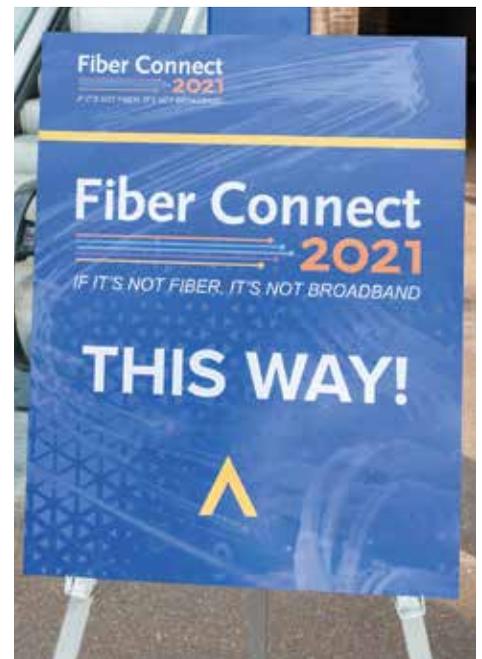


# Fiber Connect 2021: A Focus on Fiber, Open Access, Community Broadband And Public-Private Partnerships

The Fiber Broadband Association’s annual conference, Fiber Connect, held in Nashville in July, showcased many fiber community success stories and a variety of innovations that promise to expand fiber deployment. As one of the telecom industry’s first in-person trade shows since the pandemic began, it highlighted fiber’s role as the preferred way of delivering symmetrical broadband speeds, state and federal funding mechanisms, open-access, fiber-to-the-home (FTTH) networks and pricing. It also brought to light how broadband newcomers, particularly municipal broadband providers, need to overcome political and lobbying challenges from incumbents and think tanks, and the significance of public-private partnerships.



By Sean Buckley / *Broadband Communities*

## California Makes Multibillion Broadband Bet

**L**ocal community broadband efforts are all about bringing new broadband opportunities to communities whose broadband options historically were lacking. One state tackling this head-on is California, which is on track to have one of the largest open-access networks in the country.

Earlier this year, California set aside \$6 billion in what’s known as the “broadband trailer” bill. It allocates \$3.25 billion to build middle-

mile networks, which connect the last mile to internet and content hub sites in underserved and unserved areas.

California also set aside \$2 billion for last-mile lines in rural and urban areas to connect consumers’ homes and businesses with local networks. In addition, the state will create a broadband “czar” and a nine-member council within the California Department of Technology.

A key collaborator in the California plan is the Rural County Representatives of California (RCRC), an organization of 37 rural counties.

During the “Public Officials Forum” keynote panel at Fiber Connect, Barbara Hayes, chief economic development officer for the RCRC, told attendees that the group will help its rural members take advantage of the state’s new broadband funds.

“California has set up a low-loss reserve fund local governments can tap [...] to issue tax-exempt bonds to put broadband in the ground,” Hayes said.

### ADDRESSING THE UNSERVED, UNDERSERVED

According to a recent study from the University of California and the California Emerging Technology Fund, although more than 90 percent of Californians have high-speed internet, hundreds of thousands of students lack home broadband connections.

Hayes said California will have one of the largest state-owned, open-access broadband networks in the U.S. The RCRC works collaboratively with UTOPIA Fiber and KeyBank. “We’re stepping into space that’s either unserved by incumbent providers or underserved,” Hayes said.

California’s broadband networks will serve a rural population that has

limited broadband options. Today, 15 million out of 40 million California residents have only one choice of provider. Of that 15 million, about 3 million have no broadband access whatsoever.

“There’s a huge hole in California’s rural markets that needs to be filled with broadband,” Hayes said.

### SETTING PRIORITIES

Seeing the new networks with a future-proof vision in hand, California set four main priorities for its broadband plan:

- **Fiber first:** The state is committed to building out fiber with the understanding it might not be able to provide fiber everywhere.
- **Capacity:** The plan must meet high-speed expectations today and 10 to 20 years in the future.
- **Broadband for all:** The plan will consider how to reach all corners of the state with broadband.
- **Partnerships:** The RCRC hopes to build broadband in the counties it represents through creating partnerships and leveraging existing resources.

The RCRC plans to work with emerging providers and incumbent players. “We’re open to all who want to jump on the wagon,” Hayes said. “That includes incumbent service providers,

who offer a good opportunity to partner and leverage resources to cover our counties.”

But wiring homes with broadband is only one part of how the RCRC can leverage California’s initiative in its member counties. It also sees expanding fiber and broadband as an economic development play that has occurred in other cities.

“We want to connect those businesses on Main Street in rural California to the global marketplace,” Hayes said. “We also want to run fiber to business parks so we can have that same phenomenon that’s taking place in areas such as Huntsville, Alabama, in rural California.” Huntsville launched a fiber network expansion with Google Fiber that has made the city attractive to businesses; in recent years, Atlanta-based DC Blox began construction of a \$13 million data center, and Toyota-Mazda broke ground on a \$1.6 billion manufacturing plant there.

Hayes added that fiber makes a rural community an attractive area for businesses to locate. “Fiber has come up on the list of key components during the several business recruitment conversations I have had during my career,” she said. “We want rural California to be able to grow small and large businesses.”

## Windstream Finds Success in Public-Private Partnerships; Rural Affordability, Availability Challenges Remain

Windstream has a recipe it believes will bring fiber-based broadband services to more rural communities. The rural telco is taking a two-pronged approach to its FTTH expansion effort: leveraging its capital and entering public-private partnerships.

Focusing on rural markets, Windstream passed 129,000 locations with fiber in the first quarter of 2021. It enabled another 718,000 homes with fiber.

“We’re serious about investing in rural broadband, and the numbers reflect it,” said Tony Thomas, CEO of Windstream, during a keynote speech

at Fiber Connect.

Yet today, 42 million homes across the U.S. can’t access broadband.

Thomas said the challenge of rural markets is getting more affordable broadband services into more homes that could not get it before because of lack of service and pricing.

“We have a challenge with both



Tony Thomas, CEO, Windstream

availability and affordability,” he said. “A third of folks who do have broadband have less than \$30,000 in gross income and struggle to pay their bill.”

He added, “We have to conquer both of these elements to truly bridge the digital divide.”

### AGGRESSIVE EXPANSION

Windstream has set an aggressive investment plan to expand its fiber broadband network footprint. The telco plans to invest more than \$2 billion over the next five years, enabling it to connect 2 million homes in its footprint with fiber-based broadband services.

“There are a lot of opportunities to enable greater speeds inside homes and businesses,” Thomas said.

Although Windstream’s and other providers’ private investments continue to bear fruit, rural area deployments come with unique challenges.

A key concern is customer counts. “The number-one determinant is typically associated with population density,” Thomas said. “The more people you have, the more revenues you can generate to cover the investment.”

## LEVERAGING RDOF, CAF

Although Windstream is committed to its investment strategy, the service provider is leveraging federal funds, including the Rural Digital Opportunity Fund (RDOF) and the Connect America Fund (CAF), to help bring service to areas harder to serve.

The telco has pursued – and been awarded – RDOF and CAF grants from the FCC to bolster its fiber builds in rural areas. Specifically, Windstream won \$523 million in funding to connect 200,000 locations with fiber. The telco also completed its CAF-II projects on time and within budget.

“When we talk about areas with low population density, we do need strong partnerships at the federal, state and local levels,” Thomas said.

## P3S SHOW PROMISE

Windstream’s rural broadband push also is being propelled by its commitment to public-private partnerships (P3s).

The service provider established P3s across parts of its network footprint with local communities and electric utilities. For example, in Georgia, Windstream partnered with Colquitt, an electric cooperative, to deliver 1 Gbps in areas where it could not build a business case to serve on its own.

Windstream also struck a P3 with

Pennsylvania’s Greene County to build fiber to 7,300 homes in Bobtown, Carmichaels, Greensboro, Jefferson, Mount Morris, and Waynesburg on the local community level.

Most customers previously had access to less than 25 Mbps. Greene County commissioners leveraged funds through the CARES Act, coupled with capital from Windstream Kinetic, to fund the project.

“In Greene County, the dollars were more constrained, but we pushed fiber much closer to customers to enable [more than] 1 Gbps capability for [more than] 7,200 citizens through a partnership with local county officials,” Thomas said.

These are just a few examples of Windstream’s P3 process; it said it would work with others. “Windstream has a track record and is willing to help communities get connected,” Thomas said. “We are committed to working with local, state and federal officials to make sure these broadband programs are successful.”

By using these relationships, Thomas said, Windstream wants to “prioritize those communities that are either underserved or unserved – or those that have access to less than 100 Mbps symmetrical services – so they can join the digital revolution.

“We want to do these public-private partnerships,” he added. “When we talk to communities in our footprint, we give them some simple goals: have a qualified provider and understand where you will build.”

## ADDRESSING AFFORDABILITY GAPS

Despite the promise of P3s and other programs, the reality is that an estimated one-third of the country still struggles to pay for broadband service. Over the past year, programs such as the FCC’s

Emergency Broadband Benefit (EBB) provided a \$50 subsidy per customer.

Kinetic, Windstream’s community broadband business, also participated in the \$3.2 billion program. A key issue with the EBB program is it is only temporary.

“The Emergency Broadband Benefit is a good program, but the only challenge with it is it was funded by Congress through an appropriation,” Thomas said. “Once the appropriated money goes away, the program disappears.”

One way to address this shortfall is to use the Universal Service Fund (USF). Again, the only issue is that landline voice, not broadband, underpins the USF program.

“The way we solve the problem is expanding the base of contributors,” Thomas said. “We need other companies that leverage digital infrastructure – Netflix, Google, Yahoo – to pay a small fee and not push down a small set of carriers.”

He added that when “we widen that contribution base, we make this program financially solvent and solve one of the biggest challenges inside the industry: affordability.”

Thomas is not alone in his desire. In a recent Newsweek article, FCC Commissioner Brendan Carr opined that large tech companies should pay their share to carry their services on the internet.

“Big Tech has been enjoying a free ride on our internet infrastructure while skipping out on the billions of dollars in costs needed to maintain and build that network,” wrote Carr, who pointed out that Netflix, YouTube, Amazon Prime, Disney+ and Microsoft account for 75 percent of all rural broadband network traffic.

## C Spire’s Meena: 25/3 Mbps is Not enough

Though the FCC defines broadband as 25/3 Mbps, FTTH advocates say it’s inadequate.

C Spire is building out an FTTH network in the South to enhance residential and business broadband. Hu

Meena, the company’s CEO, said the 25/3 Mbps standard does not reflect broadband consumers’ usage realities.

“We are stuck in a country where customers who can get 25/3 speeds are considered connected. That can no

longer remain the case,” he said during a Fiber Connect keynote speech. “The 25/3 Mbps standard is further behind antiquated 3G in the wireless industry.”

Meena admitted that although he did not always agree with former FCC



Hu Meena, CEO, C Spire

Chairman Tom Wheeler, he does think Wheeler got broadband speeds right. Wheeler noted in a JP Morgan report that 74 percent of Americans who have internet access pay for speeds of at least 100 Mbps and that the number will increase to 90 percent by 2025.

“If the market is demanding faster speeds, why should we subsidize slower services?” Meena said.

He added, “symmetrical service should be the minimum build requirement and to subsidize other ways is a tragic waste of American taxpayer dollars.”

### NEW BROADBAND REALITIES

The pandemic highlights how high-speed broadband is critical for students, consumers and businesses. Fiber broadband transforms communities with education and economic expansion.

Meena noted that when he was a kid, he and friends spent time outside playing games and sports. That’s not as common today. “Kids these days spend time at home behind an iPad, completing their homework, watching YouTube videos or gaming with someone who may be located halfway around the world,” Meena said. “Meanwhile, mom is completing a telehealth visit while dad is completing a Zoom call, which all require a lot of bandwidth.”

One issue preventing the industry from moving forward, contends

Meena, is government regulations that oversee broadband funding. “For too long, policymakers have focused on making broadband funds technology-neutral, which has left rural and parts of urban America with inadequate connectivity,” he said. “Our country can no longer take that stance if we want to be competitive.”

He added, “policymakers’ debating speeds is a disservice to our country and is simply the result of incumbents trying to maintain the status quo.”

### FIBER IS DISRUPTIVE

C Spire is just one of several providers that have made fiber-based broadband a priority. “The incumbents were resistant to upgrading to fiber before the onset of competition and the pandemic,” Meena said, noting they are now rethinking their FTTH strategies.

C Spire has set a goal to bring fiber to communities that want its service.

The service provider was approached by one town that the local cable provider was ignoring. The town was not initially on C Spire’s radar, but C Spire felt compelled to go there based on the town’s enthusiasm to get an FTTH service.

“Our research showed just how upset the residents were about lack of adequate connectivity and poor customer service,” Meena said. “In a matter of weeks, more than 35 percent

of the town’s addresses were ready to sign up for our service.”

Overall, FTTH deployments are gaining momentum. According to RVA LLC’s 2021 North American FTTH forecast, U.S. FTTH investment will be more than \$60 billion in the next five years. A large portion of this investment will be used to make fiber available to new homes for the first time, but some will be allocated to create fiber competition for homes that already have a fiber provider.

Large incumbents and a host of competitive and community players are going all-in on FTTH. AT&T, CenturyLink (Quantum Fiber) and Verizon are expanding their FTTH networks. Frontier, which has emerged from bankruptcy protection, has adopted an aggressive FTTH buildout strategy.

“This year alone, Wall Street has seen the big incumbent ILECs plan to increase fiber-to-the-home investments to more than 30 million locations. This does not include smaller providers, such as electric cooperatives and municipal providers that are all deploying fiber across their footprints,” Meena said. “If policymakers would follow the way of Wall Street, we’d see the billions of dollars about to be spent on broadband in a practical and future-proof way.”

## Political Will Remains a Challenge for Community Broadband

As more communities decide to take their broadband destinies into their own hands, they have to overcome hurdles, including a powerful incumbent carrier lobbyist campaign and the challenge of educating community members about their plans.

During Fiber Connect, representatives from California, Colorado and Rhode Island shared how they have been battling politics, not technology, to get their broadband programs off the ground.

Each state may be different regarding populations and broadband choices, but all have one common goal: enabling access to affordable, high-speed broadband.

### ENGAGING THE COMMUNITY

New broadband entrants should face the reality that community broadband projects often don't proceed. According to Strategic Networks Group (SNG), 90 percent of community fiber projects in the U.S. have failed.

Bob Knight, the executive vice president of broadband and COO at Harrison Edwards, told Fiber Connect attendees that communities that succeeded had engaged all community members properly. He added that new entrants should educate community members about symmetrical speed benefits and funding the network.

"It's all about telling your story effectively, which can be challenging," Knight said. "People don't understand symmetrical speeds, the correlation between 5G and fiber and the finance behind it."

He added that new players should talk to tech-savvy consumers and other community stakeholders, including farmers, public safety officials and seniors. "You need to make them understand how your fiber project is going to benefit them."

Rhode Island is one of the smallest U.S. states and has poor broadband choices. Although the state did receive Broadband Technology Opportunities Program (BTOP) money to build a 48-strand, middle-mile fiber network in 2010, not everyone benefited. "Universities, hospitals and schools

have fiber broadband access, but municipalities, small businesses and residents don't," said Rhode Island Rep. Deb Ruggiero (D). "We have this fabulous information superhighway running throughout our state, but we don't have the last mile on- and off-ramps for people who need it just as much."



Rep. Deb Ruggiero

Ruggiero's support for broadband is rooted in stories she hears from her constituents about their broadband situation. In response to an op-ed she wrote in a local Rhode Island newspaper, a Jamestown resident said he has better broadband at his summer home in Portugal. "It is compelling, but it is taking all this messaging to relate to people," she said.

One way to get a message to a broad audience is to talk about fiber's capabilities and costs. For example, Newport, Rhode Island, consumers pay \$1.06 per megabyte of bandwidth; Taunton, Massachusetts, customers pay 30 cents per megabyte.

"You hit people where it matters most, which is their pocketbook," Ruggiero said.

### OVERCOMING OPPOSITION, MISINFORMATION CAMPAIGNS

Once a community gets a broadband plan in place, it often faces opposition from incumbent providers, think tanks and taxpayer associations.

In state and federal legislatures, \$7–\$10 million dollars a month is spent on lobbying efforts to stop or slow community broadband projects. "You have to assume there's going to be a challenge along the way," Knight said.

Colorado, California and Rhode Island, all at different stages of developing community broadband plans, have seen strong opposition to community broadband efforts.

Newcomers such as Pulse, a community FTTH provider in Loveland, Colorado, saw plenty of

opposition during the three-year process of developing its business. Pulse also faced the immediate challenge of the Colorado SB-152 law that prohibited communities from forming their own broadband businesses.

However, a provision in the Colorado law allows a community to overturn it to explore broadband options. More than 150 Colorado communities have voted to overturn the measure since the law went into effect in 2005. Cities including Longmont, Loveland and Fort Collins have continued to invest in building out their own broadband network infrastructure. In June, Cortez became the latest municipality to opt out of SB-152, with 78 percent in favor.

Pulse worked with the chamber of commerce, businesses, schools and local hospitals to develop its task force. The task force developed five tenets: reliability, speed, affordability, customer service excellence and accessibility.

"All in all, we had 25 back-and-forth meetings with our city council members," said Lindsey Johansen, communications and marketing manager of fiber for the City of Loveland. "There was quite a bit of opposition from public providers and some grassroots efforts organized against municipal broadband, and it became a contentious topic with our city council members toward the end of 2017."

Although the city council was reluctant to decide, it did appropriate funding and an aggressive communications and outreach plan. Education was vital in Loveland because there was confusion about what Pulse proposed. Pulse became aggressive with community outreach by participating in parades, community engagement sites and Facebook Live.

"Our project management team at the time did a good job of identifying all of our champions – businesses and those in the community who were pro broadband," Johansen. "We share why students need fiber to learn and [why] health care needs [fiber and emphasize that] it's not just another way to upload more selfies to social media."

In Rhode Island, the challenge has been no less daunting. Besides Mississippi, Rhode Island is one of the only states in the country that does not have a broadband office. State broadband offices help distribute federal dollars designated for broadband for local communities.

Leading the effort to develop a state broadband office for Rhode Island, Ruggiero pushed forward a bill in the Rhode Island House to create a broadband office. It passed 72–0 on the House floor with bipartisan support.

However, an incumbent cable operator led an effort to stop the bill from passing in the state Senate. “I know the influence of lobbyists is important because you rely on them to give you the information to do the due diligence, but often they can skew an issue,” she said.

RCRC laid out plans to develop an open-access network architecture in the state. However, during the last night of a state Congressional session, a lobbyist for an incumbent removed all broadband provisions.

Meanwhile, incumbent providers had started offering Wi-Fi services for students in unserved areas in parking lots. At the same time, the availability of telehealth for rural residents became a more significant issue.

“In California’s Central Valley, you are looking at temps of over 100 degrees, and you have parents and kids sitting in cars to access the internet,” Hayes said. “When that hit the media, it was tough for legislators to look away.”

## INDUSTRY PERSPECTIVES

“Americans at home or in their place of business should not be held back by slow broadband.”

– Hu Meena, CEO, C Spire

“It’s easier to secure funding than it is to secure political will.”

– Chris Perlitz, Municipal Capital Markets

“In Washington, you need to be able to tell your story.”

– Shirley Bloomfield, CEO, NTCA

“I don’t think there’s anyone in any industry who disagrees that fiber is the answer, but the question is, how do we get there?”

– Gary Bolton, CEO, Fiber Broadband Association

“It has become clear that broadband adoption is a bigger problem than accessibility.”

– Matt Polka, President and CEO, ACA Connects

“Fiber is the answer.”

– Russ Brethower, Senior Manager of Wholesale Fiber, Grant Public Utility District

“You can’t be all things to all people.”

– David Wade, CEO, EPB

“Competition will do more than any regulation.”

– Deb Ruggiero, Rhode Island State Representative

“I love the term ‘open networks’ because it also means ‘open-minded.’”

– David Corrado, CEO, Medina County Fiber Network

“Fixed wireless does not have the same capabilities as fiber. It’s not personal – it’s just math.”

– Tony Thomas, CEO, Windstream

## Electric Co-ops, Municipalities Won’t Play a Pricing Game

Electric cooperatives and municipalities may be new to the broadband game, but they have no interest in waging a price war against area incumbent providers.

Whenever a new competitor emerges in a town or city where a broadband incumbent telco or cable company already has a presence, there’s a possibility that the incumbent could try to undercut that provider with discounted pricing.

However, emerging providers who

spoke at Fiber Connect maintain they won’t engage in price wars.

### LOVELAND PULSE’S COMPETITIVE OUTLOOK

Loveland, Colorado, which launched its Pulse fiber network in 2018, conducted feasibility studies on the take rate it needed to break even on its FTTH investment.

Today, Loveland Pulse offers three main tiers: a starter 30 Mbps package for \$44.95 a month, 1 Gbps for \$74.95

and a 10 Gbps tier for \$299.95.

Lindsey Johansen, communications and marketing manager of fiber for the City of Loveland, told attendees during “The Case for Funding: Building



Lindsey Johansen, Communications and Marketing Manager of Fiber, City of Loveland

Community Support and Political Will” panel that incumbents’ pricing responses are a positive outcome.

“If an incumbent drops prices below what makes sense for us, we feel like that’s one of the benefits of having competition in the market, and our community can take advantage of that,” Johansen said.

But she was quick to add that one critical theme Loveland heard from other communities developing plans was that battling incumbent prices is not a winning proposition. “We visited a lot of different communities before the launch of our service,” Johansen said. “One of the things that they said to us over and over again was ‘don’t play a price battle game with the incumbents.’”

### CUMBERLAND’S FAIR AND TRANSPARENT APPROACH

Cumberland Connect, a subsidiary of Cumberland Electric Membership Corporation (CEMC), is taking a

similar tack with pricing in the rural Tennessee area it serves with FTTH.

As part of a multiyear, multiphase build, Cumberland Connect plans to build service across multiple rural Tennessee counties. Its parent CEMC currently serves more than 100,000 members, and its service territory includes more than 8,000 miles of serviced lines spanning Stewart, Montgomery, Cheatham, Robertson and Sumner counties.

When Cumberland Connect conducted a feasibility study, according to the FCC maps, it found that it had plenty of cable and telco competition, according to Mark Cook, manager of engineering and broadband for Cumberland Connect. At the same time, parts of the organization were worried about how incumbents would respond when it built to a specific area.

“We have seen our incumbent competitors build in the areas that they probably never would have,”

he said during the “Case Study: Electric Cooperatives Transition to ISPs” panel. “Early on, we were concerned when to announce where we were going, but I kept saying we’re going to go everywhere.”

Cumberland maintains its commitment to offer consistent pricing. It offers two main internet tiers: 250 Mbps for \$50 a month and a 1 Gbps package for \$80 a month. It also offers an unlimited voice calling service and three internet/video bundle packages.

“If competitors are going to do teaser rates and make threats of ‘here comes the big bad electric company,’ we decided day one that we’re not going to play that game,” Cook said. “One of the key things we have banked on is fair and transparent pricing.” ❖

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