

# Colorado Springs Utilities Establishes Citywide Fiber Foothold

Construction will begin this year on a citywide fiber network, anchored by Ting Internet, expected to pass more than 200,000 addresses and enable smart-city applications.

By Sean Buckley / *Broadband Communities*

Colorado Springs, Colorado, plans to build a new, citywide fiber network owned by Colorado Springs Utilities (CSU) that will bring consumer choice to the area. CSU's first anchor tenant for the network is Ting Internet, which signed a 25-year lease late last year, enabling it to offset a portion of the \$100 million annual construction cost and accelerate the build. Construction will now take six years instead of 15.

Construction will begin by the third quarter of this year and is expected to surpass more than 200,000 addresses, bringing modern fiber infrastructure throughout Colorado Springs.

"Colorado Springs is a vibrant, entrepreneurial, diverse community, and it seems like an ideal place to see ubiquitous fiber expansion," says Monica Webb, senior director of market development and strategic partnerships at Ting.



Monica Webb

However, Ting is not the only provider interested in being part of the CSU network. According to a report in the Colorado Springs Business Journal, Google Fiber is trying to reach an agreement to lease part of the 2,000-mile network. In a release, Aram Benyamin, CEO of CSU, said that this "nonexclusive network will provide

the foundation for a prosperous and smart city of the future."

## SMART-CITY GENESIS

The genesis of CSU's citywide fiber network emerged during a conversation between Benyamin and Colorado Springs Mayor John Suthers in 2020. While broadband access was a concern of the city, the two formative concepts behind the project were: enhancing utility operations (from the Utilities side) and enabling smart city tech (from the City of COS side). Simultaneously, Benyamin realized that CSU needed to enhance its operations and become more connected.

"We knew that to be a modern utility and enable the utility of the future, we needed to change the way we do things," says Brian Wortinger, fiber/telecom manager at CSU. "We've been following a model for 100 years in which we have large generating plants that push power in one direction out to our customers, and they consume it."



Aram Benyamin



Brian Wortinger



The new citywide fiber network in Colorado Springs will support smart-city applications, including advanced meter infrastructure, which eliminates the need for manual meter readings and enables dynamic pricing of electricity based on power demand.

The new model calls for an electric grid infrastructure in which every power consumer could be a potential energy producer. Rooftop solar, geothermal battery energy and microgrids are all part of the plan.

CSU has already built a sizeable, point-to-point communications network to serve the needs of its four facilities. It has 250 route miles of fiber and 35 microwave tower sites.

In addition to managing the electric grid, the CSU fiber network will better manage its water operations. “Living in the high desert, every drop of water is precious, and we know we can do better managing that water with sophisticated controls,” Wortinger says.

### SMART-GRID, SMART-CITY APPLICATIONS

The fiber network will enable CSU to support several of the City of Colorado Springs’ smart-city projects and innovative grid applications for its internal operations. CSU is developing two applications: advanced meter infrastructure (AMI) and microgrids.

One AMI advantage is that it eliminates the need for manual meter

readings and enables dynamic electricity pricing based on power demand, reducing the cost of electricity delivery and the frequency of blackouts. Today, CSU backhauls AMI traffic with wireless solutions from a national wireless operator.

“Currently, we are conducting AMI backhaul with over-the-air solutions that are less secure and more expensive than the new fiber network will be,” Wortinger says.

The utility also plans to implement microgrids. A microgrid is an energy system that serves a discrete geographic

footprint, such as a college campus, hospital complex, business center or neighborhood. Each microgrid contains one or more types of distributed energy (solar panels, wind turbines, combined heat and power, generators) that produce its power.

“We’re implementing a microgrid solution in the next few years, and this fiber design will be integrated into that solution so we can completely island different parts of our city,” Wortinger adds.

In addition, CSU is coupling the fiber network build with temporary

### FIBER CAPITAL INVESTMENTS SET TO ACCELERATE

In its report “2022–2026 North American Fiber Broadband Report: FTTH and 5G Review and Forecast,” RVA LLC estimates the five-year U.S. capital investment in fiber to the home (FTTH) will exceed all investment in FTTH to date and will surpass \$125 billion in the period.

According to the research firm, several drivers impact fiber broadband’s “unprecedented build cycle.” FTTH has the highest bandwidth speeds (particularly on the upstream side), the lowest latency, and the highest reliability, and consumers respond to and churn toward fiber providers when the fiber is available.

gas generators to replace a coal-fired power plant it is tearing down starting next year. “Once we have rebuilt our transmission system, we will move those temporary natural gas generators to different parts of the city,” Wortinger says. “We can then island portions of the city and this network.”

The network will also improve security. It will enable CSU to separate its IT and operational technology traffic. “We’ll be able to cut our costs in deploying and maintaining firewalls and, more importantly, provide a more secure network,” Wortinger says.

## LOOKING TO OTHER MODELS

As CSU sees it, the fiber network will enhance internal communications and provide more competitively priced broadband for residents.

CSU cited Huntsville (Alabama)

Utilities and City Utilities (CU) of Springfield (Missouri) as models for its citywide fiber network. Huntsville Utilities launched a fiber network in 2018 with Google Fiber as an anchor tenant. In 2019, CU announced plans to expand its fiber network by more than 1,000 route miles to provide affordable, high-speed broadband services to all of Springfield. Private broadband providers are able to lease the fiber, and CenturyLink (now Quantum Fiber) is the first customer.

“Huntsville and Springfield are examples showing it’s possible to build what we need for utility purposes,” Wortinger says. “We can then overbuild to support dark fiber leases for third-party entities and leverage the lease payments to offset the costs to our ratepayers.”

## A SENSIBLE PARTNERSHIP

Becoming an anchor tenant on CSU’s fiber network makes sense for Ting Internet. Ting is already present in more than 12 towns and cities, with more to come this year. A tenant lease on CSU’s network provides Ting an opportunity to scale its Colorado presence and focus its commitment to deliver what it says is “best-in-class service that delights our customers.” By establishing the agreement with CSU, Colorado Springs will become Ting’s largest market, with 200,000 available addresses.

During the early phases of infrastructure deployment, Ting will focus its efforts on establishing a local presence, connecting with enterprises within the community, and hiring a dedicated Colorado Springs team. It expects to provide fiber internet access to local businesses, enterprises and residents by 2023.

Webb says Ting’s agreement with CSU is just one of many agreements to enhance and expand its presence in more markets. “Ting is the first anchor tenant on the Colorado Springs Utilities fiber network, and it will be open to taking other providers as well,” she says. “We have fiber leases with other cities, including Westminster, Maryland.”

## FINDING THE BEST FIT

To understand which provider would be the best fit for broadband, CSU sought the help of The Broadband Group (TBG), which identified more than 30 providers. After TBG approached each candidate about the type of network, region, and size of the city, the list was narrowed down to a half-dozen. CSU sent these candidates information; they returned letters of intent stating terms and rates.

“We evaluated those responses to determine our top candidates, interviewed them, began negotiation and ended up with Ting being the best fit based on the criteria we established for bringing on an anchor tenant,” Wortinger says.

Today, several other traditional incumbent telco and cable operators offer broadband in different parts of the city. Still, many areas remain underserved in high-speed broadband.

## FIBER BROADBAND, ELECTRIC UTILITY PACTS GROWING

Partnerships between utilities and service providers such as Ting Internet continue to grow, mainly as more communities seek new ways to get broadband services.

Ting Internet’s lease agreement with Colorado Springs Utilities (CSU) plays to each company’s strengths. “What makes our arrangement with CSU a win for both parties is that it leverages the utility’s experience in building and managing critical infrastructure with Ting Internet’s expertise in marketing, provisioning and serving fiber internet customers,” says Monica Webb, senior director of market development and strategic partnerships at Ting. “It’s a great way to leverage what both parties are best at.”

CSU joins several other utilities that create arrangements with providers by building networks or sharing resources.

Traditional service providers such as Cincinnati Bell and Windstream have established partnerships with Butler Rural Electric Cooperative (BREC) and Colquitt Electric Membership Corporation to extend FTTH into rural markets in Kentucky and Georgia. Meanwhile, Huntsville Utilities built an open-access FTTH network with Google Fiber as the initial anchor tenant.

Such fiber agreements benefit all parties. An electric utility can help serve its community with necessary broadband service but contract with a third party to provide customer service, installation and other functions.

In addition to already having access to infrastructure, such as poles and construction crews, utilities have an established customer base to tap into for services. By installing fiber, a utility can provide necessary connectivity for grid applications. “A lot of utilities and electric co-ops are expanding fiber service, which not only benefits the operations of the utility itself, but is also a natural infrastructure service to all residents,” Webb says.

“Once you go beyond what the government refers to as underserved and unserved, we have a lot of unserved parts in our community,” Wortinger says. “Even in places where we have good service according to FCC maps, our market research told us that customers in those areas were not happy with their broadband service.”

### FURTHERING THE COPPER, COAX-TO-FIBER TRANSITION

Demand and awareness from cities and utilities across the country for fiber-based broadband have increased since the pandemic. Ting is rising to the challenge as it expands its presence in more cities and towns via partnerships with communities and with other providers.

“There has been a realization that existing coax or copper-based infrastructure is not sufficient,” Webb says. “There’s also an understanding that anytime people have to work or go online for school, they need great internet at core anchor institutions, and connections need to be distributed throughout the community so people can stay connected when challenges arise, such as the pandemic.”

She notes that Ting has seen the demand from cities escalate, adding, “Ting is well positioned to respond quickly to that demand because we have an established operation, and we spent last year structuring the Ting Internet business to scale effectively and quickly.”

Ting continues to ramp up its fiber presence. The provider added 2,600 new customers during the fourth quarter, scaling to 25,000 subscribers. Likewise, Ting Internet continues to build up its service addresses. During the fourth quarter, good address additions rose to 7,900, more than doubling last quarter’s additions.

Ting also increased its fiber capex, reaching \$17.5 million in the fourth quarter. This figure included what it said was a forward-looking network-design investment in anticipation of 2022 network builds and in inventory to mitigate potential future supply chain issues.

Elliot Noss, president and CEO of Ting’s parent company, Tucows, and Ting executive officer, said, “We intend to scale our expansion and investment significantly in 2022 and 2023, and investors should expect fiber capex to continue to climb.”

### FELLOW MUNICIPAL SUPPORT, PERSPECTIVE

As a utility offering electricity as its leading service for more than 100 years, CSU recognizes that fiber broadband requires new skills and knowledge. Because building a fiber network is a new endeavor for CSU, the utility reached out to other cities and utilities that have embarked on similar projects.

“We got a lot of support from other municipalities and the utility industry to help us with things to think through as we go through this project,” Wortinger says.

What about other nearby communities looking for new broadband options? Though he’s not ruling out the idea of working with another community, Wortinger says the network will initially serve only Colorado Springs.

CSU will continue to collaborate with the City of Colorado Springs and broader El Paso County, Colorado, in the near term. Specifically, the utility will seek opportunities for sharing facilities. Of the partnership with El Paso County, Wortinger says, “We’ll continue to see where we can leverage one another’s capabilities, whether it’s a joint trench or potentially carrying the City of Colorado Springs IT traffic over the dark fiber that we lease to them as another customer.” ❖

*Sean Buckley is the editor-in-chief of **BROADBAND COMMUNITIES**. He can be reached at [sean@bbcmag.com](mailto:sean@bbcmag.com).*



## Fast, Flexible FTTX Distribution Solutions



### Optical Hub Cabinets (OHC)

Flexible fiber distribution for up to 864 drops from a compact groundmount cabinet (various sizes available) with front and rear doors



### BDO Fiber Distribution Pedestals

Non-metallic fiber splice pedestals for both greenfield and brownfield FTTP, with a variety of sizes supporting 48 to 576 fibers and fiber-only or copper/fiber splice points



### CFBT Building Terminals

NEMA 12 indoor fiber aggregation or demarcation enclosures for up to 96 SC fiber connectors or 432 fiber splices; ideal for scalable, cost-efficient MDU fiber deployment



INNOVATIVE ENCLOSED SOLUTIONS™

[www.charlesindustries.com](http://www.charlesindustries.com)