

Decarbonizing the Agriculture Sector



Guiding Principles

ENVIRONMENTAL JUSTICE



We will build the clean energy economy in a way that benefits ALL Americans.

DIVERSITY IN STEM



To ensure the success of clean energy industries, we will actively foster diverse STEM talent.

FOCUS ON WORKFORCE



We will strengthen the pipeline for permanent, good-paying jobs in the clean energy workforce.

STATE AND LOCAL



We will partner with state and local governments to transition to a clean energy economy.

Overview

The Office of Energy Efficiency and Renewable Energy (EERE) accelerates the research, development, demonstration, and deployment of technologies and solutions to equitably transition America to net-zero greenhouse gas emissions economy-wide by no later than 2050. To lead in this transition, **EERE's FY 2022 budget request is \$4.7 billion**. The request calls for activities and programs to help decarbonize the electricity, transportation, industrial, buildings, and agriculture sectors, while training the next generation of clean energy workers; supporting state and local economies; creating new, high-quality, good paying jobs in the field; and deploying new, efficient, and clean technologies that are affordable for all Americans.

Decarbonize the Agriculture Sector

Agriculture represents nearly 10% of U.S. carbon emissions. Because water is critical to agriculture and our centralized fresh-water infrastructure is deteriorating due to climate change and other factors, EERE will work closely with USDA to decarbonize the agricultural sector through a focus on the nexus between energy and water. Additionally, EERE's work related to reducing greenhouse gas emissions in the agricultural sector relates to achieving decarbonization in the other key sectors of the economy. This includes developing advanced biofuels, improving efficiency of off-road agricultural vehicles, converting animal waste to clean energy, and better understanding and predicting water flow to design more water and energy efficient irrigation systems.

FY 2022 Budget Highlights

EERE's FY 2022 budget request for enterprise-wide activities and programs that support the goal of reducing the carbon footprint of buildings totals \$134.3 million. Highlights include the following:

- **Bioenergy Focus to Decarbonize the Agriculture Sector (\$24M)** – Focuses on the nexus between energy and water in coordination with the USDA by reducing upstream agricultural lifecycle emissions associated with biomass feedstock production, harvesting, and logistics. Objectives include improving the sustainability of the biomass supply chain; enabling net-negative feedstocks; developing and demonstrating agricultural waste management solutions; and creating high-quality jobs, particularly in rural America.
- **Healthy Forest Management, Sustainable Agriculture, Biogenic Carbon Drawdown (\$13M)** – Creates a new RD&D program on sustainable agriculture practices to help farmers maximize profits on marginal lands while providing valuable feedstocks for bioenergy production. Funding will develop sensors and tools for soil carbon monitoring and soil carbon enhancement via biochar while enabling carbon credit banking markets and other activities requiring verifiable carbon emission data.
- **Community Organic Waste Management Solutions (\$10M)** – Promotes new community-scale, public-private partnerships to reduce harmful emissions and other environmental issues from operations that produce manure and other wet wastes that disproportionately affect disadvantaged communities in rural areas. Funding will support engineering, construction, and operation of up to two pilot-scale projects that employ advanced technologies suitable for various community circumstances to demonstrate overall potential. ■

FY 2022 EERE BUDGET REQUEST BREAKDOWN (\$ IN THOUSANDS)

	FY 2020 Enacted (\$K)	FY 2021 Enacted (\$K)	FY 2022 Request (\$K)
Sustainable Transportation	805,500	805,000	1,132,500
Vehicle Technologies	396,000	400,000	595,000
Bioenergy Technologies	259,500	255,000	340,000
Hydrogen and Fuel Cell Technologies	150,000	150,000	197,500
Renewable Power	642,000	646,000	951,765
Solar Energy Technologies	280,000	280,000	386,575
Wind Energy Technologies	104,000	110,000	204,870
Water Power Technologies	148,000	150,000	196,560
Geothermal Technologies	110,000	106,000	163,760
Energy Efficiency	1,091,000	1,103,500	2,179,150
Advanced Manufacturing	395,000	396,000	550,500
Federal Energy Management Program	40,000	40,000	438,150
Building Technologies	285,000	290,000	382,000
Weatherization and Intergovernmental Programs	371,000	377,500	808,500
Corporate Support	309,500	309,500	468,585
Program Direction	165,000	165,000	250,000
Strategic Programs	14,500	14,500	43,585
Facilities and Infrastructure (NREL)	130,000	130,000	175,000
Subtotal, EERE	2,848,000	2,864,000	4,732,000
Rescission of Prior Year Balances	(58,000)	(2,240)	
Energy Program Rescission	(12,723)		
Total, EERE	\$2,777,277	\$2,861,760	\$4,732,000
Total, Decarbonizing the Agriculture Sector		\$50,700*	\$134,300*

*These figures represent the amount for all activities and programs that support this decarbonization goal and do not comprise the total EERE FY21 Enacted or FY22 budget request.

**OFFICE OF
ENERGY EFFICIENCY &
RENEWABLE ENERGY**

For more information, visit:
energy.gov/eere

June 2021