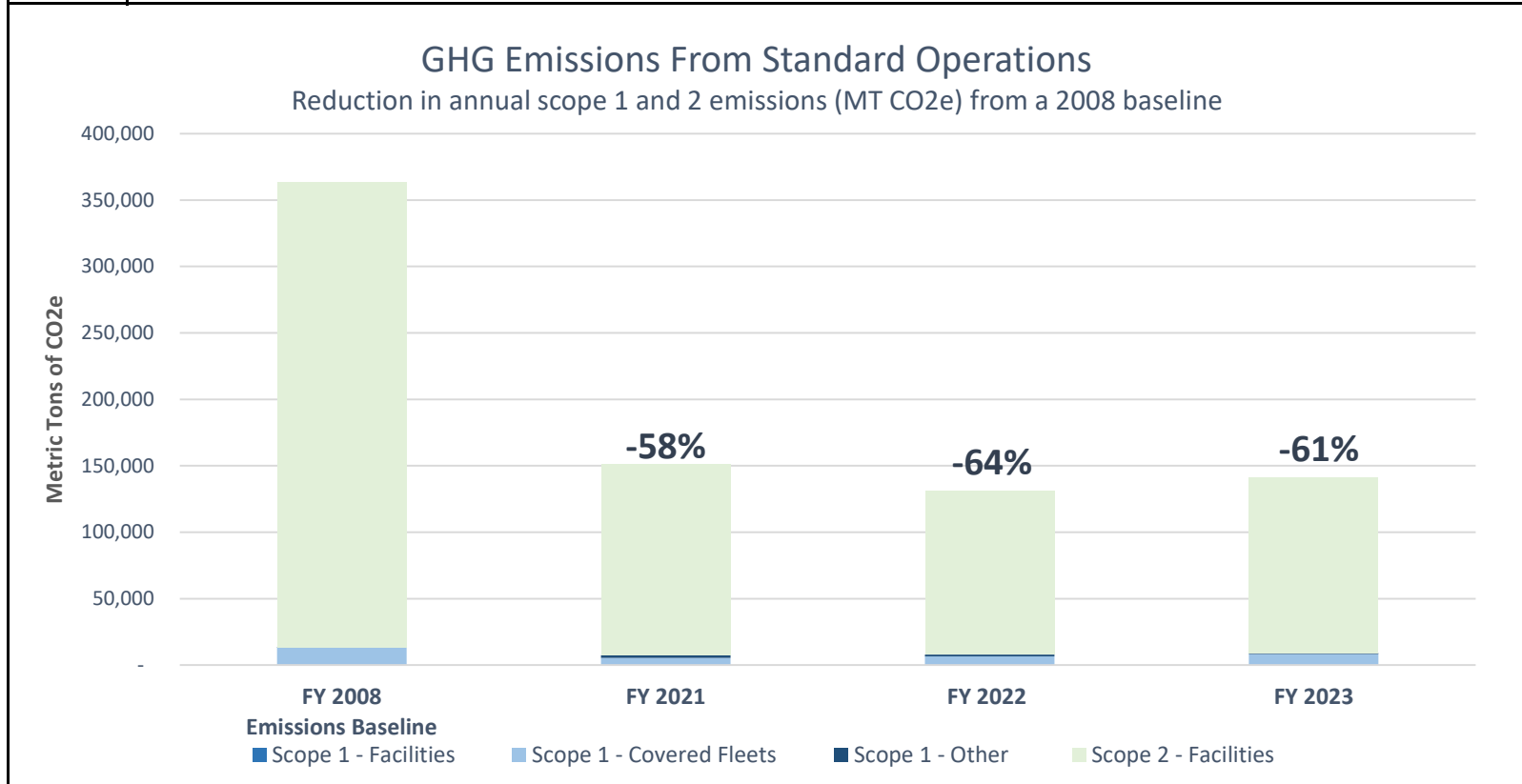


Tennessee Valley Authority

FY 2023 Sustainability Scorecard



Net-Zero Emissions Operations by 2050, Including a 65% reduction by 2030



For abbreviations and definitions— See OMB Scorecard Glossary

Agency Progress Indicator

Agency progress as compared to all other Scorecard Agencies overall progress in FY23 towards the 2030 GHG reduction goal.

↓

Bottom 25%
Middle
Top 25%

Annual Progress from Prior Year

+1,186	+9,534
Scope 1 Emissions	Scope 2 Emissions
+15%	+8%

FY 2023 Standard Operations Emissions

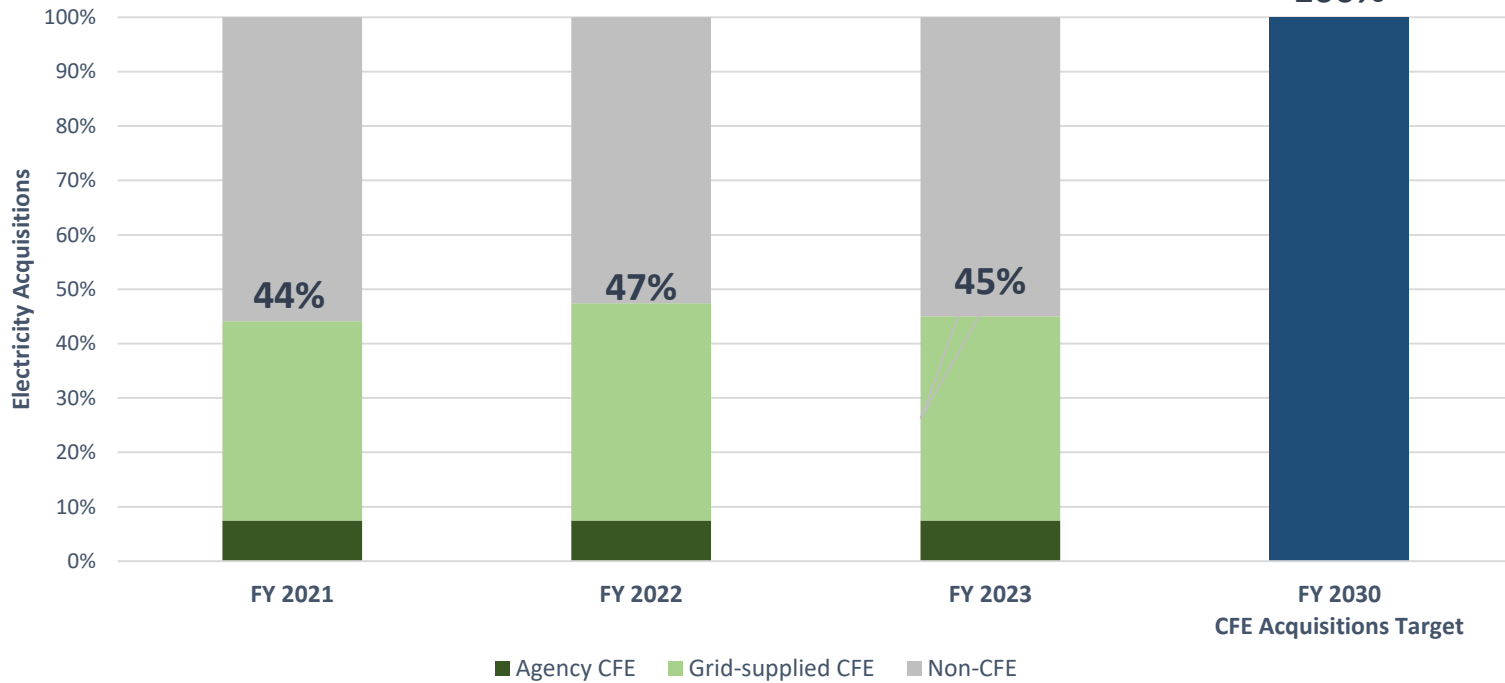
Scope and Category	MTCO2e	% of Total
Scope 1 - Covered Fleets	8,206	6%
Scope 1 - Other	840	1%
Scope 1 - Facilities	21	0%
Scope 2 - Facilities	132,374	94%
Total	141,441	

Tennessee Valley Authority
FY 2023 Sustainability Scorecard



100% Carbon Pollution-Free Electricity
on a Net Annual Basis by 2030

Carbon Pollution-Free Electricity (CFE) Acquisitions
 CFE percentage of total annual megawatt hours (MWh) consumed



Agency Progress Indicator

Agency progress as compared to all other Scorecard Agencies overall progress in FY23 towards the 2030 CFE acquisition goal.



Annual Progress from Prior Year

-14,155

MWh of CFE Acquisition

-8%

FY 2023 Agency Electricity Profile

<u>Category</u>	<u>MWh</u>	<u>% of Total</u>
Agency CFE	26,500	8%
Grid-Supplied CFE	132,510	38%
Non-CFE	194,321	55%

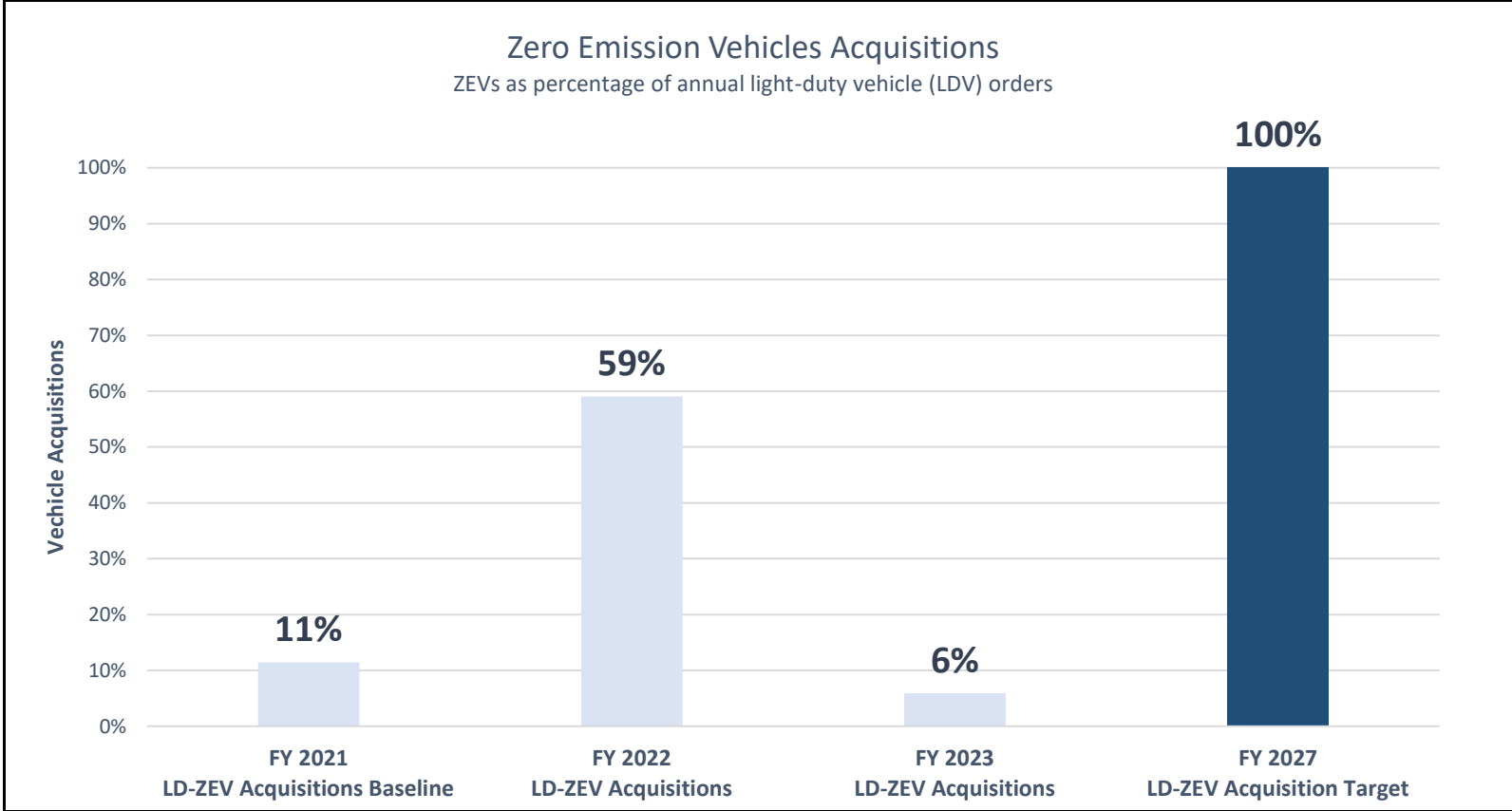
Total

353,331

For abbreviations and definitions— See OMB Scorecard Glossary

Tennessee Valley Authority
FY 2023 Sustainability Scorecard

 **100% Zero-Emission Vehicle Acquisitions by 2035**



For abbreviations and definitions— See OMB Scorecard Glossary

Annual Progress from Prior Year		
	-87	+0
LD-ZEV Acquisitions		Charging Ports
	-99%	+0%

Covered Fleet Inventory		
Category	FY 22	FY 23
Light Duty ZEV	58	112
Light Duty ICE	1,486	1,338
Total	1,544	1,450

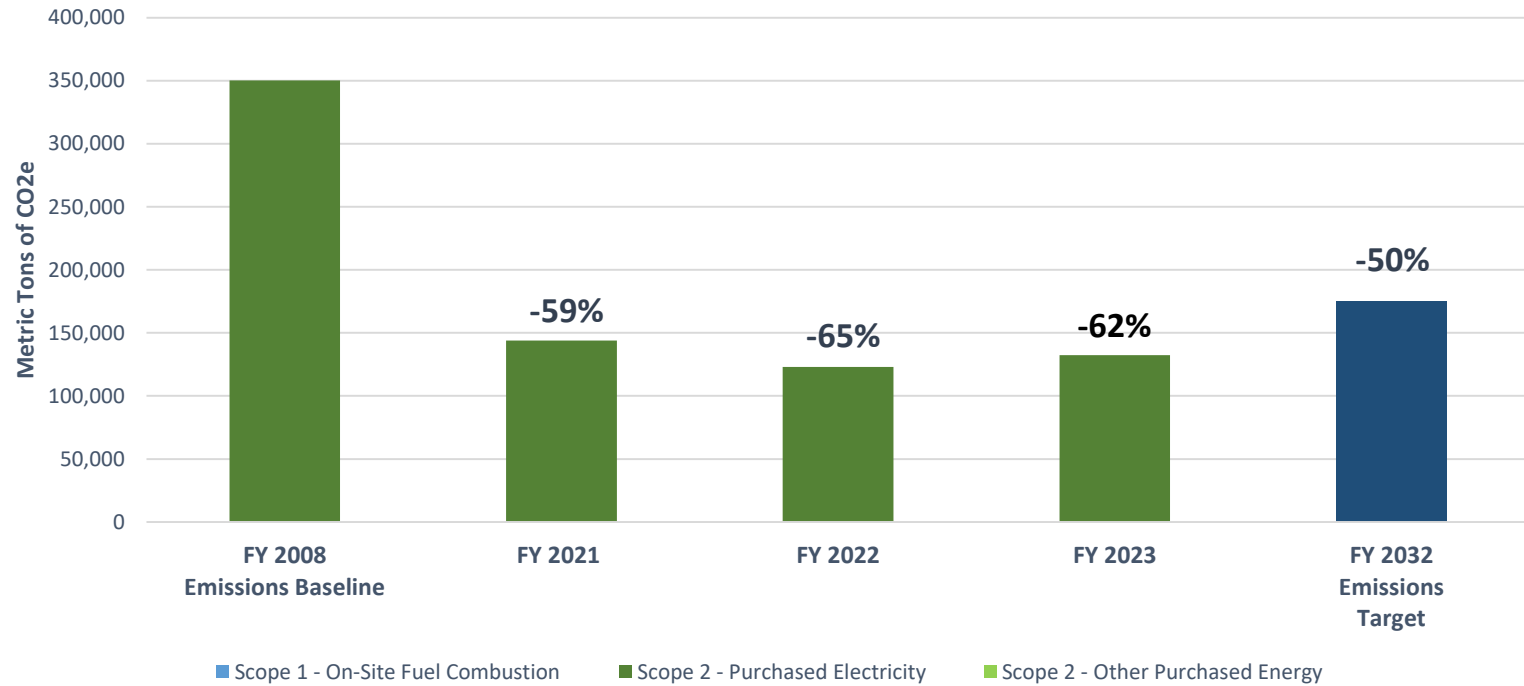
Charging Port Inventory		
Category	FY 22	FY 23
AC Level 1	23	23
AC Level 2	108	108
DC Fast Charging	0	0
Total	131	131

Tennessee Valley Authority
FY 2023 Sustainability Scorecard



**Net-Zero Buildings by 2045,
including a 50% reduction by 2032**

GHG Emissions from Standard Operations in Facilities
Reduction in annual scope 1 and 2 emissions (MT CO2e) from a FY 2008 Baseline



For abbreviations and definitions— See OMB Scorecard Glossary

Agency Progress Indicator

Agency progress as compared to all other Scorecard Agencies overall progress in FY23 towards the 2032 GHG reduction goal.



Bottom 25%

Middle

Top 25%

Annual Progress from Prior Year

-41

Scope 1 Emissions

+9,534

Scope 2 Emissions

-67%

+8%

FY 2023 Buildings Standard Emissions

GHG	MTCO2e	% of Total
Scope 1 - On-Site Fuel Combustion	21	0%
Scope 2 - Purchased Electricity	132,374	100%
Scope 2 - Other Purchased Energy	0	0%

Total

132,395

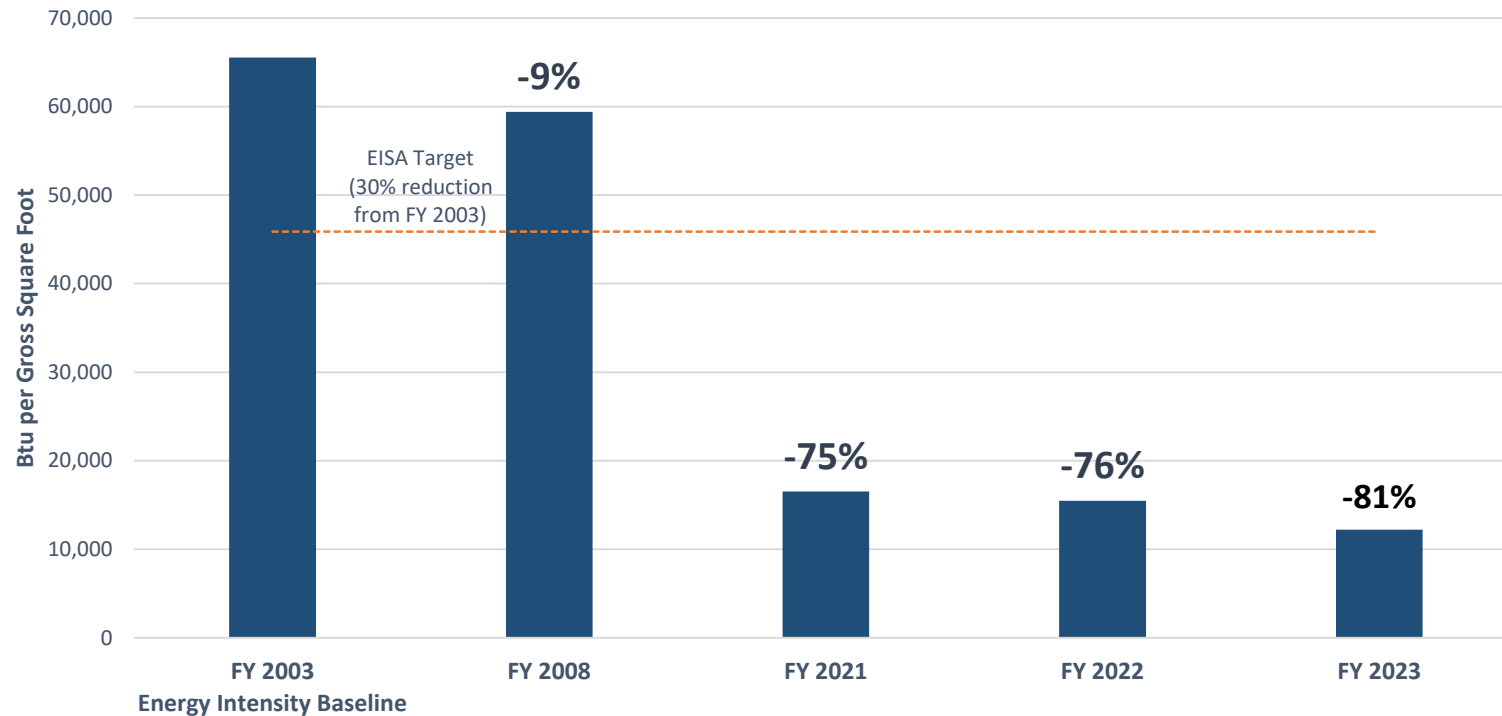
Tennessee Valley Authority
FY 2023 Sustainability Scorecard



Federal Facility Energy Use

Facility Energy Intensity

Reduction in facility energy intensity (Btu per GSF) from a 2003 baseline



For abbreviations and definitions— See OMB Scorecard Glossary

Agency Progress Indicator

Agency status meeting or exceeding the statutory goal of a 30% reduction in Btu/GSF from a 2003 Baseline



Not Met

Met

Exceeded

Annual Progress from Prior Year

-3,256

Btu per GSF

-21.0%

Energy Intensity Details

<u>End Use</u>	<u>Site-Delivered BBtu</u>	<u>% of Total</u>
Electricity	359	389%
On-Site Fuel Combustion	0	0%
Purchased Thermal	1	2%
On-Site Renewables and Other Adjustments	-269	-291%
End-Use Sector Total	92	
Gross Square Feet (Thou.)		7,542
Energy Intensity		12,220

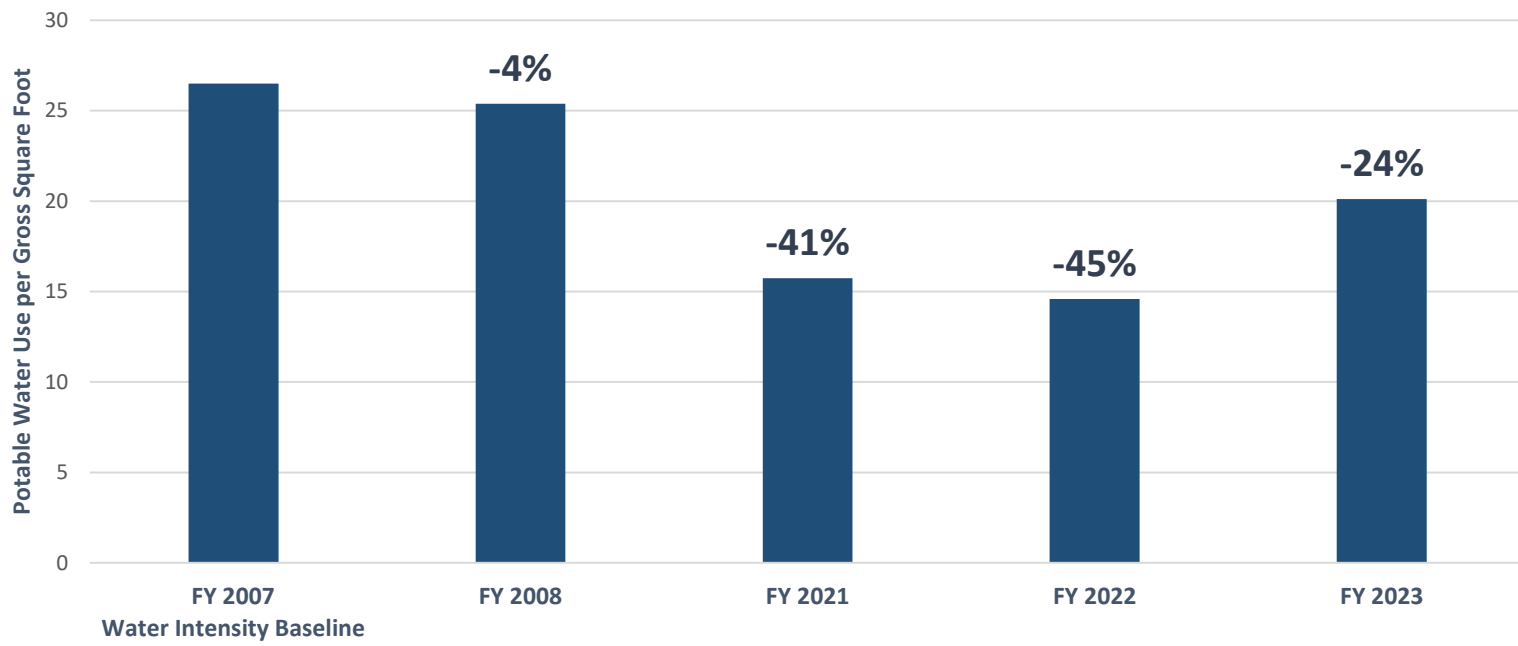
Tennessee Valley Authority
FY 2023 Sustainability Scorecard



Federal Facility Water Use

Facility Water Intensity

Reduction in facility water intensity (Gallons per GSF from a 2007 baseline)



Annual Progress from Prior Year

+6

Gallons per GSF Change

+37.9%

Water Intensity Details

	<u>FY23</u>
Gallons (Million)	451
GSF (Thou.)	22,426

Water Intensity **20.1**

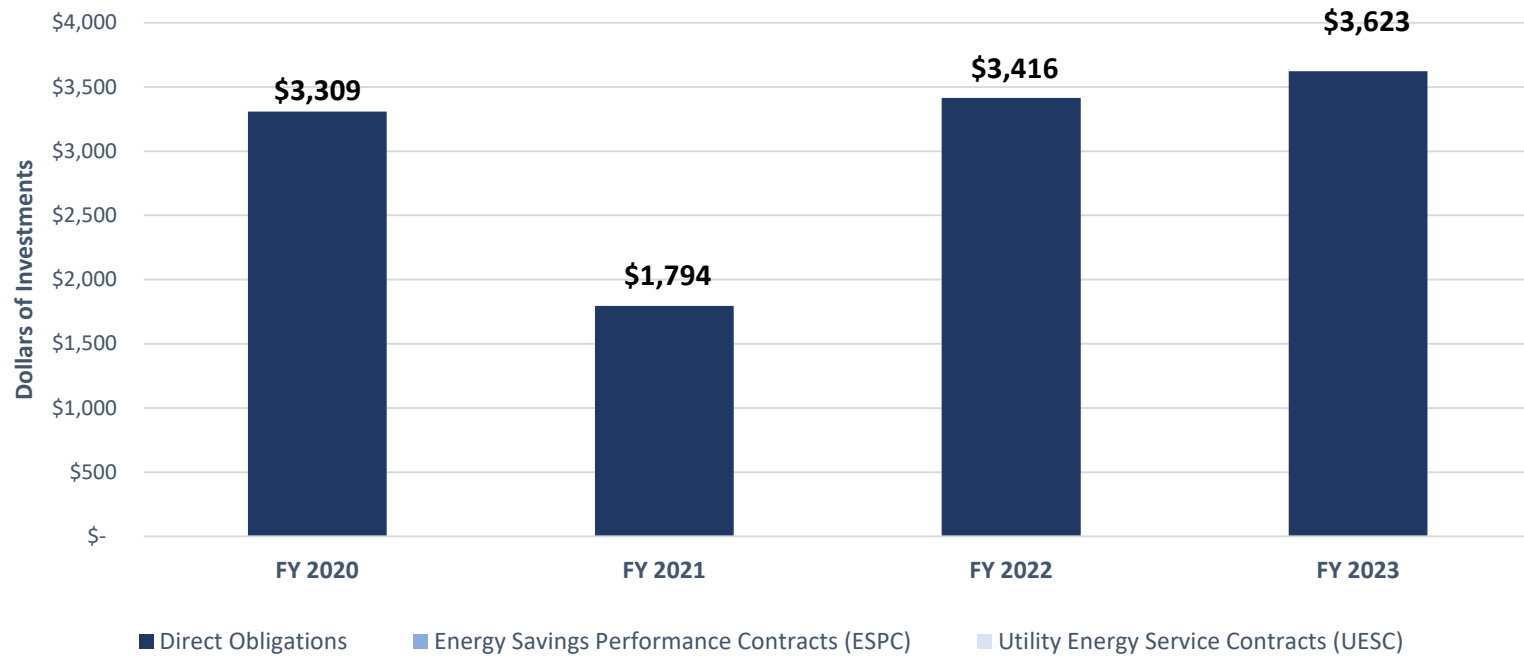
For abbreviations and definitions— See OMB Scorecard Glossary

Tennessee Valley Authority
FY 2023 Sustainability Scorecard



Federal Facility Efficiency Investments

Investment in Energy Efficiency and Renewable Energy
 (in As-Spent Dollars (Thou.))



For abbreviations and definitions— See OMB Scorecard Glossary

Agency Progress Indicator

Agency progress on completion of facility evaluations as compared to all other Scorecard Agencies in FY23



Bottom 25%

Middle

Top 25%

Annual Progress

Percent of total investments completed by
 ESPC or UESCs over the last 4 years

0%

Percent of covered facilities evaluated for efficiency
 opportunities

100%

Agency Facility Investments in ECMs

Type of Investment	Thou. \$	% of investment
Direct Obligations	\$3,623	100%
ESPC	\$0	0%
UESC	\$0	0%

Total (M\$)

\$3.6

OMB Scorecard Glossary

Abbreviations

Btu = British thermal units CFE = Carbon Pollution Free Electricity ECM = efficiency/conservation measure ESPC = Energy Savings Performance Contracts	EVSE = electric vehicle supply equipment (e.g. Charging Ports) GHG = greenhouse gas GSF = Gross square foot (or feet) ICE = Internal Combustion Engine KWh = Kilowatt hours	LDV = Light Duty Vehicle MTCO_{2e} = Metric Tons of Carbon Dioxide Equivalent N/A = data not available UESC = Utility Energy Service Contracts ZEV = Zero Emissions Vehicles
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Progress Indicators

Bottom 25%	Middle	Top 25%
Lower Quartile or 25th percentile relative to other Scorecard Agencies	Middle Quartiles or >25 th , but <75th, percentile relative to other Scorecard Agencies	Upper Quartile or 75th percentile relative to other Scorecard Agencies

Terminology

TOPIC

DATA SOURCE and TERMINOLOGY DEFINITIONS

NET-ZERO EMISSIONS OPERATIONS

Source: Agency greenhouse gas emission are calculated from the agency submitted Annual Energy Management Data Reports. Details and background data can be found on FEMP's [Comprehensive Annual Energy Data and Sustainability Performance](#) data site.

- **Standard Operations:** Any emissions from operations not designated, under section 602 of E.O. 14057, as exempted and reported as non-standard operations. Non-Standard Operations are vehicles, vessels, aircraft and other equipment used by Federal Government agencies in combat support, combat service support, tactical or relief operations, training for such operations, law enforcement, emergency response, or spaceflight (including associated ground-support equipment). Non-Standard operations also includes generation of electric power produced and sold commercially to other parties.
- **Scope 1 (Covered Fleets):** Emissions from standard operations from the agency's fleet of passenger fleet vehicles.
- **Scope 1 (Other):** Emissions from fluorinated gases and other fugitive emissions, on-site wastewater treatment, on-site landfills and municipal solid waste facilities, manufacturing and industrial processes, and from non-passenger fleet vehicles, aircraft, ships, and mobility equipment reported as standard operations.
- **Scope 1 (Facilities):** Emission from standard operations of on-site fuel consumption at federal facilities, including natural gas, fuel oil, LPG/propane, coal and any other fossil fuel.
- **Scope 2 (Facilities):** Emissions from standard operations of any purchased electricity, purchased biomass energy, purchased steam and hot water, purchased chilled water, purchased energy from combined heat/power plants, and renewable energy purchases.

See [E.O. 14057 Implementing Instructions for Federal Agencies](#) for more details on definitions.

CARBON POLLUTION-FREE ELECTRICITY

Source: Agency electric energy consumption is submitted to DOE-FEMP through Annual Energy Management Data Report. Details and background data can be found on FEMP's [Comprehensive Annual Energy Data and Sustainability Performance](#) data site.

- **Agency CFE:** Includes electricity generated at a Federal facility, electricity purchased from a qualifying CFE generation source with the associated energy attribute certificates (EACs) and Purchased or unbundled EAC.
- **Grid-supplied CFE:** CFE delivered as part of default electricity service or the electricity grid mix from a utility or electric service provider.
- **Non-CFE:** Electricity from non-carbon pollution free electricity sources.

See [E.O. 14057 Implementing Instructions for Federal Agencies](#) for more details on definitions.

OMB Scorecard Glossary

Terminology and Progress Indicators

TOPIC	DATA SOURCE and TERMINOLOGY DEFINITIONS
<p>ZERO-EMISSION VEHICLE ACQUISITIONS</p>	<p>Source: Agency fleet inventory and EVSE installation data was reported in the Federal Automotive Statistical Tool (FAST). Acquisition (vehicle order) data was provided by GSA.</p> <ul style="list-style-type: none"> • Light Duty: A vehicle weighing 8,500 pounds gross vehicle weight rating or less, certified for use on all public roads and highways. (Sec. VII of M-22-06) • Vehicle Acquisition: The placement of an order for a vehicle, recognizing fulfillment and timing of delivery is not within an agency’s control. • Vehicle Inventory: Vehicles in agency operation as of September 30 of the fiscal year as reported in FAST. • Charging Port: Electric vehicle supply equipment connector in agency operation as of September 30 of the fiscal year as reported in FAST. A charging station may have multiple ports. <p>See E.O. 14057 Implementing Instructions for Federal Agencies for more details on definitions.</p>
<p>NET-ZERO EMISSIONS BUILDINGS</p>	<p>Source: Agency facility greenhouse gas emission are calculated from the agency submitted Annual Energy Management Data Reports. Details and background data can be found on FEMP’s Comprehensive Annual Energy Data and Sustainability Performance data site.</p> <ul style="list-style-type: none"> • Scope 2 - Other Purchased Energy: Emissions from standard operations from any purchased biomass energy, purchased steam and hot water, purchased chilled water, purchased energy from combined heat/power plants, and renewable energy purchases. <p>See E.O. 14057 Implementing Instructions for Federal Agencies for more details on definitions.</p>
<p>FACILITY ENERGY EFFICIENCY</p>	<p>Source: Agency facility energy use is submitted to DOE-FEMP through Annual Energy and Water Use Reports. Details and background data can be found on FEMP’s Comprehensive Annual Energy Data and Sustainability Performance data site.</p> <ul style="list-style-type: none"> • Purchased Thermal Energy: Include energy from purchased steam and hot water and purchased chilled water. • Purchased Renewables and Adjustments: Includes renewable energy purchases but not on-site RE, subtracts source-energy-saving project credit, weather normalization credit, and project savings in Excluded buildings credit).
<p>FACILITY WATER EFFICIENCY</p>	<p>Source: Agency facility water use is submitted to DOE-FEMP through Annual Energy Data Reports. Details and background data can be found on FEMP’s Comprehensive Annual Energy Data and Sustainability Performance data site.</p>
<p>FACILITY EFFICIENCY MEASURES/ INVESTMENT</p>	<p>Source: Agency facility efficiency investments are submitted to DOE-FEMP through Annual Energy Data Reports. Details and background data can be found on FEMP’s Comprehensive Annual Energy Data and Sustainability Performance data site.</p>