

TVA EnergyRight & TVA Green Highlights Report Executive Summary

The Power of Working Together | FY2022



TVA EnergyRight®

OUR MISSION

Make life better for the people of the Valley.

TVA EnergyRight and TVA Green partner with local power companies across TVA's seven-state region to bring energy efficiency, demand response, efficient electrification and renewable energy programs to approximately 10 million people and 800,000 businesses. Our mission is to help you and your community thrive.

FY22 Highlights



50,947
participants



33,818,529
KWh energy saved



315,231
tons of carbon avoided

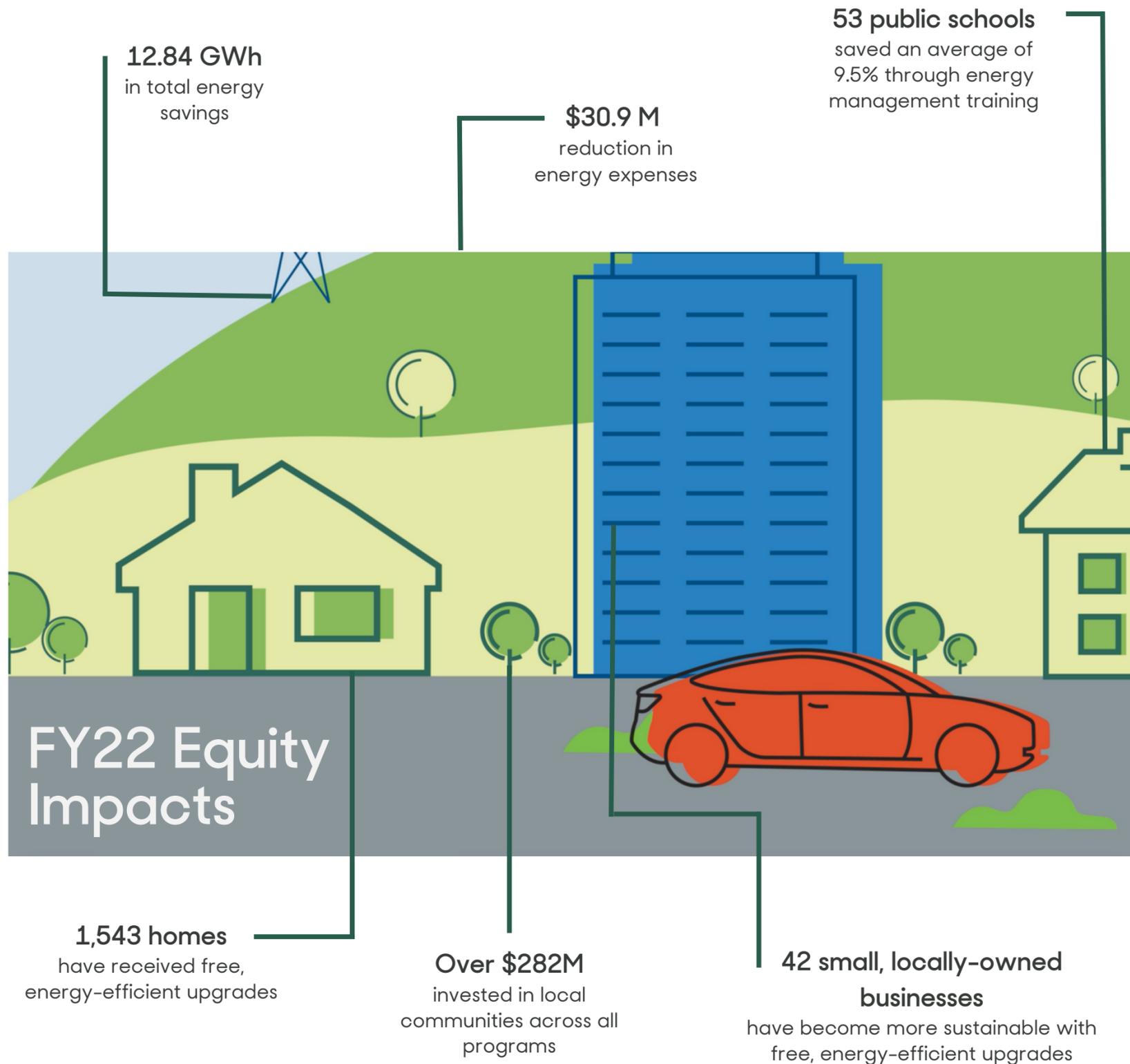


THE POWER OF CELEBRATION

TVA EnergyRight and TVA Green programs play a vital role in meeting TVA's system needs.

Energy efficiency, renewable and demand response programs reduce the need to build costly new generation assets, while smart energy technologies help balance the energy grid and improve system reliability — at a much lower cost than other options.

Our FY22 Highlights Report is a celebration of the impact we've made, along with our partners, to create a cleaner future for the Valley.



THE POWER OF COMMUNITY

Improving energy equity.

Since its founding, TVA has focused on improving lives in the Valley with low cost, reliable power, economic development and environmental stewardship. This mission of service drives TVA to do our part — alongside our partners at local power companies and local, state and federal organizations — to improve energy equity and increase energy efficiency for Valley residents and organizations left behind by market-driven efforts.

TVA EnergyRight programs that supported these efforts in FY22 include:

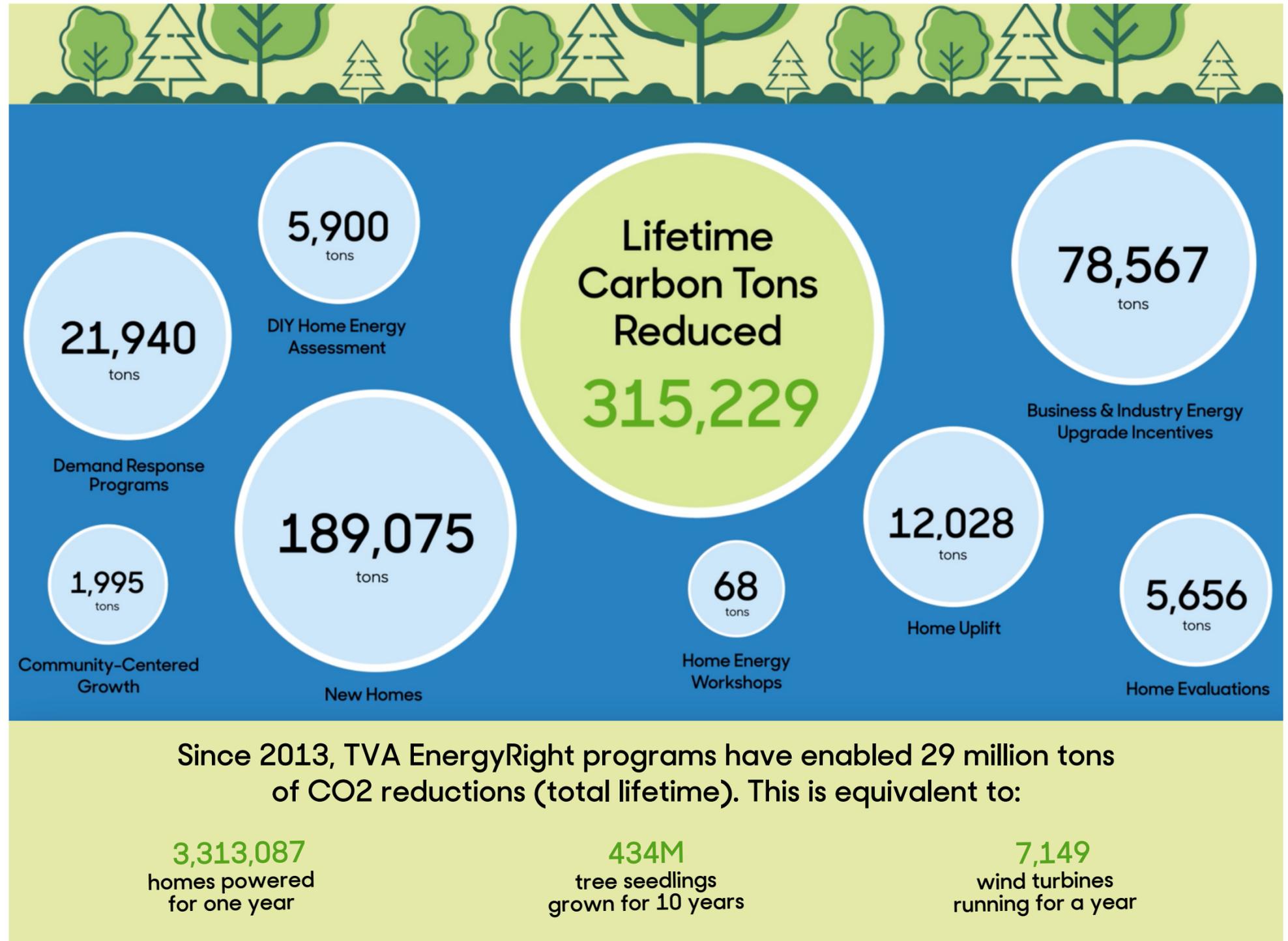
- Home Uplift
- School Uplift
- Community Centered Growth
- Energy incentives awarded to businesses in Opportunity Zones

THE POWER OF STEWARDSHIP

Reducing carbon.

TVA EnergyRight and TVA Green programs help local power companies and their residential and business customers reduce carbon output to achieve their sustainability goals.

Lowering our region's carbon footprint benefits everyone in the Tennessee Valley.



THE POWER OF PARTNERSHIP

The EnergyRight Awards

To show our appreciation for the hard work our valued partners put in each day — and to shine a spotlight on their commitment to the communities they serve — we're honored to present this year's TVA EnergyRight Awards to our incredibly deserving local power company partners.



NORTH STAR AWARD

Honors a local power company that has helped improve energy equity for underserved communities in the Valley through TVA EnergyRight programs and services.

Nashville Electric Service

In FY22, Nashville Electric Service (NES) launched their Power of Change bill round-up initiative with 100% of the collected funds directed to TVA's Home Uplift program. Power of Change is expected to raise \$1.6M in FY23, which will fund home energy upgrades for 160 income-eligible families at no cost to them.

NES's commitment to bringing Home Uplift to every community in their territory has led to expanded efforts to reach Kurdish and Spanish communities through application drives, neighborhood events, Spanish-led Home Energy Workshops and the development of culturally relevant online and traditional marketing materials.



TORCH AWARD

Honors a local power company that has demonstrated the best overall improvement in TVA EnergyRight programs and services.

West Point Water & Light

West Point Water & Light used FY22 to make the most of EnergyRight for Business & Industry services, working with TVA EnergyRight to provide \$600,000 in energy incentives to PECO Foods, Inc., a poultry products provider for industrial, retail and food service markets. This collaboration has enabled PECO Foods to bring more than 800 new jobs to Mississippi while saving energy. Our partnership with West Point Water & Light through the PECO Foods project marked the start of increased collaboration that will bring even more energy- and money-saving services to the West Point region.

West Point is now establishing their participation in School Uplift, Home Uplift, community workshops and more.



COMMUNITY CHAMPION AWARD

Honors a local power company that has actively promoted TVA EnergyRight programs and communicated their value through public advocacy or strategic alliances.

Middle Tennessee Electric

From School Uplift to Home Uplift, Middle Tennessee Electric (MTE) raised up their community through EnergyRight programs in FY22. MTE went above and beyond to support Smyrna Elementary School during their School Uplift experience. This included meeting monthly with school staff and STEM students to review their electric bills and helping host a kickoff workshop for the entire student body. They helped Woodbury Elementary save even more energy by securing an additional \$80,000 grant through the United Way for the purchase of new classroom chillers.

MTE also continues to serve residents with high energy burden through Home Uplift. They have increased their program contributions and received the first third-party contribution from First Baptist Church Murfreesboro.



INVESTING IN OUR FUTURE AWARD

Honors a local power company that has demonstrated a strong commitment to TVA EnergyRight programming that serves their local youth.

BrightRidge

As TVA EnergyRight prepared for the third cohort of School Uplift, BrightRidge helped bring eleven Washington County Schools into the program. Not only did BrightRidge facilitate invaluable relationships with county maintenance staff, school board members and administrators, but they continue to provide support to all eleven schools including monthly ENERGY STAR® Portfolio updates plus giveaway items for school family nights and energy workshops. Three of the eleven schools are currently evaluating ENERGY STAR® certification with the help of BrightRidge.

They believe their community's future leaders are within Washington County Schools and are ready to help them make an impact.

Renewable Leaders

Despite solar market instability in FY22, TVA and LPCs are committed to helping customers meet their sustainability goals. This commitment has been amply demonstrated by the following LPCs and we are proud to recognize them as our FY22 Renewable Leaders.



GREEN INVEST

Knoxville Utilities Board

In April 2022, Knoxville Utilities Board (KUB) broke ground on a 1 MW project, designed and engineered by Solar Alliance, in front of the city's public works building. KUB is using the array to create Knoxville's first Community Solar program, increasing access to locally generated renewable energy for the community. KUB has also committed to generating a portion of its overall electricity from solar energy, through participation in TVA's Green Invest program. KUB's 325 MW Green Invest commitment supports the city's goal to reduce greenhouse gas emissions by 80% by 2050 and will produce enough solar energy to power approximately 54,000 homes.

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



GREEN INVEST

DENSO & City of Maryville Electric Department

DENSO, an automotive manufacturer located in Maryville, Tennessee, partnered with TVA, Silicon Ranch and the City of Maryville Electric Department to break ground on a new Generation Flexibility and Green Invest solar project. The solar farm, the first of four DENSO plans to build in Tennessee, will help power the Maryville facility as well as support efforts to expand clean energy use in their operations and the surrounding communities.



GENERATION FLEXIBILITY

Appalachian Electric Cooperative & Morristown Utilities

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

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



VIRTUAL SOLAR EDUCATION TOOL

West Kentucky RECC

When West Kentucky Rural Electric Cooperative Corporation (RECC) reached out to TVA for ways to share helpful information about solar to customers, the Virtual Solar Education Tool was born. Created to feel like a community meeting but in a virtual format, the Virtual Solar Education Tool educates residents about common myths related to solar cost and generation; questions to ask solar installers before signing a contract; how to calculate the true cost of a solar system; and TVA Green solar programs.

THE POWER OF NEIGHBORS

Residential FY22 Highlights

HOME UPLIFT

Since 2018, TVA EnergyRight's Home Uplift program has made a difference for income-eligible families through free home energy upgrades worth up to \$10,000 per home. Home Uplift enables families to lower their utility bill and live comfortably in their homes.

- 1,543 homes uplifted
- 4.0 GWh energy saved
- 12,028 tons carbon reduced

HOME ENERGY EVALUATION

Led by a TVA Home Energy Advisor, Home Energy Evaluations make it easy for residents to get expert one-on-one advice and learn what upgrades are needed to make their home more energy efficient. Participants receive a customized report with prioritized recommendations for ways to improve their home's energy and an energy-saving starter kit.

- 4,286 evaluations
- 5,656 tons carbon reduced

QUALITY CONTRACTOR NETWORK

The Quality Contractor Network (QCN) is a group of highly skilled and knowledgeable contractors who have been specially trained and vetted by TVA EnergyRight to make sure home energy upgrades are installed correctly. TVA EnergyRight will even inspect the work after it's been completed to ensure it meets our quality standards.

- 8,409 total home energy projects completed
- 2,186 inspections performed
- \$64.88M spent by customers on home energy upgrades
- 4.6/5 customer satisfaction with QCN



DIY HOME ENERGY ASSESSMENT

This do-it-yourself assessment is an online evaluation where residents can input information about their homes and receive a personalized report with energy efficiency recommendations and energy-saving items.

- 3,032 participants
- 2.73 GWh energy saved
- 5,900 tons carbon reduced

FINANCING

Most Valley residents have access to TVA-sponsored financing through 3rd party lenders. Loan applicants can get affordable, \$0 down financing for home energy upgrades — like a new HVAC unit or attic insulation — that will save them money and help them live more comfortably. On-bill financing is available through local power companies and Regions Bank. Off-bill financing is available through Vanderbilt Mortgage and Finance, Inc.

- 2,313 loans funded
- \$21,381,684 invested in local economy



HOME ENERGY WORKSHOPS

TVA EnergyRight's free Home Energy Workshop gives residents a strong foundation in home energy education so they can make positive changes that lower their utility bill and help them live more comfortably. Workshops are hosted in partnership with participating local power companies.

- 6 workshops
- 139 participants
- .03 GWh energy saved
- 68 tons carbon reduced

ENERGY EVOLUTION WORKSHOP

The Energy Evolution High School Workshop educates and empowers students to reduce their environmental impact by becoming smarter energy consumers and to lead the next wave of our planet's energy evolution.

- 9 workshops
- 145 teens reached

EYE SPY ENERGY KIDS' WORKSHOPS

The Eye Spy Energy Kids' Workshop features a colorful cast of TVA EnergyRight monster friends who teach kids ages 5-12 years of age where energy comes from, how it is used and how they can help their families save energy and money around the house. The workshop is offered in partnership with local power companies.

- 31 workshops
- 1,200 children reached
- 1,200 energy kits distributed

NEW HOMES

The New Homes Program offers incentives to approved builders for the installation of electric equipment during the home's construction. The program helps homeowners save money and energy from the start.

- 6,795 new homes incentivized
- 189,075 tons carbon avoided

THE POWER OF BUSINESS

Business & Industry FY22 Highlights

SCHOOL UPLIFT

School Uplift supports public schools in the Valley by offering energy efficiency training and grants that reduce their energy costs and improve the quality of the learning environment.

Through the application of best practices, collectively called strategic energy management (SEM), schools save energy expenses through changing behaviors. Since most of these changes require no capital investment, participating schools can invest their limited resources and energy savings where it matters most: educating children.

- 43 schools
- Estimated \$7,700 savings annually per school
- 9.5% average energy saved

BUSINESS & INDUSTRY INCENTIVES

TVA EnergyRight for Business & Industry is making it easier than ever for businesses, large and small, to achieve their energy goals and take control of their bottom line. Incentives are offered for HVAC systems, LED lighting, thermal ice storage, electric forklifts, ultraviolet germicidal irradiation (UVGI) and custom-designed energy projects.

- 153 projects completed
- 18.8 GWh energy saved
- 36.9 GWh efficient energy added
- 75,059 tons carbon reduced

FEDERAL ENERGY SERVICES PROGRAM (FESP)

TVA's Federal Energy Services Program helps federal agencies meet energy- and water-saving goals, improve aging infrastructure and lower costs through new technologies and innovations in the energy space. Our federal customers contribute greatly to the economy and quality of life in the region. When they succeed, our communities thrive.

- 2 projects completed
- 7 projects initiated
- 6.62 GWh energy saved
- 5,161 tons carbon reduced

PREFERRED PARTNERS NETWORK (PPN)

The PPN helps Valley businesses find trained, trustworthy experts to make energy upgrades and connects customers to TVA EnergyRight's incentives for energy equipment purchases. Through the PPN, customers can find and hire a variety of trade allies, from general contractors and architects to engineers, each vetted by TVA.

- 47 participating contractors
- \$385,780,327 spent by customers on energy improvements
- 96% customer satisfaction rating



COMMUNITY CENTERED GROWTH

Community Centered Growth works with a limited number of local power companies to stimulate underserved communities through energy-related upgrades and resources for small businesses. Community Centered Growth pays the cost to implement upgrades for qualifying businesses. The pilot targets 40-60 small businesses a year. Local power company participants in FY22 included the City of Florence Electricity Department, Cookeville Electric Department, Knoxville Utilities Board and Tupelo Water & Light.

- 45 businesses
- 0.92 GWh energy saved
- 1,526 tons carbon reduced

SAVE IT FORWARD

Save It Forward provides free training and support to qualifying industrial customers to help them control their energy costs and meet their sustainability and carbon-reduction goals through the application of a series of best practices, collectively called strategic energy management (SEM). Participants are encouraged to reinvest a portion of their financial savings back into the local community through TVA EnergyRight's School Uplift or Community Centered Growth programs. Save It Forward enrolled its first participants in summer 2022 and looks forward to reporting on participants' energy savings achievements in future years.

INTERNAL ENERGY MANAGEMENT PROGRAM (IEMP)

The Internal Energy Management Program is how we make sure we're identifying, funding and implementing energy and water conservation projects in TVA buildings. IEMP helps TVA meet energy and sustainability goals, lowers costs, improves safety, increases productivity and creates jobs. Plus, it's just the right thing to do.

- \$3.8M spent on improvements
- \$285,000 in annual savings
- 3.35 GWh in energy savings
- 2,621 tons of carbon reduced



THE POWER OF INNOVATION

Electric Vehicle FY22 Highlights

FAST CHARGE NETWORK

TVA has partnered with local power companies, state agencies and third-party developers to develop one of the nation's most comprehensive EV fast-charging networks. Once completed, the Fast Charge Network will include approximately 80 locations, 200 fast chargers and multiple station owners and site hosts connecting interstates and major highways across TVA's seven-state service area. Local power companies leading the way with the first operational sites under the Fast Charge Network include Fort Payne Improvement Authority, Warren Rural Electric Cooperative Corp., Weakley County Municipal Electric System and Cullman Electric.

- 26 participating local power companies
- 32 sites contracted or completed
- 4 sites opened in FY22
- 5 states

EV FLEET ADVISOR

Our newest pilot, EV Fleet Advisor, offers educational and consulting services for commercial businesses considering electrifying all or a portion of their vehicle fleets. TVA connects businesses to an experienced consultant who helps them plan for transitioning their vehicle fleet to electric. The pilot is targeting commercial vehicle fleets and applications and will help inform future offerings.

EV WEBSITE

We designed [EnergyRight.com/EV](https://www.energyright.com/ev) to address common EV myths, questions and concerns discovered during our consumer research. The site serves as a hub for easily accessible and unbiased information on maintenance, batteries, chargers, car types and other EV topics.



CONSUMER VIDEO SERIES

We launched the second season of our popular online video series, In Charge: Life with an Electric Vehicle, which was filmed in West Tenn., Alabama and Mississippi. In Charge is an engaging and easy way for consumers to learn about electric vehicles with host and Daytona 500 winner Trevor Bayne as he test drives the latest EVs with regional guests and learns how EVs are shaping our future.

- 3 episodes
- 106,840 video views
- 938,000 social media post impressions

THE POWER OF RESILIENCE

Demand Response FY22 Highlights

INTERRUPTIBLE POWER (IP)

Through the IP5 or IP30 program, TVA EnergyRight offers financial incentives for participating businesses that agree to suspend a portion of their energy load when the power system is constrained. IP5 participants receive a monthly demand credit in exchange for load curtailment. IP30 participants receive a monthly demand credit along with an event-based energy credit in exchange for load curtailment.

- 765 MW Interruptible Power – 5 minutes' notice
- 666 MW Interruptible Power – 30 minutes' notice
- 17 Demand Response events
- 34,573 MWh energy saved
- 15,974 tons carbon avoided

PEAK POWER PARTNERS

Through our partnership with third-party administrator Enel X, TVA EnergyRight offers local power companies an easy way to administer the Demand Response program. Participating businesses receive a financial incentive as well as expanded information on their energy usage.

- ~54 MW total capacity
- 7 Demand Response events
- 1,343 MWh total energy
- 621 tons carbon avoided

VOLTAGE OPTIMIZATION

TVA EnergyRight operates voltage optimization programs with local power companies that operate distribution feeder voltages in the lower half of the standard voltage range [KP23], thereby reducing energy consumption annually.

- 179 MW total capacity
- 6 Demand Response events
- 5,084 MWh energy saved
- 2,349 tons carbon avoided



THE POWER OF RENEWABLE ENERGY

TVA Green FY22 Highlights

GREEN CONNECT

Green Connect connects residential consumers who are ready to commit to a solar generation system with quality installers. Consumers also have access to helpful resources and receive an installation verification ensuring their systems are installed to TVA Green Connect program standards.

- 215 home systems
- \$8M in spending on home solar systems

GREEN SWITCH

For \$2 per month, Green Switch consumers can match some or all of their home or business electricity use with 100% solar energy generated in the Valley, making it an easy and affordable program for Valley consumers.

- 8,805 participants
- 82,097 MWh purchased

GENERATION FLEXIBILITY

Since June 2020, Generation Flexibility has provided local power companies that have signed on as Valley Partners with the option to generate a portion of their total energy load to meet the renewable energy goals of their customers, attract sustainability-focused businesses to their communities, and solve individual challenges for their customers or distribution systems.

- 80 total executed agreements with Valley Partners
 - 9 newly executed agreements with Valley Partners in FY22
- 37 Valley Partners engaged in planning 42 projects
 - 11 new Valley Partners engaged in 9 new projects in FY22

GREEN FLEX

Green Flex enables businesses with high energy consumption to quickly meet their sustainability goals at a lower cost through the purchase of renewable energy certificates (RECs) to reduce the impact of electricity consumption, support renewable energy and become a leader in sustainability. In FY2022, product pricing was set at \$2.50 per MWh, which is made up of 100% wind RECs generated at locations outside of the Valley, then delivered to the Valley.

- 1 million RECs sold in FY22
 - 266% increase in RECs sold from FY20

GREEN INVEST

Green Invest is a proven, award-winning model that offers business and industries an effective, timely, and cost-competitive solution to aggressively meet their sustainability goals. The program matches customer-driven commitments to use more renewable energy with new in-Valley renewable projects by leveraging a competitive procurement process. Businesses who partner with TVA benefit from TVA's scale and negotiating expertise in attracting a wide variety of potential renewable projects at economic prices. Since its 2018 launch, Green Invest has resulted in:

- 11 participants
- 2,205 MWac of solar under contract
- 246 MWac of battery storage under contract

CARBON FREE REQUEST FOR PROPOSAL

In July 2022, TVA issued a request for proposal (RFP) for up to 5,000 MW of new carbon-free energy that could be online before 2029. Energy resources could include solar, wind, hydro, geothermal, biomass, nuclear, green gas and battery energy storage systems.

The response from the market was strong as evidenced by over 14 GW of generation and capacity project proposals and nearly 100 projects from more than 40 developers providing their intent to bid.

TVA will assess proposals in 2023 to select those projects that position TVA to remain a leader in carbon reduction while providing reliable, low-cost energy to customers. The carbon-free energy investments we are making now will position TVA for a clean energy future.