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)
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 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

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 forward decarbonization. Our actions will be guided by the following principles and our commitment to serving the people of the Tennessee Valley:

1. 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.

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

3. 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.

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

5. 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.

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

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

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

Expand smart technologies with communities to manage energy and services

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

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

*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.

FY05
36% Carbon-Free
57%
26%
10%
7%

FY21
56% Carbon-Free
41%
28%
12%
3%
16%

INCREASE SOLAR
10,000 MW by 2035

Electric Vehicles
200,000 on the road by 2028

REDUCE CARBON
70% by 2030
-80% by 2035
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 landfills – 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