TVA INNOVATION AND RESEARCH

Connected Communities Pilot Projects
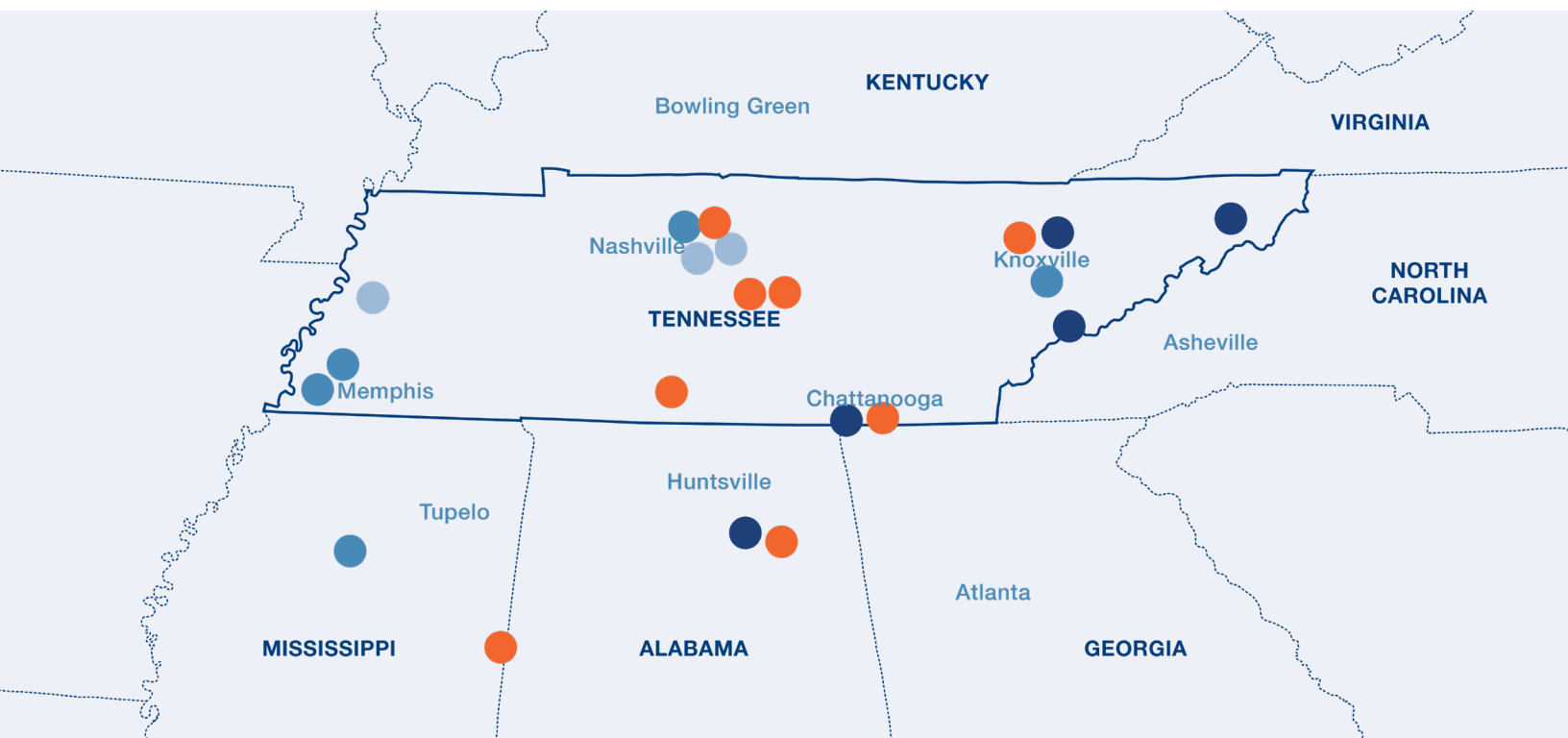
Pilot Projects Across the Region

Twenty-one project teams received TVA funding to use data and technology-driven innovations to offer improved services to their community's people and businesses. The pilot projects will run for about two years, with TVA partner organizations contributing a portion of total project costs.

PILOT PROJECT FOCUS AREAS

- Economic Empowerment
- Broadband and Digital Literacy
- Energy and Environmental Justice
- Enhanced Community Resiliency

Pictured Above: Providing Wi-Fi Access and Education to New Affordable Housing Projects

MAP OF PILOT PROJECTS

HIRING

Building the Future of East Tennessee's Workforce

To encourage STEM careers, East Tennessee PBS will work with the University of Tennessee to create a series of short videos and related education materials, covering skilled labor and STEM-field career opportunities for K-12 students to be viewed on public television, online and in the classroom.

Total Project: $573K

Engaging Children in the Power of STEM Education and the Career Pipeline

Junior Achievement of Memphis and the Mid-South will increase the technologies available at their newly launched, state-of-the-art Wang Experiential Learning Center to provide local students with workforce education and skill attainment.

Total Project: $447K

Base Camp Coding Academy

Base Camp Coding Academy will expand their program to create a more diverse student profile and scale the pipeline for under-advantaged youth in Mississippi to access careers in software development.

Total Project: $600K

Driving Tennessee Forward - EV Technologies

Southwest Tennessee Community College is creating a program that provides the community with equitable access to EV charging stations and develops a curriculum for students to learn the necessary skills for jobs related to EV charging.

Total Project: $950K

Economic Solutions Through Solar Innovation

The Cheatham County School District will construct a 50kW solar array with a Tesla Powerwall backup system and develop a solar tech training program for high school students to be prepared for careers in solar.

Total Project: $270K

Pictured: Base Camp Coding Academy

TVA TENNESSEE VALLEY AUTHORITY

Community Hotspots

Pulaski Electric System Energize will provide access to unserved and underserved residents in three Giles County rural communities through the installation of high-speed internet at public locations.

Total Project: $12K

Connectivity and Health in Orchard Knob

The Enterprise Center and Parkridge Medical Center will expand broadband access, walkable public wireless internet, telehealth services, digital literacy training and a digital resource hub to support the low-income and diverse community of Orchard Knob.

Total Project: $871K

Providing Wi-Fi Access and Education to New Affordable Housing Projects

SmartMark and Murfreesboro Housing Authority (MHA) will revitalize three MHA properties with wireless infrastructure and energy education to alleviate the burden of the cost of internet service for low-income residents and reduce the digital divide.

Total Project: $850K

High-Tech Connect Center

Farmers Telecommunications Cooperative will open a community-based technology center in Kilpatrick, Alabama, that features indoor and outdoor learning environments, providing the community access to fiber internet, digital literacy training and more.

Total Project: $236K

ACTNow

Columbus Light and Water will work with Columbus Housing Authority to provide residents digital literacy training, connection to internet services and the tools needed to engage in digital spaces.

Total Project: $340K

Tech Upgrades at City of Knoxville Recreation Centers

By adding Wi-Fi, computers, laptops, tablets, smart TVs and digital training to 15 recreation centers, the City of Knoxville Parks and Recreation Department will benefit low- and middle-income individuals who do not have internet access at home.

Total Project: $100K

Connecting Families for Student Success

Nashville Public Education Foundation seeks to launch the Connecting Families for Student Success, a program to enhance parental access to, understanding of and involvement in their children's academic journeys.

Total Project: $148K

Connecting MHA

Expanding on the Providing Wi-Fi Access and Education to New Affordable Housing Projects pilot project, Phase II will conduct a HEMS and Demand Response pilot project in one of the new MHA communities to compare energy use with a community of the same size and structure.

Total Project: $1M

Alerting Elders to
Air Quality Health Risks

Three3 and Socially Equal Energy Efficient Development will install indoor and outdoor air quality monitoring sensors in low-income homes to improve the resiliency of elders to indoor and outdoor risks.

Total Project: $985K

Living Building Certified
Education Center

Great Smoky Mountains Institute at Tremont will retrofit an existing brick home and barn that achieves the requirements of the Living Building Challenge.

Total Project: $250K+

Connected Community through
Sustainable Service

Guntersville Middle School in Guntersville, Alabama, seeks to transform its lakeside area into a sunrise-to-sunset district that provides a public education space, increased amenities for residents and guests alike and an opportunity for students to learn about new, clean technologies positively affecting their community.

Total Project: $457K

Home Energy Management System
Control Platform and Mobile App

The Home Energy Management System (HEMS) Platform is a free, open-source platform and mobile app connecting the local power company electricity distribution system with residential customers through smarter home energy controls.

Total Project: $750K

BrightRidge and Johnson City
Smart Poles

This pilot project will evaluate the combination of smart lighting and sensor technologies to support business case development around energy savings, public safety, park management, community experience and satisfaction and reduced maintenance.

Total Project: $500K+

Pictured: BrightRidge and Johnson City Smart Poles

The ARCHER Project, Resiliency Planning Framework

This DOE funded project is developing a planning framework with a community focus that uses distributed energy resources to provide more energy resilience in the face of power outages caused by extreme weather events.

Total Project: $250K

Lighting the Way: Resilient Ripley Microgrid

The National Institute for Hometown Security is building a resilient microgrid in Ripley, Tennessee, to lower the cost of energy for local city facilities and ensure the community has reliable power during emergencies.

Total Project: $888K

Synthetic Modeling on Human Impacts of Widespread Outages

RUNWITHIT Synthetics (RWI) will apply synthetic modeling to forecast human impacts that will help the city of Nashville assess the outcomes of a widespread outage on residents and the benefits of distributed energy resources (DER) deployments against measured impacts.

Total Project: $160K