

FY 2023

Building a Sustainable Future

TVA TENNESSEE VALLEY AUTHORITY



The Tennessee Valley Authority is the nation’s largest public power supplier,

delivering energy to approximately 10 million people across seven southeastern states. TVA was established in 1933 to serve this region and the nation by developing innovative solutions to solve complex challenges. TVA’s unique mission focuses on energy, environmental stewardship, and economic development. With one of the largest, most diverse, and cleanest energy systems – including nuclear, hydro, solar, gas, and advanced technologies – TVA is a leader in our nation’s drive toward a clean energy future.

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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 using words such as: may, will, should, expect, anticipate, believe, intend, project, plan, predict, assume, forecast, estimate, objective, possible, probably, likely, potential, speculate, aim, aspiration, goal, seek, strategy, target 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 any 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 Sept. 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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Sustaining a mission of service



From TVA's beginning, our mission of service focused on lifting this region ... for today and tomorrow.

We harnessed the power of our rivers, preventing devastating flooding and producing energy. We introduced sustainable farming techniques to prevent erosion and bolster crop yields. We reforested

and tended to public lands and waterways, helping to protect and restore one of the most biodiverse areas in the world.

We first generated electricity with hydropower, the original clean energy resource. Today, TVA's dams are still generating power while also creating water recreation opportunities and driving tourism for our communities.

As our population, economy and energy needs grew through the decades, TVA led the way. We now generate electricity that flows to seven states, with the majority of it coming from carbon-free sources.

And we are embracing the next sustainability challenge – working to serve regional growth while also developing a pathway toward a net-zero carbon energy future. This means delivering affordable, reliable, resilient and clean electricity for more families, businesses and industries like advanced nuclear and electric vehicles.

Sustainability is about the steps we each take to make this region a better place for today and tomorrow. TVA is working to build a diverse, clean energy system that combines hydropower, existing and new nuclear generation, renewable energy, utility scale battery storage and other innovations.

We are demonstrating that we can protect and preserve our planet and grow our economy at the same time. We are doing this as we transition to a cleaner energy system that maintains the affordability and reliability this region has long enjoyed.

At TVA, we are advancing a sustainable future each day for the Tennessee Valley region, from the Mississippi River to the Smoky Mountains. Because we were built to create solutions that power regional prosperity now, while also serving the generations to come.

Jeff Lyash

President & CEO



Tennessee Valley residents and visitors can marvel at flocks of these magnificent sandhill cranes each winter at TVA reservoirs and partner-managed refuges.

Delivering a clean energy future

Transparency and collaboration light the path ahead

As TVA's incoming Chief Sustainability Officer, you bring a fresh perspective on the subject. What opportunities do you see ahead?

We're entering a pivotal time in TVA's history. The transition to a clean energy economy may be as revolutionary as the electrification of our region in the 1930s. TVA held a unique standing then, and still does today — built for people, not profit — a public power company created to serve the common good.

Because of that unique position, we have an opportunity to lead the way in sustainability. We're able to attract new, sustainable industries to the region and forward-thinking leaders to our own workforce. Our increasingly clean energy is powering that revolution, as the region becomes a hub for next-generation industries, from advanced nuclear power to electric vehicle manufacturing.

Of course, we can't rest. The technology of today won't meet the needs of tomorrow. So TVA is working with partners like Oak Ridge National Laboratory, leading universities and industry groups to develop the technology that will power the future. We're also working with our local power company partners, industries and communities to put those innovations to use in practical ways.

Does TVA face any unique sustainability challenges?

Sure. Our unique position means that we have additional responsibilities. We are committed to meeting federal goals and the broader regulatory expectations placed on the utility industry.

TVA's mandate — part of our mission — is to deliver reliable power at the lowest feasible cost. In the years ahead we'll need to expand to meet the energy needs of the region's growing population, but also keep power affordable, reliable and resilient, all while we reduce carbon emissions. That's challenging, but all those elements — affordability, reliability, resiliency and carbon reduction — are essential for sustainability.



As Vice President of Environment and Sustainability and Chief Sustainability Officer, Michael McCall leads TVA's sustainability efforts.

I'm pleased to say TVA's financial discipline, operational efficiency and diverse generating sources have kept our energy costs among the lowest in the nation and our reliability among the highest, even as we reduce carbon emissions. And as our region's population continues to grow, we will continue to respond to our customers' expectations and needs.

That requires planning. We collaborated with the University of Tennessee's Baker School of Public Policy and Public Affairs [on a study](#) for a net-zero greenhouse gas emission economy in the Valley region by 2050. That's net zero across the entire economy, not just one sector, and we are examining the pathways and partnerships needed to get there.

TVA takes pride in its customers' trust. How will it maintain its record of reliability, as power demands in the Valley region grow?

Transparency is key. TVA's governance structure ensures oversight, which in turn manages risk, drives progress and maintains the trust that is the foundation of the public power model.

TVA plans to invest approximately \$20 billion from 2024 to 2028 on new and existing generation and transmission system improvements to help meet expected growth in the region.

We're adding both energy storage and various forms of generation, including solar. In fact, we plan to expand our nearly 3,200 megawatts of current solar capacity commitments to 10,000 megawatts by 2035.

We're excited about planning for the future and how to best meet energy demand in the coming decades. Diverse stakeholders are involved throughout our planning and decision-making processes, providing unique viewpoints that strengthen our outcomes.

With the public's help, we are updating our Integrated Resource Plan, which includes TVA's forecast of resource needs, policy goals, physical and operational constraints, risks and proposed resource choices. The final document, accompanied by an Environmental Impact Statement, will outline TVA's strategy for affordable, reliable, resilient and increasingly cleaner energy for decades to come.

Long-term planning and stakeholder input helps us anticipate and respond to emerging challenges as we work with our partners to ensure a secure energy future.



Guiding principles

Transparency and responsibility are fundamentals of the public power model

Since 1933, TVA's mission to make life better for the people it serves has guided its business decisions and strategies. Sustainability is fundamental to ensuring the enterprise can continue to carry out this mission of service for generations to come.

Sustainability means providing affordable, reliable, resilient and clean energy to the people of the seven-state region. It means providing a healthy environment and a prosperous economy, too – without compromising the ability of future generations to do the same.

Sustainability means being a good neighbor and a responsible energy provider.

These have always been guiding principles at TVA.

As the nation's largest public power supplier, TVA's governance structure is critical to ensuring transparent decision-making and driving sustainability performance.

TVA's Chief Sustainability Officer provides oversight across business units and oversees an enterprise-

wide Environment Executive Council and Sustainability Steering Committee.

Sustainability work is categorized into the five pillars listed at right. TVA identifies and prioritizes sustainability topics supporting each pillar. These priorities help focus TVA's sustainability strategy and inform its reporting.

Through collaboration with the Regional Resource Stewardship Council and other stakeholders, TVA is refreshing its sustainability priorities to better reflect the risks and opportunities of the evolving energy landscape and the rapidly growing region it serves. To reaffirm the values most fundamental to carrying out its mission, TVA also designated these foundational strategic priorities this year: energy affordability and reliability; ethics and compliance; and health and safety.

The enterprise leverages industry-accepted frameworks, including the Global Reporting Initiative and the Sustainability Accounting Standards Board standards, to meet its stakeholders' need for transparent, comparable data in sustainability reporting. It also aligns with the United Nations Sustainable Development Goals (UN SDGs).

Economic Impact

- Clean Energy
- Flood and Drought Management
- Innovation
- Supplier Partners
- Valley Economy

Environment

- Air, Water and Waste Management
- Biodiversity and Stewardship
- Climate Adaptation and Resilience
- Cultural Resource Management

Social

- Community Vitality and Engagement
- Customer Engagement and Partnerships
- Diversity, Equity and Inclusion
- Environmental Justice
- Workforce Preparedness

Governance

- Corporate Impact
- Cyber and Physical Security
- Financial Health

Foundational

- Energy Affordability and Reliability
- Ethics and Compliance
- Health and Safety

TVA Mission, Strategic Priorities and Values

Our focus on sustainability strengthens our ability to safely provide affordable, reliable and clean energy; to engage in proactive stewardship of the Tennessee River system and natural resources; and to support sustainable economic growth. TVA's mission has remained constant since our inception and focuses on three key areas:

Energy

We deliver affordable, reliable and clean power.

Environment

We provide responsible stewardship by caring for the region's natural resources.

Economic Development

We create sustainable economic growth.

Strategic Priorities



People Advantage

Amplifying the energy, passion and creativity within us all.



Operational Excellence

Building on our best-in-class reputation for reliable service and competitively priced power.



Financial Strength

Investing in the future while keeping energy costs as low as possible.



Powerful Partnerships

Promoting progress through the shared success of our customers and stakeholders.



Igniting Innovation

Pursuing innovative solutions for TVA and our customers and communities.

Core Values



Safety

We are uncompromising in our commitment to the safety and well-being of our teammates and the communities we serve.



Integrity

We are honest and straightforward, always doing the right thing with integrity.



Inclusion

We treat everyone with dignity and respect, emphasizing inclusion by welcoming each person's individuality so we can reach our potential.



Service

We are proud to be of service in the communities in which we live, work and play.

Aligning with United Nations Sustainable Development Goals

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>1 NO POVERTY</p>	<p>TVA was created to lift the Valley region from the depths of the Great Depression of the 1930s. Today, TVA remains committed to making life better for the communities it serves. In addition to providing electricity at the lowest feasible cost, TVA strives to be a trusted neighbor through corporate giving, employee volunteer efforts, assisting with recovery efforts in the wake of natural disasters, and providing programs that give support and assistance to those in need.</p>	<ul style="list-style-type: none"> Energy Affordability and Reliability Flood and Drought Management Valley Economy
<p>2 ZERO HUNGER</p>	<p>The Valley region faces higher rates of food insecurity than other parts of the country. In partnership with local nonprofit organizations, TVA fights hunger in the communities it serves through corporate contributions, food drives, and employee volunteer efforts. TVA also supports resilient, sustainable agriculture through ongoing engagement with the region's farmers, erosion prevention programs that support soil health and water quality, and incentives for food system innovations such as indoor agriculture.</p>	<ul style="list-style-type: none"> Energy Affordability and Reliability Valley Economy Innovation
<p>3 GOOD HEALTH AND WELL-BEING</p>	<p>In its first decades, TVA changed the quality of life in the Valley region for good by controlling the flooding of the wild Tennessee River and initiating programs to control malaria and other diseases. Public health and safety remains a priority for TVA today. In the aftermath of the COVID-19 pandemic, TVA continues to work with its local power company partners to support economic recovery and preserve public health. TVA also strives to protect both environmental and human health by investing in clean air and clean water for the region through responsible waste management and aggressive pollution control.</p>	<ul style="list-style-type: none"> Health and Safety Community Vitality and Engagement Flood and Drought Management Environmental Justice Air, Water and Waste Management
<p>4 QUALITY EDUCATION</p>	<p>Inclusive and equitable education is an important part of TVA's mission to give the people of the Valley region a better opportunity to thrive. TVA's educational programs focus on building the workforce of tomorrow by introducing students to STEM skills that offer steady, well-paid careers right here in the Valley region. TVA provides educational resources online and in person for students of all socioeconomic backgrounds, genders and abilities. Through the Water Monitoring Lab and other environmental programs, TVA Natural Resources conducts outreach efforts to connect with students throughout TVA's service region. For college students and lifelong learners, TVA's CADnet School to Work program, Intern Program and entry-level training courses provide paid, impactful educational opportunities that go beyond the classroom.</p>	<ul style="list-style-type: none"> Community Vitality and Engagement Workforce Preparedness

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> Continue Delivering Affordable Electricity Rates (Best-Quartile Nationally) Increase Investment in Energy Efficiency for Underserved Residents and Communities 	<ul style="list-style-type: none"> Maintained residential rates lower than 75% of the nation's top 100 largest utilities, with industrial rates that are some of the lowest in the country Donated \$100,000 to disaster recovery and 1,000 employees provided support following the tornado in Amory, in Monroe County, Mississippi. Also donated \$50,000 in supplies and equipment to Covington, Tennessee, schools following tornadoes in that area Logged 10,000 service hours by more than 2,000 employees across all the counties in TVA's seven-state service area to celebrate TVA's 90th anniversary—picking up trash from trails and streams, packaging meals at food banks and cleaning up storm-ravaged communities Hit a milestone of 5,000 homes upgraded through TVA's Home Uplift, bringing free energy efficiency savings to income-qualified residents in partnership with local power companies
<ul style="list-style-type: none"> Prioritize Social and Environmental Justice for Impacted Communities Enhance Safety and Well-Being of TVA Employees and the People of the Region 	<ul style="list-style-type: none"> Distributed 1 million meals to families in need through partnership with Feeding America Donated \$935,000 to health, hunger and housing initiatives, including partnering with Memphis Light Gas and Water to provide \$100,000 to the Mid-South Food Bank's mobile food pantries Continued to manage the Tennessee River system to meet the region's agricultural water needs, among other benefits
<ul style="list-style-type: none"> Prioritize Social and Environmental Justice for Impacted Communities Enhance Safety and Well-Being of TVA Employees and the People of the Region 	<ul style="list-style-type: none"> Supported more than 900 organizations across seven states through the Community Care Fund in 2023, with over \$22 million in total contributions from TVA and local power companies since the Fund was initiated in 2020 in response to the COVID-19 pandemic Reduced emissions of NO_x by 97% and SO₂ by 99% from historic peaks in 1995 and 1977, respectively Invested \$6.8 billion through 2023 to improve air quality in the Valley region through emission controls Achieved top decile safety performance in FY 2023
<ul style="list-style-type: none"> Continue to Attract and Grow Investments and Jobs that Power the Region's Economy Advance Employee and Community Workforce Development Create a Talent-Focused Organization that Delivers Performance and Service 	<ul style="list-style-type: none"> Partnered with the Ripken Foundation to found STEM education centers at 27 locations in underserved communities across the seven-state service region Provided \$1.5 million in STEM grants for 343 projects at regional schools in partnership with Bicentennial Volunteers, Inc., a TVA retiree organization Invested \$2.6 million in 64 schools to reduce energy costs and improve the quality of the learning environment through School Uplift

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>5 GENDER EQUALITY</p>	<p>Diversity, Equity, Inclusion and Accessibility is an integral part of how TVA does business. TVA works to advance gender equality in the communities it serves through outreach and advocacy, Supplier Diversity initiatives and more. To attract, develop and retain top talent reflective of the communities it serves, TVA is partnering to build a more diverse talent pipeline and taking steps to advance equity in the compensation structure, benefits packages and advancement opportunities TVA offers its workforce.</p>	<ul style="list-style-type: none"> ▪ Diversity, Equity and Inclusion ▪ Workforce Preparedness ▪ Valley Economy ▪ Supplier Partners
<p>6 CLEAN WATER AND SANITATION</p>	<p>TVA understands that clean water is vitally important – for plants, animals and people. Managing the Tennessee River system means balancing the needs of diverse stakeholder interests – including power production, navigation, industry, agriculture, recreation, aquatic biodiversity and public water supply – through periods of flooding and drought. More than 5 million people get their water from the Tennessee River and its tributaries every day. TVA supports a broad range of initiatives to protect and improve water resources, ensure adequate water quality and maintain water supply.</p>	<ul style="list-style-type: none"> ▪ Air, Water and Waste Management ▪ Climate Adaptation and Resiliency ▪ Biodiversity and Stewardship
<p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>TVA is in a unique position and has a responsibility to lead in developing solutions that will deliver a carbon-free energy future. As TVA works toward an aspiration of net-zero carbon emissions by 2050, it adheres to its original mission of generating affordable, reliable, resilient and clean energy. This is what customers and prospective customers deserve and expect. TVA EnergyRight® and TVA Green programs play a vital role in TVA's carbon leadership strategy while driving energy equity, efficiency and innovation. TVA is committed to building a greener future that leaves no one behind.</p>	<ul style="list-style-type: none"> ▪ Clean Energy ▪ Energy Affordability and Reliability ▪ Customer Engagement and Partnerships ▪ Innovation ▪ Environmental Justice ▪ Corporate Impact ▪ Climate Adaptation and Resiliency

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> ▪ Enhance Supplier Diversity Program Support for Women-Owned, Minority-Owned and Veteran-Owned Businesses ▪ Accelerate Impact of Inclusion with Diversity within TVA and the Communities it Serves 	<ul style="list-style-type: none"> ▪ TVA Employee Resource Group Women Empowered continued to support women in the TVA workforce and beyond through networking, developmental opportunities and community outreach initiatives, including strong support of YWCA and the Women's Fund and their associated missions ▪ Continued partnership with Girls Inc. of Chattanooga, with TVA employees recognized for mentorship work ▪ Prepopulated an inclusion-focused performance goal for non-represented employees during the FY 2023 employee performance goal-setting process, and required an inclusion-focused performance goal for leaders
<ul style="list-style-type: none"> ▪ Continue to Improve Integrated Environmental Footprint (Air, Water, Waste, Land, Biodiversity) ▪ Continue to Protect the Tennessee River System's Natural Habitats and Biodiversity ▪ Continue to Support \$12 Billion in Sustainable Recreational Activities on Public Lands and Waters 	<ul style="list-style-type: none"> ▪ Issued approximately 1,600 Section 26a permits to protect TVA's programmatic interests and natural and cultural resources while facilitating reasonable access to the reservoirs ▪ Brought the Water Monitoring Lab to 116 schools in six states, delivering 460 presentations that taught nearly 11,000 students about protecting the Tennessee River's health ▪ Improved dissolved oxygen levels in more than 300 river miles downstream of TVA dams through the Reservoir Release Improvement Program ▪ Continued to protect water quality and biodiversity by maintaining minimum flows at TVA dams, installing aeration equipment and more
<ul style="list-style-type: none"> ▪ Continue Delivering Affordable Electricity Rates (Best-Quartile Nationally) ▪ Execute Strategy to Build the Clean Energy System of the Future (with an aspiration of net-zero by 2050) ▪ Add 10,000 Megawatts of Solar by 2035 to Meet Customer Demand and TVA System Needs ▪ Increase Investment in Energy Efficiency for Underserved Residents and Communities 	<ul style="list-style-type: none"> ▪ Delivered 55% clean energy with 99.999% grid reliability with the power of a diverse portfolio of energy resources, while keeping residential rates lower than 75% of the top 100 U.S. utilities and industrial rates lower than 95% of the top 100 U.S. utilities ▪ Detailed reviews of approximately 6,000 megawatts of solar energy and energy storage ▪ Committed to investing \$1.5 billion in energy efficiency and demand response over five years, including incentives for homeowners and businesses to lower the cost of energy efficiency improvements and participate in demand response program ▪ Recognized by the U.S. Department of Energy and U.S. Environmental Protection Agency with a 2023 Partner of the Year Award for Energy Efficiency Program Delivery

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 	<p>TVA powers economic success by providing affordable, reliable, resilient and clean energy that attracts innovative industries, jobs and investments to the region. TVA also drives economic development through grants, partnerships and resources for STEM education, helping today's students build the skills needed for the workforce of tomorrow. TVA's commitment to bringing good jobs to the region starts with its own workforce. The strength of TVA is in its people – and TVA offers competitive wages, quality benefits, diverse career development opportunities and more to help ensure its team members have the support they need to Do Good Here.</p>	<ul style="list-style-type: none"> Health and Safety Valley Economy Workforce Preparedness Community Vitality and Engagement Customer Engagement and Partnerships Diversity, Equity and Inclusion
<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>TVA's long history of leadership in developing and delivering new ideas and innovative solutions provides an opportunity to bring these investments to the region and build on that track record of excellence. The Energy System of the Future is being designed to help reinforce reliability, protect the environment and keep power costs low with a diverse portfolio of clean energy sources, advanced technologies and broad electrification. Elements critical to this success include investments in energy storage integration, electric vehicle evolution, decarbonization options, Connected Communities, regional grid transformation, and advanced nuclear solutions. TVA is investing in the future today.</p>	<ul style="list-style-type: none"> Innovation Customer Engagement and Partnerships Workforce Preparedness Cyber and Physical Security Climate Adaptation and Resiliency

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> Continue to Attract and Grow Investments and Jobs that Power the Region's Economy Create a Talent-Focused Organization that Delivers Performance and Service Enhance Safety and Well-Being of TVA Employees and the People of the Region Advance Employee and Community Workforce Development 	<ul style="list-style-type: none"> Helped attract projected capital investments of over \$9.2 billion that are expected to create 12,276 jobs and retain 46,135 jobs^{[1][2]} Recognized as a Top Utility for Economic Development for the 18th consecutive year Investing approximately \$20 billion in the next five years to build additional generation and upgrade the TVA system on new and existing generation and transmission system improvements to help meet growing electricity demand amid continued economic growth TVA employees are represented by six collective bargaining agreements and nine labor unions, reflecting 58% of TVA's workforce With the addition of TVA contractors, there are a total of nine collective bargaining agreements and 17 labor unions Recognized on the Forbes 2023 List of Top 10 Best Employers in Tennessee Investing in growing the skilled trade workforce, including a \$25,000 donation to the Construction Career Center of Chattanooga Achieved top decile safety performance in FY 2023
<ul style="list-style-type: none"> Build the Integrated Grid of Tomorrow by 2027 Partner to Develop New Clean Energy Technologies for Deployment in the 2030s and Beyond Develop and Deploy a Small Modular Reactor through Federal Partnership Become the Nation's Top-Performing Nuclear Fleet by 2025 Pave the Way for More Than 200,000 Electric Vehicles on Valley Roads by 2028 Provide Reliable and Resilient Power in the Energy System of the Future 	<ul style="list-style-type: none"> Moving forward with building the energy system of the future by providing new resources to help local power companies transform the electrical grid into a more flexible, distributed and integrated electric system Continued construction on TVA's first battery storage system, projected to be completed in 2024 Earned Exemplary performance rankings, the highest awarded in the nuclear industry, at all seven TVA nuclear units Preparing a construction permit application for a BWRX-300 small modular reactor at the Clinch River Site near Oak Ridge, Tennessee, and exploring additional sites in the TVA service area for potential small modular reactor deployments Presented with a Nuclear Energy Institute Top Innovative Practice Award for demonstrating innovative safety techniques Working with partners from the State of Tennessee and Drive Electric Tennessee to support the continued build-out of the Valley-wide electric vehicle (EV) Fast Charge Network, which as of April 1, 2024, has 24 sites featuring 56 fast-charging stations

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>10 REDUCED INEQUALITIES</p>	<p>Inclusion is a core value at TVA, and TVA continuously works to integrate Inclusion with Diversity within its own workforce and in the communities it serves. TVA helps reduce economic inequality through initiatives such as its Supplier Diversity program, which ensures small, local and diverse companies have equitable opportunities to compete for TVA contracts. TVA is also creating more structure around its Environmental Justice work to address disproportionate health, environmental, economic and climate impacts on disadvantaged communities. In alignment with federal guidance, TVA has taken steps to identify and address potential barriers to accessibility in these and other programs to ensure equal opportunity. These efforts included \$900,000 for six projects that improved ADA accessibility and facilities at TVA recreation sites.</p>	<ul style="list-style-type: none"> ▪ Diversity, Equity and Inclusion ▪ Environmental Justice ▪ Valley Economy ▪ Supplier Partners
<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	<p>TVA is part of every community it serves, and it invests in communities to make the future better. Together with its partners, TVA is building resilient, Connected Communities through programs that power equitable economic development, provide support in the wake of disasters, and drive thriving ecotourism and recreation along waterways. TVA understands the significant benefits green and public spaces provide for human health and community well-being, and ongoing environmental education and outreach initiatives help make sure everyone has the opportunity to enjoy the 293,000 acres of public land TVA holds in trust.</p>	<ul style="list-style-type: none"> ▪ Community Vitality and Engagement ▪ Environmental Justice ▪ Workforce Preparedness ▪ Climate Adaptation and Resiliency ▪ Cultural Resource Management ▪ Flood and Drought Management
<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	<p>TVA believes in walking the walk of sustainability, starting with its own facilities. That's why it maintains a nationally recognized Internal Energy Management Program to make sure it is identifying, funding and implementing energy and water conservation projects in TVA buildings. TVA is committed to sustainability and continuous improvement, proactive stewardship in managing natural resources and its environmental footprint, and maintaining compliance with all applicable environmental and legal requirements. TVA expects its suppliers to share this commitment to responsible production, as detailed in the Supplier Code of Conduct.</p>	<ul style="list-style-type: none"> ▪ Corporate Impact ▪ Financial Health ▪ Air, Water and Waste Management ▪ Clean Energy ▪ Supplier Partners

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> ▪ Accelerate Impact of Inclusion with Diversity within TVA and the Communities It Serves ▪ Enhance Supplier Diversity Program Support for Women-Owned, Minority-Owned and Veteran-Owned Businesses ▪ Maintain "Top 10" Ranking for Military-Friendly® Supplier Diversity Program ▪ Prioritize Social and Environmental Justice for Impacted Communities 	<ul style="list-style-type: none"> ▪ Spent \$522 million with diverse businesses and \$1.2 billion with small businesses in FY 2023 ▪ Renewed and expanded TVA's partnership with the Tennessee Urban League, with \$3 million invested to support statewide business development programs for diverse business development initiatives ▪ Working with union leaders to expand efforts to increase TVA's talent pipeline, remove barriers to hiring diverse external candidates, and advance Inclusion with Diversity in the skilled trades ▪ Received multiple awards for TVA's continued focus on building an inclusive work culture, including being named a 2023 VETS Indexes 5 Star Employer, which recognizes companies that support veterans at work - in hiring and retention practices, culturally and by supporting their families
<ul style="list-style-type: none"> ▪ Strengthen Partnerships and Volunteer in Communities as Part of TVA's Mission of Service ▪ Prioritize Social and Environmental Justice for Impacted Communities ▪ Maintain "Best in the Nation" Status on Flood Management and 99.999% Transmission Reliability ▪ Continue to Support \$12 Billion in Sustainable Recreational Activities on Public Lands and Waters 	<ul style="list-style-type: none"> ▪ Announced \$2 million in new Connected Communities grants to improve quality of life and equity through innovative, community-driven solutions ▪ Prevents an average of \$300 million in flood damage along the Tennessee River every year ▪ Contributed \$1 million to help communities recover from severe weather events ▪ Continued to protect approximately 12,500 archaeological sites on TVA-managed land ▪ Partnered with the Cumberland River Compact to enhance urban tree canopies in underserved communities in Middle Tennessee ▪ Supported Bridge Chattanooga, Lookout Mountain Conservancy, Tennessee State Parks and other partners to improve public land accessibility for people of all abilities and backgrounds, including by providing funding for all-terrain wheelchairs and an accessible kayak launch at Radnor Lake State Park
<ul style="list-style-type: none"> ▪ Continue to Improve Integrated Environmental Footprint (Air, Water, Waste, Land, Biodiversity) ▪ Achieve 100% Sedan and SUV Electric Fleet by 2030 ▪ Execute Strategy to Develop the Clean Energy System of the Future (with path to ~80% carbon reduction by 2035 and aspiration of net-zero by 2050) 	<ul style="list-style-type: none"> ▪ Recycled 87% of coal combustion residuals produced ▪ More than \$31.5 million spent on contract actions with sustainability clauses ▪ Partnered with Volkswagen of Tennessee to develop the country's first fully electric made-in-America fleet vehicle, supporting plans to acquire EVs for all light-duty vehicle purchases after 2027 ▪ Replaced retiring coal generation with approximately 681 megawatts of modern new natural gas generation capacity through the Colbert Combustion Turbine Expansion project

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>13 CLIMATE ACTION</p>	<p>TVA's aspiration is to achieve net-zero carbon emissions at its electricity system level by 2050 and support broader Valley and national efforts to create a clean energy economy. As severe weather events like storms, droughts and floods become more frequent and extreme, TVA's climate change adaption planning allows it to operate in a secure, effective and efficient manner in a changing climate. In the aftermath of natural disasters, TVA rallies to help impacted communities – by restoring power and by joining community members to distribute food and water, clean up and rebuild.</p>	<ul style="list-style-type: none"> ▪ Climate Adaptation and Resiliency ▪ Clean Energy ▪ Environmental Justice ▪ Flood and Drought Management ▪ Air, Water and Waste Management
<p>14 LIFE BELOW WATER</p>	<p>As stewards of a region with some of the highest freshwater aquatic biodiversity in the world, TVA is committed to sustainable management of the Tennessee River and the fisheries it provides. TVA biologists conduct annual sampling in streams and reservoirs across the watershed and work with its partners to protect and expand populations of threatened aquatic species. TVA monitors and adjusts river flow to maintain healthy conditions for aquatic life and human needs, ensuring future generations can enjoy the same world-class aquatic resources the Tennessee River provides today.</p>	<ul style="list-style-type: none"> ▪ Biodiversity and Stewardship ▪ Air, Water and Waste Management ▪ Environmental Justice ▪ Flood and Drought Management

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> ▪ Enhance Climate Adaption Planning to Improve Overall Resiliency for the Region ▪ Reduce Carbon Emissions by Approximately 80% by 2035 ▪ Aspire to Net-Zero Carbon Energy by 2050 While Maintaining Low Costs and Reliability ▪ Maintain “Best in the Nation” Status on Flood Management and 99.999% Transmission Reliability 	<ul style="list-style-type: none"> ▪ Took 3,400 actions in response to Winter Storm Elliot to enhance resilience and communication in extreme cold weather conditions ▪ Partnering with the U.S. Department of Energy and national laboratories to apply advanced modeling to predict the effects of climate change on TVA's hydropower system ▪ Refreshing and expanding climate adaptation planning priority actions in response to a third-party audit by the Government Accountability Office. These actions include continuing to implement and maintain seasonal readiness programs that incorporate climate threats, continuing to evaluate climate threats in enterprise risk management, evaluating systems and components for potential resiliency hardening, and incorporating climate resiliency into business processes ▪ Began the Valley Pathways Study in 2023, a project in partnership with the University of Tennessee's Baker School that looks at all sectors of the economy to accelerate the region's clean energy future. Preliminary Findings Report identified scenarios and critical actions to achieve a net-zero clean, competitive economy across all Valley economic sectors by 2050
<ul style="list-style-type: none"> ▪ Continue to Protect the Tennessee River System's Natural Habitats and Biodiversity ▪ Continue to Support \$12 Billion in Sustainable Recreational Activities on Public Lands and Waters ▪ Continue to Improve Integrated Environmental Footprint (Air, Water, Waste, Land, Biodiversity) 	<ul style="list-style-type: none"> ▪ Dedicated \$976,616 to environmental stewardship programs to protect and improve aquatic biodiversity ▪ Cohosted the carbon-neutral 2023 Bassmaster Classic, which brought more than 160,000 fishing enthusiasts to Knoxville ▪ Partnering to improve reservoir habitats in East Tennessee, including installing concrete reef balls and natural wood structures to provide nurseries for small fry and cover for older fish ▪ Partnering to conserve, manage and improve at-risk populations of sicklefin redhorse and other culturally and ecologically significant species ▪ Removed 120,000 cubic yards of invasive eelgrass mats from Gunter'sville Reservoir alone in FY 2023 to enhance recreational activities and maintain a healthy environment for native aquatic wildlife

UN SD Goals	TVA Alignment	TVA Strategic Priorities
<p>15 LIFE ON LAND</p>	<p>The TVA service area is home to a vast array of plant and animal species, some of which occur nowhere else on the planet. Environmental stewardship is part of the mission with which TVA was charged in 1933, and the enterprise continues to recognize the importance of biodiversity to the quality of life of the region's residents. TVA works to proactively protect biodiversity through stewardship of public lands, management of the Tennessee River system, local and regional partnerships, and the integration of species and habitat conservation into project planning.</p>	<ul style="list-style-type: none"> Biodiversity and Stewardship Air, Water and Waste Management Environmental Justice Cultural Resource Management
<p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	<p>TVA is foremost a public power company, and it serves the public interest. Earning and maintaining stakeholders' trust is integral to fulfilling TVA's mission of service, and it has been since 1933. TVA's first Code of Ethics, written and distributed less than 60 days after its establishment, stated: "The affairs of the Tennessee Valley Authority shall be conducted in all respects with honesty and openness." Today, TVA remains committed to transparency and accountability. We expect every employee, contractor and supplier to embrace and uphold our core values of Integrity, Safety, Inclusion and Service.</p>	<ul style="list-style-type: none"> Environmental Justice Ethics and Compliance Financial Health Cyber and Physical Security
<p>17 PARTNERSHIPS FOR THE GOALS</p>	<p>At TVA, partnerships are paramount — with local power companies, directly served customers, industry partners, governments, communities and schools. We are stronger together. TVA continues to work to establish and strengthen partnerships that enable the development of tools, processes, projects and understanding to drive a sustainable future in the Valley region and beyond.</p>	<ul style="list-style-type: none"> Biodiversity and Stewardship Customer Engagement and Partnerships Community Vitality and Engagement Cultural Resource Management

TVA Aspirational Goals	FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> Continue to Improve Integrated Environmental Footprint (Air, Water, Waste, Land, Biodiversity) Continue to Protect the Tennessee River System's Natural Habitats and Biodiversity Continue to Support \$12 Billion in Recreational Activities on Public Lands and Waters Partner with Communities and Conservation Partners to Plant Trees 	<ul style="list-style-type: none"> Completed 267 biodiversity conservation activities including monitoring and research, education and outreach, and on-the-ground action in seven states Continued support for National Geographic's Photo Ark, which aims to inspire people to protect at-risk animals by capturing photos of nearly 20,000 species worldwide Enhanced TVA's land management practices with Indigenous knowledge, such as partnering with Federally Recognized Indian Tribes and state agency to plant and restore river cane habitat on Tellico Reservoir Engaged with about 7,000 children through environmental education and outreach events, such as the annual BioBlitz events held in partnership with Discover Life in America
<ul style="list-style-type: none"> Prioritize Social and Environmental Justice for Impacted Communities Create a Talent-Focused Organization That Delivers Performance and Service Enhance Safety and Well-Being of TVA Employees and the People of the Valley 	<ul style="list-style-type: none"> Sustained a best-in-class ethics and compliance program at TVA, the first federal agency to earn the coveted Compliance Leader Verification from Ethisphere Collaborating with a wide variety of stakeholders to envision the energy generation needs of the future through the Integrated Resource Plan process Submitted a notice of inventory completion to the National NAGRPRA program, effectively transferring legal control of all known Native American Ancestors and sacred items held by TVA back to Federally Recognized Indian Tribes
<ul style="list-style-type: none"> Strengthen Partnerships with Local Power Companies, Direct-Served Customers and Stakeholders in the Valley Region Strengthen Partnerships and Volunteer in Communities as Part of TVA's Mission of Service 	<ul style="list-style-type: none"> Partnered with 153 local power companies to supply electricity to more than 10 million people across seven Southeastern states and 60 directly served customers Helped the region create \$45.9 billion in projected capital investment in the past five years, in partnership with customers, community organizations, and state and local leaders Leveraged \$15.3 million in external partnership project input, resulting in \$45.8 million in Valley-wide positive impacts through the completion of 457 Natural Resource stewardship projects with partners between FY 2021 and FY 2023 Logged 10,000 service hours by more than 2,000 employees across all counties in TVA's seven-state service area to celebrate TVA's 90th anniversary — picking up trash from trails and streams, packaging meals at food banks and cleaning up storm-ravaged communities

A historic transformation

Leading a clean energy future



Alongside the rest of the utility industry, TVA is undergoing a historic transformation as it seeks to reduce carbon emissions while meeting the load growth driven by economic development and electrification.

TVA is charting a course to carbon reduction aligned with its mission and mandate to deliver affordable, reliable, resilient and clean energy.

Through ongoing investments in a diverse array of clean energy solutions such as efficient hydropower and solar capacity, as well as research into innovative technologies like advanced nuclear and hydrogen, TVA is working to achieve its aspiration of net-zero carbon emissions by 2050.

Beyond its generation portfolio, TVA is “walking the walk” of carbon reduction in its own facilities.

Recognized as the top-ranked federal agency in the nation for its progress in reducing the energy use intensity of its buildings, TVA is on the front lines of change when it comes to making its facilities more efficient and resilient.

Recognizing the important role TVA plays in the drive toward a broader clean energy economy, TVA works with local power companies and other partners to bring energy efficiency programs, renewable energy investments and electric vehicle infrastructure to communities across the seven-state service region.

In early 2024, the UT Baker School for Public Policy and Public Affairs and TVA presented the [Valley Pathways Study](#) preliminary findings, which will help the region establish a cleaner, more competitive economy.

The clean energy transition may be as transformative today as was TVA’s electrification of the rural Tennessee Valley region in the 1930s. There are challenges ahead, but TVA’s team members recognize the enterprise has a unique opportunity – and responsibility – to lead the way.



Clean Energy By the Numbers

55%

power from carbon-free sources
delivered in FY 2023

53%

carbon emissions
intensity reduction
against a 2005 baseline (CY 2023)

356,536 tons

of carbon avoided
through TVA EnergyRight® and TVA Green programs
in FY 2023

3.63 GWh

of energy saved
through energy efficiency improvements
in TVA buildings in FY 2023

‘A vital role’

Advanced nuclear technology highlights energy future

As TVA works toward its aspiration of net-zero carbon emissions by 2050, it’s embracing a national leadership role in the development of new nuclear technology.

Nuclear energy’s value is its ability to supply reliable, carbon-free power around the clock.

As part of its industry leadership approach, TVA obtained the nation’s first early site permit for small modular reactors from the Nuclear Regulatory Commission for the Clinch River Nuclear Site near Oak Ridge, Tennessee. This year, TVA expects to submit an application to the commission to obtain a construction permit for Clinch River, while also exploring other opportunities for SMRs across its seven-state service area.

And in 2023, TVA joined an international consortium investing in the development of a standard SMR design that can be deployed across multiple jurisdictions around the world.

Working with the state of Tennessee and others, TVA sees the potential for an advanced nuclear industry hub – including component manufacturing, training programs and construction expertise – in the Valley region.

“Nuclear energy plays a vital role in our energy supply as we work to electrify the economy, reduce emissions and provide a secure energy future,” Jeff Lyash, TVA President and CEO, said.

TVA’s energy technology innovation extends beyond nuclear. TVA funds research and development of other innovative, clean energy technologies. These include hydrogen, pumped storage, long-duration battery storage, and carbon capture, utilization and sequestration.

Overall, the challenge and opportunity of the energy transition is clear – TVA needs to meet rapid growth in demand for electricity while quickly reducing carbon emissions, Michael McCall, Vice President of Environment and Sustainability and Chief Sustainability Officer, said.



TVA's fleet innovation strategy includes:

- Leveraging energy efficiency and demand response
- Investing in the transmission system to better manage the flow of electricity
- Working to expand solar energy to 10,000 megawatts by 2035
- Maintaining existing low-cost, carbon-free nuclear and hydro generation
- Using natural gas as a bridge to accelerate renewable energy while retiring aging coal plants
- Developing options for deploying cost-effective advanced nuclear generation



Throughout 2023, TVA President and CEO Jeff Lyash met with industry leaders to continue strengthening TVA's partnerships.

\$1.5 billion invested in energy efficiency

Affordable energy – and access to it – is at the heart of TVA’s mission.

TVA EnergyRight® programs partner with local power companies across seven states to bring energy efficiency and affordable electricity to more than 10 million people and 800,000 businesses.

These programs help the families and communities that need it most. For instance, Home Uplift provides free home energy upgrades to income-eligible participants. It earned national recognition as one of the U.S. Department of Energy and U.S. Environmental Protection Agency’s 2023 ENERGY STAR Partners of the Year.

TVA is not stopping there. Between fiscal years 2024 and 2028, TVA is investing \$1.5 billion in energy efficiency initiatives to help lower energy bills and offset new load growth.

Since its inception, TVA has focused on helping vulnerable communities. This mission is strong today. TVA has dedicated teams developing environmental justice policies and programs. TVA is working to better identify disadvantaged communities so its teams can listen, learn about needs, and ensure transparency about TVA projects in and around these communities.

TVA’s Integrated Resource Plan – which will help shape TVA’s energy system through 2050 – will include an Environmental Impact Statement outlining the cost and reliability of power, the effect of energy efficiency programs, the environmental impacts of energy generation changes, and the relationship of the economy and environmental justice to all of the above.

Meanwhile, TVA’s Connected Communities program funds local projects that promote access to healthy environments and reliable, affordable, clean energy for everyone in the TVA service region. All with a vision of equitable energy access and environmental justice.



Brad Wagner, manager of program operations at TVA EnergyRight, installs a whistle that emits a sound when a furnace filter needs to be changed.

“TVA EnergyRight® programs partner with local power companies across seven states to bring energy efficiency and affordable electricity to more than 10 million people and 800,000 businesses.”

Michael McCall

Vice President of Environment and Sustainability and Chief Sustainability Officer

The cleanest kilowatt

Energy efficiency programs offset load growth

The cleanest kilowatt is the one that's never generated.

[Energy efficiency](#) is a powerful alternative to building new generation capacity – so much so that TVA expects to offset about 30% of new load growth over the next decade through efficiency and demand-side programs.

TVA prides itself on partnering with local power companies, community organizations, schools and others to offer a wide range of energy efficiency services.

These include:

Home energy efficiency rebates ranging from \$50 to \$1,500 for homeowners working with a TVA-vetted contractor to service or upgrade their HVAC system, add insulation, seal ducts and the like.

DIY Home Energy Assessment, an online survey for homeowners and renters, to identify energy-saving opportunities. Participants [receive a free kit](#) with energy-saving supplies.

Energy efficiency incentives running into six figures for businesses of all

sizes that work with a contractor in TVA's network.

Home Uplift efficiency makeovers, valued at \$10,000 to \$12,000, to lower energy bills for homeowners and renters most in need. In 2023, Home Uplift surpassed 5,000 homes upgraded since its inception in 2018.

School Uplift, which provides training and grants to help 100 schools a year save energy and improve facilities. Since 2021, participating schools have saved an average of \$13,132 per year on their energy bills.

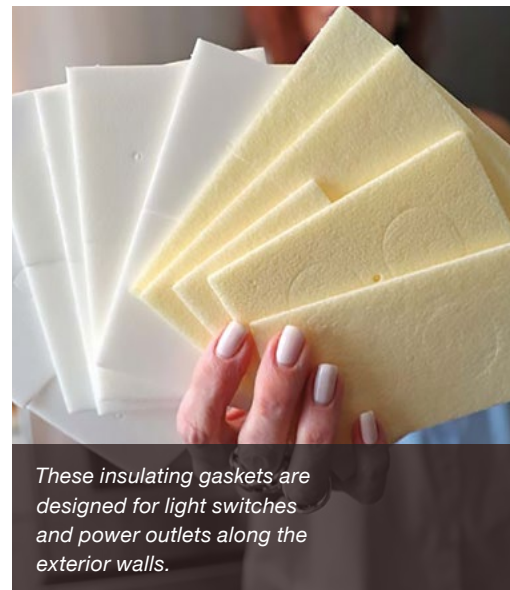
Strategic Energy Management, a two-year program for industrial customers to reduce energy use and lower carbon emissions, with an option to apply a portion of energy cost savings to a local school.

Ashley England, marketing manager for TVA's EnergyRight, said her organization aims to reach all types of consumers with its efficiency programs.

Large industrial customers make a big difference, because "the more energy used, the easier it is to save," England said. "Residential consumers are also a very important part of the goal."



TVA EnergyRight's Home Energy Evaluation helps homeowners identify and prioritize energy-saving projects around their home.



These insulating gaskets are designed for light switches and power outlets along the exterior walls.

TVA EnergyRight® FY 2023



13,800
participants



118.3 million
kWh of energy saved



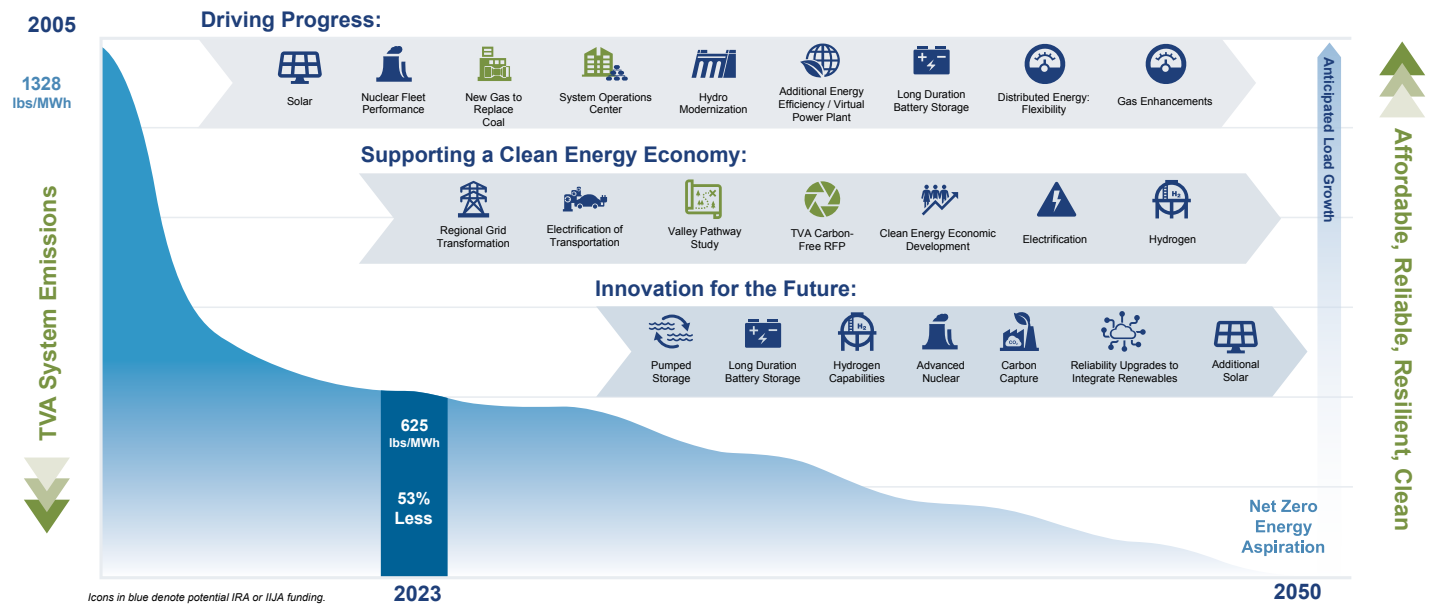
356,000
tons of carbon avoided



\$13.6 million
incentives paid

Building the Energy System of the Future

AFFORDABLE / RELIABLE / RESILIENT / CLEAN



National Leader in Carbon Reduction

Efficient from the inside out



The Nashville Collaboration Center provides a glimpse into what the future of sustainable office space looks like.



Flower power provides energy at a TVA facility.

With several thousand facilities across seven states, TVA is constantly working to drive down its own energy and water use.

Those efforts have yielded an 81% reduction in energy use per square foot since 2003 – far greater than the 30% required by law for federal agencies.

This past year, TVA also began the process of shedding unneeded office space, especially at its largest corporate sites in Nashville, Chattanooga and Knoxville, Tennessee.

As TVA has shifted toward office sharing and telework, employees have avoided 164,000 commuting miles per day, saving more than 2 million gallons of gasoline per year.

TVA is also showcasing leading-edge renewable energy projects at some of its sites.

Three of four visitor centers now boast solar-powered EV chargers.

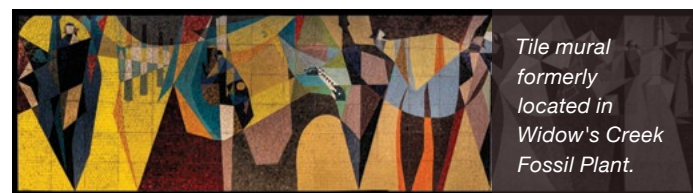
And drivers crossing Chickamauga Dam in Chattanooga can glimpse a [cluster of Smartflowers](#) – petal-shaped

solar panels rotating to track the sun – that provide power for a TVA building.

TVA's newly opened Nashville Collaboration Center located in the Gulch Union building is a pre-certified Silver LEED facility and a good example of efficiency in action.

TVA incorporated many sustainable elements in the design, including acoustic soundproofing made from recycled plastic bottles, maximizing the use of natural light to reduce electricity usage, and providing reusable cups and serving ware to reduce single-use items for meetings and events.

“In addition, TVA was able to preserve a historic tile mural from its former Widow's Creek Fossil Plant and incorporate various artifacts into the design,” Tricia Roelofs, senior director of Facilities Transformation, said.



Tile mural formerly located in Widow's Creek Fossil Plant.

The resiliency playbook

Partnerships and upgrades strengthen preparedness

Throughout TVA's service region, the weather can dish out a bit of everything. Sweltering heat. Freezing cold. Windstorms, ice storms, thunderstorms, tornadoes.

While peak season planning and event preparedness have always been important, TVA placed additional focus this past year on improving its ability to navigate even more severe weather and other unforeseen events that could disrupt normal operations.

Winter preparedness was key, especially at gas and coal plants with outdoor equipment vulnerable to freezing. TVA performed a top-to-bottom, comprehensive winter readiness assessment of every critical system at those facilities, Allen Clare, senior vice president of Power Operations, said.

That resulted in a [to-do list](#) of nearly 3,400 items to upgrade or repair.

To ensure sustainability and enhance resiliency, TVA also instituted more stringent weatherization standards and more robust protocols for regular maintenance. This will help ensure reliable operations season after season, year after year.

“These steps also translate into environmental sustainability gains,” Clare said.

“When plants operate more reliably, it results in fewer startups and shutdowns, which means less emissions,” he said.

Another key component of resiliency relates to how well TVA's teams communicate about preparedness and response, Jessica Baker, director of External Strategy and Performance, said.

In collaboration with customers and key stakeholders, TVA team members developed detailed response playbooks and communication plans to help coordinate efforts during extreme weather or other unplanned events. This helps ensure that important information gets into the right hands fast, so TVA teams and TVA's partners can react and respond quickly.

Social media, emails, texts, automated calls – they all have their place.

And like Clare, Baker stresses the link between resilience and sustainability.

“The faster we can be resilient – responding to an event and getting back to normal operations – the better we can follow our sustainability plan,” Baker said.



Inspectors check that freeze protection equipment is assembled correctly after every regular maintenance.



TVA winterization experts visited coal and gas plants across the Valley region to verify more than 3,400 upgrades had been completed.

Pumped storage plans advance



Raccoon Mountain is TVA's largest hydroelectric generating unit.

TVA specialists are conducting environmental reviews and early engineering work to expand pumped storage hydropower.

Pumped storage is a type of hydroelectric power that stores large amounts of energy by holding water in a reservoir at a high elevation. Energy can be quickly generated by running the water downhill through turbines. Then, when demand is lower, the water is pumped back uphill into the reservoir.

Building new pumped storage will allow TVA to add more solar and other zero-carbon resources. Pumped storage serves to balance fluctuations in solar power's output, provide power during peak electricity demand and allow other zero-carbon resources to run continuously during low electricity demand.

The three sites under consideration include two in northeast Alabama's Jackson County: the Rorex Creek site, which is across the Tennessee River from TVA's Bellefonte nuclear site; and the Widow's Creek site, approximately 10 miles northeast of Fabius, Alabama.

The third option is an expansion of TVA's existing [Raccoon Mountain](#) pumped storage plant near Chattanooga.

TVA expects to seek public comment on the options this year, with site selection being finalized in 2025. Any decision to proceed with a pumped storage project would be subject to approval by the TVA Board.

Setting the stage for solar



Investments in Colbert and Paradise have added nearly 1,400 megawatts to the grid.

This past calendar year, TVA completed its Colbert and Paradise combustion turbine expansion projects, each adding approximately 681 megawatts of state-of-the-art natural gas generation.

The projects support TVA's solar expansion plan, which calls for adding about 10,000 megawatts of solar by 2035.

Natural gas combustion turbines are designed to meet peaks in power demand. They enable TVA to add more renewable energy to the grid because they can generate power quickly to make up for times when renewables are unavailable, such as when the sun isn't shining.

By combining combustion turbines with new solar developments, TVA can move toward cleaner generation while still providing a flexible, responsive and reliable power grid.

TVA teams completed the Colbert and Paradise projects ahead of schedule and under budget.

Including these expansions, TVA is planning to evaluate or build 7,000 megawatts of new gas generation in the coming years. That's enough dispatchable electricity to power more than 3.8 million homes.

Renewable collaboration

Want to reduce your carbon output?

TVA and many of its local power company partners offer a menu of customer-focused programs.

Green Connect. Green Switch. Green Flex. Green Invest.

Green Connect links homeowners and small businesses with TVA-approved contractors who can install a solar project with or without battery storage. There's even an option for partners to sell their renewable power back to TVA.

Green Switch and Green Flex provide an opportunity for customers to support generation of solar and wind energy by adding as little as \$2 a month on their electric bills.

Through Green Invest, commercial and industrial customers committed to green energy are matched to new-to-the-world renewable projects.

Recent Green Invest projects include: Skyhawk Solar, a 100-megawatt solar project in Tennessee that will provide carbon-free energy to Google data centers in Montgomery County, Tennessee, and Jackson County, Alabama; and a solar facility at Bell Buckle, Tennessee, helping Vanderbilt University meet its aspiration of becoming carbon neutral by 2050.



Representatives flip a switch in April 2023 to mark the completion of the Skyhawk Solar project in Obion County, Tennessee. From left to right: Kathleen Campanella, of Excelsior Energy Capital; Ed Jackson III, of U.S. Rep. David Kustoff's office; Mark Yates, of TVA; Nick Kistenmacher, of Sen. Marsha Blackburn's office; Christopher Moakley, of Excelsior; Thomas Gamble, of Google; Johan Vanhee, of Origis Energy; and Ryan Kelley, of Wanzek Construction Inc.



Announced in 2020 and developed under the TVA Green Invest program, Skyhawk Solar contributes to TVA's continued push to grow clean energy in its seven-state service territory.

Path forward in carbon reduction

The table below is adapted from TVA's [2021 Carbon Report](#).

The final column, which is new, shows TVA's FY 2023 progress and ongoing actions in these areas.

	2020 Accomplishments	Five-Year Actions – Set in 2020
<p>ENERGY TECHNOLOGY INNOVATION</p> <p>New technologies for a net-zero future</p> <p>Advanced nuclear</p> <p>Next generation storage</p> <p>Hydrogen</p> <p>Carbon capture, utilization and storage (CCUS)</p> <p>New hydroelectric such as pumped storage</p>	<ul style="list-style-type: none"> Nation's only early site permit for Small Modular Reactor (SMR) at Clinch River Nuclear Site Founding member of the Electric Power Research Institute Low-Carbon Resources Initiative Contracted for 1,178 megawatts of utility-scale solar generation to the region by the end of FY 2020 Early analysis of pump-back options at hydro facilities 	<ul style="list-style-type: none"> Lead the identification of technologies that drive toward a clean energy future Identify technology and partnerships for Clinch River SMR Battery-storage demonstration project at Vonore, Tennessee Long-duration storage pilot project
<p>VALLEY INNOVATION</p> <p>Being a catalyst for economy-wide carbon reduction</p> <p>Transportation electrification</p> <p>Smart communities</p> <p>Energy efficiency</p> <p>Electrification</p> <p>Supplier sustainability</p>	<ul style="list-style-type: none"> Residential electric costs lower than 70% of the nation's top 100 largest utilities Developed electric vehicle roadmap with partners New rates to help support adoption of electric vehicles TVA Green Programs offer customers renewable energy options Working with LPCs on programs that help customers manage their energy usage and bills Efficient electrification to support lower carbon footprint 	<ul style="list-style-type: none"> TVA's Fast Charge Network for Electric Vehicles Support Tennessee Valley in emerging as one of the top regions in the nation for manufacturing electric vehicles Enable local power company long-term partners to generate up to 5% of their energy load through renewable and other sources Strengthening energy efficiency programs to support low-income homes and efficient electrification Work with regional suppliers to understand carbon levers in the supply chain

Long-term Actions – Set in 2020	Progress through FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> Clinch River SMR developed through partnerships; other advanced nuclear exploration Additional large-scale batteries or storage projects online Test or demonstrations of carbon capture, renewable natural gas or hydrogen with subsequent development Pumped storage/new technology hydro addition 	<ul style="list-style-type: none"> Presented with a Nuclear Energy Institute Top Innovative Practice Award for demonstrating innovative safety techniques. Preparing a construction permit application for a BWRX-300 small modular reactor at the Clinch River Site near Oak Ridge, Tennessee, and exploring additional sites in the TVA service area for potential small modular reactor deployments. In December 2022, TVA, Ontario Power Generation, BWRX TCA sp. z.o.o., and GE Hitachi Nuclear Energy ("GEH") entered into multiparty collaborative arrangement to advance the global deployment of the GEH BWRX-300 small modular reactor. Signed an MOU with ORNL and Type One Energy relating to Type One Energy's planned construction of Infinity One, a stellarator fusion prototype, at the TVA Bull Run Fossil Plant site, following completion of all environmental reviews, agreements, permits and licenses. Electric Power Research Institute Low Carbon Resources Initiative – 20-plus government-funded projects initiated; 50-plus technical reports published; Low-carbon hydrogen accelerator launched. Continued construction on battery at Vonore, set to be operational in 2024. This battery system will use lithium-ion batteries to store 40 MWh of energy. TVA will work with TC Energy to jointly invest \$1.25 million to study carbon capture technology to reduce emissions at TVA's natural gas facilities in Ackerman, Mississippi, and in Drakesboro, Kentucky. Studying new pumped storage at three sites
<ul style="list-style-type: none"> More than 200,000 electric vehicles in the Tennessee Valley region by 2028 Mass transit support Demonstration projects to aggregate electric vehicles and chargers into resource pool Additional demand response Evaluate use of coal combustion residuals materials to de-carbonize concrete production Incorporate environmentally friendly policies and metrics into existing sourcing and procurement practices 	<ul style="list-style-type: none"> The EV Fast Charge Network partnership is expected to feature 80 Fast Charge sites once completed in 2026. Published preliminary findings report for Valley Pathways Study, with the University of Tennessee's Baker School, that looks at all sectors of the economy to accelerate the region's clean energy future. Five auto manufacturers are focused on EV production in the region: Ford (Lightning), GM (Cadillac Lyriq), Volkswagen (ID4), Nissan (Leaf) and a Mazda-Toyota joint venture. TVA's internal fleet electrification program, among the most aggressive in the electric utility industry, has established a goal to acquire EVs for all light-duty vehicle purchases after 2027. Announced \$2 million in new Connected Communities grants leveraging tech and data-driven solutions, from addressing technological disparity in Columbus, Mississippi, to driving equitable STEM education in East Tennessee. Upgraded more than 5,000 homes through TVA Home Uplift since 2018 for low-income residents – helping them save as much as \$500 a year on their power bills. TVA's School Uplift helps public schools cut energy waste and engage students, faculty and staff to save energy. TVA invests, on average, \$3.2 million in the program each year and helps up to 100 schools each year. Completed several renewable energy projects through TVA Green Invest, including a 100 MW solar installation in Tennessee. The Green Connect network has 19 qualified installers, +1,000 customers registered, ~200 installations submitted, and 65 installations verified.

	2020 Accomplishments	Five-Year Actions – Set in 2020
<p>FLEET INNOVATION</p> <p>Creating more carbon reductions with TVA's existing fleet</p> <p>Improving nuclear performance</p> <p>Nuclear license extension</p> <p>Improving and extending hydro performance</p> <p>Addition of current solar technology (and more as storage technology advances)</p> <p>Evaluate retirement of additional coal</p> <p>Flexible low-carbon gas capacity</p> <p>TVA building/fleet performance</p>	<ul style="list-style-type: none"> ▪ Diverse generation mix that provides reliable and affordable energy and positions TVA well for the future ▪ Maintained carbon-free nuclear plants and improved outage performance ▪ Continued to invest in new solar through nationally recognized renewables program ▪ TVA has an Internal Energy Management Program and completed energy efficiency improvements, saving enough energy to power 50,000 average homes for a year ▪ Retired or announced the retirement of multiple TVA coal units 	<ul style="list-style-type: none"> ▪ Additional renewable energy ▪ Continue to develop and match large-scale solar, with storage options, to large business and industrial customers through TVA's award-winning Green Invest program ▪ Increase investment in existing hydro assets to optimize performance and extend life ▪ New flexible gas brought online to support renewables ▪ Climate change considerations embedded into established business practices ▪ Investing in the current nuclear fleet to improve nuclear performance ▪ Increase TVA fleet procurement of electric vehicles
<p>ENERGY DELIVERY INNOVATION</p> <p>Reducing carbon emissions by finding innovative ways to deliver power</p> <p>Optimizing system operations</p> <p>Modernizing the transmission grid</p> <p>Energy delivery market efficiencies to optimize renewables</p> <p>Market and load shape strategies</p>	<ul style="list-style-type: none"> ▪ 99.999% reliable power ▪ Support the development of a regional energy exchange market ▪ Technology-enabled right of way management 	<ul style="list-style-type: none"> ▪ Complete construction of new System Operations Center ▪ Market enabled centralized dispatch for DER integrated system and distribution planning ▪ Enhanced dispatch engine capable of co-optimizing reliability, least cost and environmental impacts ▪ Participation in the Southeast Energy Exchange Market
<p>NATURAL RESOURCE STEWARDSHIP INNOVATION</p> <p>Assess the potential for carbon reduction and sequestration and for applying greenhouse gas protocols</p> <p>Reforestation and afforestation</p> <p>Wetlands restoration</p> <p>Soil sequestration</p> <p>Agriculture, forestry partnerships</p>	<ul style="list-style-type: none"> ▪ Protected vegetation and wetlands on public lands ▪ Public lands and waters provide significant economic value ▪ "Shade Your Stream" program for water quality 	<ul style="list-style-type: none"> ▪ Develop 1 Million Trees Program ▪ Conduct climate change adaption research ▪ Establish partnerships with agricultural community

Long-term Actions – Set in 2020	Progress through FY 2023 and Ongoing Actions
<ul style="list-style-type: none"> ▪ Additional renewable energy with storage ▪ Ongoing nuclear performance improvements involving outage execution, capital projects and staffing alignment to support regulatory requests for 80-100 year nuclear unit operations ▪ Evaluating the impact of retiring the balance of the coal fleet by 2035 ▪ New flexible gas brought online to support renewables; demonstrate carbon capture ▪ TVA corporate fleet shifted to electric vehicles where feasible ▪ Condition-based maintenance ▪ Increase investment in existing hydro assets to optimize performance and extend life 	<ul style="list-style-type: none"> ▪ 97% growth of operating and committed solar capacity since FY 2020; over 3,000 megawatts in-Valley solar when announced projects come online by 2028. ▪ Investing approximately \$20 billion in the next five years to build additional generation and upgrade the TVA system on new and existing generation and transmission system improvements to help meet growing electricity demand amid continued economic growth. ▪ Clean Energy Request for Proposals resulted in five power purchase agreements totaling nearly 800 megawatts of solar generation and 20 megawatts of battery storage expected online by 2028. ▪ Upgraded Watts Bar Nuclear Plant Unit 2 to optimize plant performance for the next 40-60 years. All seven nuclear units received exemplary recognition by the industry. ▪ Building about 3,800 megawatts of new generation by 2028 to meet growing demand and adding 10,000 megawatts of solar energy by 2035. ▪ Following public engagement, TVA decided to retire its Cumberland Fossil Plant. TVA will build a 1,450 megawatts combined cycle natural gas facility at the site. ▪ Built three new combustion turbine units at Colbert ahead of schedule and under budget, providing summer net capability of 681 megawatts. ▪ Developed 2024 Climate Adaption Plan, illustrating TVA's plans and current progress in addressing climate hazards, expected to be available in June 2024. ▪ As of April 2024, retired or announced the retirement of 86% of TVA's coal-fired generation capacity.
<ul style="list-style-type: none"> ▪ Digitization, advanced sensors and fiber- optic communication will better connect TVA's operational assets and expand integration of Distributed Energy Resources ▪ Fully integrated planning, which resolves load shape locally and offsets the need for system scale peaking resources ▪ Operational infrastructure in place to fully support this integrated planning model 	<ul style="list-style-type: none"> ▪ Building a new state-of-the-art Primary System Operations Center, expected to be fully operational in CY 2026. ▪ Investing \$3.7 billion in transmission system improvements through 2028, to build the energy grid of the future that will continue to provide reliable, affordable, resilient and increasingly cleaner energy. ▪ TVA commissioned a new 500-kV Substation – one of the largest in the TVA system – for west Tennessee reliability. ▪ Partnership between TVA and Huntsville Utilities providing \$100,000 in scholarship funding to train and educate utility lineworkers.
<ul style="list-style-type: none"> ▪ Be a leader in nature-based climate solutions to mitigate climate change and build resilience ▪ 500,000 trees planted and 15 acres of wetlands restored/ improved by 2035; 1 million trees by 2050 ▪ Carbon sink and flooding protection (adaption) projects 	<ul style="list-style-type: none"> ▪ Invested \$120,000 in FY 2022 to improve water quality, protect aquatic biodiversity and sequester carbon through the Tennessee Riparian Incentive Program with Tennessee Department of Agriculture and other federal, state and local agencies. ▪ Planted 26,000 trees through the 1 Million Trees Program since 2021. ▪ Removed 120,000 cubic yards of invasive eelgrass mats from Guntersville Reservoir alone in FY 2023 to enhance recreational activities and maintain a healthy environment for native aquatic wildlife. ▪ 245,890 acres of habitat protected and 267 activities completed to protect and enhance biodiversity in the TVA region, guided by the TVA Biodiversity Policy.

A beautiful place

Environmental stewardship protects and preserves public lands and waterways



The Valley region is TVA's home.

TVA's overarching Environmental Policy improves quality of life and the environment in the Tennessee Valley by providing reliable, affordable and increasingly clean energy; engaging in proactive stewardship of the Tennessee River system and public lands; and supporting sustainable economic growth.

TVA is unique among power generators in its responsibility to manage and sustain the Tennessee River system, the public lands along its shorelines, and the natural and cultural resources they contain. TVA specialists manage the river system for multiple benefits, including flood control, navigation, hydroelectric generation, recreation, water quality and water supply.

TVA's leaders understand the environmental, social and economic value provided by the public lands

the enterprise holds in trust for the people of the region.

More than 181,000 acres of TVA's public lands have been set aside for natural resource management, with the intention of preserving natural wildlife habitats, protecting endangered plant and animal species and enhancing the biodiversity of the region.

TVA is committed to holistic and sustainable resource management. In a changing climate and an increasingly developed world, it's the only way to ensure future generations can enjoy the same beautiful natural spaces that people enjoy today.

TVA team members also care about their neighbors, and they care about protecting the region's air, land and water resources. They work each day to ensure the region remains a beautiful place to live, work and play for years to come.



Environmental Stewardship By the Numbers

254,890 acres
of habitat protected
managed under TVA's Natural Resource Plan

132 partners
collaborated with TVA
on Biodiversity Program activities in 2023

300+ river miles
with improved dissolved oxygen levels
from TVA's Reservoir Release Improvement program

\$9.7 billion
in estimated flood damage averted
over TVA's recorded history
and \$7 million in averted in FY 2023

Guardians of flora and fauna

Biodiversity Policy guides stewardship of natural resources



Artificial roost trees crafted from retired wooden transmission poles. Wildlife tracking towers installed on TVA dams. Rare mussels reintroduced to the region's rivers.

These are just some of the ways TVA specialists fulfill their mission of environmental stewardship.



It's a vital mission, spanning a vast area.

TVA's seven-state service region features 293,000 acres of public land and 11,000 miles of shoreline.

Regionwide, experts work with local, state, federal and Tribal partners to conserve species and habitat through monitoring and research, education and outreach and on-the-ground action.

Through it all, TVA's Biodiversity Policy and Natural Resource Plan help guide the way.

On land, TVA team members plant and monitor pollinator plots, restore native grasses and conduct prescribed burns. They manage forest communities and advise power plant managers on how mowing less promotes grassland habitat. They partner with Tribes to restore river cane, and, in key areas, they've installed cave gates and boulder barriers to protect bat habitats.



As a member of the Electric Power Research Institute's Power-in-Pollinators Initiative, TVA contributes to a national database of grassland that provides habitat for pollinators and imperiled species across TVA's rights of way and other lands.

TVA specialists monitor and restore aquatic systems, too. They work with conservation partners and teams at power generation plants to restore streambank vegetation and monitor globally imperiled plants, fish and mussels. They award public grants in the Shade Your Streams program and reconnect habitats to allow safe passage for native fish. And they helped the snail darter swim off the endangered species list.

They're committed to protecting a biodiverse world and educating the public about this critical work by crafting lessons, sharing databases and publishing scientific findings.

In looking at the big picture – seed to pollinator, vernal pond to the world beyond – TVA's specialists promote understanding of landscape-level health.

"That's what's in TVA's Biodiversity Policy," Adam Dattilo, TVA Biodiversity program coordinator, said. "That's what I do every day."

267 Biodiversity Activities in FY 2023

On-the-Ground Action To enhance habitat for native species.	Monitoring and Research To understand biodiversity and inform future management.	Education and Outreach To lead or fund programs about protecting Valley biodiversity.
<p>Examples:</p> <ul style="list-style-type: none"> ▪ Cave Gating ▪ Prescribed Fire ▪ Mussel and Fish Reintroduction ▪ Low-head Dam Removal ▪ Pollinator Habitat ▪ Shoreline Stabilization ▪ Habitat Restoration ▪ Imperiled Species Conservation on Rights of Way ▪ Community Tree Planting and Reforestation ▪ Reservoir Release Program ▪ Invasive Species Management 	<p>Examples:</p> <ul style="list-style-type: none"> ▪ Index of Biotic Integrity ▪ Natural Heritage Database ▪ Monitoring of TVA Natural Areas ▪ Bat Tracking, Monitoring and Cave Surveys ▪ Bald Eagle Monitoring ▪ Rare Species Monitoring ▪ Wildlife Tracking ▪ Reservoir and Tailwater Monitoring ▪ Scientific Research ▪ Amphibian and Reptile Monitoring ▪ Migratory Bird Tracking 	<p>Examples:</p> <ul style="list-style-type: none"> ▪ Outdoor Education ▪ BioBlitz ▪ Sponsor Conservation Organizations ▪ Professional Presentations ▪ External Public Events ▪ School Programs ▪ River and Land Cleanups ▪ Curricula Development ▪ Science Publications

Highlights:

- 1 species** — snail darter — recovered and delisted from the federal list of threatened and endangered wildlife
- 550+ occurrences** of rare plant species tracked on transmission rights of way
- 85%** of TVA's conservation work is voluntary and proactive, not driven by regulation
- 7 publications** in scientific journals
- 25 bat caves and roost sites monitored** for white-nose syndrome in Tennessee and Alabama
- 26,182 trees planted** since 2021
- 47,500 species records** in world-class TVA endangered species dataset for conservation and compliance
- 10,000-plus students reached** in TVA Science Kids - World Water Monitoring program
- 17 Small Wild Area and Habitat Protection Areas assessed**
- 2 cave gates repaired** in Tennessee to protect bats
- 5 Motus wildlife tracking towers** deployed in northeast Tennessee to track and monitor bats and birds
- 160 four-toe salamander nests** documented reflecting successful conservation efforts
- 51 artificial bat roost sites** monitored

A dive into data

Climate forecasting and risk assessments guide River Management

Flexibility. Partnership. Technology.

They all play a role in helping TVA manage the region's rivers and reservoirs, in all conditions.

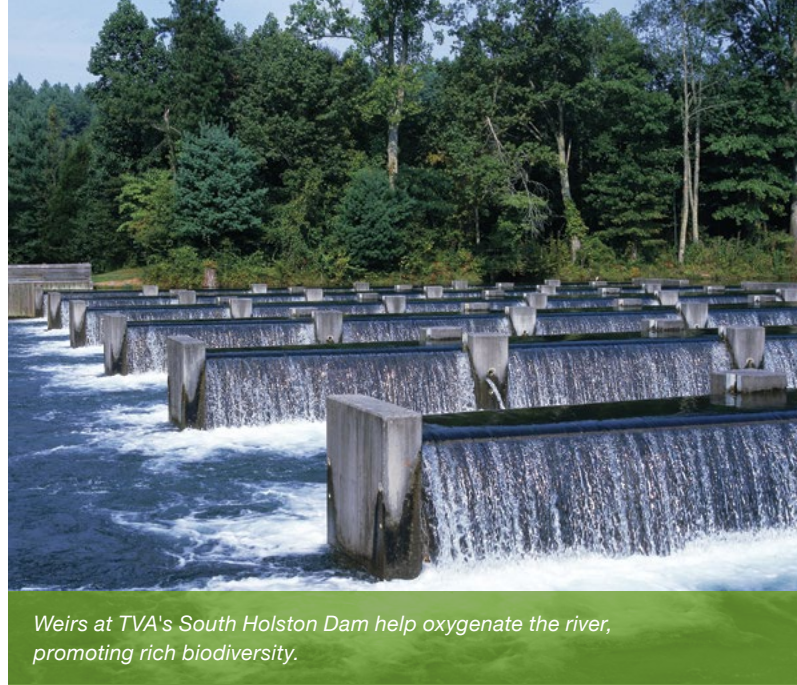
"We deal with what Mother Nature hands us," Carrie Williamson, TVA's Flood Risk program manager, said.

And these TVA specialists employ a host of tools and techniques to get the job done. Hydrology models show how much flooding TVA's system of dams prevents. Reservoir models track contaminants and floating aquatic vegetation. Temperature models forecast any impacts from power plants.

Data gleaned from all these activities helps engineers make informed decisions. They can properly aerate the waterways, for example, and ensure adequate water flow for aquatic creatures.

This carefully coordinated system for river management helps balance power production while keeping resident safety and watershed stewardship top of mind.

"It really trickles down and makes a difference in communities," Jeffery Ogden, TVA Reservoir Release Improvements program manager, said.



Weirs at TVA's South Holston Dam help oxygenate the river, promoting rich biodiversity.



TVA River Management general manager James Everett and his team help manage river flows in the region's river system.



Darrell Guinn, senior manager of TVA's River Forecast Center, meets with a team member at the forecast center in downtown Knoxville, Tennessee.

Forecasting into the future

TVA River Management hydrologists are completing a climate modeling project with Oak Ridge National Laboratory. Using current global climate models, they predicted extremes in wet and dry years and a potentially wetter future for the Valley region through 2079.

The modeling is used to understand and manage risks in six areas: hydropower, water quality, recreation, water supply, navigation and flood control.

"Modeling helps guide if and how we change river operations," Patrick Massey, TVA's lead hydrologist, said.

The goal is adaptability and resiliency 40 to 50 years out, noted Amanda Turk, TVA's manager of Hydrologic Impacts and Risk Evaluation.

Generational assets

Dam managers constantly analyze risks to dam safety: Earthquakes. Major storms. Seepage. And climate change.

"Most of these dams will probably be around for centuries," Jeffrey Munsey, manager of Dam Safety Risk and Emergency Safety Preparedness, said. "That makes things like climate change potentially more important, because we're talking about trying to extend the lifetimes of these dams for generations."

Managers plan remediations – spillway design to release floodwaters, for example – with worst-case hazard and climate scenarios in mind.

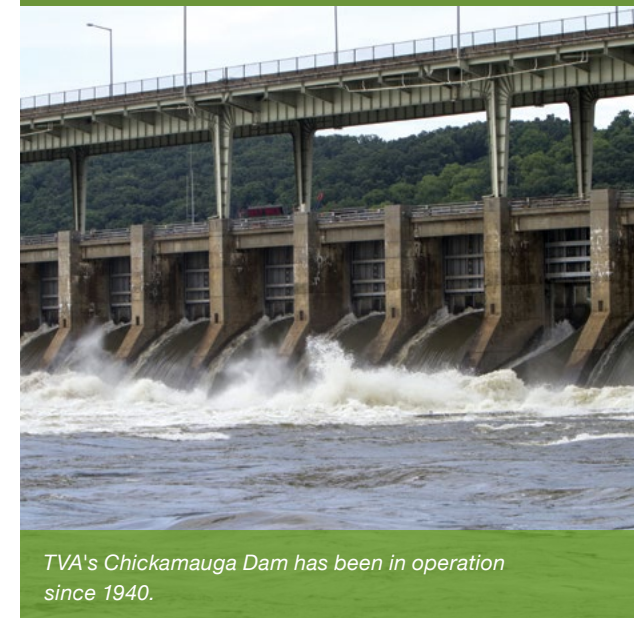
"Determining how to account for potential climate change is a difficult challenge but ... it's something we can't ignore," Munsey said.



TVA's River Forecast Center in downtown Knoxville, Tennessee.

"...we're talking about trying to extend the lifetimes of these dams for generations."

Jeffrey Munsey
Manager of Dam Safety Risk and Emergency Safety Preparedness



TVA's Chickamauga Dam has been in operation since 1940.

Adventures for all

Partnering to grow the region's outdoor offerings

Synergy.

That word embodies the abundant natural resources and recreational activities on tap in TVA's seven states.

Campgrounds. Boat ramps. Trails. Playgrounds. Swimming spots. Fishing holes. Snorkel trails.

"We have many opportunities," Jimmy Lemmond, TVA Recreation manager, said.

And the value is immense. "People can recreate and enjoy time with their families on lands TVA set aside for low-impact recreation, conservation and education," Heather Hart, TVA conservation specialist, said.

Ecotourism and recreational activities linked to TVA's system of dams and reservoirs add an estimated \$12 billion to the regional economy annually. This gives rise to partnerships and programs in local communities, and it ultimately helps drive economic growth and job creation.

"That's the synergy," Lemmond said.

Some recreational opportunities have been long-standing. TVA has organized public Wildflower Walks the past 30 years, for instance. Others, however, are new – with a sharp focus on expanding accessibility to all.

This year in Tennessee, TVA and its partners added adaptive mountain bike trails and accessible docks that cater to adventurers with disabilities.

Natural Resources grants fund outdoor trips for students from underserved areas, and one partnership program helps tourists discover new regional destinations while promoting local communities.

The TVA- and partner-funded [Tennessee River Valley Geotourism](#) podcast and a website, developed by National Geographic, highlight crowdsourced opportunities for recreation and other activities. There are numerous adventures for every flavor – paddling, biking, hiking, wildlife viewing, fishing, boating, heritage and cultural touring. All polished off with dining at recommended hotspots.

"It's a day's worth or a weekend's worth of activities," Melinda Watson, TVA's Partnerships and Strategic Integration program manager, said.

"(The project) spans the width and breadth of the Valley," Rachel Terrell, manager of public outreach and support for Natural Resources, said.

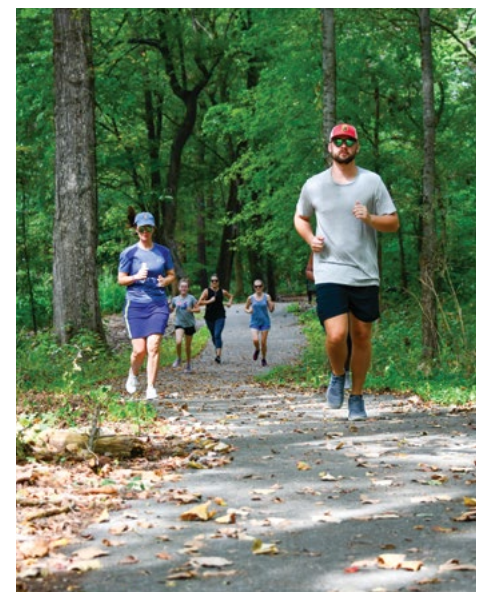
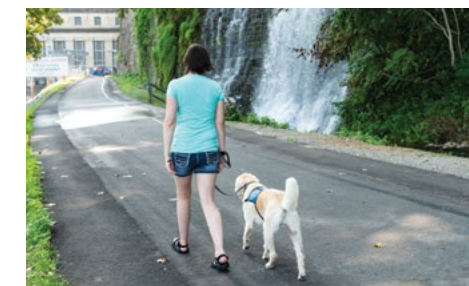
National Geographic, local tourism organizations and others have highlighted the Valley region's resources beautifully, she said.

Other partner projects include the TVA-supported Tennessee Riverline. It aims to make the Valley region an international paddling destination, Clay Guerry, TVA Recreation strategy specialist, said.

Synergy between projects drives adventures for all.



TVA-managed public lands and waterways are renowned for offering a wealth of recreational opportunities to the region's residents and visitors.





Tribal partnerships help restore river cane

Before it disappeared from the Valley region, river cane was vital to the ecosystem and Native American culture. Its stalks slowed floodwaters and held sediment. Animals depended on it for habitat. Tribes used it for houses, baskets, food and weapons.

Now, TVA is partnering with Tribal experts to bring it back, starting with an experimental stand at the Tellico Reservoir in Tennessee.

Experts from the United Keetoowah Band of Cherokee Indians and Eastern Band of Cherokee Indians worked with TVA and Tennessee Wildlife Resources Agency specialists to map cane habitat, transplant cane roots and encourage existing stands to spread.

As the cane grows, Tribes can access it for traditional uses. And TVA specialists hope to expand future sites – as well as tribal access – beyond Tellico.

“TVA wants to be a source (of river cane) for all Tribes connected to the Tennessee Valley,” Marianne Shuler, TVA archaeologist and Tribal liaison, said.

TVA and Tribal experts guide river cane planting on the banks of the Tellico River in Monroe County, Tennessee.

Education in the wild

Each year, children and families at Norris Reservoir in east Tennessee transform into scientists.

At a two-day BioBlitz event, these community scientists classify species with the iNaturalist app.

Together, they discover fungi, insects and birds as part of the environmental education program that’s guided by TVA Natural Resources team members, in partnership with Discover Life in America.

BioBlitz is one example of TVA’s efforts to showcase the environmental stewardship work happening across the region.

“We just love getting people out on our trails and using public lands that are there for them,” Melinda Watson, a TVA Natural Resources program manager, said. “Hosting a BioBlitz is a way to let them know where these lands are and, at the same time, engage their assistance in identifying the species that live there.”

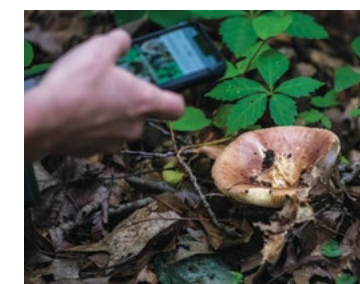
“We just love getting people out on our trails and using public lands that are there for them.”

Melinda Watson

TVA Natural Resources program manager



In summer 2023, TVA and Discover Life in America hosted a BioBlitz event at Norris Reservoir, where children and adults enjoyed two days of plant and animal discovery.



A path to sustainable growth

Affordable, reliable power attracts newcomers

- 7 AFFORDABLE AND CLEAN ENERGY**
- 8 DECENT WORK AND ECONOMIC GROWTH**
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**
- 11 SUSTAINABLE CITIES AND COMMUNITIES**

From its beginning, TVA has acted on its mission to create economic development opportunities in the Valley region and supply energy at the lowest feasible cost.

TVA continues that mission today by providing affordable, reliable, resilient and clean energy that attracts innovative industries, jobs and investments to its seven-state region.

The region's population is growing at about three times the national average, and it has experienced tremendous economic growth in recent years.

The affordability, reliability and resiliency of TVA's energy portfolio are among the deciding factors for many companies looking to establish or expand manufacturing operations in North America.

With companies like Ford Motor Co. and LG Chem investing in the

Valley region, the TVA service area has become one of the top electric vehicle component manufacturing regions in the nation – reducing carbon emissions and bringing thousands of good, green jobs to the region.

TVA and these manufacturers focus on sustainability, carbon reduction and electrifying the economy. Guided by its mission of service, TVA is uniquely qualified to help them achieve their goals.

The benefits of sustainable economic growth are available to all the region's businesses and communities. TVA offers programs for small, local and diverse businesses to increase competitiveness in its supply chain and works with local power company partners to offer job training programs to its neighbors – the people who live and work in the communities it serves.



In his 2024 State of the State address, Gov. Bill Lee said companies have invested \$35 billion in Tennessee since 2019, creating more than 211,000 new jobs.

Economic Impact By the Numbers

- TVA residential rates are lower than 75% of the top 100 U.S. utilities.
- Industrial rates are lower than 95% of the top 100 U.S. utilities.

MORE THAN

12,200¹
new jobs

expected to be created based on FY 2023 performance

MORE THAN

46,100² jobs **\$9.2 billion**

expected to be retained based on FY 2023 performance

in projected capital investments based on FY 2023 performance

\$45.9 billion **\$522 million** **\$1.2 billion**

projected capital investments based on performance for the past five years

spent with diverse businesses in FY 2023

spent with small businesses in FY 2023

¹ "New jobs" in the TVA fiscal year are newly created, paid positions at a facility of a TVA customer. "Positions" are calculated by adding (1) the number of full-time, on-site employees and/or independent contractors at the facility, (2) the total number of full-time work-from-home employees and independent contractors who reside in the TVA service territory and who spend 100% of their work time on facility-related matters, and (3) the total hours worked on facility-related matters by (a) full-time and part-time on-site employees at the facility and (b) full-time and part-time work-from-home employees who reside in the TVA service territory and who spend less than 100% of their work time on facility-related matters, divided by the number of work hours of such employees based on a 40 hour work week. A "TVA customer" means an entity that purchases power from TVA or a distributor of TVA power. New jobs reported by TVA may include positions created during the current TVA fiscal year and certified projections of anticipated positions to be created within a five-year time frame. New job numbers reported by TVA are certified and provided to TVA by TVA customers.

² "Retained jobs" are paid positions at a facility of a TVA customer that were created prior to the current TVA fiscal year and that continue to be filled in the current TVA fiscal year. "Positions" are calculated by adding (1) the number of full-time, on-site employees and/or independent contractors at the facility, (2) the total number of full-time work-from-home employees and independent contractors who reside in the TVA service territory and who spend 100% of their work time on facility-related matters, and (3) the total hours worked on facility-related matters by (a) full-time and part-time on-site employees at the facility and (b) full-time and part-time work-from-home employees who reside in the TVA service territory and who spend less than 100% of their work time on facility-related matters, divided by the number of work hours of such employees based on a 40 hour work week. A "TVA customer" means an entity that purchases power from TVA or a distributor of TVA power. Retained job numbers reported by TVA are certified and provided to TVA by TVA customers.

Powering a growing, electrified region

Innovative energy projects will help meet rising demand

In 1950, only about 2% of energy used in the United States came from electricity.

Today it's close to 25%.

And rising.

Meanwhile, TVA's service region is among the fastest growing in the nation.

So what happens if you do the math? No one has an exact calculation, but the trend is clear.

"It took us 90 years to build our current power system," Jeff Lyash, TVA President and CEO, said. "In the next 30 years, we may have to double the current system."

But how?

"There is no one lever to pull that can increase our power supply," Lyash said. "Meeting this challenge requires planning and taking the right actions to ensure we continue to provide affordable, reliable, resilient and increasingly clean energy."



TVA has responded to the challenge by:

- Investing \$20.4 billion over the past 10 years to build, maintain and improve generation and transmission assets – while keeping residential rates lower than 75% of the nation's top 100 utilities
- Planning to invest – from 2024 to 2028 – about \$16.4 billion in new and existing generation and \$3.7 billion in transmission system improvements, including a new state-of-the-art Primary System Operation Center in Meigs County, Tennessee
- Working to expand the current 3,200 megawatts of solar capacity commitments to 10,000 megawatts by 2035
- Researching and pursuing innovative technologies such as long-duration energy storage, pumped storage and carbon capture
- Evaluating advanced nuclear technology and taking steps toward potential deployment of small modular reactors at the Clinch River site in Roane County, Tennessee
- Enhancing energy efficiency initiatives to help families, schools and businesses reduce energy use
- Rewarding businesses and industries for curtailing or shifting their energy use when demand is high

'Strengthen relationships'

Ready Now connects TVA to diverse small businesses

A little more than a year after its inception, TVA's Ready Now program has strengthened relationships and nurtured new opportunities.

And there's plenty more to come.

Spearheaded by TVA's Supplier Diversity team in late 2022, Ready Now is designed to grow the enterprise's supplier pipeline and provide job opportunities for diverse small businesses.

Dozens of diverse small businesses – including those owned by women, people of color, Native Americans and Veterans – have completed the program.

"We're looking for local diverse contractors who can provide essential services and build our pipeline," Kevin Holbrook, TVA's senior manager of Civil Construction, said. "Ready Now allows us to leverage local small contractors and build bridges to strengthen relationships."

TVA's leaders know that connecting with all people, from all walks of life, is the most powerful way to serve the region. Ready Now is instrumental in helping diverse small businesses deliver their quality services to the enterprise.

"We're leveraging our region's resources and diversity to innovate continuous improvements for TVA," Holbrook, a leader on the Supplier Diversity team, said.

In early 2023, TVA welcomed a host of diverse small businesses to the annual Supplier Diversity Summit in Huntsville, Alabama. Attendees networked at vendor

booths and learned how to best secure TVA contracts, positioning them for success.

In a three-year initiative to develop businesses in underrepresented communities, TVA contributed \$3 million to Tennessee Urban League Affiliates. In the second year of this initiative:

- 40 businesses received direct funding
- 253 businesses completed Urban League training
- 1,963 businesses received coaching, consulting or mentoring
- 193 businesses received support through accelerator training and engagement in Economic Growth Hubs, including workforce and entrepreneurship centers
- 300 entrepreneurs received support through additional technical assistance



Attendees listen during a presentation at TVA's annual Supplier Diversity Summit in April 2023 in Huntsville, Alabama.

The future is electric

Advancing Ford's BlueOval City and the Fast Charge Network

TVA and its partners are leading the way in the region's electric vehicle revolution.

This year, TVA and Ford Motor Co. celebrated major milestones in developing the BlueOval City electric vehicle manufacturing campus in Stanton, Tennessee.

The project is expected to create 6,000 jobs and \$5.6 billion in capital investment—the largest in TVA's and Tennessee's history.

"BlueOval City is a game-changer for west Tennessee," Mike Montgomery, TVA West Region customer relations manager, said. "TVA's partnership with Ford will create jobs and local investment, and also accelerate the transition to electric vehicles."

TVA and its community partners added 11 charging sites to the Fast Charge Network in FY 2023, and additional sites were opened more recently. As of April 1, 2024, there were 24 Fast Charge locations with 56 charging stations. The network is expected to feature 80 locations and 200 fast chargers when it's completed in 2026.

"The goal of this program is to support automakers, encourage EV adoption and ease range anxiety through a foundational EV charging network," Andrew Frye, TVA Electric Vehicle program manager, said. "We want to ensure fast-charging stations every 50 miles down all the major interstates and highways across our region."

To educate consumers on the benefits of EV adoption, TVA EnergyRight launched a [new blog series](#), Driving EVolution, as part of a revamped [EV website](#).

"We made this blog for the EV-curious who are open to adoption and want to know more," Ashley England, marketing manager for TVA EnergyRight, said.

Since its September launch, the blog has educated thousands of readers about the value of EV ownership through topics such as battery basics and charging 101.

"I wish this blog existed when I first became an EV owner," England said. "The articles are approachable and fun while offering great tips for EV owners and their families."



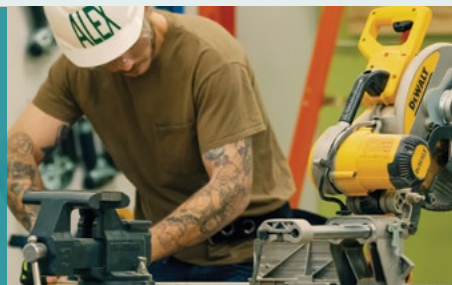
David Jamison, recruitment advisor for Memphis-Shelby County Schools, speaks to guests at a BlueOval City event in March 2023.

Building a workforce to zero in on efficiency

As the region’s contractors seek workers skilled in weatherization and energy efficiency improvements, TVA EnergyRight and its partners are working to bridge training gaps.

TVA EnergyRight and Goodwill Industries of Middle Tennessee built a training facility in Nashville, where students learn critical skills in weatherization and energy efficiency methods. TVA EnergyRight and its partners also worked with Moore Tech in Memphis to train students and professionals in home weatherization.

TVA is expanding training programs to ensure the enterprise can build the energy system of the future.



“Weatherization is important for saving energy, reducing emissions and creating jobs and opportunities,” Elizabeth Moore, manager of Commercial Energy Solutions for TVA EnergyRight, said. “Our partnerships are great examples of how TVA trains workers to improve efficiency and comfort in homes while building careers – benefiting our economy, environment and people.”

‘The sun is shining’

Penny Townson likes the way a county commissioner in Alabama put it: “The sun is shining in Lawrence County.”

“He’s right,” Townson, TVA’s field consultant of Economic Development in the Alabama region, said. “The growth potential for Lawrence County is so much greater because of this investment.”

The county will be home to First Solar Inc.’s solar module manufacturing facility, a \$1.1 billion project expected to start production in 2025. Located at Mallard Fox West Industrial Park, the facility will create about 700 jobs related to the production of next-generation renewable energy technologies.



When completed in 2025, First Solar Inc.’s manufacturing facility will produce next-generation renewable energy technology.

TVA’s economic development partners in that region include Joe Wheeler EMC, Lawrence County Industrial Development Board and Alabama Department of Commerce.

“This investment promises economic growth and job creation, (and) it also positions us to spearhead renewable energy technologies,” Townson said. “It aligns perfectly with TVA’s commitment to creating sustainable, innovative solutions for our future.”

Partners in resiliency

In summer 2023, TVA team members joined partners from utilities, academia, research institutions, government and beyond to explore some of the challenges – and unique opportunities – in grid resilience.

The second annual Regional Resiliency Summit, at Oak Ridge National Laboratory, drew stakeholders from the Department of Energy, local power companies, the Electric Power Research Institute and more.

Talks centered on decarbonization, physical and cyber grid threats, transmission and distribution interdependencies and climate change.

“Working together with key stakeholders in the region was really an important aspect of this event,” Said Sidiqi, grid research manager at TVA Transmission Technical Services, said. “As energy system transformation continues and risks evolve, understanding different perspectives from stakeholders is critical in developing a framework that takes action and operationalizes resiliency efforts.”

As TVA pursues innovative opportunities for cleaner, greener energy, collaboration is the lynchpin of it all. Together, TVA and its partners can leverage investments across the Valley region to help communities shape a resilient energy system of the future.



Clean, green and lean

TVA’s Sustainable Finance Framework is a strategic plan to ensure financial sustainability while creating positive impact for the environment and the region’s people.

The framework zeroes in on key areas for initiatives that align with TVA’s mission of providing affordable, reliable, resilient and clean energy: renewable energy, energy efficiency, climate change adaptation, green innovation, access to electricity, and access to broadband internet.

Green Bonds are a major component of this framework, as they raise funds for projects that provide environmental benefits.

TVA issued \$500 million in Green Bonds in 2021 that have been fully allocated to eligible projects across the region, including upgrading transmission systems, expanding fiber connectivity and developing solar generation facilities. The bonds will mature in 2031.

“TVA already leads the industry in providing cleaner energy,” Josh Carlon, TVA director of Corporate Finance, said. “The Green Bond program is recognition of TVA’s alignment between our investment strategy and providing sustainable power supplies for our future.”

Commitment to people

Investing in communities to uplift all



TVA was built for the people – the nation’s largest public power company created to benefit the public good. More than 90 years later, TVA remains committed to its original mission. The challenges today are different but no less critical to the lives of the people we serve.

Through the Valley Public Power Model, TVA reinvests revenue into the region’s communities. TVA delivers vital services across the region to assist families, businesses and industries – to help communities in the Valley region grow and prosper. TVA’s corporate giving, employee volunteer efforts and innovative community programs are part of building a sustainable future for the region.

From STEM grants that help the region’s schools prepare students for good, well-paying jobs here in the Valley region, to Connected Communities grants that fund

expanded access to technology solutions that make life better, TVA is working to make sure everyone can thrive.

As it builds the clean energy system of the future, TVA understands the responsibility to ensure that no one is left behind.

TVA continues to actively identify and address impacts on disadvantaged communities and to strategically weave Diversity, Equity, Inclusion and Accessibility (DEIA) into all its business activities and decision-making processes. TVA strives to be a champion for inclusion in its workforce and in the communities it serves.

There is much work to be done, but TVA is working together with its partners to enable a just transition toward a brighter future.



Students celebrate at the opening of a STEM center at the Boys and Girls Club of North Mississippi, in Tupelo.

Social Responsibility By the Numbers

\$10.4 million

donated in community contributions and disaster relief

\$1.5 million

donated in record-setting STEM Grants to regional schools in partnership with Bicentennial Volunteers, Inc.

10,000 hours

spent volunteering in every county in the service area on TVA’s 90th anniversary

Top 15

Best Employers in Tennessee by Forbes Magazine for the 5th consecutive year

27 STEM centers

to open in \$1.1 million partnership between TVA and the Cal Ripken, Sr. Foundation



TVA community relations specialist Carolyn Ward greets a student at the November 2023 opening of the STEM center at the Boys and Girls Club of North Mississippi, in Tupelo.



In 2023, TVA provided \$5,000 for STEM programming at Memphis Business Academy.

Focusing on STEM

Creating animal habitats, designing sustainable building models and earning drone pilot licenses.

These are a few examples of how schools in the region use STEM grants provided by TVA in partnership with the TVA retiree organization Bicentennial Volunteers, Inc.

This past school year, TVA and BVI contributed \$1.5 million toward science, technology, engineering and math activities in K-12 classrooms. In all, 343 schools received grants, enabling more than 130,000 students to participate in hands-on STEM learning.

“TVA remains proud to support educators and students who pursue excellence in STEM subjects,” Jeannette Mills, TVA Executive Vice President and Chief External Relations Officer, said. “To build the energy system of the future, our region’s future workforce must be prepared to continue innovating for the decades ahead.”

TVA also provided \$1.1 million in funding to the [Cal Ripken Sr. Foundation](#) this past year. The foundation works to provide STEM programming to elementary and middle school children in underserved neighborhoods.

TVA’s contribution will help fund the installation of 27 STEM centers at locations across TVA’s seven-state region.

“Supporting education and ensuring students have a solid STEM background is critical to our children’s future and the workforce of tomorrow, no matter what career path they take,” Trina Gallman, TVA Public and Community Engagement consultant, said.

Curating connections

Boosting Wi-Fi to those with limited access



TVA Connected Communities partnered with Pulaski Electric System to improve Wi-Fi access in Giles County, Tennessee.



The historic downtown in Lynnville, Tennessee, in Giles County.

The land midway between Nashville, Tennessee, and Huntsville, Alabama, boasts rolling pastures, fertile farmsteads and winding streams.

This is Giles County, Tennessee. Some still know it as The Land of Milk and Honey, a nod to the dairy farmers and beekeepers who operated here in large numbers.

More recently, it’s where Pulaski Electric System and TVA Connected Communities teamed up to improve lives by expanding Wi-Fi hotspots to students and residents who have limited access.

This year, TVA’s Connected Communities initiative donated about \$2 million to local communities across the seven-state region, supporting economic empowerment, broadband and digital literacy, energy and environmental justice and enhanced community resiliency.

“Technology and innovation are the keys to improving our communities and quality of life in the region,” Joe

Hoagland, vice president of TVA Innovation and Research, said. “These funds provide tremendous potential for standing up selected projects that will create benefits for the communities that lead them and will serve as examples for other areas of the region.”

In Columbus, Mississippi, TVA purchased 240 computers for ACTNow, a program that bridges digital divides in low-income communities. After completing an eight-hour training course, each participant receives a laptop. In some areas, TVA also supports the Base Camp Coding Academy, which offers a one-year coding program to non-traditional students seeking certification.

ACTNow participants now use those computers to manage finances, help children with homework and communicate with friends and family.

“I love my computer,” Martha Boyd, an ACTNow participant, said. “I keep my budget on there now and I use it to look things up and send emails.”

Reflecting communities

Inclusion with Diversity improves workforce

As TVA strives to make life better for everyone in the region, fresh ideas and new perspectives are key.

And that means embracing diversity in TVA's workforce.

"We are seeing a commitment to diversity and inclusion that is actionable at a grassroots level," said Will Trumm, vice president of TVA Labor Supply and Partnerships. "What is different is that it's not just a top-down initiative. It is top down, bottom up—meaning that these efforts throughout the enterprise are meeting in the middle, where initiative and change occur."

Employee Resource Groups, commonly called ERGs, are a big part of this success.

Recent efforts included an ERG Leadership Summit and an ERG Blitz, which expanded the reach and impact of the ERGs and provided TVA employees with the opportunity to engage. Whether they're at the corporate office or at a power generation site, employees are finding community.

"We're leveraging our resources to support and impact our people inside the company, as well as out in the communities that we serve," Xavier Cotto, TVA's Culture, Inclusion and Performance consultant, said. "Additionally, our ERGs are open to all, regardless of whether you fit into the demographic that the group is created around. We believe in having

allies come alongside to learn from each other and become advocates for each other."

To maintain a flourishing workforce, TVA also supports initiatives that diversify the hiring pipeline and invigorate recruitment practices.

"We've changed our actual hiring practice with our union partners in an effort to broaden the net and bring in people from diverse communities," Trumm said. "We have since increased our hiring percentage of females and people from diverse backgrounds into our trades and labor force. We want to reflect the communities we serve."

TVA also partners with the Apprentice Readiness program to reach diverse communities, exposing them to skilled trades.

These types of intentional adjustments – whether in recruiting or as a renewed commitment to inclusion – are vital to a sustainable future.

"On our TVA journey, we've made significant changes and continuously work to take actions that demonstrate the key behaviors needed to make equitable and accessible opportunities for all individuals," Tequilla Hurt, senior manager of Diversity and Inclusion, said. "It's all about correction or adjustment when warranted, and celebration of incremental progress."



EPB workforce development technician Tony Bell attends a lineman training program in April 2023. TVA works with EPB, the American Association of Blacks in Energy and many other partners to grow the Valley region's next generation of skilled workers.

United in service

On May 18, 2023, as the sun crested the horizon, they headed to their destinations.

Streams and reservoirs. Food banks. Nonprofits and community organizations. Storm-struck neighborhoods.

More than 2,000 employees and 125 retirees fanned out across the seven-state region, united for the largest day of service in TVA's history. They packaged and delivered meals. Cleaned trails and streams. Planted trees. Removed invasive species.

By day's end, they logged 10,000 service hours. It stood as a fitting tribute to TVA's long-standing mission of service, which began in 1933 when President Roosevelt signed legislation that created TVA.

TVA employees Lenice Winston and Trina Gallman volunteer at an East Tennessee food bank during TVA's 90th anniversary Day of Service.



"We asked employees how they wanted to celebrate, and they said let's do a day of service companywide," Jeff Lyash, TVA President and CEO, said. "TVA has had a mission of service since day one."

A focus on environmental justice

TVA works to improve lives by identifying and addressing how decisions impact disadvantaged communities.

"The environmental justice space is very dynamic," Janice Horn, senior program manager of TVA Environmental Justice, said. "We are growing along with it."



TVA's Environmental Justice program has created a structure to align with presidential executive orders that frame federal agencies' efforts to address disproportionate health, environmental, economic and climate impacts on disadvantaged communities. TVA's regional model and community outreach groups also dedicate resources to working within communities on their unique needs.

By developing practices and principles in this work, the Environmental Justice Regulatory and Policy Team brings an enterprise-wide perspective on creating a brighter future for all residents.

"TVA has a long history of helping communities," Skip Markham, TVA's senior manager of Environmental Management Systems and Regulatory Affairs, said. "It's who we are. Now we are working to be more strategic in our outreach, and we're also working within TVA to enhance communication and bring consistency to our efforts."

Intern program attracts top talent

The TVA intern program continues to bring fresh ideas and new skillsets to the enterprise, meeting the region's evolving energy needs and creating a thriving talent pipeline.

One of the reasons the intern program has been successful is because these students work on complex

challenges that help them develop relationships and gain valuable experience to grow their careers.

Since the revamp of the intern program, TVA has consistently placed intern classes every semester across the enterprise and boasted a 60% diversity rate.

"Getting opportunities to ask for more knowledge and gaining real-world working experience has been the best part of this internship," Sarah Williams, TVA Strategic Content intern, said. "The added bonus of being treated like an employee and seeing my writing in the TVA Annual Report has been a reward."

With TVA hiring about 70% of its interns into full-time positions, [its future workforce](#) looks bright.

Building pathways together

TVA and its partners have taken a deep dive into the Valley region's carbon emissions, thanks to the Baker School for Public Policy and Public Affairs leading development of a first-of-its-kind study to help shape a net-zero greenhouse gas emission economy by 2050.

The recently published [Valley Pathways Study Preliminary Findings](#), led by the Baker School's Charles Sims, Ph.D., will be instrumental in establishing a clean energy economy.

In early 2023, a diverse workgroup of stakeholders assembled to help researchers establish a baseline that captures the characteristics of the region's carbon emissions.

"That's a critical component – it's never been done before for the Valley region," Laura Duncan, Valley Pathways Study senior project manager, said.

With those findings now in hand, the team is connecting with community leaders and others who can help navigate the path to a net-zero carbon emissions economy. They'll determine priority actions for each economic sector while seeking feedback and opportunities to further benefit communities.

"That's really being forward-thinking in how we create a competitive, clean energy economy together," Duncan said. "That feedback will help TVA and its partners take actions that achieve carbon reduction."

Ultimately, it will position the region as a leader in developing a cleaner, more competitive economy that benefits the Valley region and beyond.

Driving progress

Governance enables TVA to build a clean energy future



As a public power provider, TVA operates with a different set of expectations and responsibilities than its publicly traded peers. Instead of focusing on shareholder profit, TVA reinvests in the region's infrastructure, environment and people – the way it has since 1933.

TVA is self-sustaining and self-funded, and it receives no public tax dollars. The enterprise has oversight similar to that of other utilities, including a Board of Directors, as well as Securities and Exchange Commission and Sarbanes-Oxley Act requirements.

As a government-owned corporation, TVA has additional oversight from Congress, the Government Accountability Office, the Office of Management and Budget, the U.S. Treasury and an independent Office of the Inspector General.

TVA's governance structure provides the oversight and perspective necessary to manage risk, drive progress and maintain the public trust that's at the heart of fulfilling TVA's mission of service. As TVA makes plans to meet stakeholder expectations, regulatory requirements and sustainability goals during the global transition to the clean energy system of the future, transparency and accountability are more important now than ever.

Its strong governance structure helps the agency learn from and respond to new and anticipated challenges as TVA works together with its partners to ensure a secure, clean energy future for the region.



Governance By the Numbers

\$611 million

in payments in lieu of taxes
in FY 2023

\$16.3 billion

in payments in lieu of taxes
since 1941

6 new board members

welcomed in FY 2023

Ethisphere Verification

for best-in-class ethics program
maintained in 2023

‘Input from all voices’

Integrated Resource Plan will guide energy, financial strategies

Stakeholder and public engagement are vital to the integrated resource planning process.



TVA is involved in a long-term planning process that has the potential to impact every resident and business in the seven-state region it serves.

The [Integrated Resource Plan](#) (IRP) will help shape TVA’s energy system of the future, ensuring that those who live and work in the region have affordable, reliable, resilient and increasingly cleaner energy for decades to come.

TVA is also preparing an Environmental Impact Statement (EIS) that evaluates the impacts of implementing the IRP.

The IRP evaluates scenarios that TVA could be operating in through 2050. It also examines the business strategies TVA could use to meet energy demand in any scenario.

The IRP will provide strategic direction, establishing a strong planning foundation and informing TVA’s next long-range financial plan.

Public engagement and transparency are vital to the process.

“The IRP process is critical in ensuring we have input from all voices – our customers, stakeholders and public – in preparing energy options to serve our region long-term,” Jeff Lyash, TVA President and CEO, said.

TVA’s teams have engaged a diverse group of stakeholders who meet regularly to provide guidance on the IRP, including environmental justice considerations.

The enterprise also seeks public participation in numerous ways. The public had its first opportunity to provide input during a public scoping period that began in May 2023.

Public participation is vital, and TVA has received comments during quarterly TVA Board listening sessions, at federal advisory committee meetings, and during informational IRP webinars. TVA also provides information via TVA’s IRP website: tva.gov/IRP. TVA looks forward to stakeholder and public feedback on the IRP to help chart the course for the region’s future energy system.

After public input is incorporated, the final IRP and EIS will be made available to the public for at least 30 days prior to consideration by the TVA Board of Directors. Subject to the Board’s direction, an official Record of Decision will then be posted.

‘Nation-to-nation relationships’

TVA consults with 23 federally recognized Tribes that have a religious or cultural interest in the Valley region. These consultations help build strong relationships.

It is within TVA’s mission to manage the enterprise’s historic properties and comply with cultural resource laws. TVA’s [Tribal Relations program](#) works to strengthen relationships beyond the minimum requirements.

One goal of the program is to increase Native American cultural awareness. To accomplish this, TVA teams host and attend outreach events to help people in the Valley region learn about Tribes. This includes additional opportunities for TVA team members to engage one-on-one with Tribes at internal engagement events.

TVA also works with Tribes to participate in repatriation of Ancestors and Ancestral artifacts.

In consultation with Tribes, TVA has executed a reinterment memorandum of agreement, which outlines TVA’s commitment to providing land for the purpose of reburial of Ancestors and cultural items.

“It is our ethical obligation to do the right thing,” Meg Cook, TVA interim Tribal liaison, said. “We want to strengthen those nation-to-nation relationships.”



At the Oka Kapassa Native American Festival in Tuscomb, Alabama, TVA archaeologists helped participants learn about the history of the area.

‘Cybersecurity is crucial’

TVA works 24/7 to monitor and protect its critical cyber assets, partnering with industry groups, peers and government agencies such as the FBI.

The proactive, comprehensive cybersecurity program at TVA aims to identify, protect, detect and respond to threats. It uses risk-based assessments to protect cyber assets through multi-layered threat analysis capabilities, continuous monitoring, penetration testing and vulnerability assessments.

TVA continually enhances cybersecurity through best practices such as cyber resiliency, whose primary attributes are to anticipate, withstand, recover and adapt. As grids undergo digital transformations, this contributes to reliability and resiliency.

TVA’s cybersecurity systems use complex algorithms to identify potential attacks, prompting analysts to follow pre-planned responses that prevent or reduce the impact. The cybersecurity team also combines threat intelligence from open source and classified documents to identify risks and employ countermeasures.

With continued vigilance and enhancements, “we can have confidence in our increasingly interconnected and technologically advanced future,” said KC Carnes, TVA Vice President of Cyber Security and Chief Information Security Officer.

Leading with integrity

The TVA Ethics and Compliance team is committed to offering guidance and education to employees, inside and outside the workplace.



By holding everyone accountable to established behavior standards, the Ethics and Compliance team creates a culture of awareness, openness and honesty.

Alongside requiring employees to participate in ethics training and attest to TVA’s Code of Conduct, the team automated the process for managing TVA policies and procedures and disclosing potential conflicts of interest.

Ginger McCormick, senior analyst with Ethics and Compliance, detailed the team’s strides.

“We published a dashboard highlighting ethics data, created an anonymized report summarizing ethics violations and established web-based reporting for ethics concerns,” she said.

TVA also contracted with Ethisphere, a leader in corporate ethics standards, to review its compliance program. In 2022, TVA became the first federal agency to receive the coveted Compliance Leader Verification certification. It was again awarded in 2023.

The enterprise was benchmarked against the world’s most ethical companies. The certification validates TVA’s government-leading efforts to build an enterprise that is transparent, with a best-in-class ethics and compliance program.

Leading to success

TVA’s Enterprise Leadership Team (ELT) oversees TVA strategy, policy and operations. The ELT is responsible for delivering TVA’s mission of service through affordable, reliable and resilient energy, environmental stewardship and economic development.

The ELT is led by Jeff Lyash, President and CEO, and includes: Wilson Taylor, interim Executive Vice President and Chief Administrative Officer; David Fountain, Executive Vice President and General Counsel; Jeannette Mills, Executive Vice President and Chief External Relations Officer; Tim Rausch, Executive Vice President and Chief Nuclear Officer; Don Moul, Executive Vice President and Chief Operating Officer; and John Thomas, Executive Vice President and Chief Financial and Strategy Officer.

TVA’s Board of Directors consists of nine members, each nominated by the U.S. president and confirmed by the Senate. Each member serves a five-year term.

The responsibilities of the Board are to establish broad strategies, goals and objectives and to set long-range plans and policies for TVA.

The current Board includes Directors Joe Ritch, Beth Geer, Beth Harwell, Bobby Klein, Michelle Moore, Brian Noland, Bill Renick and Wade White. Ritch serves as Chair of the Board of Directors.

Quarterly Board meetings are [open to the public](#) and preceded by a Public Listening Session.



The TVA Board of Directors gathers at a public meeting. In the back row, from left to right are Bill Renick, Michelle Moore, Beth Geer, Bobby Klein and Wade White; in the front row are Brian Noland, Joe Ritch and Beth Harwell.

Sustainability Steering Committee serves the region

TVA's Sustainability Steering Committee aims to provide sustainable solutions that ensure the Valley region continues to be a great place to live, work and play for generations to come.

This devoted team specializes in improving sustainability in all areas of the enterprise.

The committee is an enterprise-wide group that provides guidance for the development of TVA's Sustainability program.

Since its establishment in 2020, the committee has provided guidance through discussions on key focus areas, goals, metrics and reporting frameworks.

Jan Brown

Vice President of Culture, Inclusion and Performance and Chief Diversity and Inclusion Officer

Brian Child

Vice President of Enterprise Planning

Allen Clare

Senior Vice President of Power Operations

Bob Deacy

Senior Vice President of New Nuclear

Buddy Eller

Vice President of Communications

Melanie Farrell

Vice President of External Stakeholder and Regional Oversight

David Fountain

Executive Vice President and General Counsel

Chris Hansen

Vice President of Origination and Renewable Solutions

Joe Hoagland

Vice President of Innovation and Research

Jessica Hogle

Chief of Federal Affairs

Justin Maierhofer

Regional Executive, Regional Relations North

Michael McCall

Vice President of Environment and Sustainability and Chief Sustainability Officer

Don Moul

Executive Vice President and Chief Operating Officer

Doug Perry

Senior Vice President of External Strategy and Communications

Tom Rice

Vice President, Treasurer and Chief Risk Officer

Angela Sims

Director of Diversity and Inclusion

Heidi Smith

Director of Global Business

Rebecca Tolene

Vice President and Chief of Staff

Diane Wear

Vice President and Controller

Tammy Wilson

Vice President of Technology and Innovation and Chief Information and Digital Officer

Jacinda Woodward

Senior Vice President of Power Operations (retiring)

Appendix A – Global Reporting Initiative (GRI) Metrics

TVA's Sustainability Report is intended to provide data and context for TVA's sustainability performance over the previous fiscal year. To meet stakeholders' needs for comparable and material data in sustainability reporting, TVA engages with industry-standard disclosure frameworks, including the following Global Reporting Initiative and the Sustainability Accounting Standards Board. TVA's data management processes support data accuracy and consistency across reporting platforms. All metrics are reviewed by the Disclosure Control Committee and internal subject matter experts during the Sustainability Report review process before publication.

Disclosure	Location	Metric	FY 21	FY 22	FY 23
GRI 2: General Disclosures 2021					
2-1 Organizational details	10-K	Total Owned Summer Net Capability at the end of year (MW) ⁵	32,433	32,012	32,139
		Owned Coal Summer Net Capability at the end of year (MW)	6,580	6,580	5,815
		Owned Natural Gas Summer Net Capability at the end of year (MW) ⁵	12,183	11,777	12,638
		Owned Nuclear Summer Net Capability at the end of year (MW)	8,275	8,232	8,232
		Owned Petroleum (Diesel) Summer Net Capability at the end of year (MW)	9	9	9
		Owned Total Renewable Energy Resources Summer Net Capability at the end of year (MW)	5,386	5,409	5,440
		Owned Biomass/Biogas Summer Net Capability at the end of year (MW)	0	0	0
		Owned Geothermal Summer Net Capability at the end of year (MW)	0	0	0
		Owned Hydroelectric Summer Net Capability at the end of year (MW)	5,385	5,408	5,439
		Owned Solar Summer Net Capability at the end of year (MW)	1	1	1
		Owned Wind Summer Net Capability at the end of year (MW)	0	0	0
		Owned Other Summer Net Capability at the end of year (MW)	0	5	5
		Total Owned Net Generation (GWh)	139,300	135,667	135,528
		Nuclear Generation (GWh)	66,265	64,475	67,102
		Natural Gas and/or Oil-Fired Generation (GWh)	33,290	36,259	34,467
		Coal-fired Generation (GWh)	23,391	20,999	20,896
		Hydroelectric Generation (GWh)	16,354	13,934	13,063
		Petroleum Generation (GWh)	0	0	0
		Total Renewable Energy Resources Generation (GWh)	16,354	13,934	13,063
Total Purchased Power Generation (GWh)	20,478	29,789	24,263		
Purchased Power Renewable Generation (GWh)	7,269	8,684	7,838		
2-3 Reporting period, frequency and contact point	Sustainability Report, p. 1				

Disclosure	Location	Metric	FY 21	FY 22	FY 23
2-6 Activities, value chain and other business relationships	Public Power Partnerships 10-K Supplier Diversity	Commercial Retail Electric Customer Count (average of CY) ⁴	17	16	17
		Industrial Retail Electric Customer Count (average of CY) ⁴	43	45	44
		Residential Retail Electric Customer Count (average of CY) ⁴	0	0	0
2-7 Employees	10-K	Total Number of Employees	10,192	10,390	10,901
2-8 Workers who are not employees	10-K	Total Number of Contractors	15,544	16,227	15,676
2-9 Governance structure and composition	Governance	Total number of Board of Director Members	7	5	9
2-10 Nomination and selection of the highest governance body	Bylaws of the Tennessee Valley Authority				
2-11 Chair of the highest governance body	Board of Directors				
2-12 Role of the highest governance body in overseeing the management of impacts	Board Practices				
2-13 Delegation of responsibility for managing impacts	Board Practices				
2-14 Role of the highest governance body in sustainability reporting	Charter of the External Stakeholders and Regulation Committee, V. Responsibilities of the Committee, C. Corporate Sustainability				
2-15 Conflicts of interest	Board Conflict of Interest Policy				
2-16 Communication of critical concerns					
2-17 Collective knowledge of the highest governance body					
2-18 Evaluation of the performance of the highest governance body	10-K				
2-19 Remuneration policies	10-K				
2-20 Process to determine remuneration	10-K				
2-21 Annual total compensation ratio	10-K				

Disclosure	Location	Metric	FY 21	FY 22	FY 23
2-23 Policy commitments	Appendix E - TVA Sustainability-Related Disclosures, Plans and Policies				
2-25 Processes to remediate negative impacts	NEPA at TVA				
2-26 Mechanisms for seeking advice and raising concerns	Our Public Advisory Councils				
2-27 Compliance with laws and regulations		Compliance: Notice of Violations (NOV)	1	4	1
2-29 Approach to stakeholder engagement	Get Involved Stay Involved				
2-30 Collective bargaining agreements	Union Partnerships (tva.com)	Percentage of total employees covered by collective bargaining agreements	60%	58%	58%
GRI 3: Material Topics 2021					
3-1 Process to determine material topics	Sustainability Report, p. 6				
3-2 List of material topics	Sustainability Report, p. 6				
3-3 Management of material topics	Sustainability Report, p. 6				
GRI 201: Economic Performance 2016					
201 General Response		Non-Fuel Delivered Cost of Power (cents/kWh)	3.22	3.18	3.40
		Retail Rate (cents/kWh)	9.18	10.25	10.25
		Operating Cash Flow (\$M)	3,256	2,948	2,872
		Net Income (\$M)	1,512	1,108	500
		Nuclear Unit Capability Factor	90.5%	N/A	N/A
		Annualized Nuclear Online Reliability Loss Factor (%)	NEW	1.13%	1.53%
		Load Not Served (System Minutes)	3.2	4.5	3.1
		Reliability Rating (Transmission System) (%)	99.999%	99.999%	99.999%
		Inventory Value—Materials and Supplies Inventory (\$M)	775	808	849
		External Nuclear Performance Measures	91.1%	94.0%	94.1%
		Total Annual Capital Expenditures (\$M) ⁶	1,963	2,361	2,526
		Coal Equivalent Availability Factor (EAF)	71.6%	74.9%	74.8%
		Combined Cycle Equivalent Availability Factor (EAF)	85.3%	83.3%	83.9%
	Economic Development - Capital Investment in the Valley (\$B)	8.8	10.2	9.2	

Disclosure	Location	Metric	FY 21	FY 22	FY 23
201-1 Direct economic value generated and distributed	10-K	Operating Revenues (\$M)	10,503	12,540	12,054
		O & M Expense (\$M)	2,890	2,986	3,372
		Total Spend (\$M)	5,144	5,580	6,168
		Total Financing Obligations (\$B) ¹	20.5	20.3	20.5
	10-K	Annual Tax Equivalent Payments (\$M) ⁷	500	512	611
201-2 Financial implications and other risks and opportunities due to climate change	Climate Action Adaptation and Resiliency Plan				
201-3 Defined benefit plan obligations and other retirement plans	10-K	Qualified pension plan liabilities (\$B)	13.3	10.5	10.1
		Net periodic benefit cost (\$M)	258	258	199
GRI 202: Market Presence 2016					
202-1 Ratios of standard entry level wage by gender compared to local minimum wage					
GRI 203: Indirect Economic Impacts 2016					
203-1 Infrastructure investments and services supported		Incremental Annual Electricity Savings from EE (MWh) (CY)	19,777	37,708	133,896
		Incremental Annual Investment in EE programs (\$) (CY)	25,386,000	33,296,000	39,105,000
203-2 Significant indirect economic impacts		Jobs Created (#)	22,599	26,512	12,276
		Jobs Retained (#)	58,350	40,027	46,135
		Flood Management: Avoided Flood Damage (\$M)	170	3	7
GRI 204: Procurement Practices 2016					
204 General Response		Supplier Diversity: Total Diverse Business Spend (\$M)	365	518	522
		Supplier Diversity: Diverse Business Utilization (%)	10.8%	13.9%	12.4%
		Supplier Diversity: Total Small Business Spend (\$M)	856	1.1 billion	1.2 billion
		Supplier Diversity: Small Business Utilization (%)	25.2%	30.3%	28.2%
		Supplier Diversity: Total Valley Business Spend (\$B)	1.8	2	2.4
204-1 Proportion of spending on local suppliers	Supplier Diversity	Valley Spend Utilization (%)	52.80%	55.3%	57.3%
GRI 205: Anti-corruption 2016					
205-1 Operations assessed for risks related to corruption	10-K				
205-2 Communication and training about anti-corruption policies and procedures	Code of Conduct				
	Executive Code of Conduct				
	Supplier Code of Conduct	Percent employees completing ethics training (%)	NEW	NEW	100%

Disclosure	Location	Metric	FY 21	FY 22	FY 23
205-3 Confirmed incidents of corruption and actions taken	OIG TVA Semiannual Report: October 1, 2022 - March 31, 2023 Semiannual Report: April 1, 2023 - September 30, 2023	Ethics violations (#)	NEW	NEW	23
GRI 207: Tax 2019					
207-1 Approach to tax	10-K 10-K				
207-2 Tax governance, control, and risk management	TVA Act, Section 13				
207-4 Country-by-country reporting	10-K				
GRI 302: Energy 2016					
302-1 Energy consumption within the organization		Building source energy use (MMBTU)	NEW	NEW	2,031,414
	TVA FY 22 Sustainability Scorecard	Building renewable energy use (MWh)	NEW	NEW	75,572.7
		Building non-renewable energy use (MWh)			277,758.1
		Building Renewable Energy Use (% renewable sources) (EO 13834)	20.2%	20.7%	21.4%
		Building Non-Renewable Energy Use (% non-renewable sources) (EO 13834)	NEW	NEW	78.6%
302-4 Reduction of energy consumption	Federal Sustainability Plans and Performance	Building Energy Intensity Progress (% reduction from FY2003: Btu/GSF) (EO 13834)	74.80%	76.40%	81.40%
		Sustainable Buildings Progress (% reduction from baseline: GSF)	22.3%	22.3%	22.3%
302-5 Reductions in energy requirements of products and services	TVA EnergyRight	Gross energy savings from EnergyRight energy efficiency programs (kWh)	NEW	NEW	118,305,331
		Gross carbon avoidance from EnergyRight energy efficiency programs (Tons)	NEW	NEW	356,536
GRI 303: Water and Effluents 2018					
303-1 Interactions with water as a shared resource	Managing the River				
303-2 Management of water discharge-related impacts	Water Quality (and Reservoir Release Improvement Program)				
303-3 Water withdrawal		Water: Total Water Withdrawal-non consumptive (Billions of Liters/Net MWh) (CY)	0.0000823	0.000231	0.000089
		Total water withdrawal (Megaliters) (CY)	NEW	NEW	12,206,388
303-4 Water discharge		Total water discharge (Megaliters) (CY)	NEW	NEW	12,109,136
303-5 Water consumption		Water Supply: Freshwater Consumption Rate (All Generation) (Billions of Liters/Net MWh) (CY)	0.0000008	0.0000007	0.0000007
		Total freshwater consumption (Megaliters) (CY)	NEW	NEW	97,252

Disclosure	Location	Metric	FY 21	FY 22	FY 23
GRI 304: Biodiversity 2016					
304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		See GRI Appendix			
304-2 Significant impacts of activities, products and services on biodiversity		See GRI Appendix			
304-3 Habitats protected or restored		See GRI Appendix			
304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations		See GRI Appendix			
GRI 305: Emissions 2016					
305 General Response		Clean Energy (Power from carbon-free sources delivered) (%)	56%	52%	55%
305-1 Direct (Scope 1) GHG emissions	Sustainability Report, p. 20 Carbon Report	CLIMATE: TVA CO ₂ e Scope 1 Emissions (Metric tons) (CY)	40,374,877	41,184,773	38,208,030
		CLIMATE: TVA CO ₂ Tons from Owned Generation (Metric tons) reported in CY	38,437,510	38,966,496	36,261,940
		CLIMATE: Purchased Generation CO ₂ Emissions (Metric tons)	7,192,903	9,883,774	8,113,999
		CLIMATE: Owned and Purchased Generation CO ₂ Emissions (Metric tons) CY	45,630,413	48,850,518	44,375,939
305-2 Energy indirect (Scope 2) GHG emissions	FY 2022 Sustainability Scorecard	CLIMATE: TVA CO ₂ e Scope 2 Emissions (Metric tons) (CY) ⁸	142,802	122,840	132,355
305-4 GHG emissions intensity		CLIMATE: CO ₂ Emissions rate - System TVA Scope 2 CO ₂ Emissions Rate (Owned and Purchased lbs/MWh) reported in CY	637.67	658.06	624.94
		CLIMATE: TVA Emissions (Owned CO ₂ Tons/GWh) (CY/FY)	303	317	295
		CLIMATE: TVA Emissions (Owned CO ₂ Metric Tons/Net MWh) (CY/FY)	0.276	0.287	0.268
		CLIMATE: Owned and Purchased Generation Emissions (Owned and Purchased CO ₂ Metric Tons/Net MWh) (CY/FY)	0.286	0.338	0.278
305-5 Reduction of GHG emissions		Scope 1 and 2 GHG Emissions (% reduction from FY2008)	58.4%	64.1%	61.1%

Disclosure	Location	Metric	FY 21	FY 22	FY 23
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions		Air: TVA SO ₂ Emissions (Metric tons) (CY) ⁵	25,226	22,331	17,736
	Air Quality	Air: TVA NO _x Emissions (Metric tons) (CY) ⁵	15,210	15,270	13,221
		Non-Generation Fugitive CO ₂ e Emissions: Sulfur Hexafluoride (Metric tons) (CY)	74,619	62,133	81,236
		Air: TVA Mercury Emissions (kg) (CY)	22.26	39.17	47.44
GRI 306: Waste 2020					
306-1 Waste generation and significant waste-related impacts	10-K				
306-2 Management of significant waste-related impacts	Coal Ash (tva.com)				
306-3 Waste generated	Environmental Policy	Total non-hazardous industrial waste generated (Metric tons)	NEW	NEW	12,160
306-4 Waste diverted from disposal		Non-hazardous Municipal Solid Waste Diversion (% diverted/recycled) ²	2.98%	0.8%	1.8%
		Waste: Coal Combustion Products Beneficially Used (%) (CY)	59%	82%	87%
306-5 Waste directed to disposal		Non-hazardous waste directed to disposal (Metric tons)			
		Waste: Low-level radioactive waste disposal rate (ft ³ /MWh) (CY)	0.002533	0.002798	0.002076
		Waste: Amount of Hazardous Waste Disposed (Metric tons) (CY)	50.1	32	127
GRI 308: Supplier Environmental Assessment 2016					
308-1 New suppliers that were screened using environmental criteria	Supplier Code of Conduct Green Procurement	Sustainable Acquisition Progress – Obligations in Dollars containing Statutory Environmental Requirements (% of contract dollars with environmental clauses)	96.7%	97.5%	91.7%
308-2 Negative environmental impacts in the supply chain and actions taken					
GRI 401: Employment 2016					
401-1 New employee hires and employee turnover	DEIA Report FY 2023	Diverse external hires (%)	NEW	NEW	41.4%
		Total number of new employee hires	NEW	NEW	1,059
		Total number of employee turnover	NEW	NEW	559
401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	10-K Benefits & Quality of Life	Part-time employees are offered most benefits that full-time employees receive. Under certain circumstances, Leaves, FEGLI, Optional Long-Term Disability may not be available to part-time employees. Temporary benefits can vary based on full-time or part-time status			
401-3 Parental leave	Benefits & Quality of Life				
GRI 403: Occupational Health and Safety 2018					

Disclosure	Location	Metric	FY 21	FY 22	FY 23	
403-8 Workers covered by an occupational health and safety management system		Workers covered by an occupational health and safety management system (#)	NEW	NEW	26,577	
	403-9 Work-related injuries		Safe Workplace (RIR)	0.26	0.44	0.26
			Lost Time Case Rate (OSHA)	0.04	0.07	0.04
			Days Away, Restricted, and Transfer (DART) rate (OSHA)	0.11	0.17	0.03
		Serious Injury Incident Rate (SIIR)	0.03	0.02	0.02	
		Work-related Fatalities	0	1	1	
403-10 Work-related ill health						
GRI 404: Training and Education 2016						
404-1 Average hours of training per year per employee		Training for Career Advancement (hours/employee)	68.65	70.16	76.29	
404-2 Programs for upgrading employee skills and transition assistance programs	Benefits & Quality of Life (tva.com)					
		Continuing Education Contributions (\$)	436,764	465,684	479,156	
404-3 Percentage of employees receiving regular performance and career development reviews		Percentage of employees receiving regular performance and career development reviews	NEW	NEW	100%	
GRI 405: Diversity and Equal Opportunity 2016						
405-1 Diversity of governance bodies and employees		Military Share of Workforce (%)	17.9%	17.54%	17.27%	
		People of Color Share of Workforce (%)	11.24%	11.81%	12.50%	
		Women Share of Workforce (%)	20.37%	20.78%	20.99%	
		Share of workforce under 30 years old	NEW	NEW	11%	
		Share of workforce 30-50 years old	NEW	NEW	52.9%	
		Share of workforce over 50 years old	NEW	NEW	36.1%	
		Total number of Female Board of Director Members	1	1	3	
		Total number of Minority Board of Director Members	1	0	0	
405-2 Ratio of basic salary and remuneration of women to men		Ratio of basic salary and remuneration of women to men	NEW	NEW	91.46 %	
GRI 406: Non-discrimination 2016						
406-1 Incidents of discrimination and corrective actions taken	No FEAR Report Equity Action Plan	Number of complaints filed pursuant to the No FEAR Act	NEW	NEW	33	
		Total number of final agency actions finding discrimination	NEW	NEW	3	
GRI 407: Freedom of Association and Collective Bargaining 2016						

Disclosure	Location	Metric	FY 21	FY 22	FY 23
407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Supplier Code of Conduct Union Partnerships				
GRI 408: Child Labor 2016					
408-1 Operations and suppliers at significant risk for incidents of child labor	Supplier Code of Conduct TVA Code of Conduct, p. 50				
GRI 409: Forced or Compulsory Labor 2016					
409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Supplier Code of Conduct				
GRI 410: Security Practices 2016					
410-1 Security personnel trained in human rights policies or procedures	TVA Police				
GRI 411: Rights of Indigenous Peoples 2016					
411 General Response	Tribal Consultation Action Plan	Tribal Engagement	57	38	45
GRI 413: Local Communities 2016					
413-1 Operations with local community engagement, impact assessments and development programs		Back-to-Business Credit Program (\$)	3,219,298	N/A	N/A
		Community Care Fund (\$)	1,771,177	4,450,875	2,425,655
	Environmental Reviews				
	Get Involved, Stay Involved	Environmental & Community Engagement (# Children participating)	26,777	3,800	
		Employee Hours Volunteered (Hours)	2,637.5	1,800.8	
		Stakeholder Survey (%) ³	78.3%	79.4%	81.0%
		Customer Loyalty (VOC Survey Results) ³	70.3%	71.3%	70.3%
		Media Tone (Positive and Neutral) ³	85.7%	83.3%	
GRI 414: Supplier Social Assessment 2016					
414-1 New suppliers that were screened using social criteria	Supplier Code of Conduct Office of the Inspector General				
GRI 415: Public Policy 2016					
415-1 Political contributions	TVA is a federal agency prohibited from participating in lobbying activities.				
GRI 418: Customer Privacy 2016					

Disclosure	Location	Metric	FY 21	FY 22	FY 23
418-1 Substantiated complaints concerning breaches of customer privacy	Protecting the Grid TVA Privacy Program Complaint Resolution Process				

¹ Revised due to reclassifications.
² Does not include construction and demolition waste.
³ Three-year average, not annual rate.
⁴ Customer count is based on meters in accordance with the definition on Form EIA-861 Annual Electric Power Industry Report.
⁵ Data does not include Caledonia Combined Cycle Plant, a leased facility operated by TVA.
⁶ Construction Expenditures based on Statement of Cash Flows.
⁷ Revised from previous reporting to address errors.
⁸ Does not include transmission and distribution losses associated with owned power system.

New and Retained Job Definitions

“New jobs” in the TVA fiscal year are newly created, paid positions at a facility of a TVA customer. “Positions” are calculated by adding (1) the number of full-time, on-site employees and/or independent contractors at the facility, (2) the total number of full-time work-from-home employees and independent contractors who reside in the TVA service territory and who spend 100% of their work time on facility-related matters, and (3) the total hours worked on facility-related matters by (a) full-time and part-time on-site employees at the facility and (b) full-time and part-time work-from-home employees who reside in the TVA service territory and who spend less than 100% of their work time on facility-related matters, divided by the number of work hours of such employees based on a 40-hour workweek. A “TVA customer” means an entity that purchases power from TVA or a distributor of TVA power. New jobs reported by TVA may include positions created during the current TVA fiscal year and certified projections of anticipated positions to be created within a five-year time frame. New job numbers reported by TVA are certified and provided to TVA by TVA customers.

“Retained jobs” are paid positions at a facility of a TVA customer that were created prior to the current TVA fiscal year and that continue to be filled in the current TVA fiscal year. “Positions” are calculated by adding (1) the number of full-time, on-site employees and/or independent contractors at the facility, (2) the total number of full-time work-from-home employees and independent contractors who reside in the TVA service territory and who spend 100% of their work time on facility-related matters, and (3) the total hours worked on facility-related matters by (a) full-time and part-time on-site employees at the facility and (b) full-time and part-time work-from-home employees who reside in the TVA service territory and who spend less than 100% of their work time on facility-related matters, divided by the number of work hours of such employees based on a 40-hour work week. A “TVA customer” means an entity that purchases power from TVA or a distributor of TVA power. Retained job numbers reported by TVA are certified and provided to TVA by TVA customers. All statistics reported are based on best available data.

Supporting Material

Disclosure 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

The TVA region, which includes the Power Service Area and the Tennessee River watershed, extends across about 129,000 square miles of seven states, including portions of Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia (Figure 1). Numerous areas within this region, both aquatic and terrestrial, are known to support high levels of biodiversity and a disproportionate number of plant and animal species that are tracked and classified as rare at either the state or federal level. In 2021, the TVA Board of Directors approved a Biodiversity Policy (Biodiversity (tva.com)), which recognizes the important role TVA plays in

conserving species throughout the region. In the Policy, 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”

TVA seeks to make life better for the people we serve through the integrated management of our region’s resources. TVA achieves this by focusing on Energy, Environment, and Economic Development. This holistic approach, combined with the large TVA service area, positions TVA as a regional leader in biodiversity conservation in an increasingly developed world.

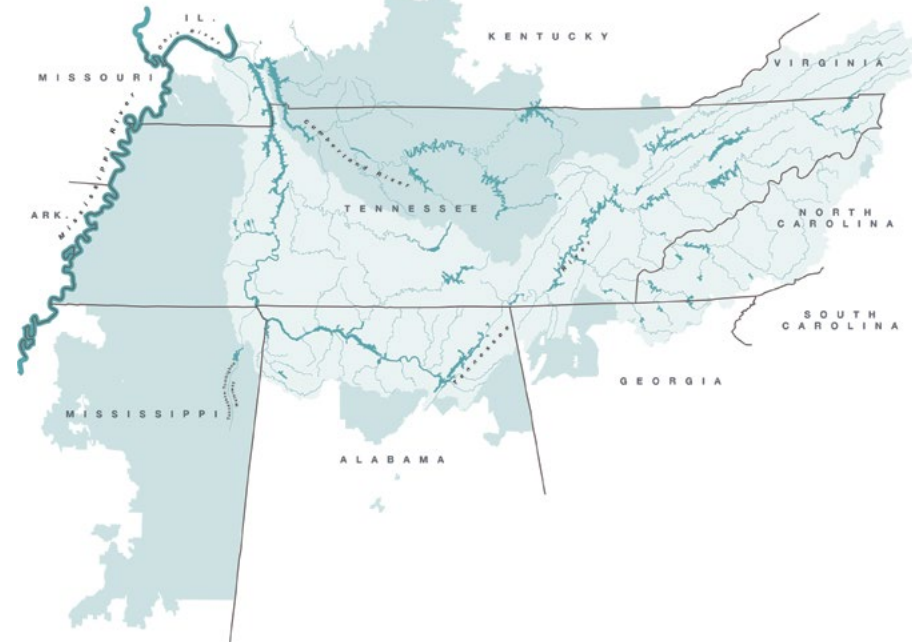


Figure 1. TVA Region comprised of the Tennessee River Watershed (light teal) and Power Service Area (teal).

Across the TVA region, TVA operates fossil plants, nuclear plants, natural gas combustion turbines, natural gas combined cycle plants, a diesel generator site, and solar sites. TVA also acquires power from a variety of other producers, generally through power purchase agreements (PPAs). These agreements include some smaller non-renewable PPAs, as well as renewable PPAs that include 4,000 small-scale solar facilities contracted under TVA renewable programs and a growing number of utility scale solar projects ([Our Power System \(tva.com\)](#)).

TVA’s hydroelectric system comprises 29 power-generating dams, a pumped storage plant near Chattanooga called Raccoon Mountain, and purchased power from eight dams on the Cumberland River operated by the U.S. Army Corps of Engineers. All but one of TVA’s power-generating dams are located on the Tennessee River system, which includes a number of tributaries, including the Holston, Clinch, Ocoee, Little Tennessee, Hiwassee, Elk, Duck, Nolichucky, Nottely, Nantahala, French Broad, Pigeon, Cheoah, and Powell, among others. TVA also operates non-power dams throughout the Tennessee River system for flood control and to provide recreational opportunities ([Hydroelectric \(tva.com\)](#)).

The TVA transmission system is the link from our generating sites to energy consumers, providing power through a network of 153 local power companies to 10 million people in the region. The system is comprised of about 16,400 miles of transmission line situated on about 240,000 acres. TVA actively manages vegetation on these rights-of-way (ROW) with the primary goal of maintaining reliability of the transmission system.

TVA also routinely maintains vegetation on about 7,000 acres of land associated with dam reservations, corporate facilities, and other facilities. These lands are managed at varying levels of intensity according to site characteristics. Management intensity ranges from frequently manicured landscapes at public-facing corporate facilities to sites that are mowed or otherwise maintained once a year or less frequently.

In addition to facilities that directly support generation and transmission of electricity, TVA manages about 293,000 acres of public land. Management of this land is guided by the Natural Resource Plan ([Natural Resource Plan \(tva.com\)](#)) and seeks to meet multiple objectives, including enhancement of biodiversity. This land is often associated with the Tennessee River system, where parcels are located adjacent to or near the river and its tributaries. The Natural Resource Plan also drives projects focused on conserving aquatic biodiversity, largely in conjunction with partners, in areas outside TVA land holdings. Selected TVA stewardship projects conducted during Fiscal Year (FY) 2023 can be found here: ([2023-Stewardship-Book](#)).

TVA operates across a wide geographic area. Aspects of those operations intersect multiple public and private resource managers that seek, at least in part, to manage terrestrial systems for biodiversity on protected lands. TVA operations intersect protected areas in a few primary ways, including on lands directly managed by TVA. TVA has a lands planning process that allocates individual parcels on its reservoir land to guide public land management on each of its reservoirs ([2020 Natural Resource Plan](#)). Three of the seven allocations have a direct nexus with biodiversity and conservation. They are described below.

1. *Sensitive Resource Management:* Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal laws or executive orders and other land features/natural resources TVA considers important to the area view scape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation and camping on undeveloped sites may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resources the site supports. Areas included are:

- TVA-designated sites with potentially significant archaeological resources.
- TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places.
- Wetlands - Aquatic bed, emergent, forested and scrub-shrub wetlands as defined by TVA.
- TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes.
- TVA public land fronting land owned by other agencies/individuals for resource protection purposes.
- Habitat protection areas - These TVA natural areas are managed to protect populations of species identified as threatened and endangered by the U.S. Fish and Wildlife Service, state-listed species and any unusual or exemplary biological communities/geological features.

- Ecological study areas - These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area.
- Small wild areas - These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.
- River corridors with sensitive resources present - A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir.
- Significant scenic areas - Areas designated for visual protection because of their unique vistas or particularly scenic qualities.
- Champion tree site - Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency “Champion Tree Program” designates the tree, while TVA designates the area of the sites for those located on TVA public land.
- Other sensitive ecological areas - Examples of these areas include heron rookeries, uncommon plant and animal communities and unique cave or karst formations.

2. *Natural Resource Conservation:* Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation and camping on undeveloped sites. Areas included are:

- TVA public land managed for wildlife or forest management projects.
- TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes.
- TVA public land fronting land owned by other agencies for wildlife or forest management purposes.
- Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird-watching, photography, primitive camping, bank fishing and picnicking.
- Shoreline conservation areas - Narrow riparian strips of vegetation between the water’s edge and TVA’s back-lying property that are managed for wildlife, water quality or visual qualities.
- Wildlife observation areas - TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas.
- River corridor without sensitive resources present - A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails and interpretive activities.
- Islands without sensitive resources or existing development.

3. Project Operations: Land currently used, or planned for future use, for TVA operations and public works projects. The most relevant aspect of this designation for biodiversity is:

- Dam reservation land - Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructures; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas and visitor centers.

While dam reservation lands are often managed for non-conservation purposes, these sites also contain habitats managed specifically for native species, such as grasslands managed with prescribed fire to enhance pollinator and wildlife habitat.

While not every aspect of these zone allocation criteria directly applies to biodiversity conservation, on the whole, species conservation is an important component of how these parcels are managed, particularly in the Sensitive Resource Management and Natural Resource Management designations. Together, parcels with these designations account for about 247,000 acres.

Another nexus of TVA operations and protected areas is the intersection of TVA transmission ROW easements and federal, state, or non-profit land managers. Examples of these land managers include the National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, state parks, state wildlife agencies, land trusts, and municipal parks. While the specific management objectives of these entities varies based on institutional mandates, local managers, and resources present, TVA uses the Office level – Sensitive Area Review (O-SAR) process to flag portions of ROW easements that occur on protected land. This internal process maps protected areas using geographic information systems (GIS) software. TVA staff review this GIS layer before work occurs on a given transmission line ROW to determine if a protected area occurs in the proposed project footprint. If known sensitive resources are present or if the land managers expressed specific concerns about the scope of the planned work, TVA works to minimize or eliminate adverse impacts of the proposed vegetation management or infrastructure project. At the end of FY 2023, TVA had 777 natural areas polygons in the O-SAR database that extend across almost 28,000 acres of transmission line ROW.

While there is no accepted single measure of biodiversity or habitat quality, the presence of plant or animal species that are tracked as rare at the federal or state level often indicates high quality habitat that supports a multitude of species. While not a complete picture, these species of conservation concern (SOCC) can be used as a proxy to help identify sites with high levels of biodiversity. TVA defines species of conservation concern as any plant or animal species that has a NatureServe global rank of G1, G2, or G3 or is tracked by a state in the Tennessee Valley with a NatureServe state rank of S1, S2, or S3 ([Definitions of NatureServe Conservation Status Ranks](#)).

Areas of high biodiversity, or high concentrations of SOCC, do not occur uniformly across the landscape. Many areas across intersecting TVA operations have been heavily disturbed by previous or current land-use or management practices and are incapable of supporting intact native plant communities. This disturbance is sometimes the result of TVA operations, particularly on TVA lands associated with generation sites or support facilities like maintenance bases, corporate offices, or substation sites. Since transmission ROW are comprised primarily of easements that TVA does not own, degraded landscapes on ROW are often the result of land management practices conducted by the land owner.

In the TVA region and outside of protected areas mentioned above, landscape features most likely to support higher levels of biodiversity and SOCC include aquatic habitats, caves, and native grasslands on TVA transmission line ROW. These consequential sites are located across the TVA region. TVA biologists and environmental scientists frequently work with conservation partners in these areas to both better understand populations of SOCC and improve the conditions on the ground.

Disclosure 304-2 Significant impacts of activities, products and services on biodiversity

The term biodiversity has no single accepted definition, but at its simplest, it can be thought of as “the variability among living things from all sources...” (Convention on Biological Diversity 1992). This diversity, at the molecular, species, and community level, is a hallmark of intact ecosystems that produce services integral to economic stability and human well-being. While this definition and comparable alternatives may be useful to ecologists, they are difficult to communicate to a general audience or meaningfully apply in the context of TVA operations. To address this practical issue, TVA developed a relatively simple definition that describes biodiversity as:

“The full variety of plant and animal species native to the service area and how those species interact to form ecological systems”.

TVA supports and conducts many types of conservation efforts meant to further our core mission of environmental stewardship. While all these efforts have a valid objective, not every project has an appreciable biodiversity focus or intersection. Agency actions that do have a biodiversity focus or intersection are called Biodiversity Activities. These activities are defined as:

“Any TVA effort that furthers conservation of native species and ecosystems in the Tennessee Valley.”

Biodiversity is difficult to quantify on a landscape scale and there is no single standard to determine the net impacts of a company’s operations on the natural world. However, TVA does implement numerous Biodiversity Activities that directly enhance biodiversity in the TVA region. The three categories of Biodiversity Activities are:

1. *On-the-Ground Action* - Efforts that directly enhance habitat for native species, including species of conservation concern (SOCC), even if that is not the primary objective of the activity. Actions can be executed directly by TVA or funded, in whole or part, by TVA and implemented by conservation partners.
2. *Monitoring and Research* - Efforts focused on understanding population dynamics of sensitive species, the distribution of plants and animals, the effectiveness of land management actions, and the effects of TVA operations on the biodiversity of the service area.
3. *Education and Outreach* - Public outreach and educational efforts that contain biodiversity-related content. This category includes TVA-led or TVA-funded partner organization efforts to implement public-facing events and educational sessions that focus on the importance of protecting biodiversity in the TVA region.

Biodiversity Activities can be ongoing programs that have relatively large impacts extending over hundreds or thousands of acres or discrete activities implemented at a specific place and time. In FY 2023, TVA engaged in 267 Biodiversity Activities that spanned all seven states of the TVA region. These activities are designed to

have positive impacts on the biodiversity of the region and can be standalone, voluntary conservation efforts or projects and programs designed to offset or mitigate TVA impacts associated with generation and transmission of electricity, operation of the Tennessee River system, or promoting economic development.

As a federal agency, TVA must comply with the National Environmental Policy Act. This federal law requires that TVA assess the environmental effects of proposed actions – such as new projects, agency plans, or changes to operations – prior to making decisions. As part of these environmental reviews and depending on the scope of the proposed action, TVA biologists perform field reviews, at their discretion, to identify resources that may be affected by the action and to determine the extent of those effects. TVA biologists are subject matter experts that specialize in terrestrial animals, aquatic animals, botany, and wetland biology and make determinations on how proposed actions could adversely affect or benefit species of conservation concern, aquatic/terrestrial habitats that are unique or important for biodiversity, the extent of invasive species, and wetlands. TVA seeks to avoid significantly impacting species or habitats important for maintaining biodiversity.

TVA conducts actions across large portions of the seven-state region where the agency operates (see 304-1), but most aspects of TVA operations do not have the potential for significant impacts on biodiversity as defined by GRI. This is because 1) most TVA actions do not intersect areas of high biodiversity, and 2) active involvement of TVA biologists helps to avoid the most severe impacts that could result from proposed projects or operational changes.

Maintenance activities at generation sites typically occur in areas that have been previously disturbed by construction and operation of the facilities. It is uncommon for these sites to support areas of high biodiversity. New construction of generation and transmission infrastructure often intersects natural habitats and results in both temporary and permanent environmental impacts, but these actions rarely result in significant impacts on biodiversity. This is because participation of TVA biologists in the environmental review process generally results in scope changes – when warranted – that reduce impacts to biodiversity below a threshold of significance or important sites for biodiversity are avoided all together. Even though most TVA operations do not have the potential to significantly impact biodiversity, management of the Tennessee River system and vegetation management along transmission line rights-of-way do intersect large portions of the landscape that support high biodiversity.

Aquatic environments in the southeastern United States are known to support high levels of biodiversity, particularly for mussels, snails and fish. In fact, the Tennessee and Cumberland River drainages are among the most biologically diverse river systems in North America and support many species at risk of extinction. Construction and operation of TVA dams have adversely impacted many aquatic species, though dam construction occurred before a modern understanding of the importance of biodiversity in aquatic systems. TVA dams provide many critical benefits, including flood control and generation of carbon-free energy, but operation of these dams also results in altered flow regimes, varying levels of in-stream temperature and dissolved oxygen, barriers to fish movement, and direct mortality in turbines.

TVA employs biodiversity activities to monitor and ameliorate the impacts associated with managing the river system. Some of these include:

Reservoir Release Improvement

The Reservoir Release Improvement Program, which is monitored with the Index of Biotic Integrity and Benthic Index of

Biotics Integrity programs, has the dual objectives of increasing wetted perimeter and dissolved oxygen below 14 TVA dams. Since it began in 1992, the program has improved dissolved oxygen in more than 300 river miles and water flow in more than 180 river miles. In addition, TVA has long-term monitoring stations on tributary reservoir tailwaters to assess improvements in aquatic communities that can be attributed to this program.

Index of Biotic Integrity

This program samples over 800 Tennessee River tributaries on a rotation to assess water quality using presence and diversity of fish and benthic macroinvertebrates as indicators of system health. The long-term dataset extends from the late 1980s to the present day and tracks trends in water quality and species distribution. It is a significant contribution to overall knowledge of the biodiversity of the Tennessee River system. In addition, the program aids in rare species monitoring and protection, provides long-term data used by TVA and other conservation partners, and facilitates collection of voucher specimens – representative sample organisms that are deposited in museums in perpetuity.

Tims Ford Dam Operations - reduction in variable flows

TVA modifies operations associated with hydropower generation at Tims Ford Dam with the goal of increasing tailwater temperature in the spring and summer and of lessening water level fluctuations year-round, especially at times critical to successful reproduction of the boulder darter, a federally endangered fish. Operational changes attempt to simulate natural flow regimes and water temperatures downstream of Tims Ford Dam. Because of the changes to the operation of Tims Ford Dam agreed to by TVA and the U.S. Fish and Wildlife Service, unnatural flow variability is reduced.

Dams without supplemental aeration

Dissolved oxygen levels are monitored at all dams that do not currently have aeration capability. If dissolved oxygen levels lower than 5 parts per million are consistently observed below any dam, measures will be implemented to modify that dam’s discharge rates to improve dissolved oxygen concentration when feasible. Established minimum flows are monitored and modified if needed to ensure that there is adequate minimum flow in the tailwater reaches to maintain fish and mussel populations.

Fish protection at cooling water intake structures – Clean Water Act Section 316(b) compliance

The Final Clean Water Act Section 316(b) Rule (2014) provides that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact from impingement of juvenile and adult fish on intake screens and entrainment of fish eggs and larvae through the screens and into the cooling system. Sites must comply by reducing their intake flow via operational measures or installing technologies (e.g., modified fish-friendly traveling water screens with fish return) that will safely return fish back to the reservoir.

Grasslands are among the most imperiled plant communities in North America. A few generations ago, native grasslands were relatively abundant in portions of the South; today they are rare (Noss 2013). Among other causes, habitat loss in native grasslands has occurred as a result of farming/cultivation, development, fire suppression, and invasive species. As a result, maintained transmission line ROWs are often among the only relatively intact open herbaceous habitats remaining on the landscape in the TVA region. Approximately 20 globally rare herbaceous communities, as defined by NatureServe, have the potential to occur within TVA transmission ROWs. In addition to species-rich grassland communities, ROW also support over 550

occurrences of plant SOCC. Typically, these SOCC are present only because periodic removal of woody plants from the ROW maintain the sunny conditions needed for these species to thrive.

Even though TVA vegetation management of transmission line ROWs has a net benefit on rare plant species and grassland habitats, tools like herbicide can negatively impact these sensitive resources. TVA's [Transmission System Vegetation Management: Final Programmatic Environmental Impact Statement](#) outlines the full suite of avoidance measures TVA employs to reduce impacts and increase benefits of the program. TVA uses the Office level - Sensitive Area Review program (O-SAR), which is an internal process developed to protect sensitive resources on transmission line ROWs.

In the first phase of the O-SAR process, qualified biologists perform reviews of the entire transmission system every 3 years. These desktop reviews use computer-based mapping programs and a wide array of digital data in lieu of field surveys to ascertain where sensitive resources may occur on TVA transmission line ROWs. If during the review, data indicate a sensitive resource may be present, a polygon that defines the area of interest is created within the O-SAR database and overlaid on the segment of transmission line ROW under review.

In the second phase of the O-SAR review process, specific guidance governing transmission ROW vegetation management is appended to every identified sensitive resource polygon. This guidance results in the assignment of a "Class" level for each polygon that is accompanied by specific guidance provided to TVA transmission ROW personnel to support further vegetation management planning efforts. The guidance may be informational or prescriptive and may result in limitations of particular control measures, requirements for notification to TVA biologists, or the need for site-specific field surveys to be performed by TVA biologists prior to work activities. This guidance constitutes an important aspect of the implementation of best management practices to minimize environmental impact. The guidance is particularly important to clearly define what vegetation maintenance activities are permissible within sensitive areas, taking into account the specific sensitive resources that occur or might occur on a given section of transmission ROW. The guidance also seeks to give certainty and flexibility to TVA transmission ROW personnel, who develop vegetation control activities over large areas under schedule and budget constraints.

In FY 2023, TVA employed the following Biodiversity Activities related to ROW vegetation management.

Conserving state and federally listed plant species before TVA ROW vegetation management

Over 550 occurrences of SOCC occur on TVA ROWs. The Office level - Sensitive Area Review program (O-SAR) facilitates intra-agency coordination before ROW vegetation management activities commence. The resulting avoidance measures conserve species across the transmission system including many instances of globally rare plants that often only occur on the ROW and not in the surrounding landscape.

Rare plant monitoring: federally listed plants on TVA ROW
TVA transmission line ROWs support multiple populations of plant species that are listed as endangered or threatened under the Endangered Species Act. TVA has committed to monitoring these populations over the 20-year life of the programmatic ROW vegetation management consultation with the U.S. Fish and Wildlife Service, which was completed in conjunction with the programmatic Environmental Impact Statement.

Disclosure 304-3 Habitats protected or restored
Energy, Environment, and Economic Development are all part of

the core TVA mission that seeks to make life better for the people we serve. While critical to TVA and the region, both generation and transmission of electricity and economic development projects have the potential to negatively impact biodiversity. On the other hand, initiatives and projects that aim to further TVA's environmental goals are often focused on protecting species and habitats. The two chief internal drivers for species conservation work include the Natural Resource Plan and Biodiversity Policy. The TVA Natural Resource Plan ([Natural Resource Plan \(tva.com\)](#)) guides much of the agency work that seeks to protect biodiversity on 293,000 acres of TVA reservoir lands and in the Tennessee River watershed. The scope of the TVA Biodiversity Policy ([Biodiversity \(tva.com\)](#)) is agency-wide and seeks to integrate species and habitat protection (or avoidance) into projects where the primary objective is to construct, operate, and maintain generation and transmission infrastructure or promote economic development. The value of nesting biodiversity activities (See section 304-2) within these types of projects depends on many factors including location and scope, but in an increasingly developed world, including conservation within the scope, can be very impactful and important in protecting biodiversity across the landscape.

TVA protects a significant portion of the approximately 293,000 acres of public land surrounding its reservoirs. As described in disclosure 304-1, TVA has a formal process for designating and managing about 247,000 acres to meet conservation objectives including preservation of biodiversity. In addition, TVA works to restore terrestrial communities on the 293,000 acres, in aquatic communities in the Tennessee River watershed, and increasingly on lands used for the generation and transmission of electricity. The following are selected On-the-Ground Action biodiversity activities (See 304-2 for more on biodiversity activities) conducted in FY 2023. The activities seek to directly enhance habitat for native species. Some of these include:

Grassland Restoration at Primary Systems Operation Center

TVA is restoring grassland habitat at almost 19 acres on the Primary Systems Operation Center site in Meigs County, Tennessee. This work will foster biodiversity and reduce mowing costs compared to standard mowing practices. The site will be mowed outside of the breeding bird season and weed/woody species will be selectively treated with herbicide to promote a species rich grassland populated with native plants.

Grasslands and Agricultural Lands Management (GALM)

The GALM program focuses on enhancing biological diversity on TVA's non-forested lands. Management of these lands provides habitat diversity for a wide range of plant and animal communities, as well as other environmental benefits and public use opportunities. These lands are maintained in early successional plant communities or agricultural fields, such as native warm season grasses, row crops and hay forage. Some GALM activities also fall under the "Stewardship Project Approach" and have an explicit conservation objective. This subset of GALM activities uses tools like prescribed fire to promote biodiversity by establishing early successional wildlife habitat, promoting diverse plant communities comprised of native grasses/forbs, and controlling invasive plants. This program is a part of the Land and Habitat Stewardship Focus Area of the TVA Natural Resource Plan.

Aquatic Ecology Management

The Aquatic Ecology Management Program focuses on the enhancement of aquatic biological communities in streams, reservoirs and tailwaters of the Tennessee River watershed. This enhancement may include activities, such as habitat improvement, biological monitoring and pollution reduction.

Partnering with local organizations and state and federal agencies to conduct outreach efforts to promote the value of the Tennessee River and its aquatic biodiversity is a key objective. This program is a part of the Water Resources Stewardship Focus Area of the TVA Natural Resource Plan.

Forest Resource Management

In the Forest Resource Management Program, TVA oversees forest resources by developing management plans to balance multiple uses, such as enhancing habitat, managing vegetation and controlling exotic, invasive plant species. Examples of forest health and enhancement projects include reforestation, prescribed fire, invasive vegetation control, native species conversion, implementation of unit management plans, wildlife habitat enhancements and scaled timber harvest and salvage activities. This program is part of the Land and Habitat Stewardship Focus Area in TVA's Natural Resource Plan.

Dewatering Projects Management

TVA operates, either alone or in partnership, seven dewatering projects on Kentucky Reservoir in Tennessee (Big Sandy, West Sandy, Camden, Duck River, Busseltown) and Wheeler Reservoir in Alabama (Harris-Sweetwater/Whiteside, Rockhouse). The original intent in developing dewatering areas was for malaria control. Dewatering areas currently are managed to provide food and habitat for wildlife, protect bottomland hardwood forests and provide hunting and fishing opportunities. TVA contributes funds to maintain the dewatering sites that cover approximately over 21,000 acres on Kentucky Reservoir and 4,300 acres on Wheeler Reservoir. This program is in the Land and Habitat Stewardship Focus Area of TVA's Natural Resource Plan.

Disclosure 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations

TVA defines a species of conservation concern (SOCC) as any plant or animal species that has a NatureServe global rank of G1, G2, or G3 or that is tracked by a state in the Tennessee Valley with a NatureServe state rank of S1, S2, or S3 ([Definitions of NatureServe Conservation Status Ranks](#)). Generally, SOCC includes all species tracked as rare across the states where TVA operates and all species covered by the Endangered Species Act. While similar to the IUCN Red List for the TVA region, the TVA list of SOCC is more inclusive and contains more species.

TVA evaluates the potential impacts to SOCC when assessing the overall impacts of operations, including the planning and execution of voluntary conservation projects. These evaluations typically occur during the scoping stage of projects and are associated with an environmental review conducted in compliance with laws such as the National Environmental Policy Act and Endangered Species Act. While TVA complies with all local, state, and federal regulations, these two federal laws specifically trigger assessments of project-related impacts on biodiversity and SOCC. TVA has internal processes that ensure all proposed actions that have the potential to affect specific SOCC are reviewed by trained biologists that specialize in botany, terrestrial zoology, and aquatic biology. TVA is able to conduct these in-depth reviews because of the data and expertise maintained within the agency.

TVA is unique amongst all utilities in the United States in that it is a [NatureServe Network](#) partner and maintains an in-house Regional Natural Heritage Database. TVA manages these data in coordination with [NatureServe](#), which is the authoritative source of biodiversity

	AL	GA	KY	MS	NC	TN	VA	Grand Total
Fungus			1		6	2	7	16
Invertebrate Animal	137	44	102	27	102	163	163	738
Nonvascular Plant	7	5	13	10	22	37	14	108
Vascular Plant	131	125	195	166	90	372	91	1170
Vertebrate Animal	33	47	83	49	52	137	51	452
Grand Total	308	221	394	252	272	711	326	2484

data throughout North America. The TVA Regional Natural Heritage Database contains over 45,000 site-specific records of SOCC for all seven states across the TVA region. TVA also shares data with all seven state Natural Heritage programs. TVA biologists use these data to drive conservation and help ensure TVA projects avoid impacting species and their habitats.

As of FY 2023, the TVA Regional Natural Heritage Database contained records of 2,484 SOCC across the seven-state TVA region. Conservation status is tracked at the state level and some species are tracked across multiple states.

In FY 2023, TVA conducted 76 biodiversity activities that intersected SOCC. These biodiversity activities spanned all seven states of the TVA region and include 48 Monitoring and Research and 28 On-the-Ground Action activities; Education and Outreach activities were not included here. The biodiversity activities conducted by TVA range in size and scope from smaller, discrete actions to larger programs that span many years and multiple states. Of the 76 biodiversity activities intersecting SOCC, 60 were voluntary while the remainder had a regulatory nexus. For the 16 compliance-driven biodiversity activities, TVA biologists and subject matter experts played a direct role in designing and/or implementing the program or project to reduce

impacts of agency actions or promote species conservation. A select list of TVA biodiversity activities intersecting SOCC is included below.

Rare plant monitoring - Ruth's golden aster

Ruth's golden aster is a federally endangered species that occurs only below TVA dams on the Hiwassee and Ocoee Rivers in Polk County, Tennessee. The activity supports TVA Section 7(a)(1) responsibilities under the Endangered Species Act, which charges federal agencies to aid in the conservation of listed species. Understanding population dynamics helps to prevent extinction of this plant and conserve other species also found in the respective rivers.

Grassland restoration at Little Cedar Mountain

Portions of Little Cedar Mountain, a TVA site in Marion County, Tennessee, contain remnant native grasslands. These open areas contain a high proportion of native species, several of which are tracked by the State of Tennessee. In FY 2023, TVA cleared trees from around the edges of the glades and removed invasive plants. Thus far work has increased density of native grasses and wildflowers, including several species of SOCC.

Tuscumbia darter conservation and grassland enhancement at Lawrence County Solar

The North Alabama Solar Site encompasses about 2,800 acres in Lawrence County, Alabama, and is being developed as a utility scale solar site. As part of this effort, TVA is pursuing a multi-year study of the population dynamics of the imperiled fish Tuscumbia darter with the ultimate goal of enhancing habitat in Wheeler Branch for that species and for the rare round-rib Elimia snail. In FY 2023, TVA replanted about 30 acres of old agricultural field with native grasses and wildflowers. This field and Wheeler Branch will be managed as a single unit to benefit in-stream habitat and terrestrial plant and animal species. TVA also mulched about 15 acres of plantation pine trees and installed fire lines around 130 acres on the south side of the property. This area will be managed with prescribed fire to further enhance native grassland habitat. Multiple agencies helped with aquatic sampling in Wheeler Branch including the Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, and Geological Survey of Alabama.

Gray bat emergence at known summer roost sites

TVA monitors gray bat summer emergence annually across the TVA region, mostly in caves on TVA land. In FY 23, these sites included Norris Dam Cave (Campbell Co., TN), Beth Page Bridge (Franklin Co., TN), Bluff Cave (Jackson Co., AL), Blythe Ferry Cave (Meigs Co., TN), Hartsville Nuclear Plant (Trousdale Co., TN), Marble Bluff Cave (Roane Co., TN), Nickajack Cave (Marion Co., TN), Hambricks Cave (Marshall Co., AL), Quarry Cave (Marshall Co., AL), Collier Cave (Lauderdale Co., AL), Featherfoot Cave (Decatur Co., TN), and Williams Bluff (Sevier Co., TN). The activity supports TVA Section 7(a)(1) responsibilities under the Endangered Species Act.

Piper Cave restoration

The Nature Conservancy is using money granted from TVA to clean up several tons of debris from Piper Cave (Smith Co., TN) and install a bat-friendly gate. The federally endangered gray and northern long-eared bats, proposed endangered tri-colored and little brown bat, and state-listed Allegheny woodrat are all present. The activity supports TVA 7(a)(1) responsibilities under the Endangered Species Act.

Nashville crayfish follow-up surveys

As a result of U.S. Fish and Wildlife consultation, TVA relocated a population of federally endangered Nashville crayfish outside the area that would be impacted during the scheduled replacement of a transmission line structure. Data from follow-up surveys indicated more individual crayfish present after the structure was replaced because direct impacts of transmission infrastructure repair work were avoided and the streambanks were concurrently stabilized.

Cave gate construction for TVA partners

TVA worked with external partners including the U.S. Forest Service and National Park Service to construct cave gates that will be used to protect bat species occurring in cave and mine sites. In FY 2023, the partnership resulted in construction of 11 cave gates at locations in Daniel Boone National Forest and 2 for the Big South Fork. TVA possesses unique expertise in cave gate construction and is supplying this service to partners at cost. The activity supports TVA Section 7(a)(1) responsibilities under the Endangered Species Act.

Fencing of federally-listed plant Mohr's Barbara's button in Jefferson County, Alabama

TVA worked to install temporary fencing around populations of the federally-threatened plant Mohr's Barbara's button near a transmission line in Jefferson County, Alabama. This was done to prevent impacts during pole replacement in January 2023. In addition, the timing of the outage required for the transmission repair was moved from summer 2023 (growing season) to the winter (dormant season) to further reduce the likelihood of impacting the species during maintenance work.

Little Tennessee Native Fish Conservation Partnership Freshwater Mussel Release

TVA partnered with the North Carolina Wildlife Resources Commission and the Eastern Band of Cherokee Indians to release 1,600 freshwater mussels in the Little Tennessee River watershed.

Sicklefin Redhorse monitoring

TVA participated in a multi-agency collaboration to monitor sicklefin redhorse populations and promote future conservation actions. This SOCC, which is a culturally significant species to the Eastern Band of Cherokee Indians, is restricted to the upper Hiwassee and Little Tennessee river basins.

References

Noss, Reed F. 2013. Forgotten Grasslands of the South: Natural History and Conservation. Island Press.

Tennessee Valley Authority. 2017. Transmission System Vegetation Management: Final Programmatic Environmental Impact Statement.

Appendix B - Sustainability Accounting Standards Board (SASB) Metrics

Code	Topic	Metric	FY 2023
IF-EU-110a.1	Greenhouse Gas Emissions & Energy Resource Planning	(1) Gross global Scope 1 emissions (Metric Tons)	38,208,030
IF-EU-110a.1	Greenhouse Gas Emissions & Energy Resource Planning	(2) Percentage covered under emissions-limiting regulations	0.00%
IF-EU-110a.1	Greenhouse Gas Emissions & Energy Resource Planning	(3) Percentage covered under emissions-reporting regulations	99.90%
IF-EU-110a.2	Greenhouse Gas Emissions & Energy Resource Planning	Greenhouse gas (GHG) emissions associated with power deliveries (Metric Tons)	44,375,939
IF-EU-110a.3	Greenhouse Gas Emissions & Energy Resource Planning	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	TVA Carbon Report
IF-EU-110a.4	Greenhouse Gas Emissions & Energy Resource Planning	(1) Number of customers served in markets subject to renewable portfolio standards (RPS)	4 LPCs
IF-EU-110a.4	Greenhouse Gas Emissions & Energy Resource Planning	(2) Percentage fulfillment of RPS target by market	100%
IF-EU-120a.1	Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N2O) (Metric Tons) (CY) ¹	13,221
IF-EU-120a.2	Air Quality	SO ₂ Emissions (Metric Tons) (CY) ¹	17,736
IF-EU-140a.1	Water Management	(1) Total water withdrawn (Thousand Cubic Meters)	12,206,388
IF-EU-140a.1	Water Management	(2) Total water consumed (Thousand Cubic Meters)	97,252
IF-EU-140a.1	Water Management	(3) Percentage of water drawn and consumed in regions with High or Extremely High Baseline Water Stress	0%
IF-EU-140a.2	Water Management	Number of incidents of noncompliance associated with water quantity and/or quality permits, standards, and regulations	7
IF-EU-140a.3	Water Management	Description of water management risks and discussion of strategies and practices to mitigate those risks	Water Use in the Tennessee Valley Report
IF-EU-150a.1	Coal Ash Management	(1) Amount of coal combustion residuals (CCR) generated (Metric Tons)	1,653,329
IF-EU-150a.1	Coal Ash Management	(2) Percentage recycled	87%
IF-EU-150a.2	Coal Ash Management	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	CCR Rule Compliance Data and Information
IF-EU-240a.1	Energy Affordability	Average retail electric rate for residential customers	12.23
IF-EU-240a.1	Energy Affordability	Average retail electric rate for commercial customers	11.87
IF-EU-240a.1	Energy Affordability	Average retail electric rate for industrial customers	5.78

Code	Topic	Metric	FY 2023
IF-EU-240a.4	Energy Affordability	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	Equity Action Plan
IF-EU-320a.1	Workforce Health & Safety	(1) Total recordable incident rate (TRIR)	0.26
IF-EU-320a.1	Workforce Health & Safety	(2) Fatality rate	0.000092
IF-EU-420a.3	End-Use Efficiency & Demand	Customer electricity savings from efficiency measures, by market (MWh)	See Appendix C - EnergyRight Metrics
IF-EU-540a.1	Nuclear Safety & Emergency Management	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	TVA operates seven nuclear power units at three sites: five units are in the Licensee Response Column of the NRC Action Matrix and two units (Watts Bar 1 and 2) are in the Regulatory Response Column
IF-EU-540a.2	Nuclear Safety & Emergency Management	Description of efforts to manage nuclear safety and emergency preparedness	Emergency Preparedness
IF-EU-550a.1	Grid Resiliency	Number of incidents of noncompliance with physical and/or cybersecurity standards or regulations	Physical noncompliance: 2 Cyber noncompliance: 8

¹ Data does not include Caledonia Combined Cycle Plant, a leased facility operated by TVA.

Appendix C - EnergyRight Metrics

	FY 23 Gross kWh Savings	FY 23 Gross Carbon Avoidance (Tons)	FY 23 Participant Count	FY 23 Incentive
DIY Home Energy Assessments	2,479,442	7,319	2,758	N/A
Residential Services	3,953,332	14,573	7,051	N/A
Home Uplift	4,890,933	15,131	2,796	\$4,675,974
Home Energy Workshops	479,167	1,391	533	N/A
Small Business Direct Install Pilot	815,075	2,649	68	\$318,113
Compressed Air Training	4,920,560	7,033	7	N/A
Small Business Uplift	1,362,599	3,444	92	\$3,691,270
School Uplift	6,887,663	9,167	128	\$2,325,927
Internal Energy Management Program	3,633,109	11,860	44	N/A
Federal Energy Services Program	10,988,413	31,829	1	N/A
Business & Industry Incentives	77,895,038	252,140	340	\$2,640,265
TOTAL	118,305,331	356,536	13,818	\$13,651,548

Energy Equity Information

Home Uplift # of homes upgrades	1,499
School Uplift Cohort # of school participants	64
Small Business Uplift # of business participants	81
Total invested in Local Communities	\$430.5M
Reduction in Lifetime Energy Expenses	\$48M
Total Carbon Reduction across all programs	449 kTons

Demand Response Information

DR Total Participants	1,554
DR Total Capacity	1,565 MW
DR Carbon Avoided	27,012 Tons
DR # of events	27

Electric Vehicle Information (as of April 1, 2024)

# of Fast Chargers in operation	56
# of Fast Charge sites in operation	24
# of LPCs contracted to participate in Fast Charge Network	59

Equivalencies for Gross Carbon Avoided

Wind Turbines	88.02
Trees Planted	5,348,927
IEMP Investment	\$2,294,454
IEMP Lifetime Savings	\$3,863,811
Number of projects underway in FY23 for the Federal Energy Services Program	7

Appendix D - TVA Alignment with Disclosure Standard

Standard Information		Sustainability Pillar				Sustainability Report		TVA.com
Standard Code	Criteria Description	Environment	Economic	Social	Governance	Section Title	Page	Supporting Information
Global Reporting Initiative (GRI) Criteria								
2	General Disclosures				✓	TVA's Approach to Sustainability	p. 6	About TVA The TVA Act
3	Material Topics				✓	TVA's Approach to Sustainability	p. 6	Sustainability
201	Economic Performance		✓			Economic Impact	p. 44	Financial Statements SEC Filings
202	Market Presence		✓			Social Responsibility	p. 52	DEIA Report Do Good Here
203	Indirect Economic Impacts		✓			Economic Impact	p. 44	TVA Economic Development Flood Damage Reduction
204	Procurement Practices		✓			Economic Impact	p. 44	Supplier Diversity Metrics Supplier Code of Conduct
205	Anti-Corruption				✓	Governance	p. 60	TVA Code of Conduct Executive Code of Conduct Board Code of Conduct
206	Anti-Competitive Behavior				✓	Governance	p. 60	Board Code of Conduct Executive Code of Conduct OIG Semiannual Reports
207	Tax		✓			Governance	p. 60	2022 Tax Equivalent Payments 10-K: Tax Equivalents
301	Materials	✓	✓			Climate and Clean Energy	p. 20	Green Procurement Federal Sustainability Plans
302	Energy	✓				Climate and Clean Energy	p. 20	TVA OMB Scorecard EnergyRight Highlights Report
303	Water and Effluents	✓				Climate and Clean Energy	p. 20	TVA OMB Scorecard EEI ESG Report Managing the River
304	Biodiversity	✓				Environmental Stewardship	p. 34	Biodiversity Land Management
305	Emissions	✓				Climate and Clean Energy	p. 20	Strategic Intent and Guiding Principles Air Quality
306	Effluents and Waste	✓				Climate and Clean Energy	p. 20	Water Quality Coal Ash
307	Environmental Compliance	✓				Environmental Stewardship	p. 34	Environmental Reviews

Standard Information		Sustainability Pillar				Sustainability Report		TVA.com
Standard Code	Criteria Description	Environment	Economic	Social	Governance	Section Title	Page	Supporting Information
Global Reporting Initiative (GRI) Criteria								
308	Supplier Environmental Assessment	✓	✓			Economic Impact	p. 44	Green Procurement Federal Sustainability Plans Supplier Code of Conduct
401	Employment			✓	✓	Social Responsibility	p. 52	Benefits and Quality of Life 10-K: Human Capital Management
402	Labor/Management Relations			✓		Social Responsibility	p. 52	Expressing Concerns and Differing Views
403	Occupational Health and Safety			✓		Governance	p. 60	Safety Policy TVA Code of Conduct
404	Training and Education			✓		Governance	p. 60	10-K: Human Capital Management
405	Diversity and Equal Opportunity			✓	✓	Social Responsibility	p. 56	DEIA Report Equal Employment Opportunity Policy
406	Non-discrimination			✓	✓	Social Responsibility	p. 52	DEIA Report Equity Action Plan No Fear Act Notice
407	Freedom of Association and Collective Bargaining			✓	✓	Governance	p. 60	DEIA Report Supplier Code of Conduct
408	Child Labor				✓	Governance	p. 60	TVA Code of Conduct Supplier Code of Conduct
409	Forced or Compulsory Labor				✓	Governance	p. 60	TVA Code of Conduct Supplier Code of Conduct
410	Security Practices			✓	✓	Governance	p. 64	TVA Police 10-K: Key Initiatives
411	Rights of Indigenous Peoples			✓		Governance	p. 63	Cultural Resource Management Tribal Consultation Action Plan Sacred Sites MOU TVA Tribal Relations
Global Reporting Initiative (GRI) Criteria								
413	Local Communities			✓		Social Responsibility Governance	p. 52 p. 60	DEIA Report: Communities Public Power Partnerships Get Involved, Stay Involved

Standard Information		Sustainability Pillar				Sustainability Report		TVA.com
Standard Code	Criteria Description	Environment	Economic	Social	Governance	Section Title	Page	Supporting Information
414	Supplier Social Assessment		✓	✓		Economic Impact	p. 44	Supplier Code of Conduct Supplier Diversity Policy
415	Public Policy				✓	Governance	p. 60	Board Code of Conduct Political Activity Policy
416	Customer Health and Safety			✓		Economic Impact	p. 44	TVA Dam Safety Transmission Safety Nuclear Safety
417	Marketing and Labeling			✓		Social Responsibility	p. 52	TVA Code of Conduct
418	Customer Privacy			✓	✓	Governance	p. 60	TVA Privacy Policy
Sustainability Accounting Standards Board (SASB) Criteria								
IF-EU-110a	Greenhouse Gas Emissions and Energy Resource Planning	✓	✓		✓	Climate and Clean Energy, Governance	p. 24 p. 60	Strategic Intent and Guiding Principles Carbon Report Federal Sustainability Plans
IF-EU-120a	Air Quality	✓				Environmental Stewardship	p. 34	Air Quality
IF-EU-140a	Water Management	✓		✓		Environmental Stewardship	p. 38	Water Quality Managing Water Supply
IF-EU-150a	Coal Ash Management	✓		✓		Climate and Clean Energy	p. 28	Coal Ash CCR Rule Compliance
IF-EU-240a	Energy Affordability		✓	✓		Climate and Clean Energy, Social Responsibility	p. 23 p. 52	TVA Rates Strength and Stability
IF-EU-320a	Workforce Health and Safety			✓		Social Responsibility	p. 52	TVA Code of Conduct Safety Policy
IF-EU-420a	End-Use Efficiency and Demand		✓	✓		Climate and Clean Energy	p. 24	EnergyRight EnergyRight and TVA Green Highlights
IF-EU-540a	Nuclear Safety and Emergency Management			✓	✓	Climate and Clean Energy	p. 22	Nuclear Safety Emergency Preparedness
IF-EU-550a	Grid Resiliency		✓			Economic Impact	p. 46, 51	Protecting the Grid Resilience at TVA

Standard Information		Sustainability Pillar				Sustainability Report		TVA.com
Standard Code	Criteria Description	Environment	Economic	Social	Governance	Section Title	Page	Supporting Information
United Nations Sustainable Development Goals (UN SDGs)								
1	No Poverty		✓	✓		Social Responsibility	p. 52	Community Support & Assistance Community Relations Mission of Service
2	Zero Hunger		✓	✓		Social Responsibility	p. 52	DEIA Report (Communities) Shade Your Stream
3	Good Health and Well-Being	✓		✓		Social Responsibility	p. 52	Community Support & Assistance Connected Communities Environmental Stewardship
4	Quality Education			✓		Social Responsibility	p. 52	TVA STEMready STEM Classroom Grants TVA Kids School Uplift Do Good Here
5	Gender Equality			✓		Social Responsibility	p. 52	DEIA Report Employee Resource Groups Equal Employment Opportunity Policy
6	Clean Water and Sanitation	✓		✓		Environmental Stewardship	p. 34	Managing Water Supply Water Use in the Tennessee Valley Reservoir Health Ratings
7	Affordable and Clean Energy		✓	✓		Climate and Clean Energy	p. 23	Tennessee Valley Renewable Energy TVA EnergyRight TVA Strategic Intent and Guiding Principles
8	Decent Work and Economic Growth		✓	✓		Economic Impact	p. 44	TVA Economic Development TVAsites.com Better Place to Live, Work and Play
9	Industry, Innovation and Infrastructure		✓			Social Responsibility, Governance	p. 52 p. 60	TVA Strategic Intent and Guiding Principles TVA New Nuclear Program Energy System of the Future

Standard Information		Sustainability Pillar				Sustainability Report		TVA.com
Standard Code	Criteria Description	Environment	Economic	Social	Governance	Section Title	Page	Supporting Information
United Nations Sustainable Development Goals (UN SDGs)								
10	Reduced Inequalities		✓	✓		Social Responsibility	p. 52	DEIA Report Equity Action Plan Employee Code of Conduct
11	Sustainable Cities and Communities		✓	✓		Social Responsibility Governance	p. 52 p. 59	Connected Communities Action Plan for EO 13175 Natural Resource Plan Boone Dam Project
12	Responsible Consumption and Production	✓				Climate and Clean Energy	p. 26	Federal Sustainability Plans Coal Ash TVA Reports
13	Climate Action	✓				Climate and Clean Energy	p. 20	Carbon Report Federal Sustainability Plans TVA Strategic Intent and Guiding Principles
14	Life Below Water	✓				Environmental Stewardship	p. 34	Trout Fishing the TVA Tailwaters Fishing the Valley Reservoir Health Ratings
15	Life on Land	✓				Environmental Stewardship	p. 34	TVA Environmental Policy TVA Biodiversity Policy Stewardship Projects
16	Peace, Justice and Strong Institutions				✓	Governance	p. 60	Get Involved, Stay Involved TVA Code of Conduct Executive Code of Conduct
17	Partnerships for the Goals				✓	Governance	p. 60	Connected Communities Public Power Partnerships Innovation & Research

✓ = secondary emphasis

✓ = primary emphasis

Appendix E - TVA Sustainability-Related Disclosures, Plans and Policies

TVA reports its sustainability performance, goals and strategies through numerous platforms to meet both stakeholder expectations and federal obligations. These publications reflect TVA's emphasis on transparency and accountability.

Federal Reporting

Federal Sustainability Report and Implementation Plan (SRIP): TVA maintains the SRIP consistent with the applicable Executive Orders (EO) and regulations that establish and assess federal sustainability goals, including EO 14057, EO 14008, and the remaining sections of EO 13834. The objective of TVA's Federal Sustainability Program is to reduce the non-power block component of the TVA environmental footprint as a federal agency, including buildings, fleet and procurement. Read more at [Federal Sustainability Plans and Performance](#).

Federal Climate Adaption Plan: TVA maintains the Climate Adaption Plan as a cohesive part of its major planning processes, consistent with EO 14008. Climate adaption and resiliency planning allows TVA to address the actions that help better understand climate trends and possible risk. Read more about the [2022 Climate Adaptation Plan Progress Update](#). The upcoming Climate Adaptation Plan update is expected to be available in June 2024.

National Environmental Policy Act (NEPA)

Disclosures: TVA conducts environmental reviews and seeks public feedback in accordance with the National Environmental Policy Act, which requires federal agencies to consider the effects of certain proposed projects on the human and natural environment before final decisions are made. Read more and get involved at [Environmental Reviews](#).

Freedom of Information Act (FOIA) Disclosures:

As a federal agency, TVA is required under the Freedom of Information Act to disclose records that any person requests in writing, subject to certain exceptions such as information covered by national security and law enforcement-related exclusions. TVA releases annual and quarterly reports of FOIA requests, as well as guidelines for new requests, online. Read more at [Freedom of Information Act](#).

Corporate Reporting

Global Reporting Initiative (GRI) Standards: The GRI standards form the backbone of the TVA Sustainability Report. GRI is a recognized international framework for economic, environmental and social performance disclosure that guides reporting companies to report comprehensive information regarding the sustainability issues most significant to their operations. Review TVA's performance in selected GRI metrics in Appendix A of this Sustainability Report.

Sustainability Accounting Standards Board (SASB) Standards: The SASB standards are intended to

increase accessibility to the sustainability information most significant to the financial community. TVA began reporting with this framework in 2022 to enable communication to investors about how sustainability issues impact long-term enterprise value. Review TVA's SASB index in Appendix B of this Sustainability Report.

United Nations Sustainable Development Goals (UN SDGs) Framework:

The SDGs are ambitious global goals adopted by the UN Council for Sustainable Development as a universal call to action for social justice, environmental stewardship and equitable

economic development. TVA has identified 10 priority SDGs where its mission and aspirations have the most opportunity for direct impact, but TVA strives to support all 17 goals. Read more about TVA's Priority UN SDGs and TVA's Supported UN SDGs in this Sustainability Report.

Edison Electric Institute (EEI) - Environmental, Social and Governance (ESG) Template: TVA publishes ESG reports for the financial community using the utility-focused and investor-driven reporting template developed by EEI. The EEI ESG report template provides information in a measurable and consistent format for investors and customers to accurately assess long-term sustainability progress. Read more in the [EEI-ESG Template](#).

Strategic Plans and Policies

Environmental Policy: TVA's overarching Environmental Policy is to produce affordable, reliable and clean power, support sustainable economic growth in the Tennessee Valley region and promote proactive environmental sustainability in a balanced and ecologically sound manner. Read more at [TVA Environmental Policy](#).

Biodiversity Policy: The Biodiversity Policy states that TVA will proactively protect biodiversity through continued stewardship of public lands, management of the Tennessee River system, local and regional partnerships, and the integration of species and habitat conservation across project planning. Read more at [TVA Biodiversity Policy](#).

Carbon Report: TVA is committed to providing affordable, reliable, resilient and clean energy in the Tennessee Valley region and engaging in environmental stewardship in a balanced and ecologically sound manner. The Carbon Report provides a framework for TVA's carbon reduction strategy through innovation in energy technology, energy delivery, natural resource stewardship, the TVA fleet and the region. Read more at [Carbon Report](#).

Diversity, Equity, Inclusion and Accessibility (DEIA) Report: DEIA is an integral part of how TVA does business, and TVA is taking deliberate steps to identify and close gaps. The DEIA Report builds upon TVA's transparency efforts by providing insight into initiatives and performance in this vital area. The report details TVA's progress to advance DEIA both internally and externally in the communities it serves. Read more in the [DEIA Report](#).

Securities and Exchange Commission (SEC) Reporting: TVA files quarterly (10-Q) and annual (10-K) reports with the SEC. These reports contain financial, operational and descriptive information, as well as an analysis of material risks. Access current and historical TVA SEC filings at [SEC Filings](#).

Code of Conduct: In addition to electricity, TVA "generates trust" by setting and following high ethical standards. TVA's Code of Conduct documents are intended to inspire, guide and enable the best performance of TVA and its suppliers. By setting standards and by providing guidance in line with TVA's Values, the Code helps TVA build a strong ethical culture and achieve its business goals with integrity. Read more about TVA's [Employee Code of Conduct](#), [Board Code of Conduct](#) and [Supplier Code of Conduct](#).

Integrated Resource Plan (IRP): Building on TVA's service commitment, the IRP provides strategic direction for making decisions about how TVA can meet future demand for power in new and innovative ways. Considering costs, environmental factors, reliability, regulations and energy efficiency, the plan helps determine how TVA's energy portfolio will look in the future. The current IRP was completed in 2019, with the next IRP launched in 2023.

Natural Resource Plan (NRP): The NRP describes a broad range of programs across 10 focus areas to direct TVA's management of the public lands and waters within its power service area and the Tennessee River watershed. The NRP is a strategic level document

that will guide the direction of TVA's resource stewardship over the next 20 years. Read more at [Natural Resource Plan](#).

Strategic Intent and Guiding Principles: TVA's strategic intent and guiding principles outline TVA's intent to align its people, operational and innovation efforts to business strategies that provide affordable, reliable, resilient, and clean energy to the Tennessee Valley region. Focused on energy supply and decarbonization initiatives, the document provides a framework for responsible carbon reduction strategies

and establishes a series of milestones on the path to achieving TVA's aspiration of net zero by 2050. Read more at [TVA Strategic Intent and Guiding Principles](#).

Transparency and responsibility are fundamentals of the public power model, and TVA is supportive of the broader efforts in the U.S. and globally to ensure consistent, comparable, and reliable information about the financial effects of climate-related risks on our operations and how we manage those risks.

Appendix F - Reconciliation Table

	Sept. 30, 2021	Sept. 30, 2022	Sept. 30, 2023
Total outstanding debt	\$20,314	\$20,034	\$20,266
Exchange gain	58	150	109
Unamortized discounts, premiums, issue costs and other	122	132	132
Notes payable	-	-	-
Debt of variable interest entities	(1,056)	(1,013)	(974)
Bonds and Notes, Gross	\$19,438	\$19,303	\$19,533
Notes payable	-	-	-
Leaseback obligations	25	-	-
Membership interests of variable interest entity subject to mandatory redemption	24	20	18
Debt of variable interest entities	1,056	1,013	974
Total Debt and Other Financing Obligations, Gross ("TFO")	\$20,543	\$20,336	\$20,525
Cash and Cash Equivalents	(499)	(500)	(501)
Total Debt and Other Financing Obligations, Gross ("TFO"), net of Cash and Cash Equivalents	\$20,044	\$19,836	\$20,024

Note: numbers may be adjusted for rounding

Appendix G - External Awards

- **5-Star Employer** - VETS Indexes
- **Best-in-State Employer (ranked No. 8 in Tennessee)** - Forbes Magazine
- **EcoVadis Bronze Medal** - in recognition of sustainability achievements
- **ENERGY STAR Partner of the Year in Energy Efficiency** - US Environmental Protection Agency and US Department of Energy
- **Ethisphere® Compliance Leader Verification™ (2022-2023)**
- **Leading Disability Employer**- The National Organization for Disability
- **Top 10 Military Friendly Employers Award** recipient in four areas:
 - **Military Friendly Employers** (ranked No. 4)
 - **Military Spouse Friendly Employers** (ranked No. 7)
 - **Military Friendly Supplier Diversity Program** (ranked No. 1)
 - **Military Friendly Brand** designation
- **Top Companies for Utilities Award (ranked No. 3) and Top Regional Companies Award (ranked No. 12)** - Fair360
- **Top Utility for Economic Development** - Site Selection Magazine, for the 18th consecutive year

Appendix H - Acronyms

CEO - Chief Executive Officer

CO₂ - Carbon Dioxide

CSO - Chief Sustainability Officer

DEIA - Diversity, Equity, Inclusion, and Accessibility

DIY - Do It Yourself

EIS - Environmental Impact Statement

EV - Electric Vehicle

FBI - Federal Bureau of Investigation

FY - Fiscal Year

GHG - Greenhouse Gas

GRI - Global Reporting Initiative

GWh - Gigawatt Hour

HVAC - Heating, Ventilation and Air Conditioning

IRP - Integrated Resource Plan

LPC - Local Power Company

MOA - Memorandum of Agreement

MLGW - Memphis Light, Gas and Water

NO_x - Nitrogen Oxides

TVA - Tennessee Valley Authority

SASB - Sustainability Accounting Standards Board

SEC - Securities and Exchange Commission

SO₂ - Sulfur Dioxide

STEM - Science, Technology, Engineering, Math

UN SDGs - United Nations Sustainable Development Goals



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