

Whip City Fiber Delivers Gigabit Service

A 118-year-old utility in a 349-year-old city is bringing the most up-to-date technology to its citizens and neighboring Western Massachusetts towns.

By Ryan Cawley / *SpryPoint*

Westfield Gas + Electric (WG+E) in Western Massachusetts has been privileged to serve the citizens of Westfield for 118 years. Following the failed efforts of private investors years earlier, the city fathers decided to keep the utility alive and purchase it outright, with a mission to provide the residents and businesses of Westfield with reliable gas for lighting and heat.

A community-owned public power provider, WG+E is staffed by individuals who live in the community and have a strong interest in making Westfield – a city of about 41,000 that was first settled in 1669 – a better place to live. WG+E is directly accountable to its ratepayers, and it reinvests profits in its distribution systems and in the community itself. Customers benefit from lower rates, local service, in-kind work for the city and contributions to local community programs and services.

WHY FIBER?

The genesis of WG+E's fiber plans came more than 20 years ago, when the Telecommunications Act of 1996 allowed electric utilities to invest in their own telecommunications systems. Because cable television costs were rising, WG+E envisioned constructing and operating a hybrid fiber-coax cable television system and utilizing excess fiber to reduce the telecommunications costs for networking its distribution equipment and to provide low-cost networking connectivity to municipal facilities. Though WG+E never did

enter the cable television market, it constructed fiber optic cable through the city, providing utility and municipal connectivity. WG+E started offering internet, lit fiber and dark fiber services to commercial and industrial customers as an added value.

A move into fiber aligned well with the traditional business at WG+E. It combined smart-grid connectivity, automated meter reading and community broadband on the same network, strengthening the business case for further investment in all these initiatives.

Through its long-standing relationship with gas and electric customers, WG+E was well aware of strong community support for expanding low-cost, municipally owned internet throughout the city. Out of that existing fiber investment, a new effort was launched to bring a world-class, dedicated fiber-to-the-home network to Westfield.

In 2014, after significant local market research, WG+E presented an initial proposal to its governing body, the Municipal Light Board (MLB), defining a project to bring fiber to Westfield. The proposal outlined a business case built around the community benefits that would result from the initiative. High-speed internet would encourage commercial investment and economic development, reduce customer entertainment costs, increase property values and make the community a more attractive place for families to settle. The MLB approved a one-year, proof-of-concept,



Dan Howard, general manager of Westfield Gas + Electric and Whip City Fiber, among spools of fiber optic cable

pilot project. In 2015, using internal resources, WG+E constructed a gigabit passive optical network (GPON) to serve a 250-customer area that included both residential and commercial passings.

Rising to the challenge of validating the market research and meeting deadlines, the utility completed the project on time and within budget. “The success of the pilot showed us that we could move ahead incrementally and prove the success of our business plan at each step along the way,” says Dan Howard, general manager of WG+E.

In 2016, building upon that success, the MLB authorized additional investment to construct another nine fiberhoods, or service areas, bringing the total number of homes passed to more than 2,000. Once again, the project proved successful.

The creation of the business plan and the success of the pilots eventually paved the way for the Westfield City Council to approve a \$15 million bond in February 2017. The bond and amortization schedule are the sole responsibility of WG+E through its Whip City Fiber (WCF) business unit. “We see the bond approval as a

much-needed vision of the future and how technology will help continue to revitalize the economy here in Westfield,” says Aaron Bean, operations manager at WG+E/WCF. “We want to be known as a ‘gig friendly city’ open to new technologies and future growth. We know and understand that gigabit-speed infrastructure is critical to the future, and we want to be ready.”

STRATEGY AND EXECUTION

WG+E realized that building an FTTH network in an established cable community would be no easy task. Competing against well-known, established national communications companies to provide internet and phone service to the citizens of Westfield was a daunting challenge. WG+E met this challenge by establishing a comprehensive strategic plan built upon specific, actionable goals; maintaining realistic timelines; and, most important, serving its ratepayers with the highest-quality product.

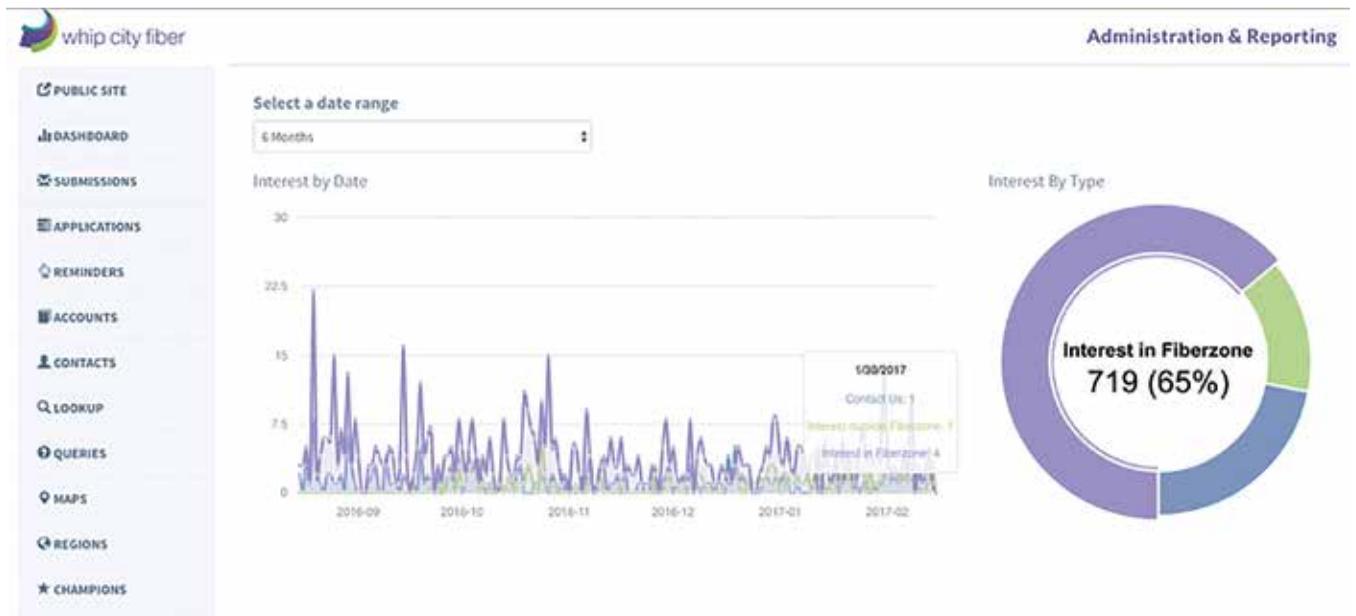
The utility hit the high-speed highway running, using technologies and partners it developed during the pilot program. The aggressive rollout plan aimed to pass 70 percent of the city’s households by the end of 2018.

This schedule included constructing a fiber backbone that linked critical technology hubs, constructing three technology hubs in strategic locations and partnering with vendors for service drops and inside wiring for homes.

EVALUATING TECHNOLOGY

The WG+E team knew that launching this high-tech business would require having the right operational and billing support technology partners in place. An agile approach to technology enablement could be a differentiator when competing with existing providers. The team sought a partner whose industry experience, technology platform and business culture aligned with these goals.

WG+E turned to SpryPoint, a Canada-based utility software provider. SpryPoint already provided WG+E with several cloud solutions and business consulting services focused on customer service and operations for the gas and electric side of the business. The SpryPoint team brought a unique mix of experience and technology, with decades of experience supporting working municipal electric and gas utilities as well as broadband organizations. It brought a



Whip City Fiber uses SpryPoint’s demand aggregation to gauge interest in fiber services in different parts of Westfield.

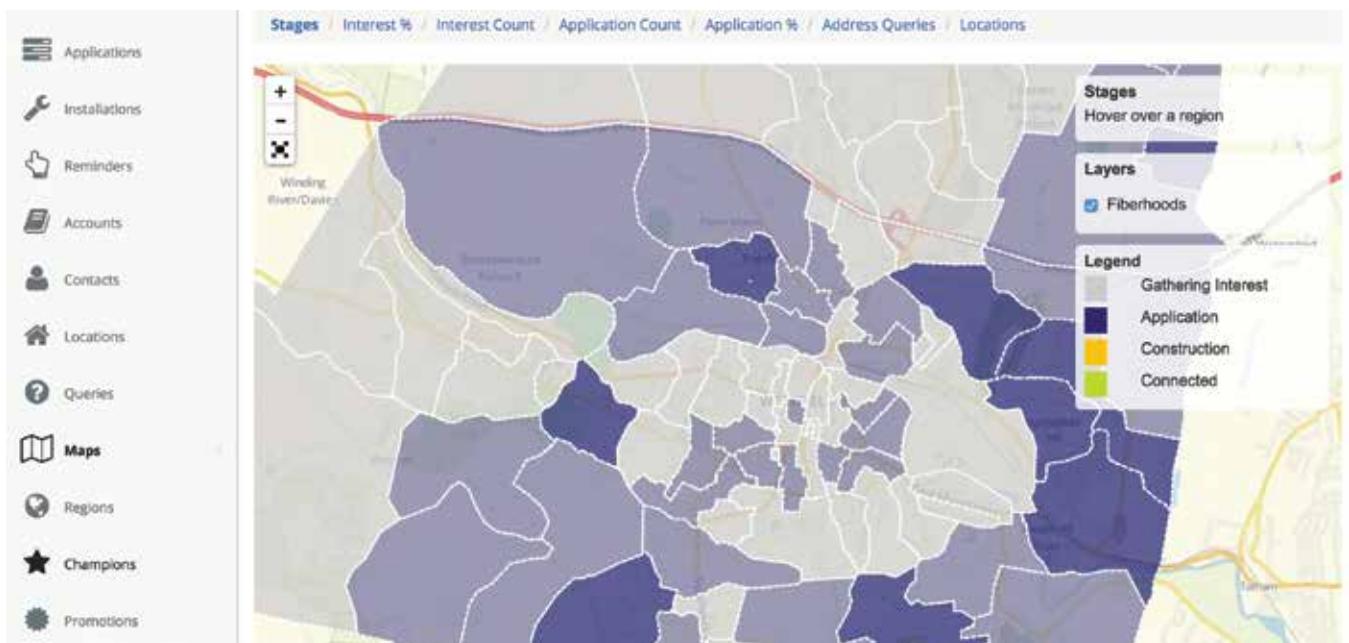
comprehensive set of well-documented business application processes to WG+E’s new Whip City Fiber business.

To begin with, SpryPoint created a new website for WCF, which was integrated with its broadband demand management and CRM platform. This platform engaged the Westfield

community and began to aggregate customer demand for broadband by fiberhood. Customers could see their fiberhoods on an interactive map and express interest through an online form. This information, along with seasonal and engineering considerations, was used to create

a solid plan for deploying fiber to Westfield. This data-driven approach allowed WG+E to assess interest in each area, build out incrementally and execute project deployment based on projected return on investment.

All customer information acquired through the sign-up process was



The SpryPoint software shows the status of all the fiberhoods in the city.

automatically injected into the SpryPoint CRM. WCF was able to segment and proactively promote and market to prospective customers. SpryPoint integrated its CRM with WG+E's legacy customer information and billing system to capture a 360-degree view of customers, allowing the utility to manage all contacts throughout the customer life cycle.

Once installations were underway, WCF used the SpryPoint mobile field service application, SpryMobile, to manage the dispatch and execution of all field work from a request for service or trouble ticket through to customer sign-off on installation. Soon, WCF customers will access the SpryPoint customer portal to facilitate customer self-service, e-billing and payments.

PRICING AND CURRENT SERVICES

WCF undertook a careful financial analysis to competitively price its new



Jamie Cincotta, telecommunications fiber technician for Whip City Fiber, installs aerial fiber.

service. The cost of FTTH deployment is high, with heavy upfront equipment costs, and stiff competition was likely to keep profit margins low. WFC offers

1 Gbps service for \$69.95 a month, with free standard installation and no contract for residential customers. Pricing for business service is customized





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based on the number of users and required bandwidth, starting at \$84.95.

Customer feedback has been overwhelmingly positive. Few can argue with low-cost gigabit service, which is at least 10 times the speed of any other option in the area. In addition, WCF is driven by a focus on customer service, which has defined WG+E's reputation over the years. The WCF team has offered regular educational events to help customers make the transition to streaming services from cable. It also provides demo centers where customers can see the service in action or get their questions answered. Installation includes an advance consultation with the customer and a check-in with a technician after installation to make certain the customer's devices are connected and working properly.

WHAT'S NEXT?

In early 2017, WCF was asked to participate in a Massachusetts state program designed to help small towns

that were either unserved or underserved with broadband connectivity. Design and engineering grants will be released directly to rural towns planning to build last-mile municipal broadband networks. Many of these neighboring towns are looking to the WCF model and view the company as a proven partner that has the experience, resources and know-how to assist with the design of their fiber networks and to build and operate them.

These towns also see WCF and WG+E as aligned with their municipal goals: to strive for cost minimization rather than to seek profit maximization. The towns that choose to make the investment in broadband will own their network infrastructures as municipal assets and, if they choose, partner with WCF to manage their operations.

These projects are completely separate from the funding involved with the Westfield project. The towns will fund roughly two-thirds of the

cost, with state grants making up the remaining one-third.

Westfield is fortunate to have the political will and climate that allows the collaboration between WG+E/WCF and the city to support a fiber network on which to build the future. It has also launched a collaborative marketing effort promoting all the city's resources, such as hospitals, a university, an airport, an abundance of developable land, municipally owned gas and electric utilities and, of course, high-speed FTTP internet. Homeowners, businesses, schools, individuals and the local economy will benefit from this technology. ❖

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