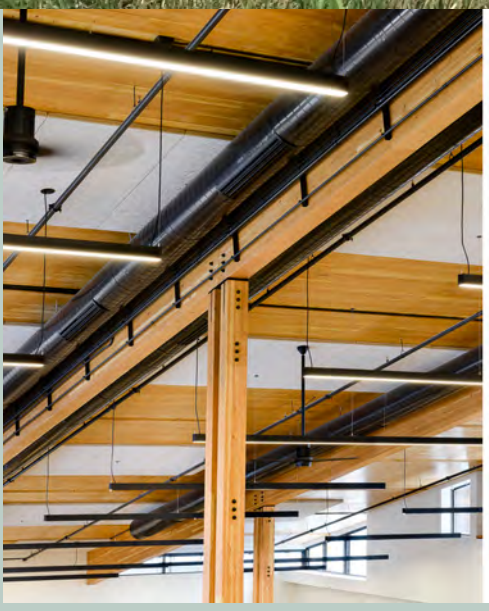
U. S. DEPARTMENT OF AGRICULTURE

U.S. Department of Agriculture 2022 Sustainability Plan



July 29, 2022

2022 USDA Sustainability Plan

1. USDA Sustainability Plan Summary

The U.S. Department of Agriculture (USDA, the Department) is committed to achieving the goals of Executive Order (E.O.) 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, and to reducing scope 1, 2, and 3 greenhouse gas (GHG) emissions. USDA plans to accomplish this by conserving energy and water, implementing renewable energy projects, utilizing performance contracts, building and operating new facilities, reducing solid waste, procuring goods and services, and procuring and operating new fleet vehicles sustainably. The Department and its agencies will continue to lead by example in fostering sustainable practices, optimizing its real property footprint, conducting operations in a sustainable, resilient, and environmentally responsible manner, as well as meeting or exceeding environmental statutory and regulatory requirements.

2. Priority Actions Towards Goals

A. 100 Percent Carbon Pollution-Free Electricity

USDA has initiated several priority actions to increase carbon pollution-free electricity (CFE) to 100% by 2030, with 50% on a 24/7 basis. Priority actions in FY 2022 include the following:

- quantifying emissions from purchased electricity by e-GRID region to prioritize locations for CFE purchase and on-site installation;
- prioritizing locations for CFE purchases based on 1) emissions/kilowatt-hour (kWh), and 2) CFE offerings from the local utility by end of FY 2022; and
- identifying priority sites for onsite CFE installation to be completed in calendar year 2022.

B. 100 Percent Zero-Emission Vehicle Fleet

USDA is taking several priority actions to transition to 100% acquisition of zero-emission vehicles (ZEVs) by 2035 for the fleet, including 100% light-duty ZEV acquisitions by 2027. These ambitious target-goals are in accordance with E.O. 14057. Priority actions in FY 2022 include the following:

- beginning ZEV acquisition planning for FY 2022 and beyond to best-match replacing internal-combustion engine-based vehicles with ZEVs;
- beginning identification of locations for potential prioritization of electric vehicle supply equipment installation in FY 2022 and beyond; and
- beginning implementation of a plan for the installation of telematics on vehicles throughout the fleet in FY 2022 and beyond.

C. Net-Zero Emissions Buildings, Campuses, and Installations

i. Design and Construction for Net-Zero Emissions

USDA is embarking upon a path towards owning and operating a net-zero emissions portfolio of buildings, campuses, and installations. USDA's Forest Service (FS) and Agricultural Research Service (ARS) presently operate three as well as continue to construct net-zero energy facilities. The Department identified the following priority actions for FY 2022:

- initiating the strategic USDA Design and Construction for Net-Zero Emissions plan; and

- moving towards goal-attainment by sharing information with the USDA sustainability program leads in the component agencies via Sustainable Buildings and Facilities Energy and Water workgroup meetings.

ii. Increasing Energy Efficiency

USDA initiated several priority actions to increase energy efficiency at its facilities. Priority actions in FY 2022 include the following:

- increasing employee-telework and remote work positions;
- evaluating covered facilities for use with energy savings performance contracts; and
- initiating development of an ISO 50001-based Energy Management System (EnMS).

iii. Increasing Water Efficiency

USDA initiated several priority actions to increase water efficiency at its facilities. Priority actions in FY 2022 include the following:

- increasing employee-telework and remote work positions;
- identifying operations and maintenance best practices for operational efficiency and control of equipment; and
- initiating development of guidelines for conducting facilities water evaluations and benchmarking.

D. Reducing Waste and Pollution

In FY 2021, USDA buildings reported recycling 1,011 metric tons, composting 141 metric tons, sending 56 metric tons of waste to energy recovery facilities, and disposing of 4,680 metric tons in landfills or incinerators. This resulted in a waste diversion rate of 19.5%. USDA is working to reduce hazardous and non-hazardous waste generation and annually divert 50% of non-hazardous solid waste by FY 2025 and diverting 70% by FY 2030 by:

- proactively tracking recycling and reporting data annually;
- maximizing purchase of materials with high recycled content; and
- working to reduce hazardous waste and ensure proper disposal of any hazardous waste that is generated.

E. Sustainable Procurement

In FY 2021, 28.5% of USDA's contract actions and 11.7% of its obligations complied with statutory environmental requirements, equivalent to $1.103 billion in contract actions. USDA is implementing actions to reduce emissions, promote environmental stewardship, support resilient supply chains, drive innovation, and incentivize markets for sustainable products by:

- developing and prioritizing strategies to improve performance on sustainable procurement metrics, including conducting training on sustainable acquisition requirements;
- building on partnerships between the sustainability and procurement staff; and
- improving compliance with requirements to purchase biobased products across the Federal Government by reviewing current solicitations to ensure that required clauses to purchase biobased products are included.

F. Climate- and Sustainability-Focused Federal Workforce

USDA envisions a prepared workforce, ready to strategize, plan, and meet USDA's sustainability goals. USDA is developing departmental teams and strengthening workers' credentials via continuing learning, professional certifications, and raising awareness with

training courses and webinars and through existing communication channels, such as internal work groups and newsletters. Additional priority actions include:

- incorporating sustainability priorities and requirements into employee performance plans;
- presenting updated, live, sustainable acquisition training to the acquisition community, and on-demand training through USDA's AgLearn system;
- completing USDA's yearlong "Climate, Agriculture, and Forestry Seminar Series" that is designed to provide USDA employees with the scientific foundations of climate change and an understanding of how climate change influences USDA's mission and daily work;
- identifying climate literacy needs and means to address them in USDA agency-level climate adaptation plans; this information will be used to develop short- (end of 2022) and long-term climate literacy goals; and
- Animal and Plant Health Inspection Service employees starting International Facility Management Association and the National Property Management Association (NPMA) certification programs. A Real and Personal Property Supervisor is certified as a Professional Property Specialist, and another staff member is attending a Sustainability Program Managers course in Facility Management and Sustainability. Two Fleet Specialists will enter the NPMA Fleet Management Specialist Certification course.

G. Incorporating Environmental Justice

USDA is incorporating environmental justice into sustainability and climate adaptation planning and programs, including decision-making regarding facilities, fleet, and operations. USDA is committed to increasing equity and environmental justice awareness, skills, and abilities of USDA staff. USDA will take additional steps to educate its staff on environmental justice, including disproportionate impacts from climate change, and how mitigating these impacts and promoting equitable distribution of benefits relates to USDA agencies, programs, and activities. Planned and completed actions include:

- in accordance with USDA Departmental Regulation 1070-001 Policy Statement on Climate Adaptation, weaving environmental justice into the development of USDA agency-level climate adaptation plans; and
- presenting at the Interagency Council for Advancing Meteorological Services' Social Equity Workshop on the alignment of efforts that address climate change, equity, and environmental justice. Topic examples include equity as part of the evaluation criteria of the Partnerships for Climate-Smart Commodities program and new partnerships under the Natural Resource Conservation Service's (NRCS's) Equity Conservation Cooperative Agreements.

H. Accelerating Progress through Partnerships

USDA is building on and developing external partnerships to accelerate progress in achieving the goals of E.O. 14057. Priority actions in FY 2022 include establishing numerous partnerships with an assortment of stakeholders within the private sector, state, and local governments, and throughout the Federal Government to optimize the electrification of its fleet. Partnerships being established include those with Department of Energy, Federal Energy Management Program, National Renewable Energy Laboratory, and the General Services Administration, that will support USDA in continuing to plan, design, and execute the electrifying of its fleet.

3. Progress Examples

100 Percent Carbon Pollution-Free Electricity

In 2022, ARS completed construction of a 33.3-kW solar array at its Research Farm in Fort Collins, Colorado. The solar array powers two 10,000 square foot buildings and saves the

facility $5,400 annually. The solar array enables the Research Farm to be net-zero facility for electricity. The facility is ARS' second net-zero electricity facility. Buildings at the facility will also be retrofitted with energy efficient lighting and refrigeration equipment to save energy.

100 Percent Zero-Emission Vehicle Fleet

USDA is executing its electrification strategy by placing orders to acquire a minimum of 100 ZEVs in 2022 that will specifically serve as replacements for petroleum-based vehicles. These new ZEVs will help USDA reduce petroleum consumption and realize gains in maximizing efficient vehicle use. USDA is committed to its long-term acquisition plan of replacing inefficient petroleum-based vehicles with ZEVs; USDA's efforts in 2022 demonstrate the intent of transforming its fleet inventory to one significantly comprised of ZEVs by 2035.

Design and Construction for Net-Zero Emissions

- ARS is building towards optimized energy efficiency and reducing indirect fossil fuel consumption. ARS is constructing three projects in FY 2022 with energy efficiency 30% over ASHRAE 90.1-2013, and construction projects with design in 2020 or later will reduce indirect fossil fuel consumption by 80%.
- FS continues progress on a national approach for energy savings performance contracts (ESPCs), including a breakthrough on the budget procedure. FS removed a budget disincentive by funding ESPC payments from the national account to accrue the generated savings from FY 2022 forward. FS also factors energy and sustainability impacts into its National Asset Management Program facility project funding process, using quantified metrics such as the Federal Guiding Principles conformance.

Increasing Energy Efficiency

- FS completed a major building envelope and heating, ventilation, and air conditioning (HVAC) upgrade project for the 100,000 square foot Corvallis Forestry Science Laboratory in FY 2021. The project included the installation of a building automation system and updates to air handling units, the cooling system for the walk-in coolers and freezers, exhaust air and process water systems, roofing, and windows. It yielded annual savings of 2.4 million gallons of water, 2.5 million pounds of steam, and 276,345 kWh of electricity.
- In 2022, ARS will complete a Utility Energy Service Contract (UESC) at its facility in Fort Pierce, Florida. The UESC's energy conservation measures include lighting efficiency, chiller replacement, boiler replacement, and HVAC and fume hood controls replacement. The project will save the facility $91,500 annually.

Increasing Water Efficiency

In 2022, ARS replaced a 150-horsepower irrigation pump with a high-efficiency pump and variable frequency drive at its facility in Salinas, California. The project also included welding multiple water leaks in the manifold. The project reduced the electricity use by 50% and saved a significant amount of water.

Reducing Waste and Pollution

In 2021, the FS National Greening Fire Team on-site incident recycling program diverted 621,575 pounds (310.8 tons) of material from community landfills, reducing the GHG emissions by 1,072 tons of carbon dioxide equivalent and reducing trash hauling costs by $1.3 million at 31 incidents across four wildland fire geographic coordination areas. The Greening Fire Team Net-Zero Waste design and assessment initiative will provide a roadmap to achieve net-zero waste by 2030 through on-site waste audits, a detailed supply chain analysis, and research into regional recycling partnership and infrastructure opportunities.

Sustainable Procurement

USDA awarded a competitive, negotiated task order to Epsilon, Inc. a Service-Disabled, Veteran-Owned Small Business for data center colocation, migration, and support to replace an existing USDA data center. The majority of servers will be moved to the new data center by the beginning of December 2022, and the move is expected to be completed by March 2023, based on external dependencies. The facility is powered by 100% renewable energy and is Leadership in Energy and Environmental Design Gold and ENERGY STAR® certified. It is the first UL 3223 certified data center, which addresses sustainability and climate resilience by requiring energy efficiency in addition to data center reliability and security. The data center provides for modularity and the ability to adapt to rapidly changing business strategy and needs.

Climate- and Sustainability-Focused Federal Workforce

- USDA's Four Pillars of Sustainability of Acquisitions initiative has increased climate awareness for contracting officers through the Senior Procurement Executive Talks in May 2022 for 225 contracting officers. Live training on sustainable acquisition was also presented to the entire USDA acquisition workforce and had 464 participants.
- USDA's Office of Energy and Environmental Policy (OEEP) and Agriculture, Forestry, and Climate Science Working Group launched a year-long seminar series in December 2021 on topics including the basics of climate science, the effects of climate change on agriculture and forestry, and addressing the causes and consequences of climate change. There were 2828 attendees from 23 USDA agencies and offices, all 50 states, and at least 14 countries. Recordings and resources from the 12-seminars are available online to USDA staff.

Incorporating Environmental Justice

The installation of two solar photovoltaic arrays in September 2021 at the Tropical Agriculture Research Station (TARS) facility in Mayaguez, Puerto Rico helps the facility to avoid carbon emissions and reduce local air pollution from grid electricity and TARS generators, which rely primarily on fossil fuels. At the time, Puerto Rico's unemployment rate was 7.9% and the project provided much-needed stimulus to the local economy by employing a local engineer. These outcomes support the Justice 40 initiative for the benefits of Federal clean energy investment to flow to underserved communities. In addition, in April 2022, the local utility experienced a blackout for several days and the solar arrays provided the lab with uninterrupted power supply during the blackout, contributing to the facility's climate resiliency and allowing the laboratory to continually pursue its mission of furthering Puerto Rico's agriculture.

Accelerating Progress through Partnerships

USDA agencies including FS prefer wood as a structural building material for its low embodied carbon benefits. The FS Cooperative Forestry Wood Innovations team has collaborated with private sector partner WoodWorks for ten years to share the benefits of wood and mass timber design and construction. WoodWorks assists with project resources, continuing education, and design tools. WoodWorks and FS educate builders on mass timber construction methods, including use of cross-laminated timber (CLT) and glue-laminated timber (glulam). Outcomes include recent projects such as the USDA FS Nez Perce-Clearwater National Forests Supervisor's Office with a CLT roof supported by glulam beams and columns and light-frame walls and floors, a mass timber structural system. The office was one of the first applications of CLT by the FS and the first USDA project to use BioPreferred® CLT.