

Mapping the Landscape of Broadband in Tennessee

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Executive Summary

What the pandemic brought to the forefront of many people's minds is how vital Internet access is in our daily lives. The internet is no longer considered a luxury item and is now considered a utility like water and electricity due to rising needs for telehealth and telecommuting either for work or school, and this mindset will continue to evolve. From economic development to agriculture and public safety, access to internet service must *continue to advance in this digital economy*.

Tennessee currently ranks 29th in the U.S. for broadband access, with 13 percent lacking accessibility. While only 2 percent of the state's urban citizens lack access, 34 percent of rural residents lack coverage at recognized minimum standards due to low population density and challenging geography. Too many Tennesseans are living without the connectivity they need for growing businesses, increased education, agricultural advancements, and health care options.

In 2017, the Tennessee Broadband Accessibility Act was signed into law to increase broadband access to Tennessee's unserved citizens. The act provided \$45 million over three years in grants and tax credits for service providers to assist in making broadband available to unserved homes and businesses. In addition, the plan permitted Tennessee's private, nonprofit electric cooperatives to provide retail broadband service and make grant funding available to the state's local libraries to help residents improve their digital literacy skills and maximize the benefits of broadband.

In 2021, the Tennessee Advisory Commission on Intergovernmental Relations (TACIR) recommended that Tennessee join several other states in creating a broadband availability map. The map is intended to be used for state broadband funding decisions and serve as a community planning resource. The map is crucial to understanding where gaps are in coverage.

Under contract with the Tennessee Department of Economic and Community Development (TNECD), Connected Nation (CN) was tasked to help the state create The Tennessee Broadband Accessibility Map. The interactive map covers all 95 counties and provides information on broadband availability, speeds, technology types, and available providers. The map is used for state broadband funding decisions and is used as a community planning resource.

Idea

TNECD, in partnership with Connected Nation, developed the Tennessee Broadband Accessibility Map to assist in the determination of grant awards for internet service providers (ISPs) to extend broadband services into rural areas of Tennessee. Under contract with TNECD, CN requested data from providers in Tennessee to create a statewide broadband map. The map includes information, searchable by address, for all 95 counties by covering broadband availability, speeds, and technology types. The broadband map aims to visualize where those holes are for administering grant programs for the state and visually represent the service available in Tennessee. The map is essential in making informed decisions about where to invest broadband funding for infrastructure and adoption programs. The map allows us to drill down and focus on parts of counties that show exceptional need.

What makes it different?

Robust, current, high-quality datasets. The Tennessee Broadband Accessibility map plays a significant role in decision-making by providing data from many sources into a single map highlighting broadband needs and impact. The focus on the integrity of the data helps ensure the map is accurate and up to date.

Data

- A robust internet service provider database is maintained and updated bi-annually.
- State data is provided from applications for grant areas
- The mapping portal provides a link for the public to provide feedback on the map and data

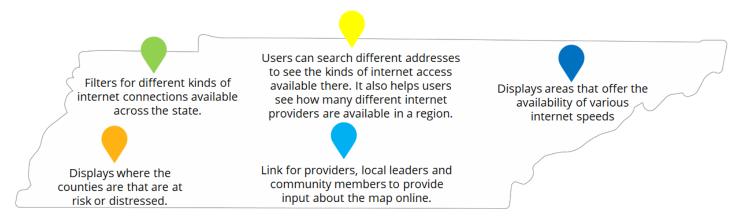
Validation and Challenge Process

- The data is validated through collaboration with internet service providers.
- When TNECD is informed of a completed build, contractors, if necessary, are tasked with driving through their network, meeting with the provider, and mapping end-of-line infrastructure. The validation performed allows TNECD to gather a comprehensive view at a more granular level of where access and service gaps exist.
- The feedback from the public comment on the map and additional data are validated in-field or via desktop research.

Tennessee state leaders have made the expansion of internet access across the state of Tennessee a priority. The focus of the map is to identify the unserved and underserved communities of Tennessee. Through this initiative, the expansion of the broadband footprint will provide communities the tools they need to access information which is crucial to grow and thrive.

The map project started in early 2021, and the TNECD Broadband Director oversaw the project. The ECD team worked with CN and ISPs statewide to outline project goals, gather requirements, identify data sources, and develop project milestones. Project progress was reported through biweekly status updates. Several avenues were utilized to promote awareness; press releases were sent to all state legislators, counties, and broadband stakeholders. The map is also prominent on the ECD TN.gov web page.

The image below illustrates the variety of information that is available through the map.



The first iteration of the map came out in April 2022, and a mapping update occurred in December of the same year, representing recently awarded areas, and a plan to provide an additional update before June 30th is underway.

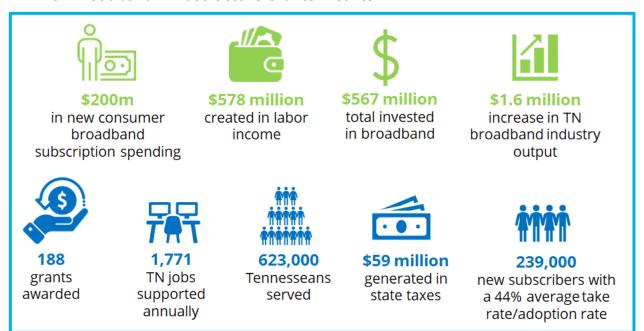
TNECD is looking at this map from all aspects to understand how to support rural communities and determine if other state agencies can utilize it. The map can provide insights at the county level as to whether it is under economic distress, allowing for digital opportunity investments, as well as other targeted funding opportunities. We have coordinated with the Governor's office to ensure he receives regular updates on the progress of the project.

Impact

The Broadband Accessibility Map plays an important role in strategizing where TNECD invests in broadband infrastructure funding across the state.

The map enables TNECD to make informed decisions regarding program development, implementation, and outreach regarding infrastructure and adoption programs. Due to the success of the map, it has attracted considerable interest from state leaders, businesses, communities, and stakeholders statewide. Residents across the state have been very engaged, as the map has received input from over 700 individuals spanning 66 counties. The metrics below capture the impact of the state's broadband grant program which have been achieved by using the map as a key strategic tool on where to invest funding statewide.

TNECD Broadband Infrastructure Grants Metrics



Looking Forward

Successful implementation of state and federal programs using TN's broadband map is ongoing. TNECD is working to enhance the visualization of the map and continues to reach out to providers for access to updated data. Recently, the state legislature passed a law that requires the map to be updated twice a year, which should lead to a more accurate and current look of the landscape of broadband in TN.