





Fiscal Year 2020 Sustainability Report Executive Summary

Providing a Better Future for the
People of the Valley



Sustainability for TVA means ensuring our ability to provide the region with low-cost and reliable electricity, a healthy environment and a prosperous economy, now and for future generations. As the pace of change accelerates, we are committed to partnering with communities to create a sustainable energy system of the future while protecting our natural resources and serving as a catalyst for the growing clean-energy economy.



FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements relating to future events and future performance. All statements other than those that are purely historical may be forward-looking statements. In certain cases, forward-looking statements can be identified by the use of words such as “may,” “will,” “should,” “expect,” “anticipate,” “believe,” “intend,” “project,” “plan,” “predict,” “assume,” “forecast,” “estimate,” “objective,” “possible,” “probably,” “likely,” “potential,” “speculate,” or other similar expressions. TVA believes that the assumptions underlying the forward-looking statements are reasonable. Numerous factors could cause actual results to differ materially from those in the forward-looking statements. For a discussion of these factors, please see the annual, quarterly and periodic reports that TVA files with the Securities and Exchange Commission. New factors emerge from time to time, and it is not possible for management to predict all such factors or to assess the extent to which any factor or combination of factors may impact TVA’s business or cause results to differ materially from those contained in any forward-looking statement. TVA undertakes no obligation to update any forward-looking statement to reflect developments that occur after the statement is made. Reporting: All references to years in this annual Sustainability Report refer to TVA’s fiscal years ending September 30, unless specifically identified as calendar years. All financial data is reported in U.S. dollars. This report contains key measures of the progress being made and describes our strategies for the future. TVA is committed to continual improvement in reducing environmental impact and modernizing the electricity grid to support new technologies.

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Contact: sustainability@tva.gov

Sustainability Commitment Rooted in TVA’s Mission

TVA’s unique public power model inspires us daily to pursue new ideas and innovative solutions that improve our service and make life better across the seven states of the Tennessee Valley. Sustainability has been a driving force at TVA since its creation in 1933. Our mission has remained constant and focuses on three key areas:

Energy: delivering safe, low-cost, reliable power;

Environment: providing responsible stewardship by caring for the region’s natural resources; and

Economic Development: creating sustainable economic growth.

To deliver on that promise, we build sustainability into everything we do—every decision we make, every project we undertake. Our focus on sustainability strengthens our ability to safely provide reliable, low-cost and increasingly cleaner energy; to engage in proactive stewardship of the Tennessee River system and natural resources; and to support sustainable economic growth. TVA supplies electricity to nearly 10 million people across seven southeastern states, working in partnership with 153 local power companies (LPCs) and with directly served customers.

As a public power provider, it is critical that we understand and are accountable for performance on the sustainability issues most important to our stakeholders. TVA’s FY 2020 Sustainability Report provides transparency on our everyday activities, goals and progress in delivering energy, environmental, economic and societal impact. We follow best-in-class standards like the Global Reporting Initiative (GRI), a recognized international framework for economic, environmental and social performance disclosure. We also engage with industry, federal and customer-oriented disclosure initiatives from CDP (formerly the Carbon Disclosure Project), Edison Electric Institute, Electric Power Research Institute, The White House Council for Environmental Quality, Office of Management and Budget and the Task Force on Climate-Related Financial Disclosures. The Sustainability report aligns with GRI standards, including information in the report which (1) reflects the organization’s significant economic, environmental and social impacts; or (2) substantively influences the assessments and decisions of stakeholders. To view our progress tracked within the GRI framework visit tva.com/sustainabilityreport.



Aspirations to Make Life Better for the People of the Valley

Sustainability is a critical part of TVA's mission to make life better for the Tennessee Valley's 10 million people and businesses by providing low-cost, reliable and increasingly cleaner energy, a healthy environment and a prosperous economy, today and for future generations. TVA's Sustainability Report provides a comprehensive view of our performance and our future aspirations.

RELIABLE, LOW-COST ENERGY

- Maintain 99.999% Reliability While Innovating for a Changing Utility Sector
- Continue Delivering Low-Cost Electricity Rates in Best-Quartile Nationally
- Lower Consumer Energy Costs Through Energy Efficient Homes in Valley Communities

DECARBONIZATION

- Aspire to Net-Zero Carbon Energy by 2050 While Maintaining Low Costs and Reliability
- Reduce Carbon Emissions 70% by 2030, with Path to Approximately 80% by 2035
- Add 10,000 MW of Solar by 2035, Including Solar Driven by Local Power Companies and Customers Participating Through Green Invest Program

INNOVATION

- Pave the Way for over 200,000 Electric Vehicles on Valley Roads by 2028
- Innovate Utility-Scale Battery Storage for Renewable Energy
- Develop and Deploy a Small Modular Reactor through Federal Partnership

ECONOMIC DEVELOPMENT

- Continue to Attract and Grow Investments and Jobs That Power the Valley's Economy
- Strengthen Partnerships with Local Power Companies and Directly Served Customers
- Enhance Supplier Diversity Program Support for Women-Owned, Minority-Owned and Veteran-Owned Businesses
- Maintain "Top 10" Ranking for Military-Friendly Supplier Diversity Program

ENVIRONMENTAL STEWARDSHIP

- Improve Integrated Environmental Footprint (Air, Water, Waste, Land, Biodiversity)
- Protect the Tennessee River System's Natural Habitats and Biodiversity
- Support \$12 Billion in Sustainable Recreational Activities on Public Lands and Waters
- Partner with Communities and Conservation Partners to Plant 1 Million Trees

PEOPLE AND PARTNERSHIPS

- Enhance Safety and Well-Being of TVA Employees and the People of the Valley
- Strengthen Partnerships and Volunteer in Valley Communities as Part of Our Mission
- Prioritize Environmental Justice for Impacted Communities
- Create a Talent-Focused Organization That Delivers Performance and Service
- Accelerate Impact of Inclusion with Diversity Within TVA and the Communities We Serve
- Create a Culture That Lives Up to Our Values and a Positive Employee Experience

RESILIENCE

- Become the Nation's Top-Performing Nuclear Fleet by 2025
- Build the Integrated and Reliable Grid of Tomorrow
- Maintain "Best in the Nation" Status on Flood Management
- Enhance Climate Adaptation to Improve Overall Resiliency for the Valley



Our efforts to build a robust, diverse power generation mix have led to a 63% reduction in total mass carbon emissions for owned generation since 2005. As a national leader in low-carbon energy, we aspire to achieve a net-zero carbon energy future by 2050 while maintaining power reliability and affordable rates. Current plans put TVA on a trajectory to achieve a 70% reduction by 2030 and approximately 80% by 2035. That is well ahead of the industry and ahead of the 50% carbon reduction goal the U.S. is targeting for 2030. Progress toward net-zero emissions will require continued investment in new, cost-effective technologies in addition to nuclear, solar, wind and hydro. We are committed to achieving our carbon-reduction goals while delivering low-cost energy and maintaining our track record of 99.999% reliability since 2000.

Our ability to decrease carbon emissions helps our customers and end-use consumers compete in the marketplace and enables TVA to attract and retain businesses, jobs and investment. During the past five years, TVA has attracted and retained approximately 341,000 jobs and more than \$45.4 billion in direct investment. Even in 2020 during COVID-19, TVA helped attract and retain approximately 67,000 jobs and \$8.6 billion in capital invested.

We firmly believe that low-carbon, low-cost energy combined with high reliability creates an incredibly competitive advantage for the Valley. Global tech companies like Facebook and Google that require vast data centers and computing power have built major operations

Economic Impact: Powering the Valley's Economy of the Future

TVA has one of the largest, most diverse and cleanest energy-generating systems in the nation. We are investing in our assets, reducing our reliance on coal, modernizing the transmission system and adding new renewable energy resources to ensure safe, reliable and cleaner energy for decades to come.

across our seven-state region, partly because we can meet their ambitious environmental goals. General Motors, Nissan and Volkswagen are putting electric vehicles (EVs) and net-zero emissions commitments at the core of their strategies and are building the next generation of EVs right here in the Valley. TVA's EV Initiative with LPCs and other stakeholders anticipates increasing the number of EVs on Valley roads to well over 200,000 by 2028.

TVA is committed to providing all customers with stable wholesale rates. Living in the region, we enjoy electric rates lower than 70% of the nation's largest utilities and industrial rates lower than 90% of other large utilities. TVA's strong financial and operational performance in recent years has allowed us to maintain stable effective wholesale rates from FY 2013 through FY 2021.

A cleaner fleet has meant lower costs. TVA's Grid of Tomorrow initiative focuses on enabling greater use of renewable resources to support its decarbonization goals while ensuring a continued supply of reliable, low-cost power. In fact, our efforts to modernize TVA's generating portfolio have allowed us to reduce annual fuel and purchased power expenses by more than \$1 billion. Optimal resource planning around robust, diverse power generation and efforts to improve nuclear fleet performance will assist TVA in further reducing fuel costs and meeting our commitment to keep rates stable for the next decade.

Emissions reduced from historic peaks

97.4%

Reduction in nitrogen oxide (NO_x) below CY 1995 levels through CY 2020 from TVA owned and operated generation

99.2%

Reduction in sulfur dioxide (SO₂) below CY 1977 levels through CY 2020 from TVA owned and operated generation

63%

Reduction in total carbon dioxide (CO₂) below CY 2005 levels through CY 2020 from TVA owned and operated generation, and purchased power

Environmental Impact: Stewards of the Environment

TVA is a steward of the region's waterways and surrounding public lands, and we are dedicated to preserving the Valley's cultural and natural resources and maintaining a healthy climate for future generations. We comply with applicable environmental laws, regulations and commitments, while maintaining an Environmental Management System that fosters continuous improvement in our proactive stewardship and in reducing our environmental footprint.

We aspire to achieve net-zero carbon emissions by 2050 and to support broader national efforts to decarbonize the economy, and we are developing the robust roadmap and technologies to achieve it. TVA improves regional air quality through emission controls on existing generation and through adopting cleaner energy options. From 1970 to 2020, TVA spent approximately \$6.8 billion on clean air controls to reduce emissions from its power plants.

To keep us on track toward these aspirations, TVA's Climate Change Resiliency and Adaptation Plan enables us to identify possible impacts to achieving our mission, assess potential consequences and our ability to mitigate climate change, develop adaptation-planning actions, ensure resources are invested wisely and support the federal government's leadership role in sustainability.

At TVA, our unique public service mission includes the management of approximately 11,000 miles of shoreline and 293,000 acres of public lands along the Tennessee River and its tributaries for cultural and natural resource protection. TVA's management of the river system also supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production and cooling water for TVA's generation units.

TVA operates river dams at 49 projects, generates hydroelectric power with 29 conventional hydro plants and one pumped-storage plant and has invested more than \$800 million in dam safety projects since 2010. TVA is working with federal agencies, state and local governments, and communities across the Valley to ensure adequate,

sustainable supplies of water to support the region's continued growth. TVA's investments helped prevent \$1 billion in potential flood damage during the wettest year on record.

With a focus on protecting cultural and natural resources, TVA also supports the precious biodiversity in the Valley and provides recreational opportunities on TVA lands and waterways for everyone to enjoy. In 2020, TVA conducted more than 245 stewardship projects to enhance and protect natural resources and promote ecotourism.

Over 20 Tribes have a religious and cultural connection to ancestral homelands in the Tennessee Valley and play a vital role in the management of cultural resources on TVA land. In 2020, we collaborated with the Tribes on efforts including repatriation of archaeological sites and executed agreements to guide TVA and tribal interactions.

The Tennessee River watershed is one of the most biologically diverse regions in North America. As an environmental steward, TVA monitors and protects species and habitats across the Valley, supporting the ecological biodiversity. In FY 2020, TVA ranked best among peers in biodiversity based on industry benchmarks for protecting our 247,000 acres of public lands.



Social Impact: Serving People and Communities Across the Valley

At TVA, our unique, long-standing mission of service inspires us every day to support the 10 million people we are privileged to serve. TVA delivers vital services across the region to assist families, communities, businesses and industries—and help the Tennessee Valley recover and grow.

Throughout our 88-year history, we have worked together to help Valley communities become more sustainable and resilient. TVA works in partnership with local power companies and directly served customers to benefit the people of the region. Our actions are guided by what is best for the Valley as a whole. We strive to maintain a competitive, diverse supplier base that is reflective of our region.

Each and every day, our employees are focused on making life better for the people in the Valley. The TVA EnergyRight® suite of programs, in partnership with our LPCs, ensure end-use consumers have the right tools and information to feel confident in their energy decisions. Through the Home Uplift program, TVA, LPCs and other strategic partners provide benefits to high-energy-burden residents by offering free energy upgrades to increase home energy efficiency and to lower the homeowner's monthly energy bills.

During the pandemic, TVA carried out its mission of service by partnering with LPCs to create the COVID-19 Community Care Fund, which provided \$2.5 million in local contributions and TVA matching funds to non-profit organizations addressing hardships created by the pandemic. TVA provided approximately \$200 million for Pandemic Relief Credit for directly served customers, LPCs and their large commercial and industrial customers. At the end of September 2020, credits of \$9.9 million had been distributed by TVA under its Back-to-Business Program, supporting approximately 92,000 jobs across the Valley.

We strongly believe in working to support the vibrant communities where we live and work. Our Team TVA volunteer program connects

employees' passion for volunteering with opportunities to serve. Employees also serve communities in partnership with LPCs, such as volunteering at local food banks, local schools and other activities. TVA's community outreach focuses on science, technology, engineering and mathematics (STEM) and robotics to inspire the future workforce. In FY 2020, TVA and TVA retiree group, Bicentennial Volunteers Incorporated, sponsored more than 200 robotic competitions and 350 robotic teams and invested more than \$1.1 million in grants for STEM and robotics activities.

It is our diverse employees who help us give back to the community and achieve our aspirations. At TVA, inclusion with diversity is about shaping a work environment that values all voices and building a talented, highly skilled workforce made up of people from every background. We are fostering and nurturing an inclusive culture where employees show up knowing their contributions matter, understand the value of their work to the 10 million people we serve and are supported and engaged leaders and co-workers.

We have a professional and personal commitment to protect our employees, our contractors, our customers and those in the communities we serve, which is why safety is one of TVA's core values and a key part of our culture. Last year was one of TVA's safest years on record with recordable injury rates and serious injury rates among the lowest in the industry nationwide.



For more information on this and other TVA reports:

Sustainability Report
tva.com/sustainabilityreport

Carbon Report
tva.com/carbon