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NEWS RELEASE

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New Economic Study Documents \$2.69 billion in Benefit from Chattanooga's Community Fiber Optic Network

Chattanooga, TN (Jan. 22, 2021) – Newly-released, independent research documents \$2.69 billion in community benefit during the first ten years since EPB of Chattanooga built America's first Gig-speed community-wide network and used it to establish the nation's most advanced smart grid power distribution system.

"Chattanooga's smart city infrastructure was designed as a platform to give our customers the power to do more," said David Wade, EPB President & CEO. "From education and innovation to job creation, it's amazing to see how our customers are realizing possibilities we could only imagine ten years ago."

The new study was conducted by Bento Lobo, Ph.D., head of the Department of Finance and Economics at the Rollins College of Business at the University of Tennessee at Chattanooga.

"The true economic value of the fiber optic infrastructure for EPB's customers is much greater than the cost of installing and maintaining the infrastructure," Dr. Lobo said. "Our latest research findings show that Chattanooga's fiber optic network provides additional value because it provides high speeds, with symmetrical uploads and downloads, and a high degree of network responsiveness which are necessary for the smart grid and other cutting-edge business, educational and research applications."

Key Community Benefits from Chattanooga's Advanced Infrastructure:

- **Job creation and retention:** The fiber optic infrastructure directly supported the creation and retention of 9,516 jobs which is about 40% of all jobs created in Hamilton County during the study period.
- **Lower unemployment rate:** According to the study, since Chattanooga's fiber optic network was deployed, it has helped keep the local unemployment

rate lower. This effect has been magnified since the outset of the COVID crisis when fiber optics helped many businesses transition their employees to remote work very quickly. According to the latest available numbers from the U.S. Bureau of Labor Statistics, Hamilton County's unemployment rate was 4.7% in November which is significantly lower than Tennessee's rate (5.3%) and two percentage points lower than the U.S. unemployment rate (6.7%) for the same period.

- **Bridging the digital divide for education:** Having Chattanooga's fiber optic network in place allowed EPB to join with Hamilton County Schools and other local and state partners in launching HCS EdConnect, a fiber optic broadband internet service provided at no charge to economically challenged families with K-12 students. Designed to continue providing the service for at least 10 years, HCS EdConnect represents a lasting solution for bridging the digital divide among students. Currently more than 12,000 students have internet access to continue their studies from home through HCS EdConnect.
- **Reduced power outages:** Related to the smart grid's ability to quickly re-route power around storm damage and other problems, the study documents a 40-55% annual decrease in outage minutes providing EPB customers with an average of \$26.6 million in savings each year by helping them avoid spoilage, lost productivity, and other negative impacts.
- **Decreased environmental damage:** The smart grid has helped EPB decrease carbon emissions by 7,900 tons through demand management and reduced truck-miles.
- **\$110 million in Smart City research:** In 2014, the U.S. Department of Energy designated Chattanooga as a Smart Grid Living Laboratory. Since then, EPB has partnered with Oak Ridge National Laboratory and a range of other national and local research partners, like the University of Tennessee at Chattanooga Center for Urban Informatics and Progress, to play a significant role in more than \$110 million in Smart City Research.

Fiber in the time of COVID-19

As national stories swirled about the possibility that the COVID crisis would "break the internet" and YouTube and other video providers actually reduced the resolution of their content in some markets, EPB's fiber optic network has proven more than equal to the challenge of transitioning to remote work, on-line education, and telehealth.

In comparing a typical pre-COVID day (March 4, 2020) to a typical COVID day (December 14, 2020), EPB has seen a 75% increase in the total volume of Internet Bandwidth Usage over the course of the day. In a very real sense, many companies (and schools) have "outsourced" the traffic that once flowed across their internal networks to Chattanooga's community-wide internet.

EPB has also seen a 64% increase in Peak Bandwidth Usage which still occurs during the “Prime Time” hours of the evening and is correlated to more video streaming. Because Chattanooga has a fiber optic network, the community has been able to transition to more intensive internet bandwidth usage utilizing in-place infrastructure.

Additional Fast Facts: Community Benefits of Fiber Optics

- **Entrepreneurial activity:** Hamilton County entrepreneurs raised \$1.2 billion in equity investment and crowdfunding with the study attributing \$244 million of that investment to support from the fiber optic infrastructure. In addition, information from Kickstarter shows that Chattanooga has produced about 10% of the site’s crowd funded projects during the study period, a higher percentage than any other Southeastern city.
- **America’s “Best Metro for Remote Work”:** Chattanooga’s ample bandwidth contributed to Zillow’s recent designation of the city as the #1 “Metro for Remote Work.”
- **Gig City garners world-wide media recognition:** Since 2010, Chattanooga’s community network and smart grid have earned more than 2,200 media placements with a reach of about 4 billion people. This recognition supports efforts to recruit business investment and talent into the local economy.
- **Increased funding for public services:** Because of the extensiveness of the fiber optics infrastructure, EPB is the largest contributor to local tax coffers having paid \$59.9 million to local governments from 2011-2020 in support of local schools and other public services.
- **More efficient operations for customers:** As the study notes, since the deployment of the smart grid “EPB has moved up to being among the most efficient utilities in the country” (as measured by the SAIDI metric) which reduces environmental impact while keeping costs lower for customers.

ABOUT EPB

EPB serves the greater Chattanooga area by providing world-class energy and connectivity solutions as a means of promoting economic development and enhancing quality of life for our community. We deliver electricity to more than 170,000 homes and businesses across our 600 square mile service area which includes most of Hamilton County as well as parts of surrounding counties in both Tennessee and Georgia. In 2010, EPB Fiber Optics, which offers internet, TV, and telephone services, became the first provider in the United States to deliver up to 1 Gig (1,000 Mbps) internet speeds utilizing a community-wide fiber optic network which is accessible to every home and business in its service area. In 2015, EPB became the first, and to date, only American ISP to make up to 10 Gig (10,000 Mbps) internet speeds accessible to all of its residential and commercial customers as a standard offer.

EPB has also utilized its community-wide fiber optic network to deploy the most advanced and highly automated smart grid power management system in the nation. In recognition of EPB's groundbreaking infrastructure, the Department of Energy and Oak Ridge National Laboratory are utilizing EPB's smart grid as a national model for researching and developing best practices. EPB is also the first major power distribution utility to earn the USGBC's PEER certification for having a highly automated, modernized electric power grid.

EPB is an independent board of the City of Chattanooga which began serving customers in 1939. Visit EPB.com for more information.

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