

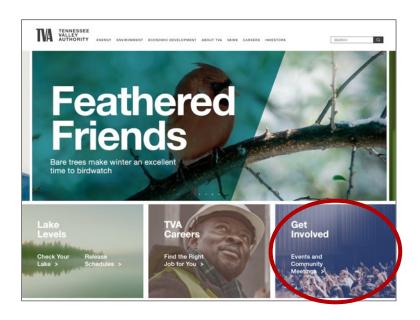
Board Meeting

May 11, 2022 Young Harris, Georgia



Public Input

TVA has several opportunities for the public to offer input:



- Board Listening Sessions
- TVABoard.gov
- board@tva.gov
- Regional Resource Stewardship Council (RRSC)
- Regional Energy Resource Council (RERC)
- Public Land Information Line (PLIC)
- Complaint Resolution Hotline
- Social Media
- TVA Ombudsman
- NEPA Process





Board Meeting

May 11, 2022 Young Harris, Georgia



Opening Remarks

Jeff Lyash President and CEO

May 11, 2022





Strategic Intent and Guiding Principles



TVA Strategic Intent and Guiding Principles

May 2021

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

This statement of Strategic Intent is to be used in accordance with all internal and external processes in providing the principle direction from TVA leadership in developing business strategies that provide reliable realilient, low-cost and clean energy to the Tennessee Valley region in keeping with the TVA mission. is investing more than \$2 billion in transmission em improvements over five years to ensure that we imue to provide increasingly clean, low-cost, reliable er. We are working to find ways to ensure our grids together seamlessly as local power companies bring own solar and other renewable resources onto the

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Part Three: Leading in Innovation, Decorbonization

TVA Leadership in Decarbonization

TVA is an industry leader in developing innovative and cost-effective technologies that will decarbonize our economy and achieve our aspiration of a net-zero carbon energy future.

We measure and benchmark our carbon emissions in two ways, each for important reasons. Carbon intensity, or the rate of emissions, measures the amount of carbon released per unit of electricity produced and is priscally reported as law MWh. This reasoure allows carbon of easily compass electric utilities in an equivalent manner. The other period of the carbon in an electric utilities in an equivalent manner. The other period is the carbon in an electric utility's footprint. For 2001, 174% carbon intensity was 500 (bufWhy and mass emissions were 4.25 million tons.

Based on our progress in diversifying the power system and the status of our existing power system assets, we are working to achieve significant carbon reductions in the decades to come without compromising the low rates and high reliability that statem the customers and communities we serve.

We intend to follow this trajectory as we aspire to achieve net-zero carbon emissions by 2050:

Results Delivered

We have achieved a 63% reduction in mass carbon emissions in our energy supply from calendar year 2005 to 2020, primarily by diversifying our generation portfoliowe have:

- Added about 1,600 megawatts of new, carbon-free nuclear generation with the commercial operation of Watts Bar Nuclear Plant Unit 2 and extended power uprates at all three units at Browns Ferry Nuclear Plant
- Added renewable energy, with over 400 megawatts of solar and 1,200 megawatts of wind
- Retired approximately 8,600 megawatts of coal generation in recent years, including Bull Run Foesil Plant's announced retirement of 865 megawatts by December 2023. This amounts to about 69% of our coal generation, and we are evaluating the impact of retiring the balance of the coal-freed feet by 2035.
- Added about 5,200 megawatts of new flexible and efficient gas generation
- Invested over \$400 million in energy efficiency programs since 2011

Executing a plan to 70% carbon reduction by 2030

- Bringing additional solar capacity online as part of TVA's total projected solar capacity of about 10,000 megawatts by 2035, including solar commitments to date of over 2,300 megawatte expected to come online by 2023, pending environmental reviews, largely driven by customer demand
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- Modernizing our gas fleet to support year-round reliability and integration of intermittent renewable generation
- Expanding our storage portfolio by adding lithium-ion batteries as costs decline
- Working with local power companies on customercentric options
- Investing in our existing carbon-free nuclear and hydroelectric fleets
- Investing in our transmission system to enable the integrated grid of the future

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Energy Efficiency









Energy Burden

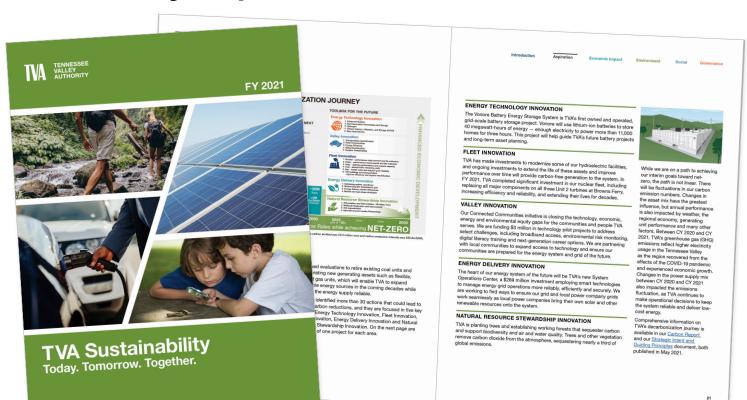








Sustainability Report





Opening Remarks

Jeff Lyash President and CEO

May 11, 2022





Board Meeting

May 11, 2022 Young Harris, Georgia



Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair



Financial Update

John Thomas
Executive Vice President
Financial Services

May 11, 2022



Q2 Fiscal Year 2022

Net Income of \$220M was \$71M favorable to budget

Base Revenue of \$3.7B was \$47M favorable to budget

Total Financing Obligations (TFO) were \$296M favorable to budget



Q2 Summary Income Statement

	FYTD22					FYTD21				
\$ million	A	ctual	В	udget	get Variance Fav/(Unfav)		Actual		'22 v '21 Fav/(Unfav)	
Base Revenue	\$	3,691	\$	3,644	\$	47	\$	3,653	\$	38
Fuel Revenue*		1,695		1,285		410		1,150		545
Other Revenue		81		66		15		73		8
Total Operating Revenue	\$	5,467	\$	4,995	\$	472	\$	4,876	\$	591
Fuel & Purchased Power		1,767		1,379		(388)		1,213		(554)
Total O&M		1,547		1,525		(22)		1,359		(188)
Taxes, Depreciation, Other		1,406		1,399		(7)		1,107		(299)
Interest		527		543		16		557		30
Net Income (Loss)	\$	220	\$	149	\$	71	\$	640	\$	(420)

^{*} Includes off-system sales



Q2 Summary Cash Flow Statement

\$ million	FYTD22					FYTD21				
Net Cash Provided by / (Used in)	Actual		Budget		Variance		Actual		'22 v '21	
Operating Activities	\$	1,459	\$	1,403	\$	56	\$	1,570	\$	(111)
Investing Activities		(1,290)		(1,400)		110		(1,092)		(198)
Financing Activities		(166)		(3)		(163)		(480)		314
Net Change in Cash	\$	3	\$	-	\$	3	\$	(2)	\$	5
Beginning Total Financing Obligations	\$	20,543	\$	20,660	\$	117	\$	21,421	\$	878
Change in Debt and Financing Obligations		(145)		34		179		(474)		(329)
Ending Total Financing Obligations	\$	20,398	\$	20,694	\$	296	\$	20,947	\$	549



Q2 Summary

Higher sales primarily due to economic growth

Diverse power system helping to offset rising energy prices

Customers benefiting from Pandemic Recovery Credit

Continuing to benefit from lower debt



Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair



Operations and Nuclear Oversight Committee

Jeff Smith, Chair



External Stakeholders and Regulation Committee

Beth Harwell, Chair



TVA Sustainability Today. Tomorrow. Together.

Rebecca Tolene
Vice President and Chief Sustainability Officer

May 11, 2022





Clean Energy System of the Future

TVA's clear mission of service to the Valley provides us a business advantage. Our purpose inspires one of the best workforces in the country and positions us as partners with customers and stakeholders.





Economic Impact

Partnering to Build the Region's Clean Energy Economy



TVA's public power model takes into account a broad view of the needs of people, which is the core of a sustainable company. TVA reinvests back into the Valley's infrastructure, environment and people.



Environment

Stewarding the Region's Resources

The Tennessee Valley and surrounding regions are some of the most biodiverse areas across the nation. TVA has a critical role in ensuring our environment and natural resources remain well protected and available for many generations – and we take this responsibility seriously.



Social

Serving People and Communities Across the Region



Serving the region's communities is an important part of our mission of service.



Governance

Driving Progress Through Governance and Accountability



Our governance structure is critical to driving sustainability performance.



Sustainability Pillars

Economic Impact

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

Environment

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

Social

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

Governance

- Transparency
- Board and Executive Diversity
- Systemic Risk Management
- Ethics
- Cyber and Physical Security
- Sustainable Financing Framework





External Stakeholders and Regulation Committee

Beth Harwell, Chair



People and Governance Committee

Brian Noland, Chair





Board Meeting

May 11, 2022 Young Harris, Georgia



Energy Burden

Tom Rice Vice President Financial Operations & Performance

May 11, 2022



Energy Burden

Energy burden is the percentage of total household income spent on electricity and heating fuels.

• Burden is considered "high" when a household pays 6% or more of its income on energy bills, and "severe" when a household pays 10% or more of its income on energy bills

Compared to other census regions, East South Central has the highest percentage of households with a high energy burden.

 Nearly seven million people in the region experience high energy burdens; 78% of these households are low-income





Drivers of Energy Burden

Income

Income is the single greatest driver of energy burden

Energy Usage

Home energy consumption is driven by:

- Housing
- · Level of Electrification
- Weather

Residential Energy Rate

TVA has the most control over the residential energy rate



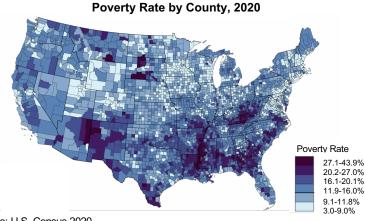
Total Household Income



Income

Low incomes and high poverty levels in East South Central drive high energy burdens

- The region has the highest poverty rate in the U.S., with nearly 2.8 million people living at or below the poverty threshold
- The region's states rank in the bottom 10 for median income



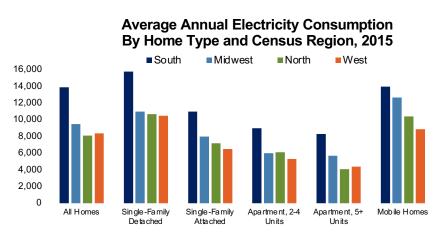
State	Median Income, 2020	Income Rank Among U.S. States	Poverty Rate, 2020
Mississippi	\$44,966	50	18.4%
Alabama	\$54,393	44	13.9%
Tennessee	\$54,665	43	13.1%
Kentucky	\$56,525	41	13.8%
United States	\$67,521	-	11.0%

Source: U.S. Census 2020

Energy Usage: Housing

Housing units in the South consume more electricity than those in other regions, driven by lagging building codes, electrification, and weather

East South Central has the highest concentration of mobile homes in the country (11%) and the lowest percentage of multi-family units (18%)





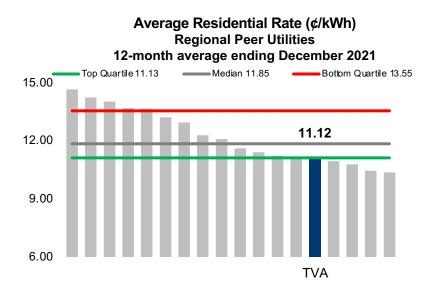
Source: 2015 Residential Energy Consumption Survey, American Housing Survey 2019, Office of Renewable Energy & Energy Efficiency

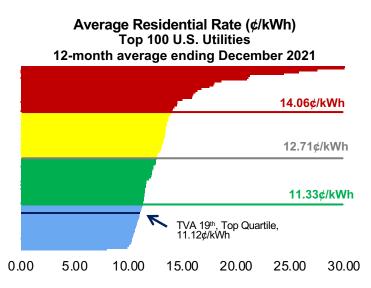
TVA Restricted Information - Deliberative and Pre-Decisional Privileged



Residential Energy Rate

TVA's average residential rate is top quartile compared to regional peer utilities and the 100 largest U.S. utilities, helping to keep energy bills low





Source: Energy Information Administration EIA-861M, ESS

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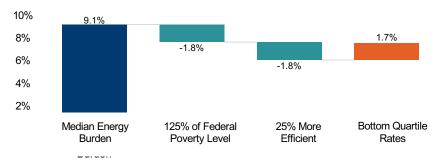
Closing the Gap for Low-income Households

Cumulatively, increases in income and decreases in home energy usage can significantly decrease low-income energy burden

Changes in income have the largest impact on energy burden for the lowest-income households

An increase in rates would worsen energy burdens

Low-Income Energy Burden East South Central



		Usage 25% ▼	Lowest Rates ▼	No Rate or Usage Change	Highest Rates ▲	Usage 25% ▲
50% F	-PL	14.2%	14.2%	18.3%	21.9%	22.4%
₹ 75% F	-PL	9.4%	9.5%	12.2%	14.6%	14.9%
ش 100% <u>څ</u>	FPL	7.1%	7.1%	9.1%	11.0%	11.2%
<u>2</u> 125%	FPL	5.7%	5.7%	7.3%	8.8%	8.7%
125% 5 150%	FPL	4.7%	4.7%	6.1%	7.3%	7.5%
[⊆] 175%	FPL	4.0%	4.1%	5.2%	6.3%	6.4%
200%	FPL	3.5%	3.5%	4.6%	5.5%	5.6%

Source: American Housing Survey 2017



Key Takeaways

Income is the most powerful lever to improve energy burden for the lowest-income households

Actions taken by lawmakers would further improve long-term housing efficiency

Targeted energy efficiency efforts can assist households with high energy burdens

TVA's low rates provide an important counterbalance to the region's relatively high energy usage



TVA's Energy Burden Strategy Efforts

Doug Perry Senior Vice President Commercial Energy Solutions



Valley-wide Energy Efficiency

TVA's Energy Services and Programs have historically served residential, business, and industrial market sectors through

- Energy upgrade incentives and financing
- Energy management consultation and advice
- Contractor networks



School uplift: 54 schools

\$5M invested by TVA; \$1.2M matched

Schools averaged 13% annual energy savings



School Uplift Video



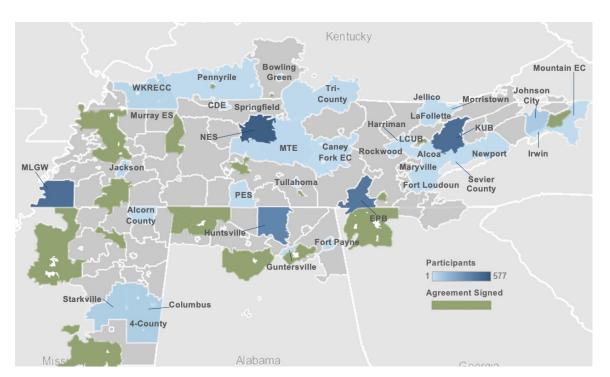
A Focus on Underserved Communities



\$50 million to help our neighbors and community members reduce their energy burdens.



What We Are Doing – Home Uplift



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



Our Goal

Over the next five years, we plan to **reduce energy expenses** in underserved communities by \$200 million.

For residential customers who participate in our programs, that is an average of \$500 a year in bill savings.





Home Uplift Video





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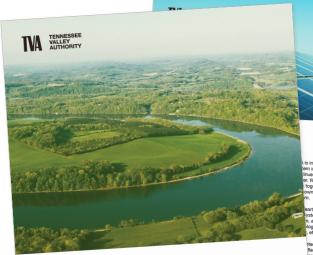
President's Report

Jeff Lyash President and CEO

May 11, 2022



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TENNESSEE VALLEY

Guiding Principles

01

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

02

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

03

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

04

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

05

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

06

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



Commitments

Serving Valley communities

Continued investments in our clean, diverse portfolio

Being a leader in innovation and decarbonization solutions

Inclusion with diversity

Being a leader in low-carbon energy

Financial strength and stability













Signature Transformative Innovation Initiatives







Accelerate progress toward our aspiration of net-zero carbon

Designed to develop, deploy and safely and economically operate viable advanced nuclear reactors

Develop a roadmap for our exploration of advanced nuclear technologies



200,000

Electric Vehicles in the Valley by 2028

\$1,000 Annual Fuel Savings

\$200 Million Consumer Savings

Saving Almost 1 Million Metric Tons of Carbon Each Year















President's Report

Jeff Lyash President and CEO

May 11, 2022





Board Meeting

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