
TVA Sustainability

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TVA Overview

- Founded in 1933 as part of the New Deal
- Non-profit Federal Corporation, the nation's largest Public Power provider
- 10,000 + Employees, 18% Veteran
- Aspire to be Net Zero Carbon by 2050
- Manages 290k+ acres of public land
- Manages the Tennessee River System to minimize flood damage and for recreation, water quality and navigation
- In the Tennessee Valley, Economic Development with partners resulted in 341,000 jobs over \$45.4B in investment (last 5 years)



PARTNERING
with **153**
Local Power
COMPANIES

TO SERVE
10 MILLION
PEOPLE

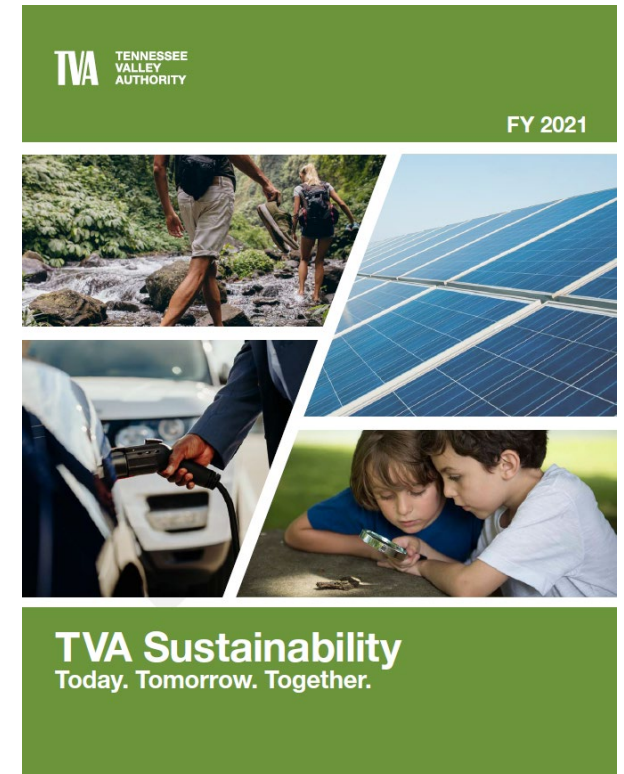
700,000
Businesses
IN
PARTS
OF **7**
STATES

Directly Serve
57
LARGE industries &
federal installations

TVA's Approach to Sustainability

Sustainability for TVA means ensuring our ability to provide the people of the Tennessee Valley with low-cost and reliable electricity, a healthy environment, and a prosperous economy — without compromising the ability of future generations to do the same.

- Our sustainability objectives align with the United Nations' [Sustainable Development Goals](#) and the [Global Reporting Initiative](#) standards.
- The sustainability report provides a comprehensive view of TVA's progress as a business and community partner.
- Focus areas:
 - **Aspiring to Achieve Net-Zero**
 - **Economic Impact:** Partnering to Build the Region's Clean Energy Economy
 - **Environment:** Stewarding the Region's Resources
 - **Social:** Serving People and Communities Across the Region
 - **Governance:** Driving Progress through Accountability and Transparency



tva.com/sustainability

TVA Sustainability Priorities

Economic Impact

- Energy Affordability
- Reliability & Resiliency
- Jobs Created & Retained
- Flood & Drought Management
- Energy Innovations
- Renewable Energy
- Investor Relations
- Supplier Partners

Environment

- Climate Change & Resilience
- Air Quality
- Water Quality & Availability
- Waste Management
- Habitat & Biodiversity Protection
- Cultural Resource Management

Social

- Health & Safety
- Environmental Justice
- Community Vitality & Engagement
- Reservoir & Stewardship Benefits
- Local Power Company Partnerships
- Diversity & Inclusions
- Labor Relations
- Recruitment, Development and Retention
- Skilled Workforce Availability

Governance

- Transparency
- Board & Executive Diversity
- Systematic Risk Management
- Ethics
- Cyber & Physical Security
- Sustainable Financing Framework

TVA Strategic Intent to Decarbonize



TVA Strategic Intent and Guiding Principles

May 2021

This document provides TVA's Strategic Intent and Guiding Principles, focused on energy supply and decarbonization initiatives.

This statement of Strategic Intent is to be used in accordance with all internal and external processes providing the principle direction from TVA leadership in developing business strategies that provide reliable, low-cost and clean energy to the Tennessee Valley region in keeping with the TVA mission.

Our Guiding Principles for Carbon Reduction

TVA's mission is the foundation of all that we do in service to the people of the Tennessee Valley, and we act in accordance with our values and priorities. Our region's continuing success requires an increasingly clean energy supply, and we are building on TVA's accomplishments to move toward decarbonization. Our actions will be guided by the following principles and our commitment to serving the people of the Tennessee Valley:

01

Prioritize the needs of Valley stakeholders as we work to achieve our goals by maintaining low rates and high reliability, and attracting new jobs in the Valley.

02

Use best-available science and support research and policies that further carbon-free dispatchable technologies.

03

Partner with our long-term local power company customers and other customers and communities to support economy-wide decarbonization efforts and the strategic electrification of other sectors, such as transportation.

04

Maintain nuclear generation, hydro generation and a strong transmission grid as key enabling assets.

05

Be transparent with stakeholders in measuring and sharing our progress, and listen and work effectively with all our stakeholders to understand their priorities and needs.

06

Adapt to new technologies and changing policies, and be willing and open to changing our plans and projects to achieve deep carbon reduction.

Carbon Reduction Leadership

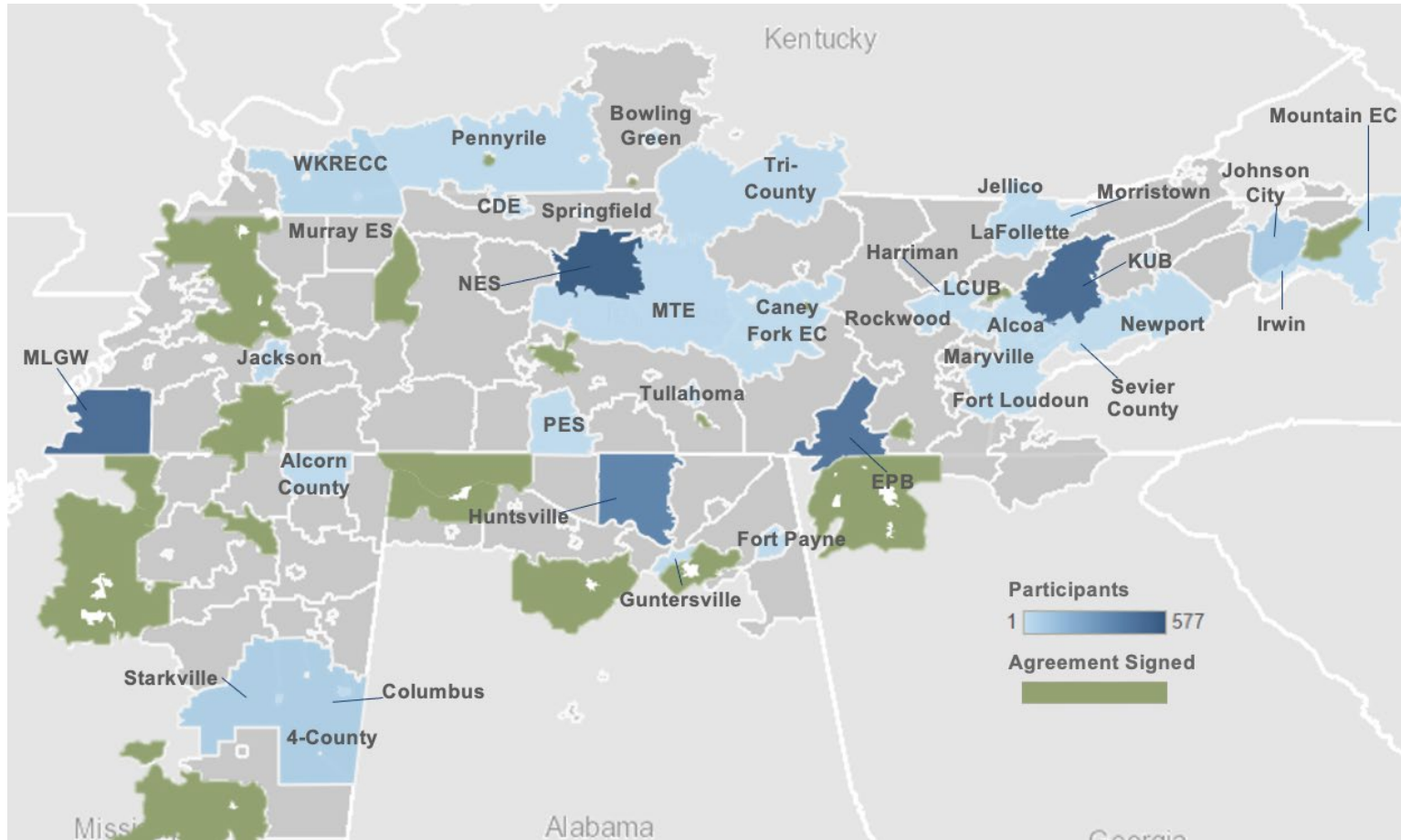
57%
by end of CY 2021

Our Plan
70%
by 2030

Our Path
~80%
by 2035

Our Aspiration
Net-Zero
by 2050

Addressing Energy Burden– Home Uplift



Over **\$40 million** invested by TVA and our partners, impacting **3,700 homes**

Biodiversity at TVA

- Key part of TVA's environmental mission
- 2021 TVA Board approved our Biodiversity Policy

The span of TVA operations and reservoir lands, combined with the biodiversity of the region, position TVA as a potential regional leader in biodiversity conservation.

TVA's Biodiversity Statement: "TVA recognizes the importance of biodiversity to the quality of life of the region's residents and we work to proactively protect biodiversity through stewardship of public lands, management of the Tennessee River system, local and regional partnerships, and integration of species and habitat conservation in project planning."



Paving the way for over 200,000 EVs in the Tennessee Valley by 2028

The **power** of going electric

Gas and diesel vehicles are our biggest sources of CO2 emissions, but the benefits of switching to EVs go way beyond the tailpipe.



Affordable energy

Charging at times of low energy use, like overnight, helps keep rates low



Local spending

EVs use locally produced fuel and support local power companies



Leading innovation

Driving sustainability and leading policies



Clean air

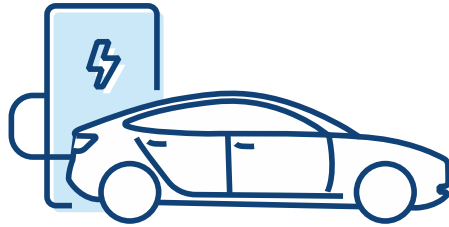
Reduce air pollutants and the largest sources of CO2 emissions



Economic development

Attracting EV producers and suppliers

Electric Vehicle Evolution Initiative www.tva.gov/EV



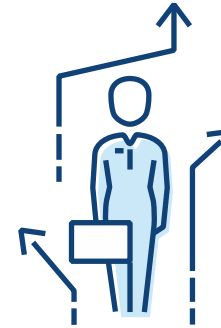
Charging Infrastructure Availability

- Remove “range anxiety”
- Foundational EV charging network
- Partner with Local Power Companies (LPCs)



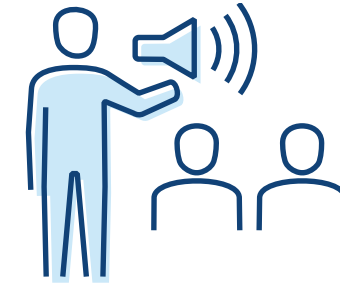
EV Availability and Offerings

- Partner with automakers and fleets
- Support making a wide range of EVs available



Innovative and Supportive Policies

- Remove utility policy or pricing barriers
- Craft policies and pricing that encourage investment and enable a market



Consumer Awareness

- Help consumers make sound choices
- Educate, inform, and promote while lifting TVA and LPC brands

Removing market barriers in key areas

Preparedness, Adaptation and Resiliency

TVA celebrated 22 years of 99.999% reliability in 2021



System Preparedness: invests in preparation for extreme weather to prepare and harden our system for extreme weather

River Management Adaptation Planning: incorporates climate data and modeling assumptions to study future potential climate and precipitation regimes

Climate Action Adaptation Planning: develops plans to address the actions that help us better understand trends and possible risk around climate

Transformative Innovation Initiatives

Develop feasible technology pathways to achieve the next phases of carbon reductions and offsets



Expand smart technologies with communities to manage energy and services



Develop a reliable, affordable, flexible, and clean generation option with cost and risk shared



Develop an interconnected, intelligent grid able to reliably deliver power as it evolves



Implement a long-term strategy to integrate energy storage for system flexibility and maximizing renewables

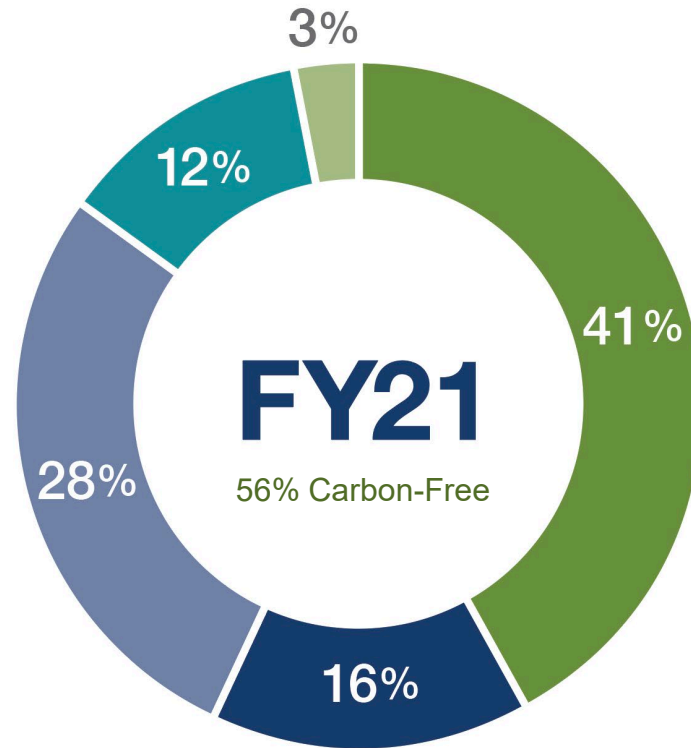
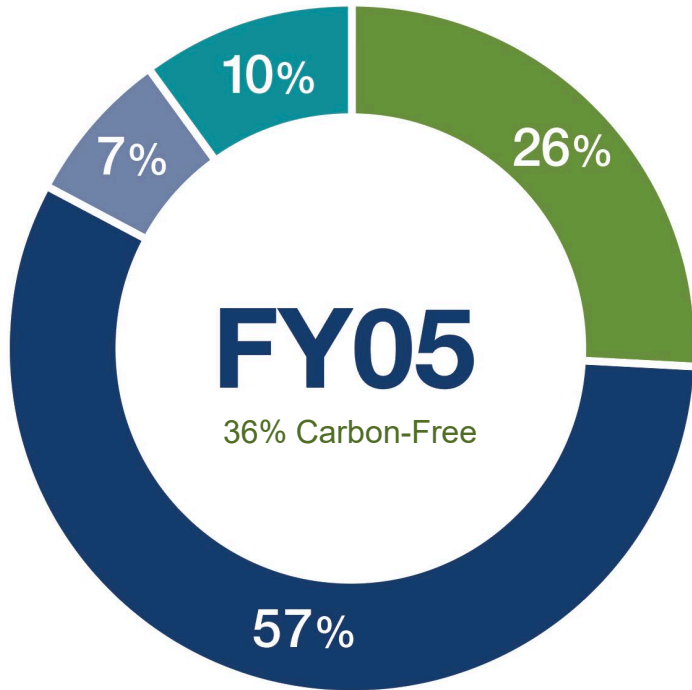


Enable adoption of electric vehicles in the Valley to create load growth and benefits for citizens



6
Initiatives

TVA Energy Portfolio



■ Nuclear
 ■ Hydro
 ■ Wind & Solar
 ■ Coal
 ■ Gas



INCREASE SOLAR

10,000 MW by 2035



Electric Vehicles 200,000

on the road by 2028



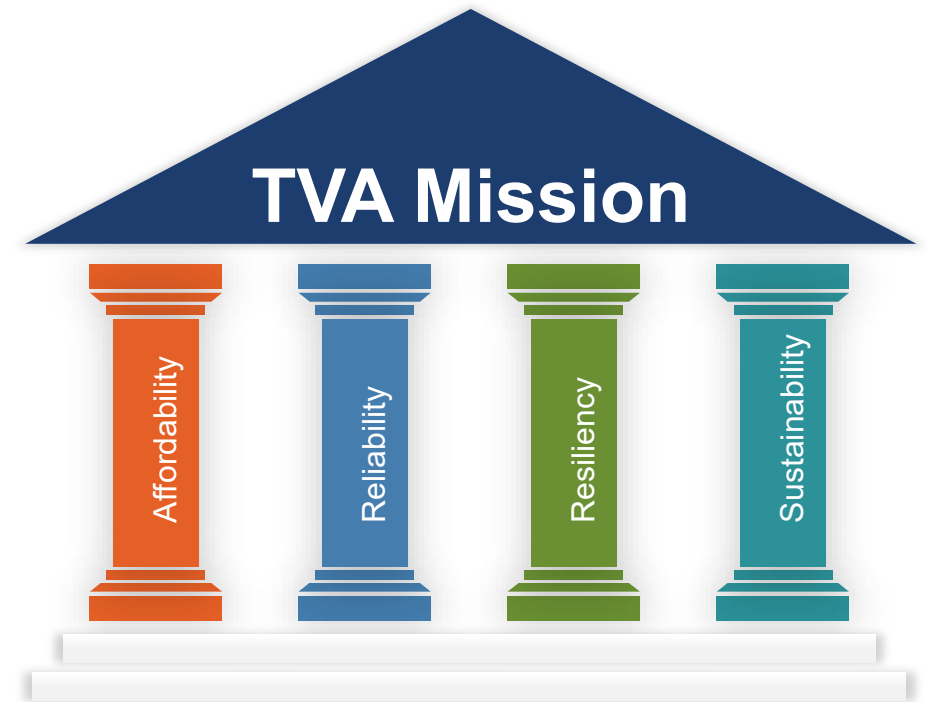
REDUCE CARBON

70% by 2030
~80% by 2035

*Chart depicts both generated and purchased power within respective resource types. In addition to power supply sources included here, TVA offers energy efficiency programs that effectively reduced FY 2021 energy needs by about 2,300 GWh or 1.4%. TVA sells the renewable energy certificates resulting from some of its purchased power to certain customers.

Challenges & Opportunities:

- Load growth – current increasing load demand from demographic change – primarily in Tennessee
- Electrification
- Daily load peaks
- Transmission and energy inertia issues
- Battery technology and cost
- SMR / new-nuclear technology
- Gas – need for a bridge technology
- Carbon capture – what about storage or use
- Hydrogen at commercial scale
- Land use issues vs. solar vs. any technology
- CCR material in land fills – long-term storage and beneficial reuse of landfilled materials.
- Solar and other new tech – future waste streams– total life cycle cost
- Inflation Reduction Act 2022
- Balancing resiliency, reliability and cost with climate adaptation concerns



Building the Clean Energy Economy



Thank you