



Offsetting Fiber Costs with the Utility Lease Model

How a city owned electric utility effectively “changed the math” on traditional network build economics, enhancing its grid operations while advancing connectivity options for residents and businesses throughout its service territory.

In 2016, City Utilities (CU), a municipally owned electric utility based in Springfield, Missouri, offering a comprehensive range of services including electricity, natural gas, water, transit, and fiber operations, initiated a transformative project. The objective was to expand its current fiber network, SpringNet, and modernize its utility operations. But like many utilities, CU found the cost of such a sweeping fiber deployment prohibitive. To secure control over its connectivity future and ensure its effectiveness as a utility serving the city, CU sought a solution.

“When the math doesn’t work, change the math.”

Jeff Bertholdi, the Director of Broadband at SpringNet, spearheaded the fiber expansion initiative. In the pursuit of viable options, CU came across a novel fiber model implemented in Huntsville, AL which intrigued them into visiting the city-owned electric utility to delve deeper into the details. They discovered that Huntsville Utilities (HU) was helping to offset build costs of its own 1,000-mile fiber network by leasing part of the newly built fiber network to an Internet Service Provider (ISP). The novel approach of leasing excess fiber effectively transformed HU’s fiber network into a revenue generating asset, “changing the math” on traditional fiber build economics. Recognizing the potential of this approach, CU realized that it could be the solution needed to make citywide fiber deployment suddenly feasible for Springfield.

Identifying a Qualified Consultant and Advisor

City Utilities sought to build a fiber network to future proof visibility and control of their distribution system, including advanced grid monitoring technologies. For long-term benefits, the goal was for fiber to pass every residence within their service territory, regardless of economic status.

City Utilities issued a Request for Proposal (RFP) to identify a consultant who could guide and educate on fiber network options, business metrics, and financial scenario analysis.

“While we knew The Broadband Group (TBG) oversaw Huntsville’s network build, we wanted to ensure we understood every potential option,” explains Bertholdi. “Upon evaluating various organizations, TBG emerged as the clear choice. We were seeking a company with extensive experience in every aspect of a network build that could leverage lessons learned and best-practices versus a traditional engineer/design firm. We required an advisory resource with long-term perspective on the industry that could take us from initial strategy development to network design, to potential network tenant selection, all the way through construction. TBG’s track record in creating industry shaping structures over the years was a distinguishing factor.”

“TBG tailors network deployment options according to the specific desires of a city or utility, avoiding any preconceived assumptions. Our role is to educate clients, offer a range of options, conduct assessments to mitigate risks, and ultimately discover pathways to achieve the utility’s objectives. Three decades of lessons learned and best practices is what sets us apart, and I think that appealed to City Utilities in the selection process,” explains Andrew Hurry, The Broadband Group’s senior financial consultant.

Applying Learnings to Select a Path

Bertholdi explains that during the initial planning phase, The Broadband Group embedded itself within the Utility to conduct in-depth analysis and create a solid strategic plan. TBG developed a comprehensive report along with a preliminary network design that served as the basis for shaping potential build metrics. Financial requirement insights were also detailed, facilitated by a dynamic pro forma that incorporated a wide range of scenario analyses. “We were suddenly empowered to make informed decisions in a vertical that was outside the core area of expertise of the Utility.”



One of TBG’s suggested network deployment solutions was the “Utility Lease Model” that was recently successfully completed in Huntsville. In this approach, City Utilities would design and construct its citywide network with a primary objective of better serving its community through improved fiber accessibility and enhancing future utility operations. Notably, the network would include excess fiber capacity that could be leased to an ISP, creating a new revenue stream. “The model was inspired by a thesis introduced by Blair Levin (Brookings Institution), in which he challenged the industry to identify deployment models that ‘change the math’ and allow for fiber networks to be deployed in locations where they financially would not, or could not, otherwise occur,” explains Jeff Reiman, president of The Broadband Group.



From Plan to Execution

After careful examination of various network build options, weighing risks and rewards, City Utilities made the strategic choice to adopt the Utility Lease Model for its territory-wide fiber network deployment. It was seen as the optimal approach to provide the Utility with a communications platform that could not only support today’s technologies, including supervisory control and data acquisition (SCADA), and advanced meter reading (AMI), but also inevitable future technologies.

The proposed fiber network would span almost 1,100 miles and pass approximately 115,000 Springfield homes. With the network design in place, it was now time to identify an ISP anchor tenant that was operationally and financially qualified. An RFP was circulated to interested ISPs who saw the value in reaching 115,000 new potential subscribers.

Numerous ISPs responded and each was evaluated based on their financial sustainability and operational capabilities. Ultimately, upon TBG’s recommendation, City Utilities selected Centurylink (now Lumen) as the anchor tenant. With a signed network lease in place, City Utilities was able to obtain its Board approval for the fiber build.

Constructing. Managing Challenges. Delivering Timely Results.

With the project approval, TBG worked alongside City Utilities to identify material and construction vendors for network implementation. Recognizing the potential for unforeseen challenges in a project of this magnitude, City Utilities required a structured plan grounded in realistic risk assessments.

Patrick Thibeault, senior vice president & CTO at The Broadband Group, highlights the company's ability to complete the network construction within three years, attributing the success to careful and experienced based planning at every stage. "The approach involved simultaneous network planning and construction, enabling continuous learnings of the topography and the seamless incorporation of improvements. This adaptability helped us to both minimize costs and ensure the timely completion of the project."

Despite the best laid plans, one major challenge was the network construction commencing only months before the onset of the pandemic. The project and its vendors would suddenly face unimaginable challenges.

Bertholdi recalls that, "In spite of pre-orders and efforts of our vendors, some material orders went unfulfilled on-time due to pandemic supply chain demands. But when our primary suppliers ran out of the materials, TBG's network allowed them to find solutions by locating materials and equipment we needed. Somehow, TBG was able to maneuver the industry challenges and came through for us." Despite the seriousness of the pandemic and some inevitable delays, the project ultimately was successfully completed months ahead of schedule.

High-Performance Internet Connectivity: The Utility Lease Model's Side Benefit

Today, Bertholdi explains that the project has been an overwhelming success. City Utilities is benefitting from improved grid operations while Brightspeed (the anchor tenant after purchasing the region from Lumen) provides a competitive choice for Internet services, delivering gigabit connectivity to Springfield's residents and businesses.

Springnet director Jeff Bertholdi explains that "Prior to our initiative, local internet was not only frustrating, it was unacceptable. The number of calls we were getting from residences complaining that their ISP was not meeting their needs was overwhelming."

Since Brightspeed started offering gigabit internet service, Bertholdi says, "We continue to hear positive feedback from local households receiving the fiber-enabled Internet services. We now have a motivated provider delivering high-performance service to our community, introducing a level of competition never before seen in this market."

"The transformation of Springfield, even in these early days of the project being complete, has been incredible to witness. When we first visited Springfield in 2016, the home video rental business was still in existence," recalls TBG's president, Jeff Reiman. "Legacy internet infrastructure was so poor that Netflix was still not widely adopted to the point video rental stores were still in demand. The new fiber network has been transformational for the city, highlighted by the Wall Street Journal naming Springfield as the 'Top City for Remote Workers' in the country. A high-profile recognition that could not have even been a consideration absent the fiber network."



Better Operations. Improved Services. The Utility Lease Model's Many Benefits

Jeff Bertholdi notes that the fiber network has already enhanced reliability of the electrical grid and improved operations. "The process of building the fiber network, which included pole upgrades, has introduced material financial benefits. The substantial efforts invested in the make-ready process have notably bolstered the system's reliability, as each pole touched undergoes an essential upgrade," explains Bertholdi.

Although not the primary driver for the expanded fiber network, Bertholdi reiterates the significance of Brightspeed's local gigabit internet service, emphasizing its considerable benefits for both residents and businesses.

Selecting the Right Advisor

"My advice for other utilities considering a similar path is to prioritize consultants and advisors who have completed projects in their portfolio," says Bertholdi. "Many utilities recognize the need for infrastructure upgrades, however struggle with the financial aspects involved in a large-scale fiber build. Working with The Broadband Group and the Utility Lease Model unlocks the roadblocks and empowers your community to become a leading-edge digital city."

The Broadband Group's Key Benefits for utilities to partner with an ISP in a Utility Lease Model structure.

1

Minimize Market Risk – By constructing a fiber network that suits a utility's requirements and leasing excess capacity to a tenant ISP, the utility can focus on its core competencies without the numerous challenges in becoming an ISP. Further, the tenant(s) ISP pays a fixed lease rate, regardless of its take rate. While improved residential and business internet service and heightened competition are desirable outcomes, they are more of a byproduct than a primary goal for the utility.

2

Remove Drop Risk – Customer drop installation is often the most challenging aspect of fiber network construction. Under the Utility Lease Model, the tenant ISP assumes this responsibility and the investment in drops only occur when there is immediate revenue from a new subscriber.

3

Network ROI – The lease contract outlines the tenants' fixed monthly payments throughout the term of the agreement. The anchor tenant commits to paying a set amount for each household passed, effectively transforming a previous cost center into a revenue generating asset.

4

Better Balance Sheet – The Utility Lease Model was carefully crafted to respect the metrics of the broadband industry. This attracts reputable ISPs with the financial capacity and operational wherewithal to be sustainable over the term of the agreement.

5

Mitigating Political and Legal Risks – By not becoming the primary ISP, The Utility Lease Model avoids the push back communities have seen for a public entity competing with private business. In this case the utility is not competing against private businesses. A utility builds the network it needs for its internal operational priorities and simply enables ISPs to provide fiber enabled broadband services to residents and businesses.