Missouri residents' systems.

John Sadler

"Broadband is a powerful economic development engine," Dunning said. "It can be the difference, especially in the rural communities."

Dunning said the most important uses of high-speed internet for businesses are e-commerce, online sales, posting job openings, online job training and freelance work.

The trend of working from home has put rural Americans at a "huge disadvantage," she said, because they are unable to do their jobs.

A new era of business

Rufus Harris, Gilmore's uncle, buys and sells cars for dealers from his home in Flemington. For him, time truly is money.

"When the internet is down, I'm out of business," Harris said. "I can't do my job."

Before he can participate in an online auction, Harris has to spend four to six hours doing research, which includes looking up car recalls and Carfax reports online.

When the broadband connection is slow, Harris said he's forced to pack up his things, get in his pickup truck and drive 20 miles to Bolivar. There, he hands over his credit card several times a month to stay in a room at the Super 8 motel to have Wi-Fi. The other option is to lose a potential sale, which translates to loss of income.

Because CenturyLink is the only broadband provider in Flemington, Harris pays $39 a month for residential internet service. But Harris said he spends a minimum of $300 to $400 a month to pay for motel rooms. That doesn't include the amount it costs him in income when the internet is down, he said.

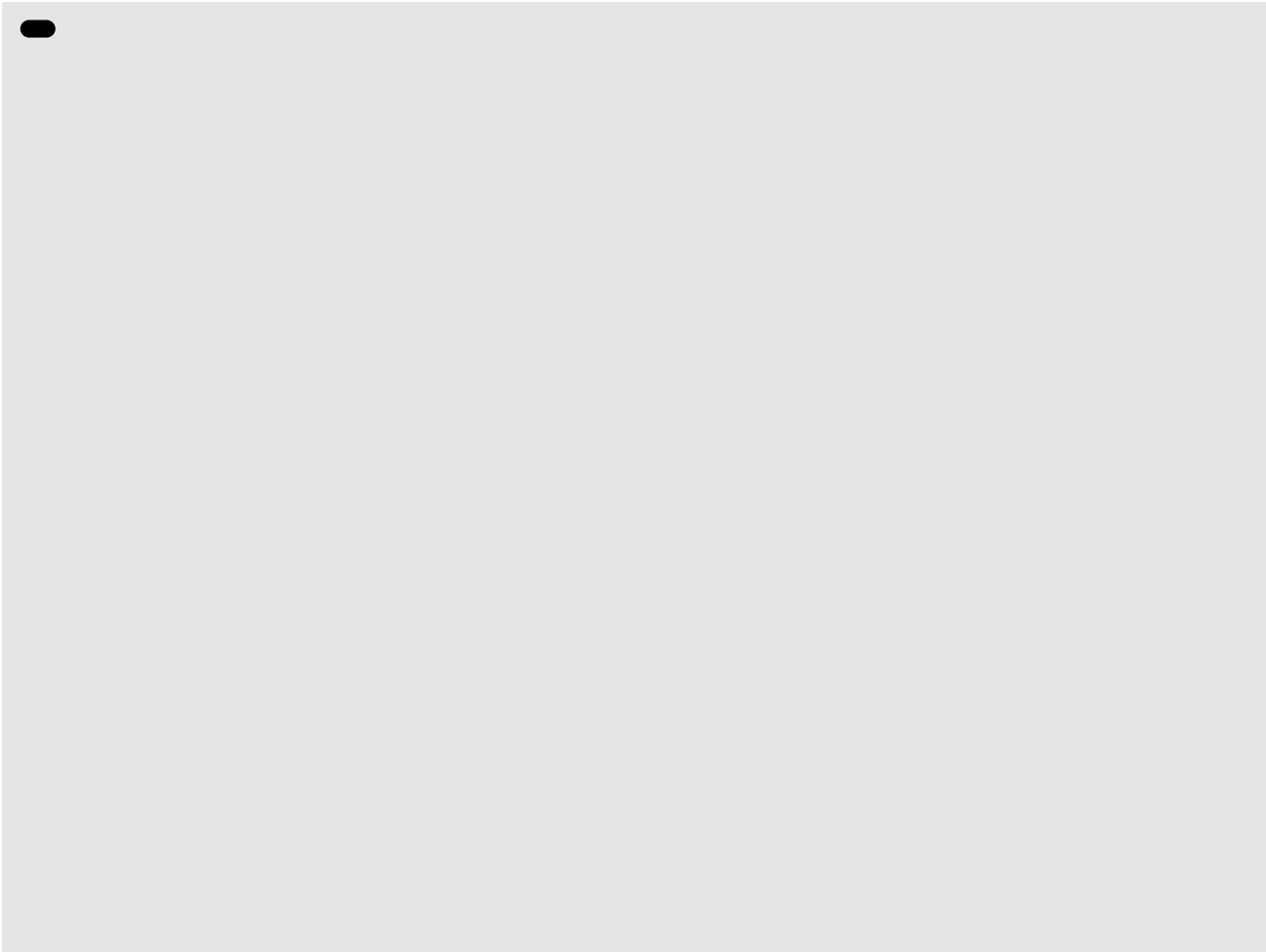"It's a shame when you pay for a service that

you don't receive," Harris said. "We're

supposed to get at least 1.5 (Mbps) or up to,

and most of the time it's not near that good. A

lot of the time, it might take 2 minutes to

change from one page to the next."

Gilmore and Harris have been told by CenturyLink customer service representatives that CenturyLink

bandwidth has been "capped out" and they are experiencing "line exhaust" because the company

oversubscribed the area, which is why they experience slow broadband. And they have no other

option.

Nancy Devinay, a CenturyLink spokeswoman for Missouri, was unable to confirm whether the

Hermitage area has been "capped out."

Devinay said in an email that the broadband provider is planning to upgrade high-speed service in the

Hermitage area by installing fiber technology. She said the project will take 12 months and is still in

the planning phase.

Rural and local businesses in Missouri fall through the broadband coverage cracks and suffer from lack of access to affordable or dependable internet coverage. A new local internet provider, I-Land Internet Service, offers businesses a better broadband alternative with tower-to-tower internet using the local water towers. Customers of the service can gain access if they are in the line of sight of these water tower access points. Larry and Cindy Lightfoot have decided to make the shift from CenturyLink to I-Land. "It will help my business, help me to better serve my customers," said Larry Lightfoot.
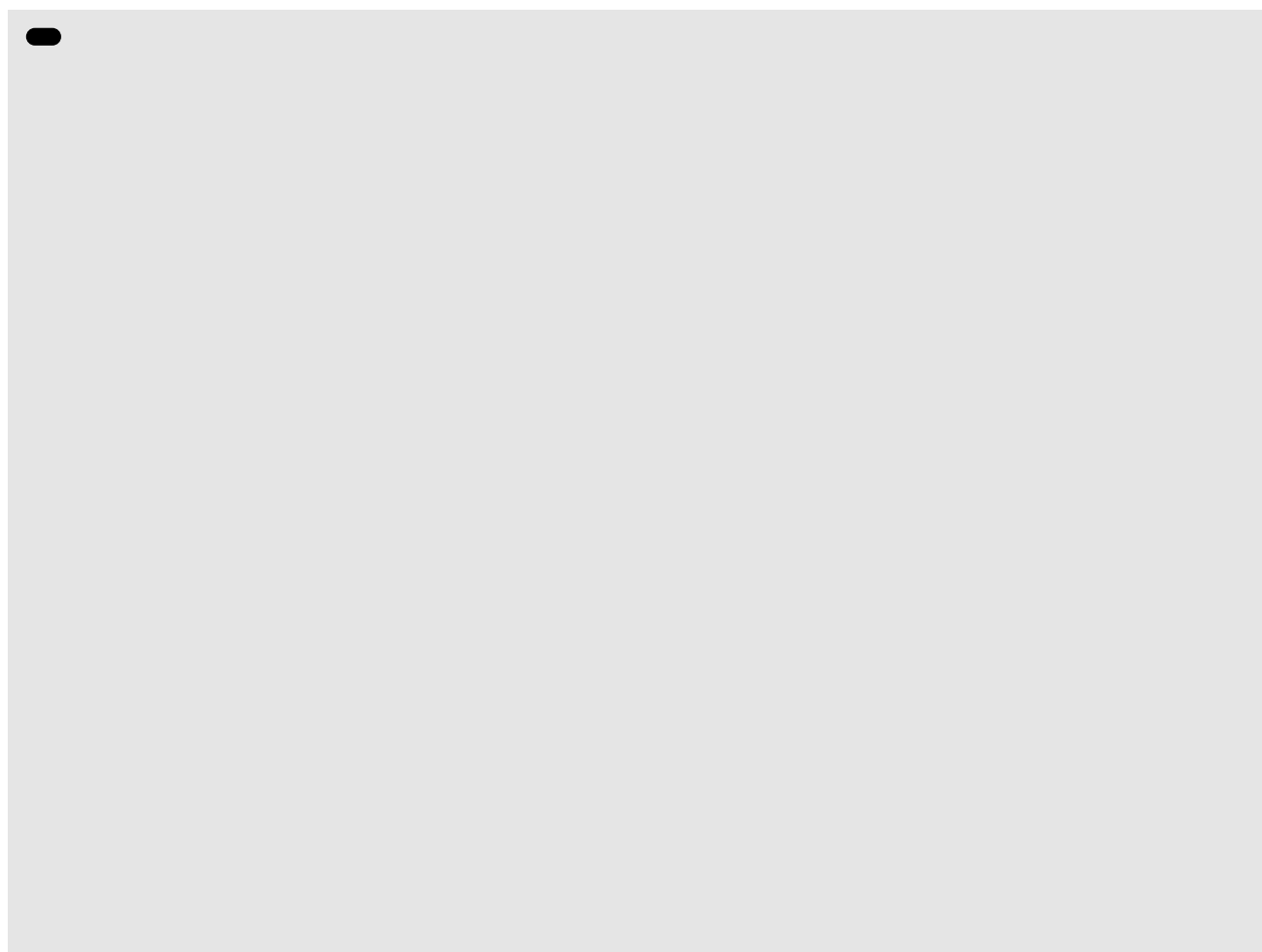
WHITNEY MATEWE/MISSOURIAN

There are other broadband providers that only a small amount of the Hermitage population has access to, like American Broadband and I-Land. I-Land provides an antenna for a home or building that connects the user to a water tower equipped with I-Land technology. Customers must be in the line of sight to one of the four equipped towers in the Hermitage area. Gilmore, for example, is just out of reach.

When people in the area aren't using the bandwidth, Harris said the internet speed is adequate, but that's usually between 4 and 8 a.m. After that, he said, the service is almost impossible to use.

"The biggest thing you don't realize would be how slow the computer reacts to a command, like to

change from one page to the next takes minutes," Harris said. "You can't download pictures or files or upload. You can't stream anything — you can forget that here, it's impossible.

"When the internet is working its best here," Harris said, "it's still 20 times better in Bolivar at the Super 8."

Bill Wyatte works for I-Land Internet Service, a fairly new provider based out of Sedalia. I-Land bypasses the need for business owners to depend on the spotty broadband service or the even pricier fiber optic service that were the only two options in rural Missouri. This new and growing service provider meets a need for many businesses, but if the building is not located within the sight of a tower those businesses are stranded, paying for unreliable broadband they typically cannot access. Wyatte, who said I-

Land has an estimated "2,000 customers total," unrolls "Cat 5" Category 5e cables as he sets up service for local business manager Larry Lightfoot.

Few options to fund broadband projects

During Gov. Jay Nixon's administration, he created MOBroadbandNow, a working group to find a solution to broadband access in Missouri. It submitted its final report in June 2015, and Missouri has not had an official broadband task force since.

There is no state funding for telecommunications companies to spread broadband coverage across Missouri, but the federal government offers grants and loans to government entities, telecommunications companies and businesses yearly.

One program that the FCC offers is the Connect America Fund, or CAF, for broadband expansion in both urban and rural areas. CenturyLink was awarded in 2015 with almost $70 million to bring broadband to Missouri in the timeframe of six years, Devinay said. They will use the funds to provide speeds of at least 10 Mbps download and 1 Mbps upload to more than 150,000 homes and businesses in areas that the FCC has designated as "high-cost areas," she said.

USDA Rural Development's biggest loan program is the Telecommunications Infrastructure Loan program. The financial aid is offered to rural utilities, commercial corporations, LLCs, nonprofits, etc., to improve rural telecommunications infrastructure. The funds can be used for new construction, improvements, acquisitions or expansions of broadband technology.

STATE NEWS

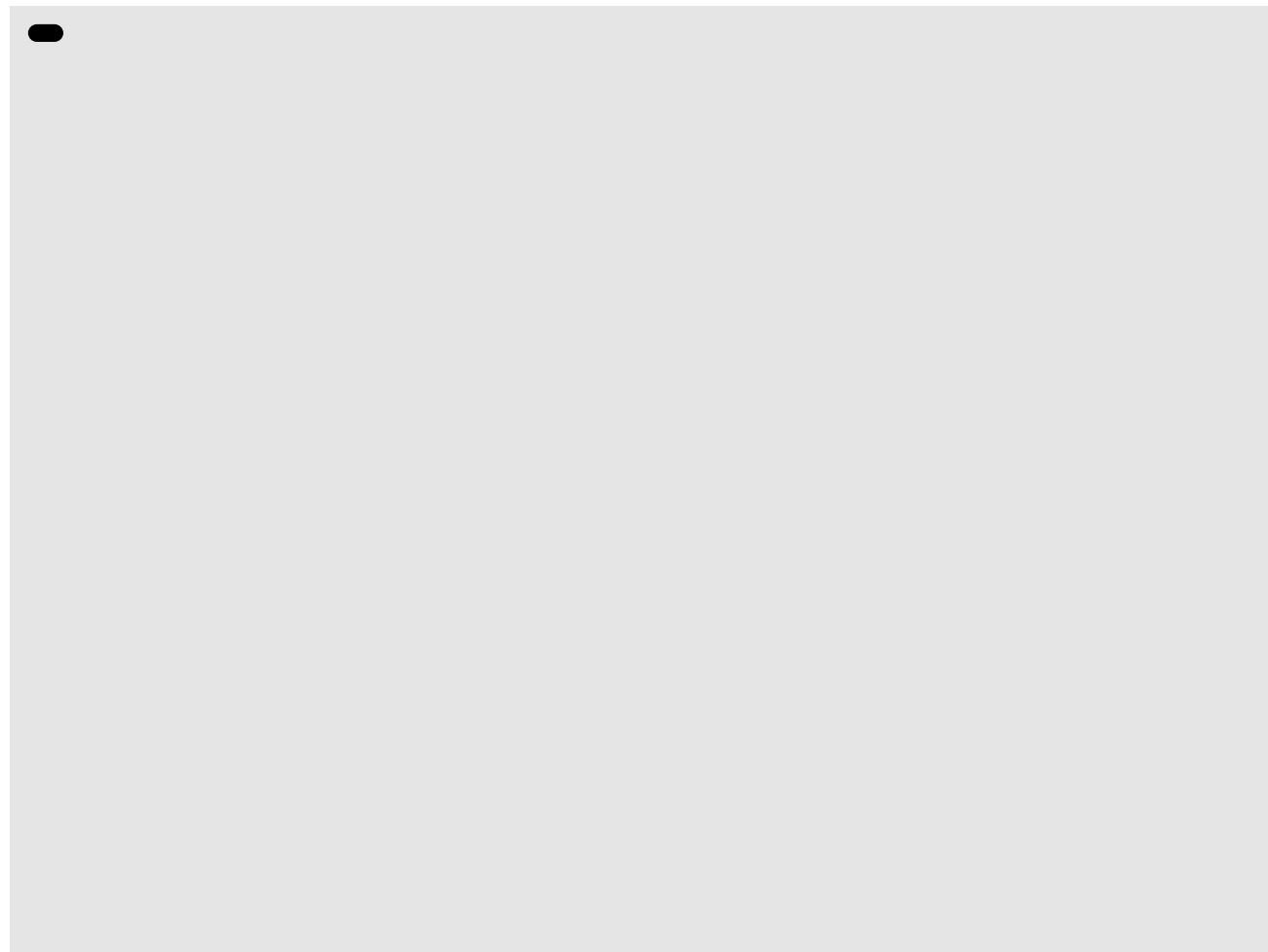Many rural residents are forced to live off the grid

BY KATHRYN HARDISON

Another program is the Community Connect Grants program, which helps fund broadband access in rural areas where private providers cannot economically provide broadband. This program is open for anyone to apply.

Brian Whitacre, an agricultural economics professor at Oklahoma State University and a national broadband expert, said the problem with most grant programs is that they mainly focus on helping telecommunication companies expand their networks, but people still have to adopt the new

technology.

"It's not just the infrastructure, it's letting people know how using that infrastructure can benefit their lives," Whitacre said. "In rural areas, you typically have an older population or less income, so we have to go out and get people to understand the value of having a broadband connection."

James Hayes, a technician at I-Land Internet Services, climbs up the roof of the new Hermitage Lumber Inc. building, providing a service sorely needed for most people in rural Missouri, a source of reliable internet and a step toward bringing economic growth to small local businesses. "I've always lived here, I like knowing who lives across the street. I think it's a safe place to raise your kids and your grandkids. I don't mind small. It's just easy, it's quiet, it's comfortable," said Cindy Lightfoot. The Lightfoots, owners of the local motel and managers at Hermitage Lumber Inc., transitioned to a local internet provider that caters to rural residents.

WHITNEY MATEWE/MISSOURIAN

A success story

In 2011, 15 telecommunications companies were awarded loans to expand broadband in Missouri, according to a USDA report. Only half of the recipients completed their projects.

Big River Broadband, now Big River Communications, received $24 million in federal funding from the Broadband Initiative Program through the American Recovery and Reinvestment Act of 2009. The program was focused on delivering broadband to counties underserved in southeast Missouri.

Big River Communications is made up of three entities: Big River Telephone, Big River Broadband and Big River Wholesale.

> "To compete in today's world without broadband, you're going to be left behind, and too many people in rural Missouri are being left behind."
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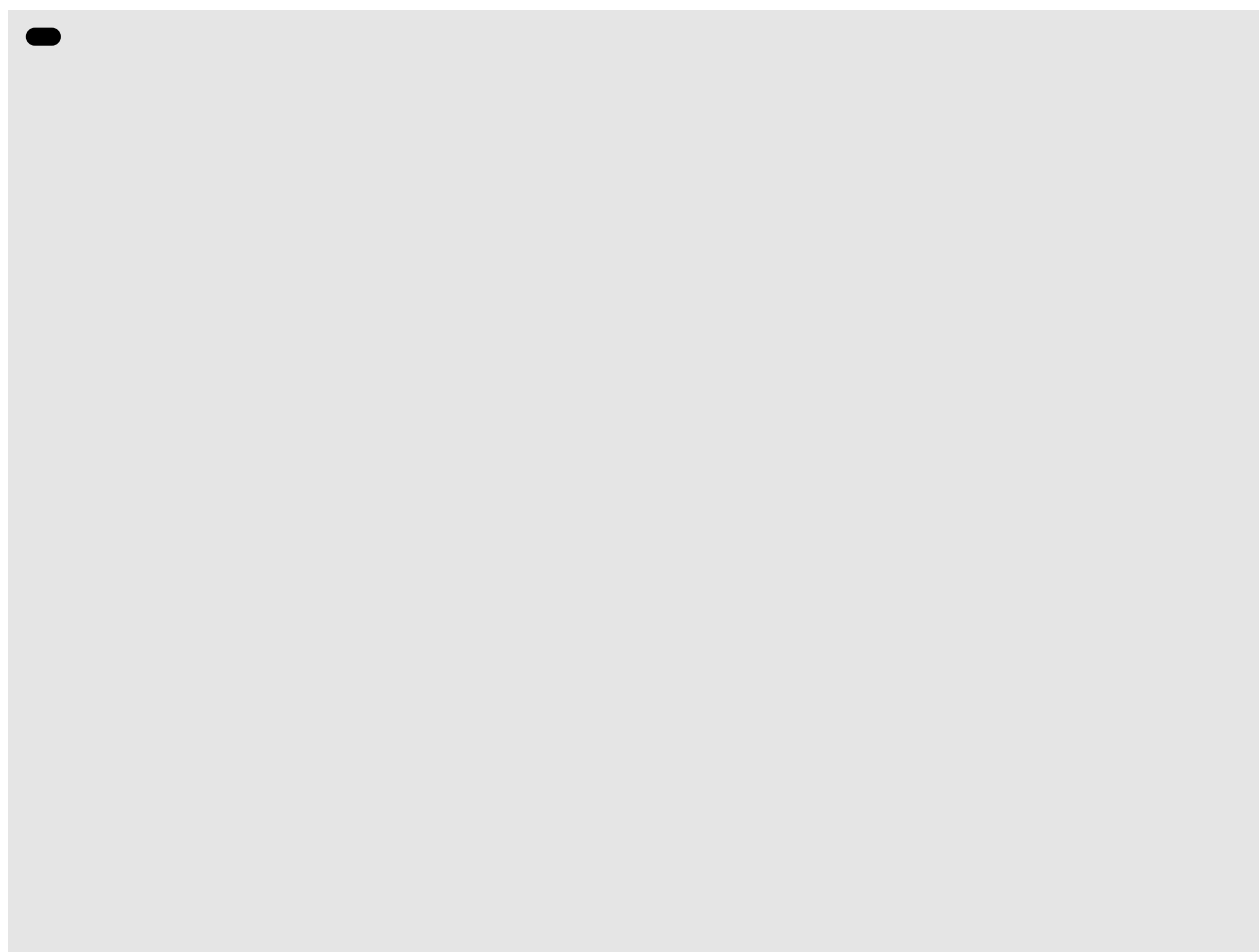> — Kevin Cantwell, president of Big River Communications

As part of its expansion project, the company built an infrastructure of 61 towers that deliver a licensed 4G LTE spectrum. Big River used the spectrum to provide a fixed broadband solution and telephone service to seven southeastern Missouri counties, said Kevin Cantwell, president of Big River Communications. The counties were: Washington, St. Francis, St. Genevieve, Perry, Cape Girardeau, Bollinger and Madison.

"These counties were lacking access to broadband services, and were underserved," Cantwell said.

"Incumbent telephone providers have been there for 100 years and were responsible to deliver the latest and greatest technology, but in these areas they weren't being funded properly, so people did not have access to high-speed internet."

The project made a broadband connection of 14.5 Mbps download speed and 4.8 Mbps upload speed available to almost 45,000 households and over 7,500 businesses, Cantwell said.

"To compete in today's world without broadband, you're going to be left behind," Cantwell said, "and too many people in rural Missouri are being left behind."

Larry Lightfoot is known affectionately by his grandchildren as "Buddy," and has been managing Hermitage Lumber Inc. since 1995. Lightfoot and his wife, Cindy, nicknamed by the grandchildren as "Ma," also own and run a local motel in Hermitage, the Clearlight Inn. The Lightfoots offer their motel guests free Wi-Fi, but some days the Wi-Fi crashes three to four times within 24 hours. Larry Lightfoot said paying for internet service that isn't reliable is frustrating, and the lack of service impacts his business. For the Lightfoots and other rural Missouri business owners, living in smaller towns and cities allows them to live at a different pace of life than bigger cities. Everyone knows each other in their small communities. "We don't have much, but we're family," Larry Lightfoot said.

Lack of broadband, lack of industry

Fifteen miles away from Harris' home and Gilmore's convenience store, Cindy and Larry Lightfoot have similar complaints as business managers and owners in the city of Hermitage.

The Lightfoots have managed Hermitage Lumber Inc. for 22 years. They also own the Clearlight Inn, which they built from the ground up after a tornado leveled the area in 2006.
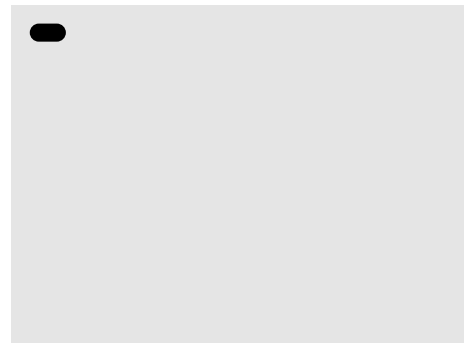
They use CenturyLink service at the lumber yard and American Broadband at the hotel.

Cindy Lightfoot said the inadequate broadband service they have at the Clearlight Inn with American Broadband leaves their customers frustrated, because the broadband service doesn't provide fast high-speed internet during times when the bandwidth is experiencing line exhaust.

While the Lightfoots were not affected by CenturyLink's service outage in November, they have had problems with credit card transactions in the past due to CenturyLink outgoing phone lines.
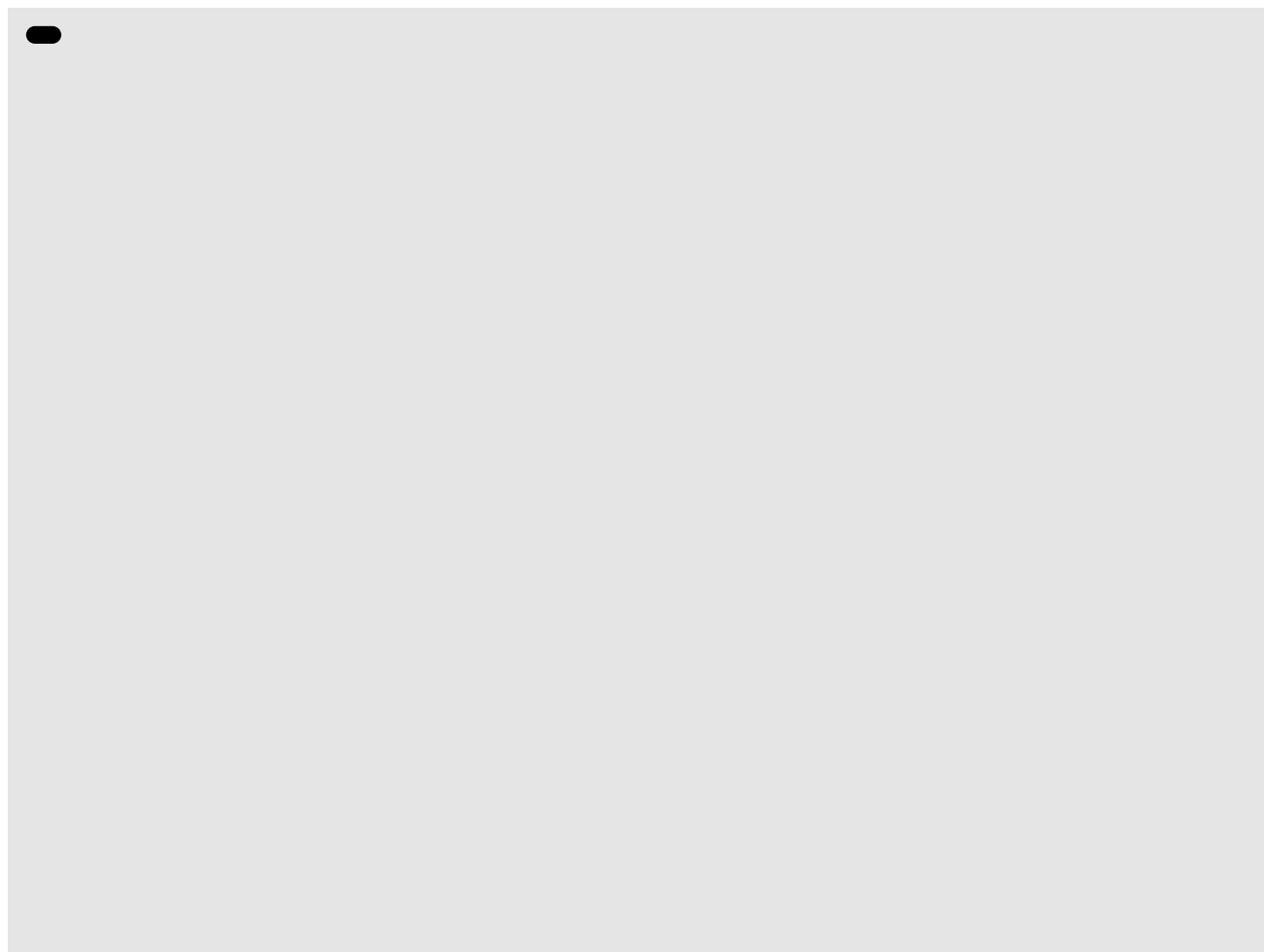

With only a few internet providers operating, business owners in rural towns often face low-speed connections or outages, which can keep their businesses from growing.

Jiwon Choi

Larry Lightfoot said that one of the reasons the Hermitage area has few broadband options is because the area population is small, and the area's only industry is tourism from Pomme de Terre Lake. But even then, the tourism is seasonal.

"Hickory County has no industry, we have no manufacturing. All we have is mom and pop stores — that's all we got," he said. "There's so much to offer that you can get in the city — that's why we're rural, because there's nothing to offer around here."

Because there's not adequate broadband service for businesses, Larry Lightfoot said the Hermitage area is "a step behind."

Access to high-speed internet and uninterrupted service would be ideal, Larry Lightfoot said, but he doesn't think the service would allow his businesses to grow in the online world. Online delivery isn't an option for the lumber yard because there isn't a UPS or FedEx to pick up orders twice a day, he said.

"We're rural," he said. "Rural is everybody sticks together, so they come in and buy it."

Larry Lightfoot commissions technicians from I-Land Internet Services to install tower-to-tower service at the new larger lumber store location as he prepares for the early January grand opening. James Hayes, one of the technicians from the Sedalia-based internet provider, scouts the best wiring route with Lightfoot. "It's getting to be an internet world," Lightfoot. "That's the reason why we are trying to upgrade. If you don't keep up with technology you don't grow. The mom and pops [stores] are just about gone."

WHITNEY MATEWE

But dependable broadband would make it easier for the Lightfoots to do their jobs by receiving emails, doing online invoicing and would improve their ability to serve their customers, he said.

"The internet will not make our business better, but it makes our job easier to serve the people," Larry Lightfoot said.

Several business owners in Hermitage agreed that more dependable broadband service would make their jobs easier, create growth in their business, and that they aren't receiving a fraction of the service they're paying for.

Chase Crawford, a Hickory County commissioner and business owner, explained that because the main broadband hub is in Hermitage, residents have decent access to internet. Facebook loads on your phone using Wi-Fi and you are able to send emails without a problem. But when the hub is down, the entire city and surrounding areas are affected.

"We're working with the state right now and a lot of different private entities about bringing fiber-optic access to more rural areas," Crawford said. "It seems that it's an insurmountable task to fund such a project."

CenturyLink was unable to provide an estimate of how much it would cost to install a fiber-optic line per mile because it depends on the terrain and distance of the project. Federal data for Missouri fiber-optic costs was also unavailable.

The most available data from the U.S. Department of Transportation reported that in 2008 it cost $26,400 to install a fiber-optic line per mile in Louisville, Kentucky.

Crawford said the lack of dependable broadband is one of the reasons Hickory County doesn't have large industries, and high-speed internet is a necessity for most businesses to move to an area.

"It's hard to pull people away from urban areas if they don't have reasonable means of communication," Crawford said.

Supervising editor is Mark Horvit, horvitm@missouri.edu.

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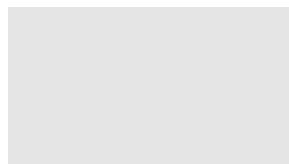State rural broadband expansion continues with $24.1 million from FCC

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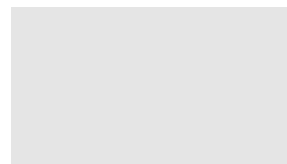
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