



TVA People's IRP

Testimony of Taylor Allred

Greenlink Analytics

January 25, 2024

Experience and Education

- **Energy Analyst at Greenlink Analytics**
- 15 years of experience in energy policy and analysis
- Modeling energy resources and economic impacts
- Intervened in utility proceedings across the Southeast
- Analysis of utility rate cases and integrated resource plans (IRPs)
- Energy efficiency, demand response, and distributed energy program analysis
- Organized environmental justice communities around energy burden
- Issued investor guidance based on state utility commission proceedings
- Master of Public Administration from College of Charleston
- Bachelor of Arts from University of Virginia, history major and econ minor

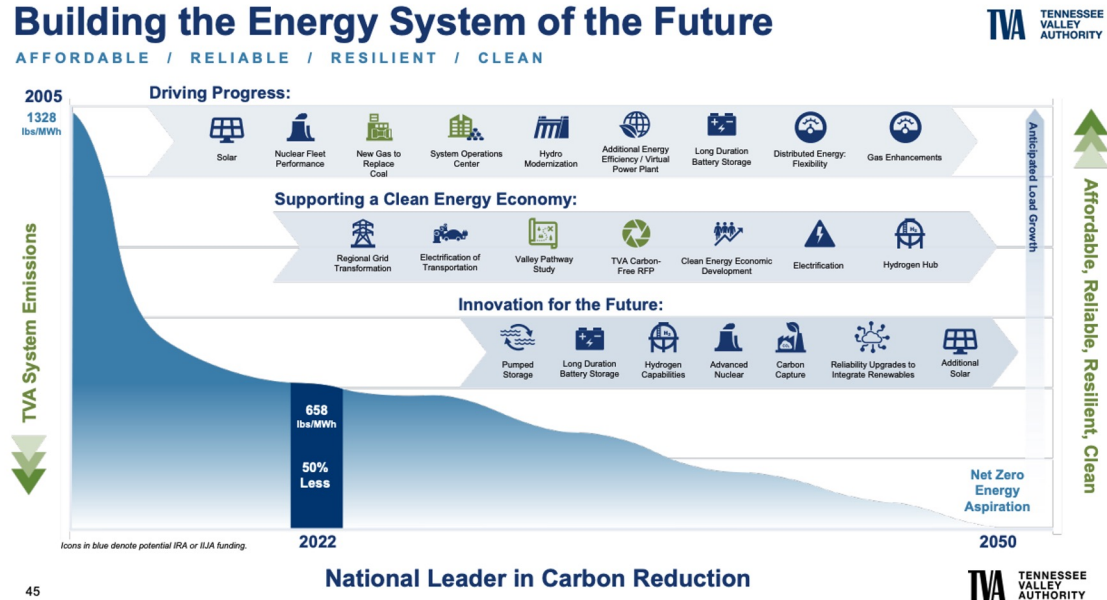




Climate Change and Inequity

Delayed Phase-Out of Fossil Fuels

- UN: climate change requires drastic action
- White House goal: net zero electricity by 2035
- TVA: model for 2050 “net zero energy aspiration”
- Delays → higher costs + more inequitable impacts
- TVA needs better community engagement.



Source: TVA 2024 IRP Working Group Meeting 5 materials. Nov. 13-14, 2023.



Environmental Justice

TVA must address its history of environmental injustice | Opinion

Pearl Walker and Michael Malcom Guest columnists

Published 5:09 a.m. CT Nov. 3, 2022



Protestors Barbara Hickey and David Linge, from left, attend the Kingston coal ash disaster memorial, which remembered 51 workers who died between the Dec. 22, 2008, spill and December 2020. *Caitlyn Jordan/News Sentinel*



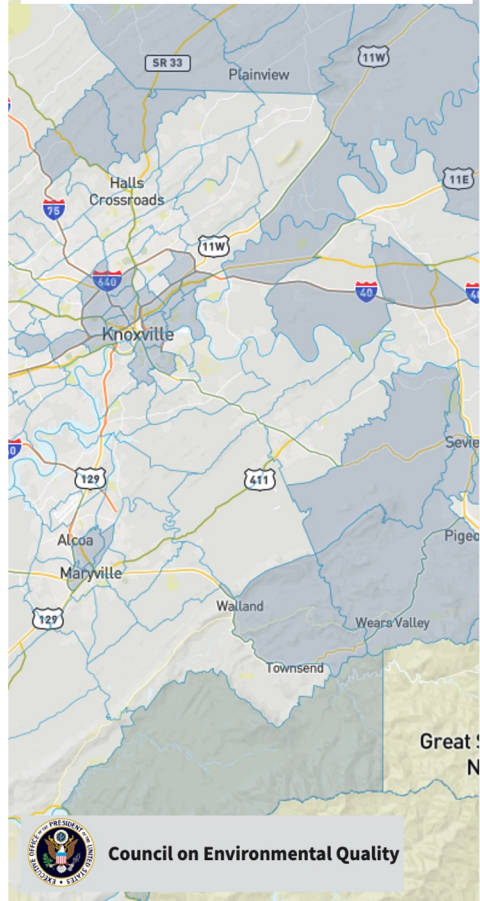
Pearl Walker Submitted



Michael Malcom Submitted



Federal Resources



Things to know:

The tool uses census tracts. Census tracts are a small unit of geography. They generally have populations of between 1,200 - 8,000 people.

Communities that are disadvantaged live in tracts that experience burdens. These tracts are highlighted on the map.

The tool ranks most of the burdens using percentiles. Percentiles show how much burden each tract experiences when compared to other tracts.

Thresholds, or cutoffs, are used to determine if communities in a tract are disadvantaged. Certain burdens use percentages or a simple yes/no.

Land within the boundaries of Federally Recognized Tribes and point locations for Alaska Native Villages are highlighted on the map. These communities are also considered disadvantaged.

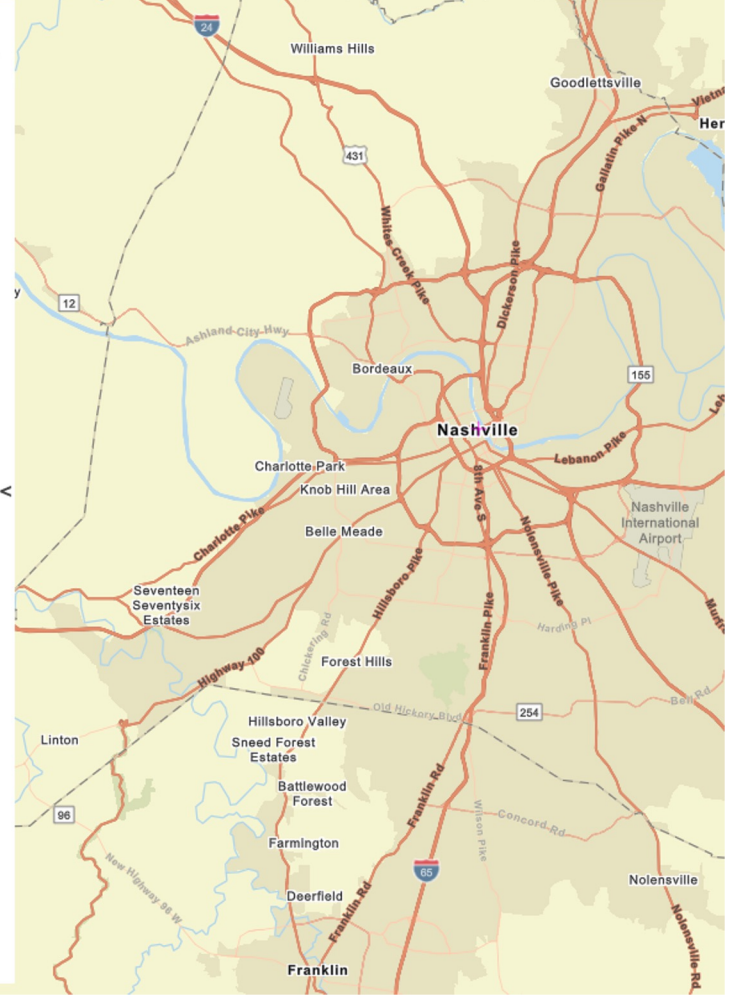
Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the territory itself by using the 'Compare to State' option.

Compare to US
 Compare to State

Environmental Justice Indexes

- Particulate Matter 2.5
- Ozone
- Diesel Particulate Matter
- Air Toxics Cancer Risk
- Air Toxics Respiratory HI
- Toxic Releases to Air
- Traffic Proximity
- Lead Paint
- Superfund Proximity
- RMP Facility Proximity
- Hazardous Waste Proximity
- Underground Storage Tanks
- Wastewater Discharge

- Supplemental Indexes**
- Pollution and Sources
 - Socioeconomic Indicators
 - Health Disparities
 - Climate Change Data
 - Critical Service Gaps
 - Additional Demographics
 - Threshold Map

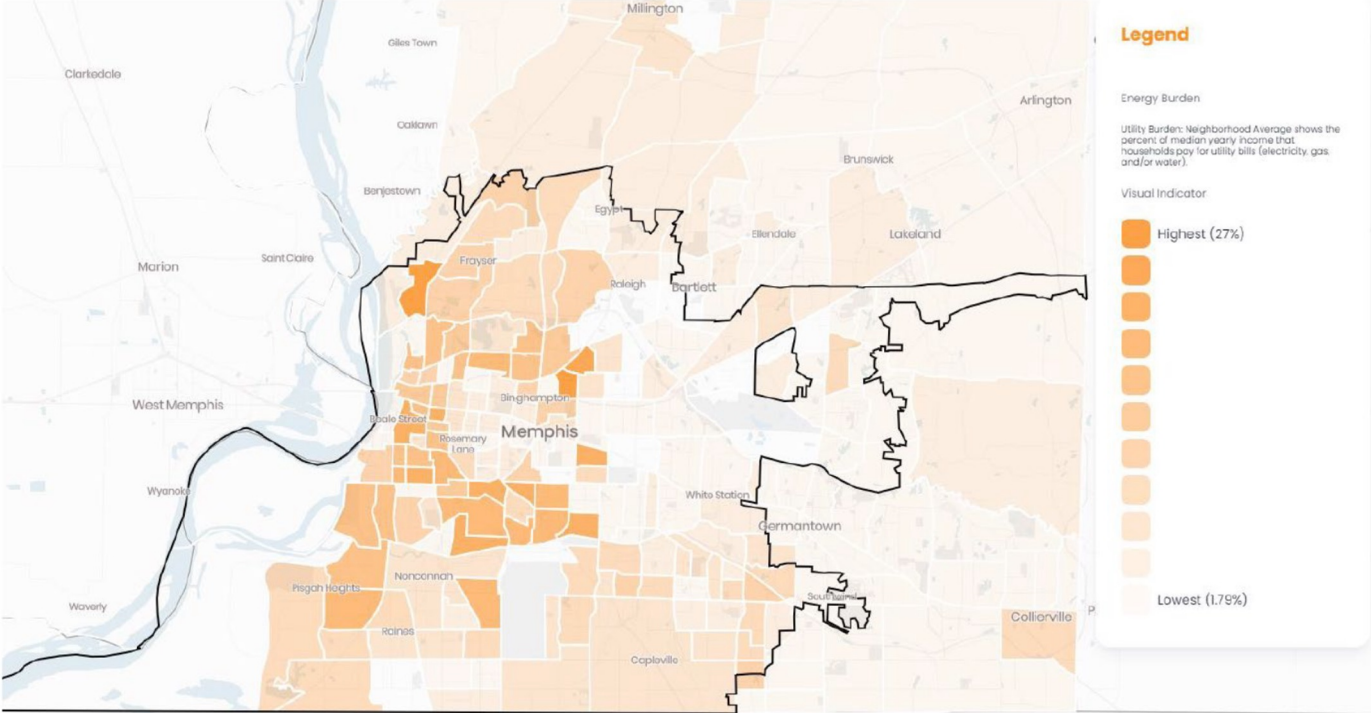




Energy Burden, Race, and Health

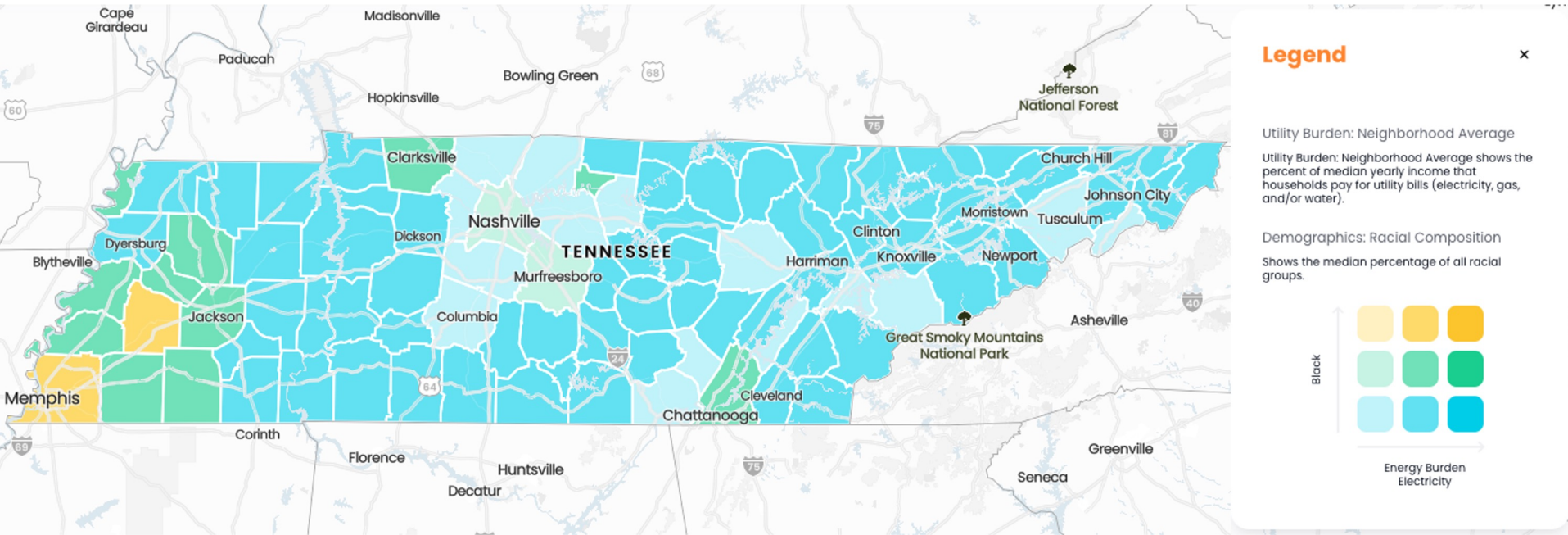
Energy Burden in Memphis

Figure 1: Energy Burden Across Census Tracts in Memphis, TN (2019 data)



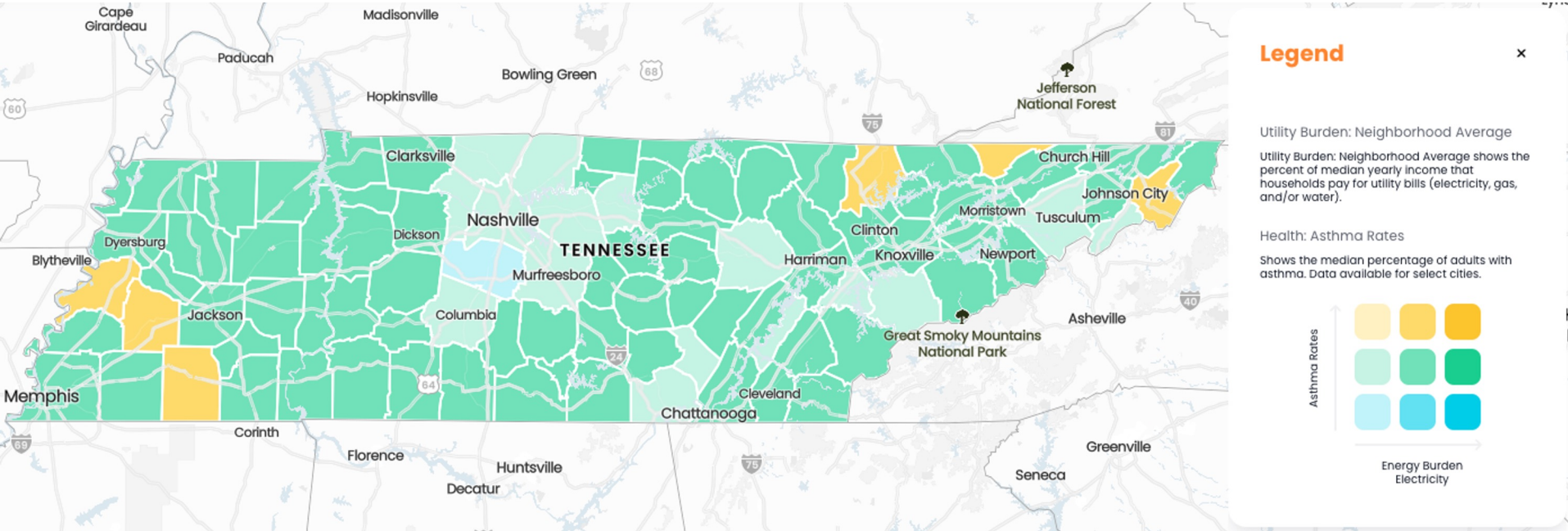
Source: Greenlink Equity Map. Greenlink Analytics. 2022.

Energy Burden and % Black: Moderate Correlation



Source: Greenlink Equity Map. Greenlink Analytics. 2024.

Energy Burden and Asthma Rates: Strong Correlation



Source: Greenlink Equity Map. Greenlink Analytics. 2024.



TVA's Record on Energy Efficiency

Trailing Behind Regional Energy Efficiency Leaders

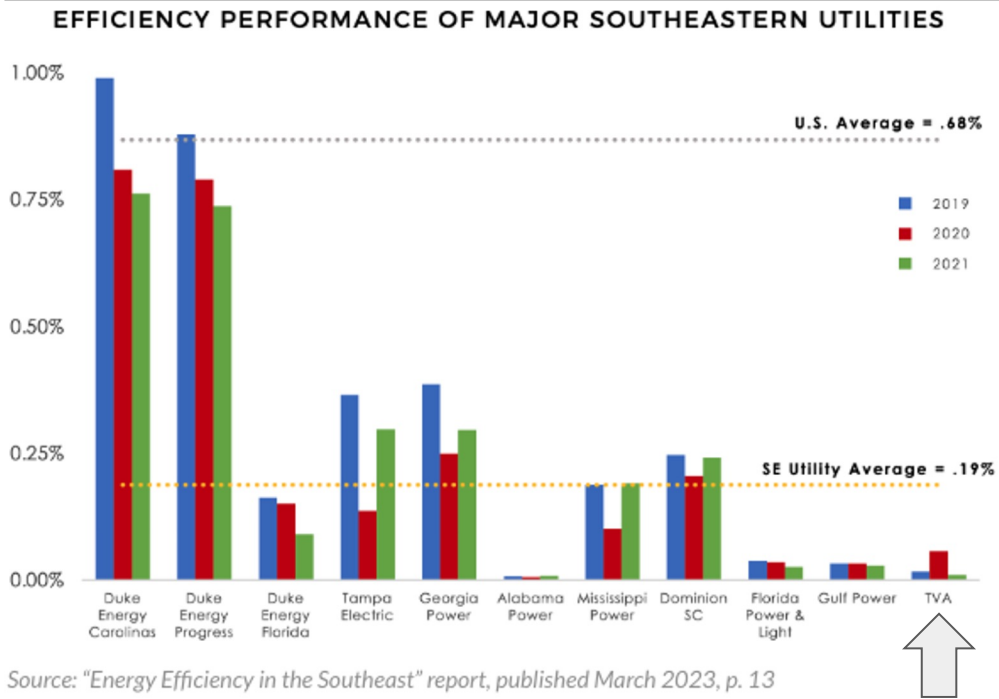


Image Source: Smith, S. (November 17, 2023). Rising up from the bottom, TVA's \$1.5 billion efficiency announcement. Southern Alliance for Clean Energy.

TVA's Recently Announced \$1.5 Billion DSM Investment

FY24-FY28 Investment

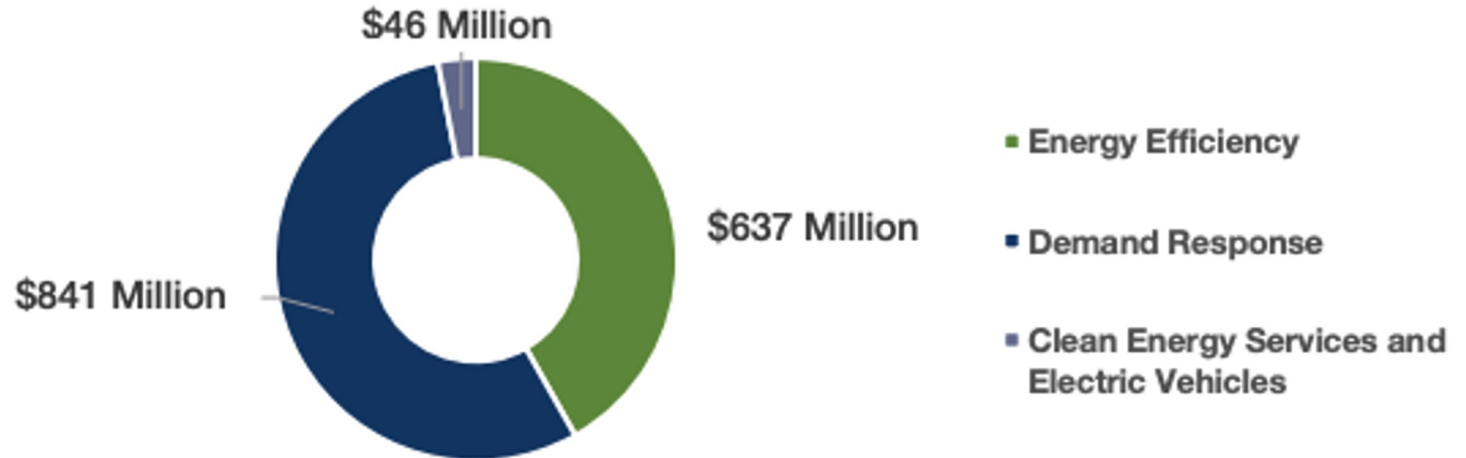


Image Source: Tennessee Valley Authority. (November 2023). Energy efficiency & demand management expansion.



Job Creation and Economic Development

Job Creation

- \$1.5 billion EE/DSM
→ ~10k jobs (net)
- Mostly manufacturing and construction jobs paying \$39-58k/yr
 - 35-100% higher than \$29k TN median income
- 80k+ clean energy jobs in TN already
 - Including 50k in energy efficiency
 - Source: E2. Clean Jobs America 2023

Greenlink Analytics' Clean Energy Jobs Calculator: Estimated Impacts of TVA's Announced Energy Efficiency and Demand-Side Management Investments (2024-2028)				
State:	Tennessee			
Investments (NPV)			Top-5 Gaining Industries	
Residential EE/DR		\$700,000,000	<u>Industry</u>	<u>Jobs Gained</u>
Commercial EE/DR		\$350,000,000	Manufacturing	3,900
Industrial EE/DR		\$350,000,000	Construction	1,600
Electric Vehicles		\$5,000,000	Professional, Scientific, and Technical	500
EV Infrastructure		\$20,000,000	Federal, State, and Local Government*	100
Commercial Electrification		\$20,000,000	Finance and Insurance	100
Total Investment		\$1,445,000,000		
Jobs Summary			Income Summary (millions)	
Direct		6,200	Direct	\$530
General Economy		6,100	General Economy	\$410
Total Jobs Added		+12,300	Total Income Added	+\$940
Jobs Lost		-2,700	Income Lost	-\$280
Net Job Effect		+9,600	Net Income Effect	+\$660
Top-5 Gaining Positions				
<u>Industry</u>	<u>Occupation</u>		<u>Median Annual Wage</u>	<u>Jobs Gained</u>
Manufacturing	Production		\$40,000	2,000
Construction	Construction and Extraction		\$45,000	900
Manufacturing	Transportation and Material Moving		\$39,000	400
Manufacturing	Office and Administrative Support		\$42,000	300
Manufacturing	Installation, Maintenance, and Repair		\$58,000	200
*Excluding state and local schools and hospitals and the U.S. Postal Service (OES Designation).				
Note: State-level jobs and income estimates are based on direct, indirect, and induced job-creation effects of TVA-funded equipment purchases and installation only. This does not include ratepayer/customer-funded investments or the economic impacts of utility bill savings, avoided generating capacity, avoided emissions, health benefits, or other non-energy benefits. Investments in each category represent net present value, could vary considerably, and are rounded estimates based on TVA's Energy Efficiency & Demand Management Expansion Fact Sheet (November 2023).				



Recommendations and Conclusion