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CHATTANOOGA HIGH SPEED BROADBAND INITIATIVE

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You asked for a description of Chattanooga's high-speed broadband initiative. You wanted to know (1) how much it costs and how the city is funding it, (2) its impact on local economic development and (3) whether Connecticut municipalities could adopt similar initiatives.

The Office of Legislative Research is not authorized to provide legal opinions and this report should not be considered one. Much of the information in this report is taken from the initiative's website, <http://chattanoogagig.com/>.

SUMMARY

Chattanooga's municipal electric and telecommunications utility offers fiber optic broadband service with speeds up to one gigabit per second to its residential and business customers. Customers can use the service for telephone and cable TV as well as high-speed Internet access. The initiative grew out of the utility's development of a smart grid that uses the fiber optic network to increase the electric grid's reliability and responsiveness.

The smart grid and broadband initiatives have cost approximately \$390 million, funded by \$229 million in local revenue bonds, \$111 million from a federal grant, and a \$50 million loan from the municipality's electric division of the municipal utility to establish the utility's fiber optic division.

State and local officials assert that the broadband initiative has been a major economic development asset, but we have found no empirical analysis of the economic effect of the initiative.

It appears that the six Connecticut communities with municipal electric utilities could adopt initiatives similar to Chattanooga's. One of these municipalities, Groton, has done so but has recently announced plans to sell its broadband system to a private company. It appears that municipalities that do not have municipal electric utilities could not adopt such initiatives under current law.

CHATTANOOGA HIGH SPEED BROADBAND INITIATIVE

As noted in OLR Report [2012-R-0223](#), in the 1990s Chattanooga's Electric Power Board (EPB) began developing a fiber optic network to control and monitor the municipal utility's electric grid. The utility wanted to increase the reliability of its operations by creating a smarter grid that could minimize outages.

In the early 2000s, EPB expanded the network and began using it to offer broadband telecommunication services to local businesses. In 2007, EPB's board of directors approved a Fiber to the Home initiative designed to help generate new jobs, improve services to electric customers, and provide additional benefits, such as high speed fiber optic broadband connection. The incumbent cable TV company and the state cable industry association filed lawsuits challenging the plan's telecommunications provisions, which ultimately failed.

In 2009, the EPB began to offer a "triple-play" (TV, Internet, and telephone) telecommunications package to local residents and business. In early 2010, EPB announced the first 100 megabit per second (mbps) package available in the area. Unlike many Internet offerings, this service is symmetrical, allowing customers to upload and download data at the same speed.

EPB has laid over 6,000 miles of fiber optic cable, with the network becoming fully operational in spring 2012. The network covers roughly 170,000 homes and businesses in urban, suburban, and rural areas.

EPB currently provides Internet service to over 35,000 residential and 2,500 business customers. Relatively few customers subscribe to the full gigabit service. The basic triple play package has a 50-mbps symmetrical connection, compared to the American average of 6.7mbps. The current price for this package is \$121 per month, plus taxes; the current price for 1 gigabit per second symmetrical Internet service by itself is \$300 per month, plus taxes. Further information about the EPB network is available at <https://epbf.com/>.

In addition to offering high-speed broadband, EPB offers business customers a virtual local area network (LAN) option. This option allows businesses to securely connect multiple worksites, permitting high-speed data transfer, Internet access, and bandwidth that can be quickly increased or decreased. It allows worksites to send and receive graphic-rich files and share resources across an integrated network at speeds of 30 mbps to 1 gigabit per second. This option also allows a remote worksite to serve as an off-site data warehouse for storing critical data. It does not require capital investments for routers or other devices and its pricing is not based on the distances between eligible locations.

COSTS AND FINANCING

EPB issued \$229 million in revenue bonds in 2008. Of this amount, \$162 million was used to build the fiber optic network, which is owned by the EPB's Electric Division and is used for both the smart grid and telecommunications services. An additional \$39 million of the bond issue was used for electric equipment such as transformers associated with the smart grid. \$26 million was used to cover the first three years of interest payments, and the remainder to cover the financing charges. The 25-year bond carried an average 4.5% interest rate. EPB initially planned to use this funding to develop a smart grid to serve its customers within ten years.

In October 2011, EPB received a \$111 million grant from the U.S. Department of Energy under the American Recovery and Reinvestment Act to accelerate development of the smart grid system. The grant allowed EPB to complete its 10-year deployment plan in less than three years.

To date, EPB's Fiber Optic Division has borrowed approximately \$50 million from the Electric Division to finance the costs of adapting the broadband network to provide telecommunications services to its customers. The Fiber Optic Division is paying off the loan on schedule and EPB is presently on track to pay off its bonds ahead of schedule. In October, 2012, Standard and Poor's upgraded its rating of EPB's 2008 bonds to AA+.

ECONOMIC DEVELOPMENT IMPACT

State and local officials assert that the broadband initiative has helped economic development in Chattanooga. The state's public-private economic development organization [Connected Tennessee](#), asserts that the broadband network was "a key element" in helping Volkswagen choose Chattanooga as the site for a billion dollar car factory.

Similarly, in the June 27, 2012 edition of the Chattanooga [Times Free Press](#), EPB's chief executive officer Harold DePriest stated that

the fiber-optic network already has proven to be an important economic development tool. Access to high-speed Internet is clearly a factor when attracting new businesses to Chattanooga, resulting in many new jobs for our community. There are dozens of entrepreneurs from around the globe in Chattanooga today because we have the capability they need to develop high-bandwidth applications of the future.

According to the initiative's website, the broadband network allows small startups to compete globally at affordable rates and individuals to pursue dreams of starting sole proprietorships from their homes. An example of such a startup is ReTickr, which aggregates news websites and social media to make it easier for Internet users to access information in a way that is tailored to their individual preferences. In addition, a new venture capital firm, Lamp Post, depends heavily on the fiber optic network as it helps young companies build their businesses. Lamp Post. The website credits Lamp Post with assisting in the creation of 50 new jobs in the last half of 2011 alone.

However, we have not found any empirical analyses of the impact of the broadband initiative, which has only recently been fully deployed, on economic development.

Similar Initiatives in Connecticut

It appears that six municipalities with municipal electric utilities (the borough of Jewett City, the cities of Groton and Norwich, the second and third taxing districts of Norwalk, and the town of Wallingford) could adopt initiatives similar to that implemented in Chattanooga and one such municipality (Groton) already has done so. As described in OLR Report [2012-R-0233](#), Groton Utilities, the city's municipal electric and water utility, established Thames Valley Communications (TVC) to provide customers in the area with Internet, cable TV, digital phone and other broadband services, using a hybrid fiber/coaxial cable network. Its Internet service offers download speeds ranging from 1.5 to 20 mbps. The statutes (CGS § [16-1](#)) specifically authorize municipal electric utilities to become certified to provide cable TV service, and TVC has used its cable network to provide internet and phone services.

In November 2012, TVC [announced](#) plans to transfer ownership and operation of its system to CTP Investors, a firm specializing in building broadband, cable TV, and wireless businesses. Over the previous year, the TVC board reviewed options for maintaining service levels and assuring the financial stability of the municipally-owned cable system. After reviewing all available options, it decided that transferring ownership to a private operator was in the best interest of the customers and the citizens of Groton. Groton mayor Marian Galbraith stated that the increasing costs to subsidize TVC put a strain on the finances of the city and Groton Utilities. She stated that the capital costs to stay current in the competitive cable market have outweighed the benefits to the city of owning and operating the company.

Under the new ownership, TVC customers will be able to continue their current cable TV, Internet, and telephone services without disruption. CTP plans to retain the administrative and operational functions of TVC in order to maintain and improve current service levels. The customer service center and other physical assets from TVC will also be transferred to CTP. A final city council vote on the sale is scheduled for December 17, 2012.

It appears that towns that do not have municipal electric utilities could not replicate Chattanooga's initiative under current law. The Connecticut courts have consistently held that (1) towns have only the specific powers granted them by the legislature; (2) an enumeration of powers in a statute forbids things not enumerated; and (3) in determining whether a town has the authority to do something, the court does not search for a statutory prohibition but rather for statutory

authority. In addition to the legal issues, it is unclear how a municipality would finance a broadband initiative.

Several municipalities have established more limited broadband initiatives. For example, Manchester has created a 50-mile long, town-owned fiber optic network. The network connects 44 town buildings, including schools, libraries, and fire stations, giving town and board of education employees access to a wide range of computer resources, including the Internet and the Connecticut Educational Network. Further information about Manchester's initiatives is available at www.townofmanchester.org/InfoSystems/strategicplan.cfm.

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