

# Renewables Highlights

Fiscal Year 2022<sup>1</sup>



**Today, TVA is the largest public power provider in the U.S. and one of the nation's largest power producers.**

We partner with 153 local power companies (LPCs) to serve approximately 10 million people across seven Southeastern states and 57 directly served customers, including 50 industrial customers and 7 military and federal installations. We operate the nation's **third largest nuclear fleet**, one of the largest high-voltage transmission systems in North America, and we are the largest contributor to the reduction in carbon intensity in the U.S. from 2016 to 2022.<sup>2</sup>

## Residential Solutions

**Green Switch**

**Green Connect**

**Dispersed Power Production**

From the moment the TVA Act was signed and one of the world's great hydropower systems got its start, we've been **committed to producing clean, low-cost renewable power**. As market demand has evolved, so have our generation methods, partnerships and expertise.

In 2022, TVA achieved approximately 57% reduction in its carbon emissions compared to 2005 baseline standards. We are working to increase that number to 70% by 2030 through innovation and technologies that we believe will deliver meaningful, impactful progress.

## Business & Industry Solutions

**Green Invest**

**Green Flex**

**Green Switch**

**Dispersed Power Production**

To meet carbon goals and the needs of our customers, TVA is building the energy system of the future. We are leveraging increased market demand for renewable energy solutions to drive economic development while also providing energy system and environmental benefits for our region. Companies and organizations with sustainability goals are looking for green reasons to locate or stay in the TVA service area and we have solutions for them.

To increase availability and reduce the cost of renewable energy, we have developed TVA Green<sup>3</sup>, a comprehensive portfolio of renewable solutions to meet the sustainability goals of business and residential customers, offered in partnership with local power companies. These programs are about more than a clean region. TVA Green is about working closely with partners to provide innovative solutions, making our region more competitive for jobs and investments, and a long-term commitment to make the TVA service region a great place to live and do business.

At the end of the fiscal year, TVA's existing and contracted renewable energy was over 8,200 MW, including solar capacity totaling nearly 2,800 MW<sup>4</sup> across 3,800 installations in 7 states. Growth of our operating and contracted solar capacity was nearly 75% from FY20 to FY22.

<sup>1</sup> 1 Fiscal Year 2022: October 1, 2021-September 30, 2022

<sup>2</sup> FY22 TVA Annual Report.

<sup>3</sup> TVA tracks renewable energy commitments and claims, in part, through the management of renewable energy certificates (RECs). This mechanism allows businesses and individuals to purchase RECs through TVA to meet their renewable energy and sustainability goals. TVA Green Programs are offered in partnership with LPCs, which makes it easy for end-use consumers to purchase RECs for their personal sustainability goals.

<sup>4</sup> 2,012 contracted utility-scale solar projected to be online by 2024.



## 2022 Highlights

- 8,264 MW Operating and Contracted Renewables Capacity in 2022
- Community solar available to over 1.5 million customers



## Green Switch & Green Flex Programs

- 8,837 total participants
- 592,810 MWh Green Power Sales



## Green Invest Program

- 2,205 MW utility-scale, new-to-the-world solar agreements to-date
- Contracted 246 MW battery storage
- Met sustainability needs for Google, Facebook, General Motors, Knoxville Utilities Board and Vanderbilt
- Generated \$3 Billion total in solar investments in TVA's service area



## Partner Flexibility Option

Launched program that enables our long-term LPC partners to self-generate up to 5% of their energy needs, giving them more flexibility to meet their customers' unique needs or clean energy goals.

- 80 LPCs signed Flexibility Agreements
- 37 LPCs are actively engaged in planning 42 projects
- 2 operating solar projects



## 2022 RFP for Renewables

In July 2022, TVA issued a request for proposal (RFP) for up to 5,000 MW of new carbon-free energy that could be online before 2029.



## Dispersed Power Production

- 642 operating projects
- 278 MW of power



## Battery Technology

TVA's first owned and operated grid-scale battery energy-storage system, a 40 megawatt-hour demonstration system, will help ensure continued electrical reliability for up to 14 gigawatts of solar energy planned through 2038. The Vonore Battery Energy Storage System is due to be operational in late 2023.

TVA has another 246MW of battery storage contracted to come online by the end of 2024.



## TVA-Directed Solar Project

The land associated with the first potential TVA-directed utility-scale solar project is currently undergoing pre- decisional environmental and cultural due diligence investigations prior to land acquisition.

## Renewable Leaders

### Green Invest

In April 2022, Knoxville Utilities Board (KUB) broke ground on a ~1 MW project, designed and engineered by Solar Alliance, in front of the city's public works building. KUB is using the array to create Knoxville's first Community Solar program, increasing access to locally generated renewable energy for the community. KUB has also committed to generating a portion of its overall electricity from solar energy, through participation in TVA's Green Invest program.

KUB was the first local power company in TVA's service area to enter a Green Invest agreement and continues to be a leader in utilizing TVA's green solutions.

**Knoxville Utilities Board  
Green Invest Customer**

### Generation Flexibility

Appalachian Electric Cooperative (AEC) and Morristown Utilities (MU) teamed up on an innovative joint solar project in 2022 that will allow them to take advantage of the efficiencies that a large-scale solar project provides. They are the first LPCs to partner on a joint project to maximize their shared benefits.

Covering 200 acres of land in the White Pine, Tennessee area, the project is sized at 24.75 MW of solar. The power that is generated will connect to a substation where both AEC and MU take power from TVA. Over 63,000 solar modules are planned and will be attached to a tracking system that will enable them to follow the sun as it moves across the sky.

**Appalachian Electric Cooperative  
& Morristown Utilities**