

# National Aeronautics and Space Administration

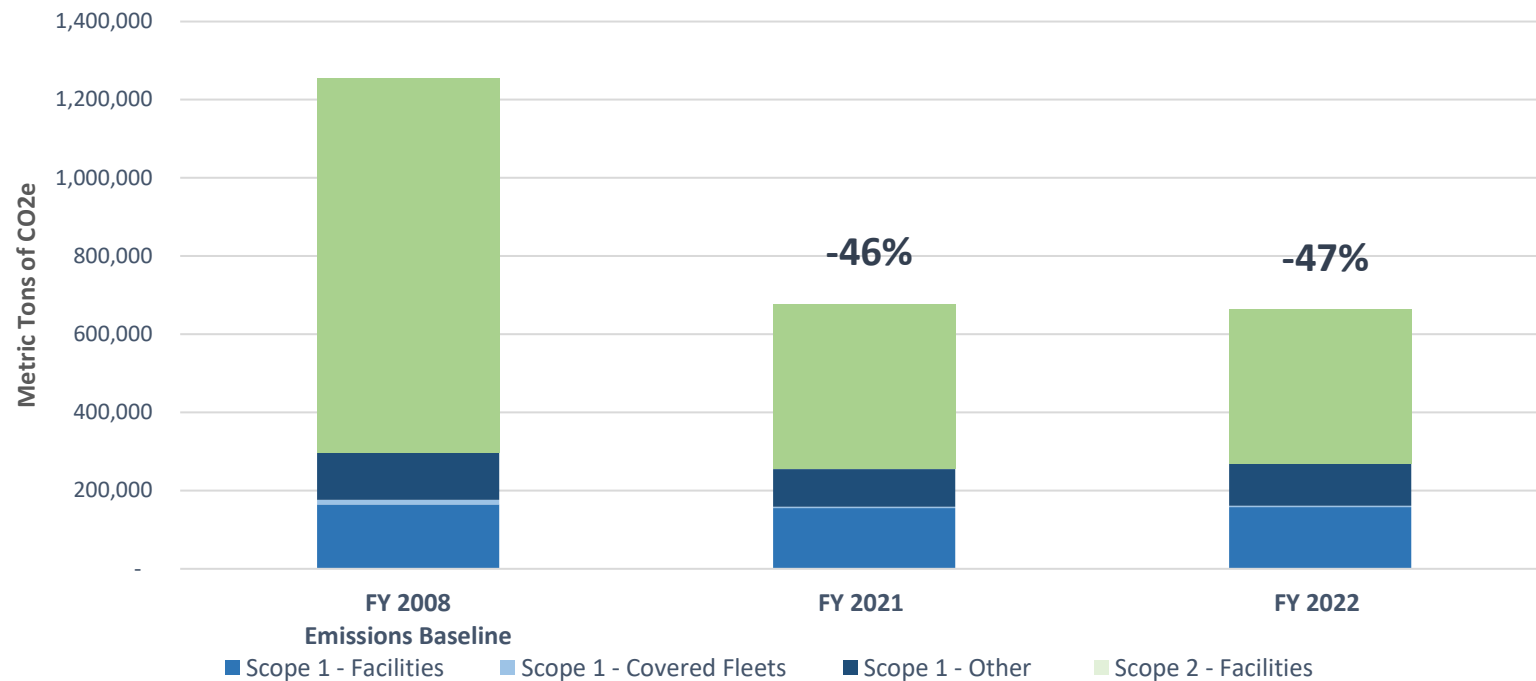
## FY 2022 Sustainability Scorecard



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

#### GHG Emissions From Standard Operations

Reduction in annual scope 1 and 2 emissions (MT CO2e) from a 2008 baseline



For abbreviations and definitions— See OMB Scorecard Glossary

#### Annual Progress from Prior Year

**+13,007**

Scope 1 Emissions

**-26,390**

Scope 2 Emissions

**+5%**

**-6%**

#### FY 2022 Standard Operations Emissions

Scope and Category	MTCO2e	% of Total
Scope 1 - Covered Fleets	3,756	1%
Scope 1 - Other	106,613	16%
Scope 1 - Facilities	157,944	24%
Scope 2 - Facilities	393,961	59%

**Total**

**662,274**

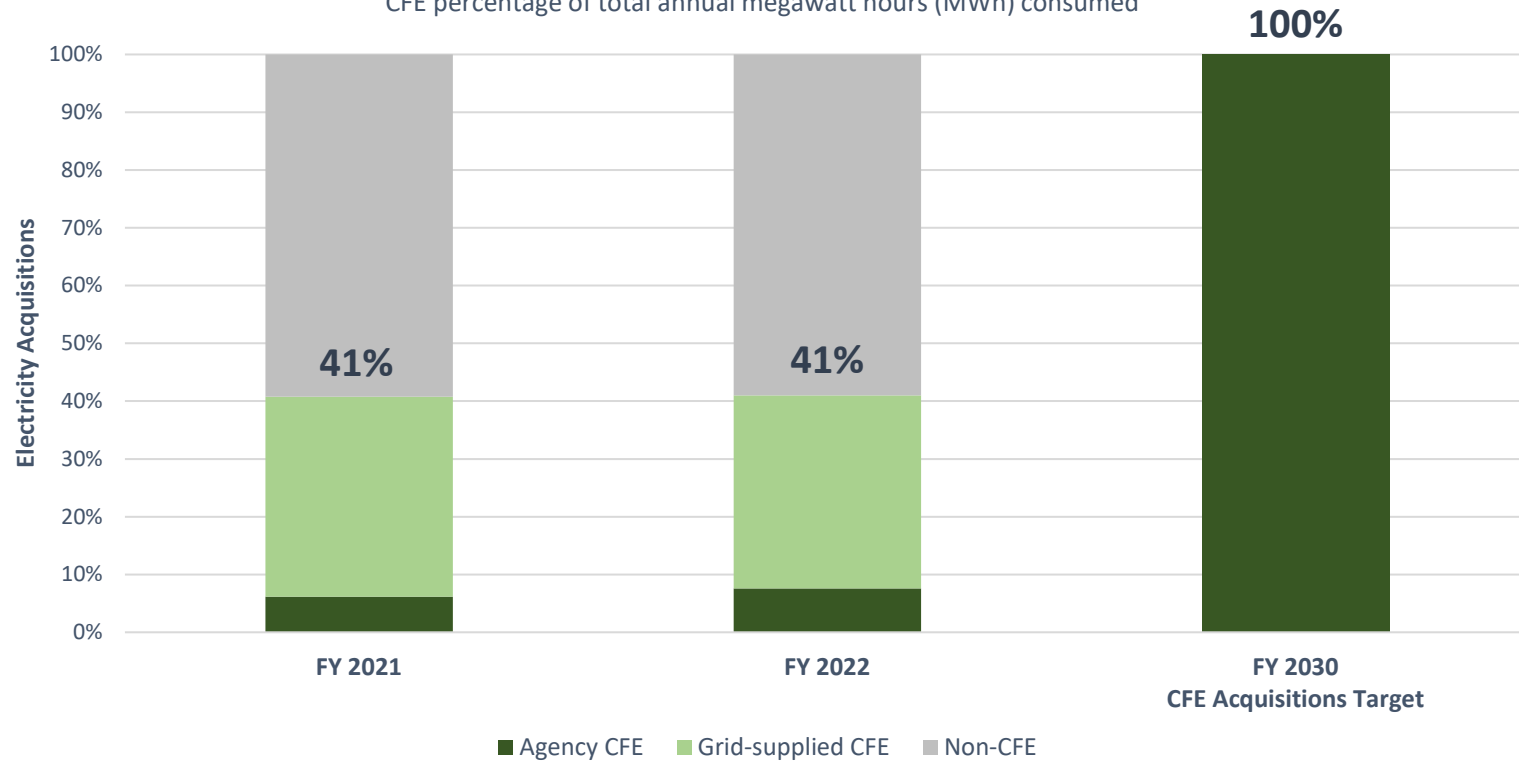
# National Aeronautics and Space Administration

## FY 2022 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



### Annual Progress from Prior Year

**+13,527**

MWh of CFE Acquisition

**+3%**

### FY 2022 Agency Electricity Profile

Category	MWh	% of Total
Agency CFE	90,893	8%
Grid-Supplied CFE	399,854	33%
Non-CFE	707,079	59%

**Total**

**1,197,825**

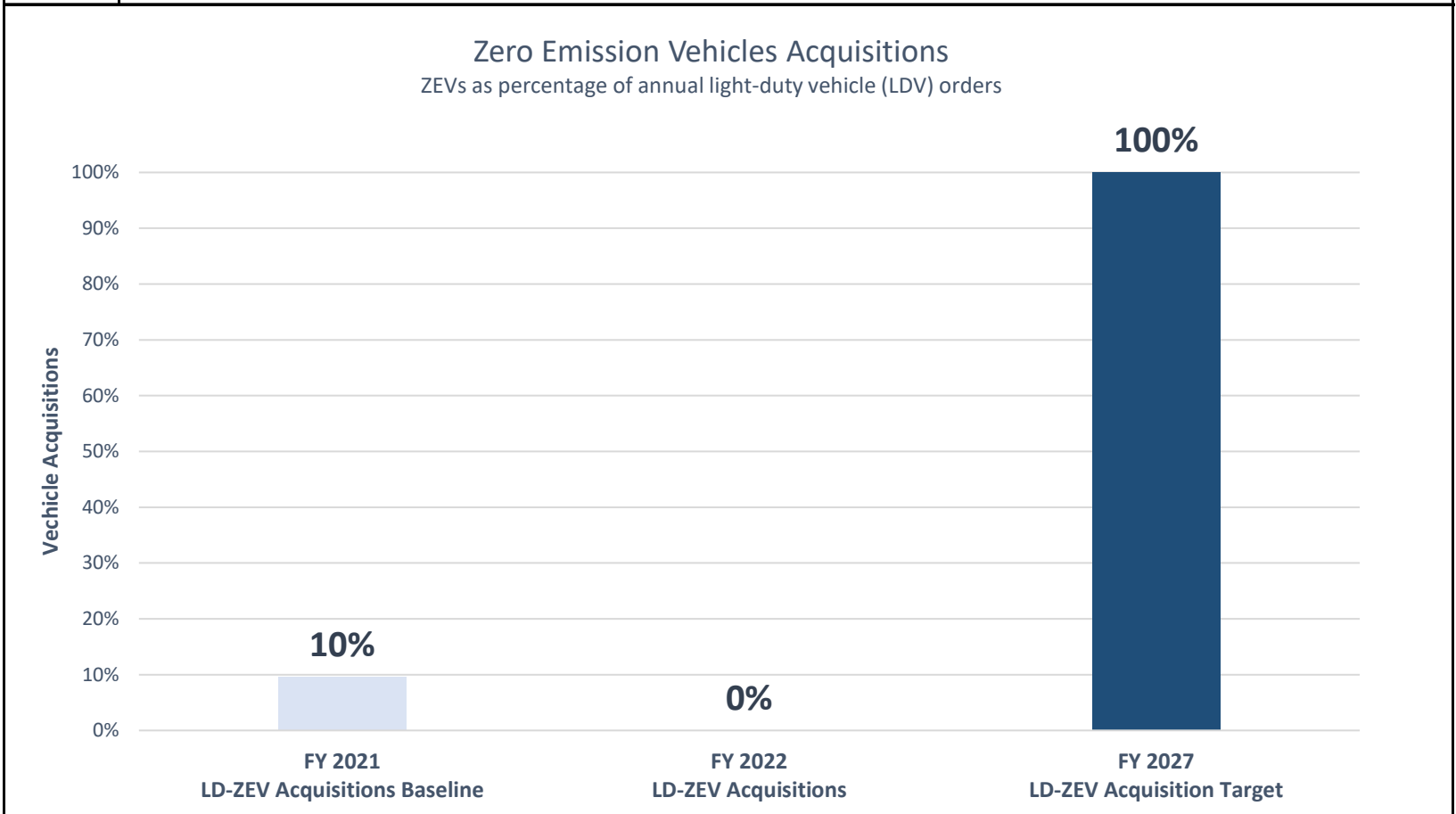
For abbreviations and definitions— See OMB Scorecard Glossary

# National Aeronautics and Space Administration

## FY 2022 Sustainability Scorecard



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



Annual Progress from Prior Year		
	<b>-12</b>	<b>+82</b>
	LD-ZEV Acquisitions	Charging Ports
	<b>-100%</b>	<b>+23%</b>
Covered Fleet Inventory		
Category	FY 21	FY 22
Light Duty ZEV	62	68
Light Duty ICE	1,459	1,445
<b>Total</b>	<b>1,521</b>	<b>1,513</b>
Charging Port Inventory		
Category	FY 21	FY 22
AC Level 1	285	285
AC Level 2	72	154
DC Fast Charging	2	2
<b>Total</b>	<b>359</b>	<b>441</b>

For abbreviations and definitions— See OMB Scorecard Glossary

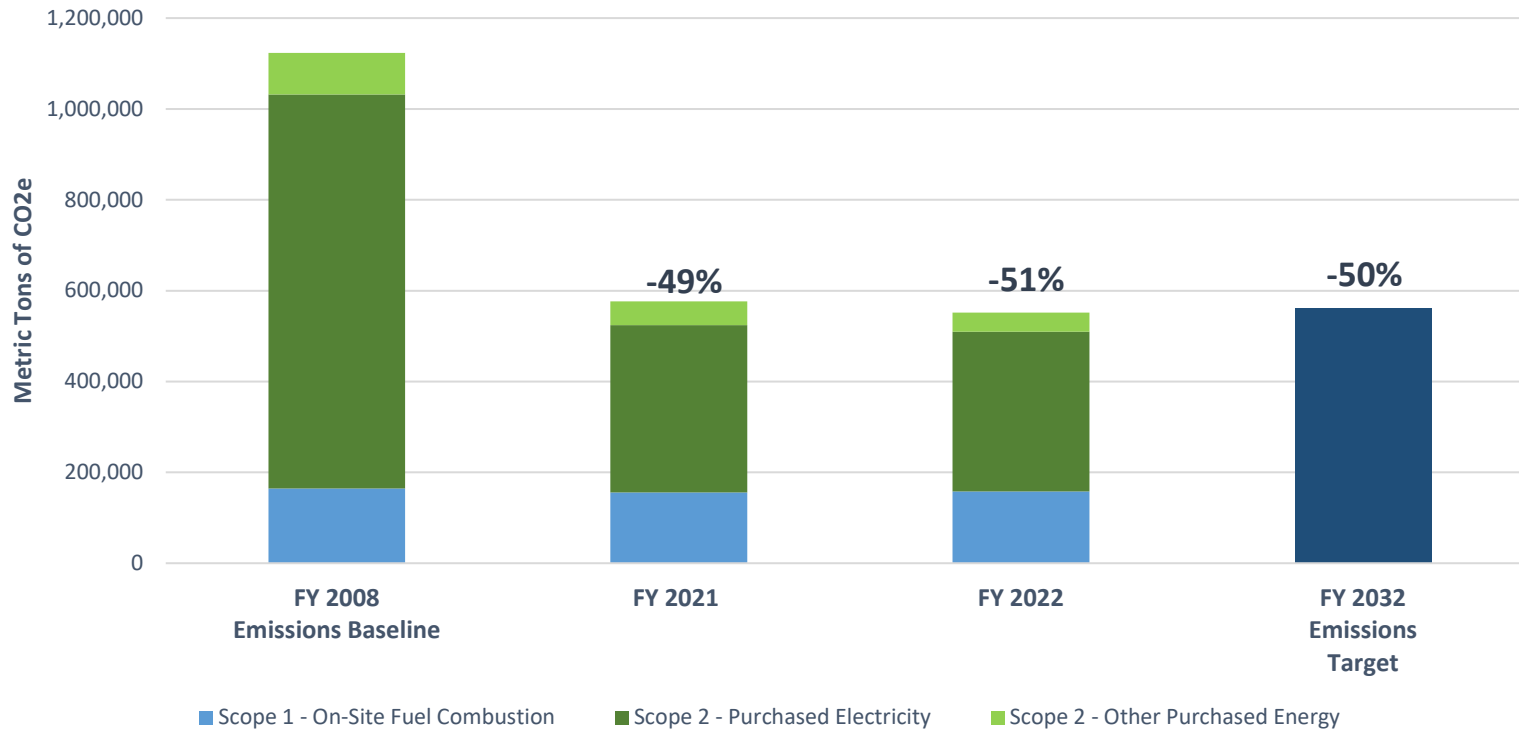
# National Aeronautics and Space Administration

## FY 2022 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 CO<sub>2</sub>e) from a FY 2008 Baseline



### Annual Progress from Prior Year

**+2,232**

Scope 1 Emissions

**-26,390**

Scope 2 Emissions

**+1%**

**-6%**

### FY 2022 Buildings Standard Emissions

GHG	MTCO <sub>2</sub> e	% of Total
Scope 1 - On-Site Fuel Combustion	157,944	29%
Scope 2 - Purchased Electricity	351,863	64%
Scope 2 - Other Purchased Energy	42,097	8%

**Total**

**551,905**

For abbreviations and definitions— See OMB Scorecard Glossary

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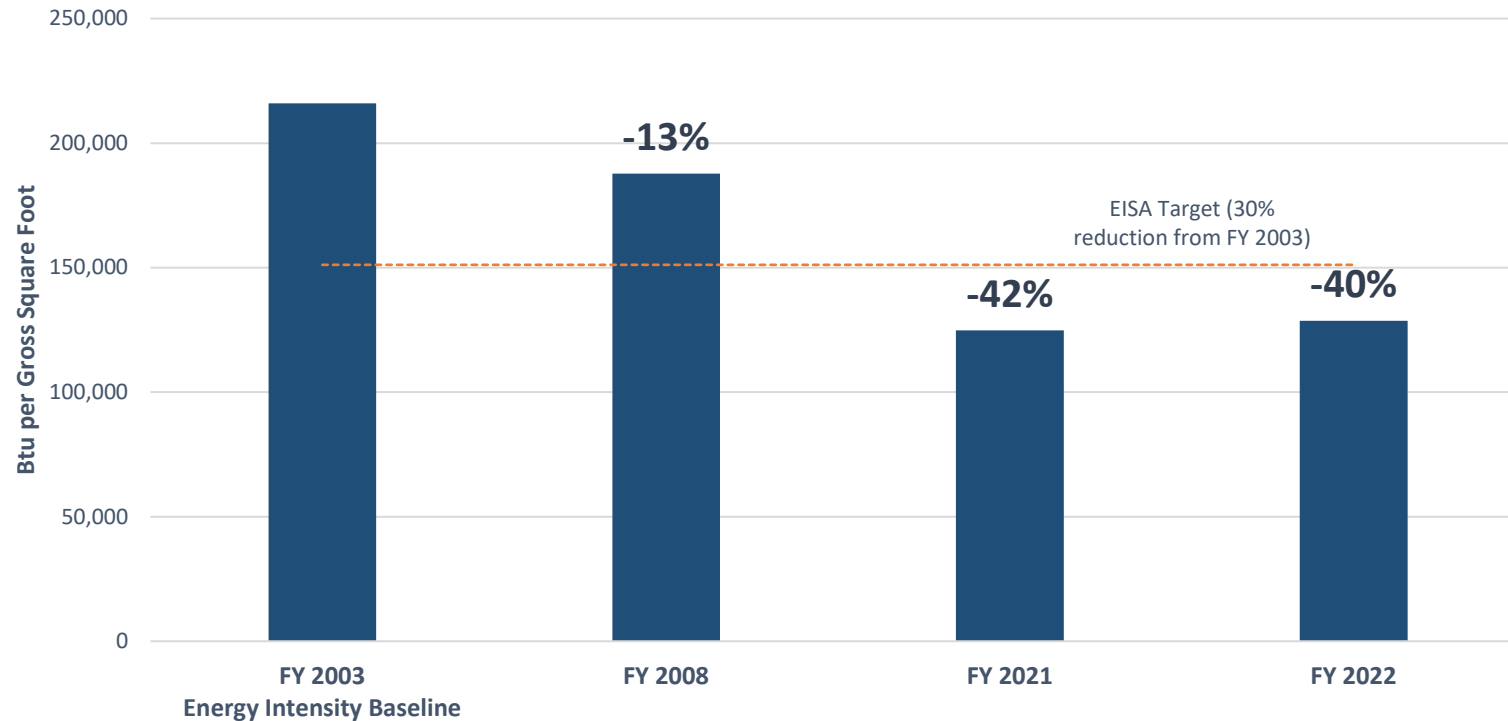
## FY 2022 Sustainability Scorecard



### Federal Facility Energy Use

#### Facility Energy Intensity

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



#### 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

**+3,888**

Btu per GSF

**+3.1%**

#### Energy Intensity Details

End Use	Site-Delivered BBtu	% of Total
Electricity	2,423	60%
On-Site Fuel Combustion	2,396	59%
Purchased Thermal	188	5%
On-Site Renewables and Other Adjustments	-957	-24%
<b>End-Use Sector Total</b>	<b>4,050</b>	
<b>Gross Square Feet (Thou.)</b>		<b>31,477</b>

**Energy Intensity**

**128,656**

For abbreviations and definitions— See OMB Scorecard Glossary

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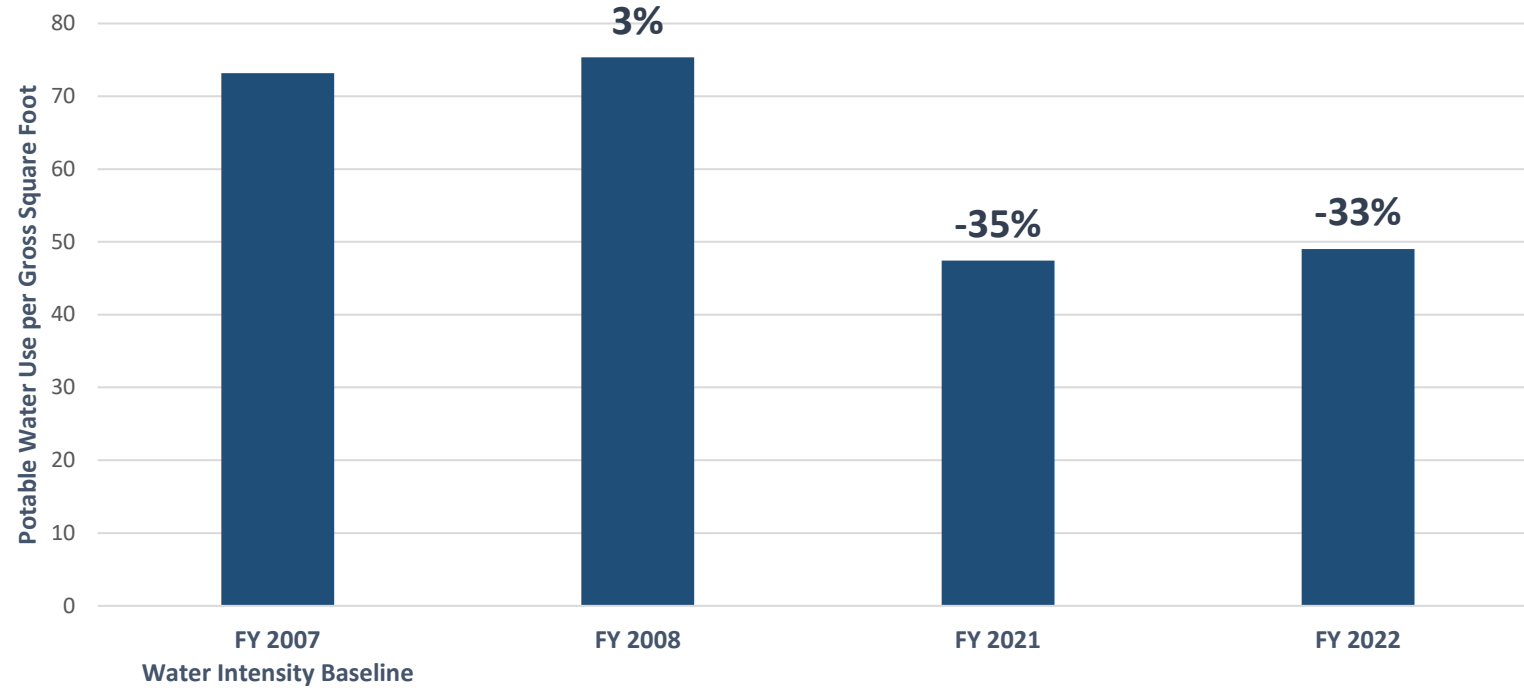
## FY 2022 Sustainability Scorecard



### Federal Facility Water Use

#### Facility Water Intensity

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



#### Annual Progress from Prior Year

**+2**

Gallons per GSF Change

**+3.4%**

#### Water Intensity Details

	<u>FY22</u>
Gallons (Million)	1,823
GSF (Thou.)	37,193
<b>Water Intensity</b>	<b>49.0</b>

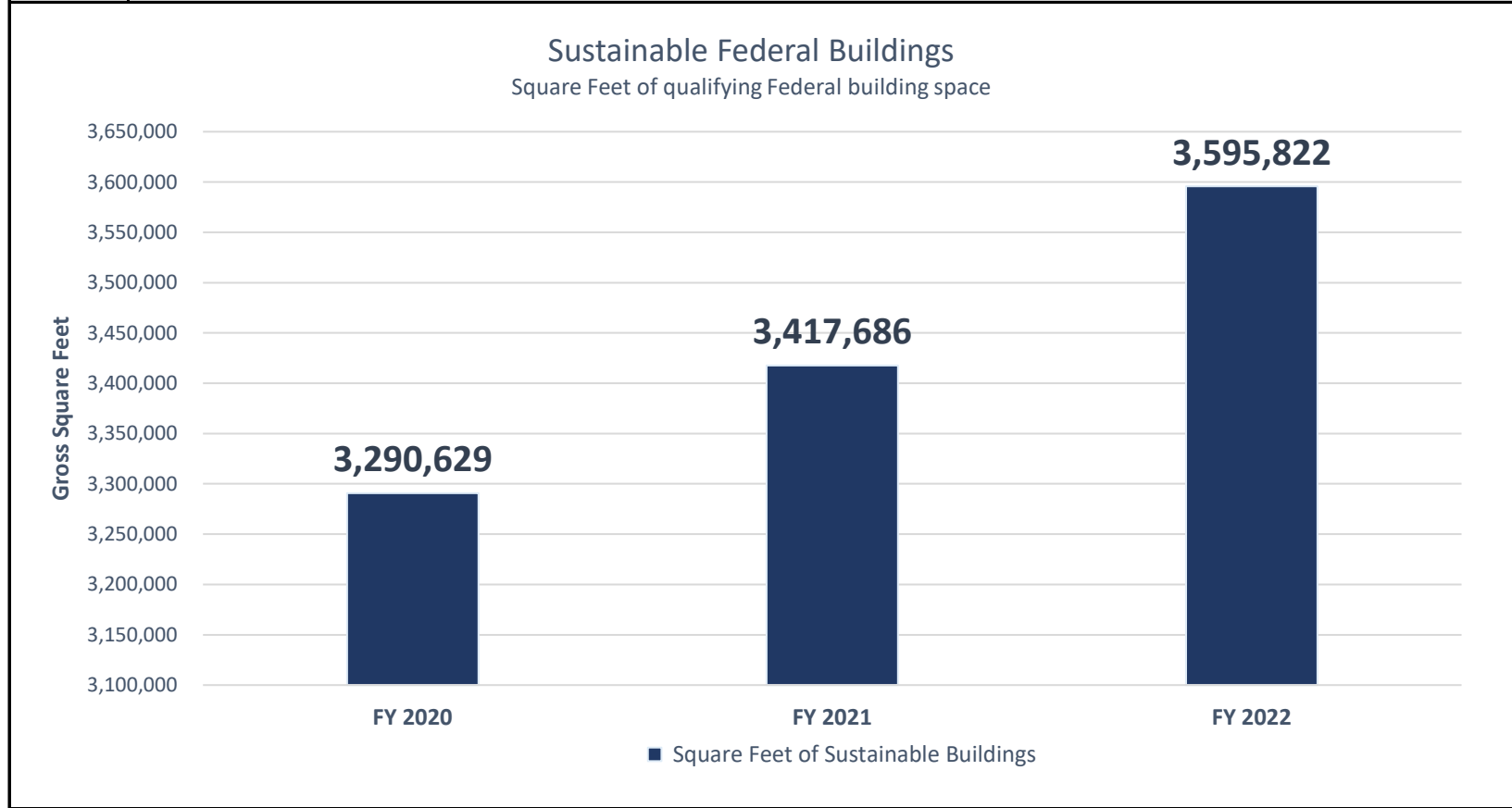
For abbreviations and definitions— See OMB Scorecard Glossary

# National Aeronautics and Space Administration

## FY 2022 Sustainability Scorecard



### High Performance Sustainable Federal Buildings



Annual Progress from Prior Year		
<b>+4</b>	<b>+178,136</b>	
Sustainable Federal Buildings	Sq.ft of Sustainable Federal Buildings	
<b>+8%</b>	<b>+5%</b>	
Agency Sustainable Building Details		
	Number of Buildings	Sq.ft. of Buildings
■ Assessed as Sustainable	52	3,595,822
■ All Applicable Buildings	147	11,316,975
Portfolio Sustainability	<b>35%</b>	<b>32%</b>

For abbreviations and definitions— See OMB Scorecard Glossary

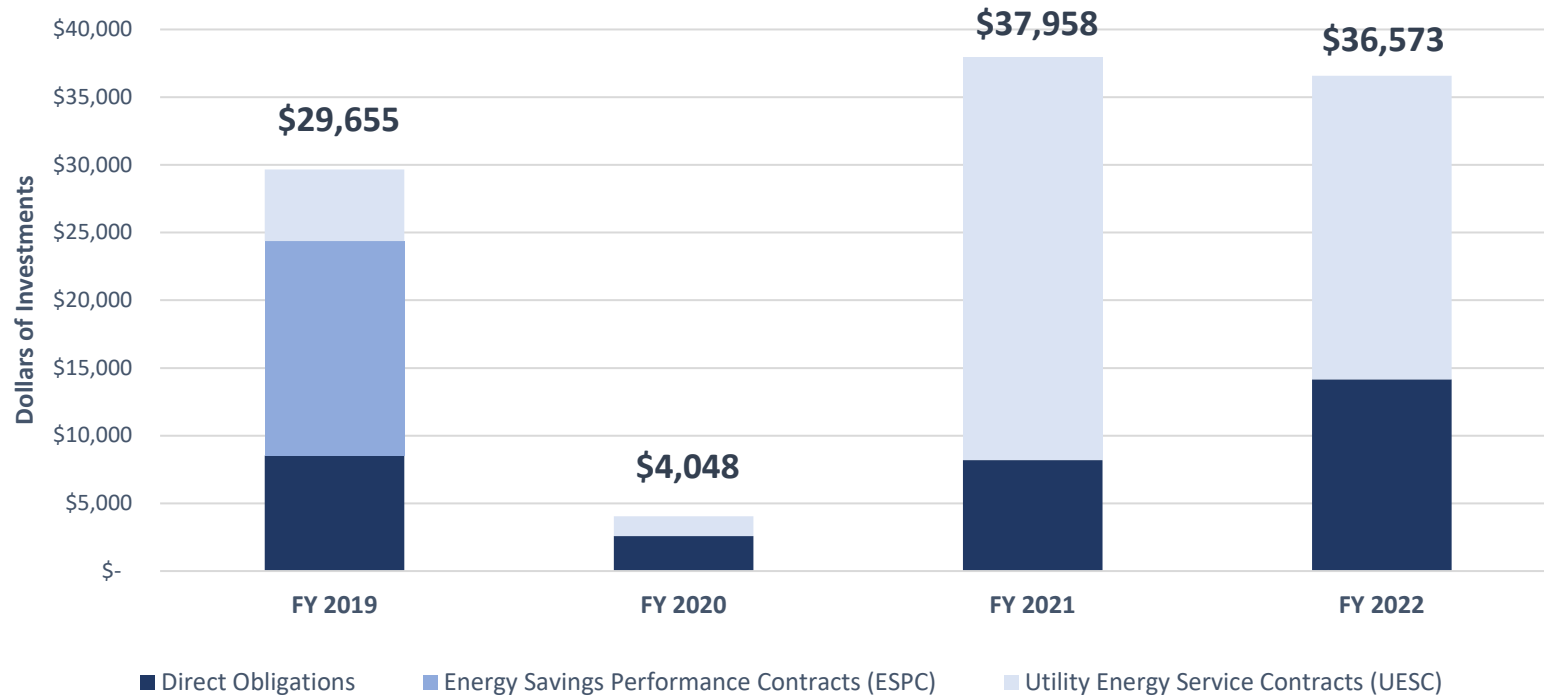
# National Aeronautics and Space Administration

## FY 2022 Sustainability Scorecard



### Federal Facility Efficiency Investments

Investment in Energy Efficiency and Renewable Energy  
(in Adjusted Constant FY 2022 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 FY22

**Top 25%**

### Annual Progress

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

**69%**

Percent of covered facilities evaluated for efficiency  
opportunities

**100%**

### Agency Facility Investments in ECMs

Type of Investment	Thou. \$	% of investment
Direct Obligations	\$14,165	39%
ESPC	\$0	0%
UESC	\$22,408	61%

**Total (M\$)**

**\$36.6**



## OMB Scorecard Glossary

### Abbreviations

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

### Progress Indicators

#### Top 25%

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

#### ZERO-EMISSION VEHICLE ACQUISITIONS

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.

- **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.

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

#### NET-ZERO EMISSIONS BUILDINGS

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.

- **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.

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

#### FACILITY ENERGY EFFICIENCY

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.

- **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).

#### FACILITY WATER EFFICIENCY

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.

#### HIGH PERFORMANCE SUSTAINABLE BUILDINGS

[Source: Agency sustainable building inventory is reported through GSA's Federal Real Property Profile Management System. Details and background data can be found in the Federal Real Property Public Data Set \(FRPP\).](#)

- **Assessed as Sustainable:** Any building which meets the criteria as laid out in the CEQ [Guiding Principles for Sustainable Federal Buildings and Associated Instructions](#).
- **Applicable Buildings:** All sustainable buildings and all federal buildings over 25,000 sq.ft. which met the criteria as detailed in Section 32 of the GSA 2022 [Guidance for Real Property Inventory Reporting](#).

#### FACILITY EFFICIENCY MEASURES/ INVESTMENT

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.