

U.S. Department of Commerce



2022 Sustainability Plan



Photo submitted by Lydia
Wasmer, NOAA, in the 2022
Earth Day Photo Challenge.

A handwritten signature in blue ink that reads "Gina Raimondo".

Secretary of Commerce

1. The U.S. Department of Commerce Sustainability Plan Summary

The U.S. Department of Commerce (subsequently referred to as “the Department”) is committed to fulfilling the vision set forth in Executive Order (E.O.) 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, by emulable leadership and action to integrate equitable sustainability and climate considerations into all aspects of the Department’s missions, policies, operations, facility management, real property, acquisitions, and use of resources.

The Department’s vision for building an organization prepared for the climate crisis in areas related to sustainability, mitigation, and environmental justice includes the following steps:

- Utilizing the Department’s power of procurement to create equitable economic opportunities and invest in and maintain climate-ready, resilient, and sustainable facilities, products, and services;
- Promoting the advancements of a climate-resilient economy and sustainable growth to create market opportunities (both domestic and abroad), new businesses, advanced technologies, and quality jobs;
- Continuing to improve the accuracy of the Department’s energy, water, and waste data and real property portfolio through data validation, evaluations, and assessment of the Department’s facilities;
- Continuing to develop a pipeline of prioritized projects and/or energy and water conservation measures (ECMs) with potential for available funding, including performance contracting through Energy Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs);
- Pursuing energy and water efficiency upgrades, sustainable design, and climate-resilient features concurrently with all construction and major renovation projects and ensuring master plans and design guides incorporate sustainable and climate-resilient parameters;
- Recognizing Department employees for outstanding performance in implementing exceptional projects or programs that help the Department achieve its mission while reducing greenhouse gas emissions, improving energy and water conservation and environmental performance through the Department’s Sustainability, Energy, and Environmental Ambassadors program and the Energy and Environmental Stewardship Awards; and
- Providing no-cost, engaging Department-wide training on climate adaptation and resilience; sustainability; energy, water, and waste reduction; and environmental compliance topics to maintain a knowledgeable, effective, and climate-literate workforce.

This plan provides details on these efforts and additional, complementary Departmental sustainability work. It is not comprehensive of the Department’s work on sustainability, but rather highlights important elements of that work related to the Department’s own operations.

2. Priority Actions Towards Goals

A. 100 Percent Carbon Pollution-Free Electricity

The Department’s approach to achieving 100-percent carbon pollution-free electricity combines

the two-fold approach of: 1) modernizing aged infrastructure through completing owned inventory projects using sustainable and climate-resilient design and construction; and 2) expanding the use of renewable and clean energy through utility partnerships/programs and installation of renewable energy systems at owned facilities. A few examples of the Department and its Bureaus/Operating Units' (OU) progress toward meeting this goal include:

- Evaluating/identifying/prioritizing facilities for installation of carbon-free electricity generation.
- Providing technical expertise to OUs on analyzing and prioritizing renewable energy projects, clean energy purchasing through utility providers, and utilization of performance contracting, through the Department's interagency agreement with the National Renewable Energy Laboratory.
- Operating the National Institute for Standards and Technology (NIST)'s 7.9-megawatt co-generation facility and 4.4-megawatt, 15-acre solar array system for a full 12-months, combining to generate as high as 58% of the heavily research-leveraged Gaithersburg, MD campus's energy usage.
- Monitoring and tracking electricity produced from four solar arrays currently in service at mission critical National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) facilities. This data is being used to develop a list of best practices, helping the agency identify the most efficient design for additional projects, based upon geographical location and site conditions.

B. 100 Percent Zero-Emission Vehicle Fleet

The Department's approach to achieving a 100-percent zero-emission vehicle (ZEV) fleet includes a systematic plan, which replaces agency owned vehicles based on vehicle life cycle and commercial lease vehicles based on the expiration of lease agreements. The Department's current objective is to replace 7 to 10 light duty fossil fuel vehicles with ZEV (100% electric vehicles and plug-in hybrid electric vehicles) in fiscal year (FY) 2022. A few examples of the Department and its OU's progress toward meeting this goal include:

- Conducting site assessments to determine what infrastructure support will be required for ZEVs at Department facilities.
- Contracting with charging station manufacturers and installation companies that provide support and/or cost savings for electric vehicle charging infrastructure construction.
- Identifying ZEV vehicles and charging station locations for FY 2023 implementation.

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

The Department's approach to advancing net-zero emissions buildings in its portfolio includes utilizing OU master plans and building renovation schedules to prioritize candidate net-zero emissions buildings. Master plans specifically detail sustainable design approaches, including energy and water reduction, storm water management, daylighting, adaptive reuse, landscape architecture, and renewable energy, all of which contribute to net-zero emissions. A few examples of the Department and its OU's progress toward meeting this goal include:

i. Design and Construction for Net-Zero Emissions

- Incorporating into NOAA's long-term facilities planning the ability to meet net-zero emissions standards. Business case analysis of alternatives will consider the availability of carbon-free electricity from local utility providers, the feasibility of constructing on-site renewable energy sources, and cost estimates that account for the construction of net-zero emissions facilities. Prioritization of facilities capital planning projects will factor in energy retrofits of NOAA's owned facilities.
- Incorporating net zero emissions, Leadership in Energy Design (LEED), and Guiding Principles for Sustainable Federal Buildings into NIST's in-process program of requirement.
- Reducing the overall footprint at the U.S. Census Bureau's Suitland Federal Center (SFC), National Processing Center (NPC) and all regional offices. The Census Reimagined renovation project located at SFC has been designed using renovations to the lighting, HVAC, and overall infrastructure that align with E.O. 14057.

ii. Increasing Energy Efficiency

- Participating in demand response programs, tailored for Department facilities that support the energy grid by reducing consumption during declared utility emergencies and generating revenue to support additional sustainability initiatives.
- Meeting the ASHRAE 90.1 standard for 30% more energy efficiency over minimum requirements and reaching LEED Gold, incorporating pre-requisites and targeted points for energy efficiency through NIST facility modernization projects.
- Utilizing modern energy efficient programs in the design for the new U.S. Census Bureau National Processing Center campus, including working with the National Renewable Energy Laboratory on the design of the server rooms to reduce overall energy consumption.

iii. Increasing Water Efficiency

- Designing and implementing a successful freshwater conservation project at the NIST Gaithersburg campus that uses largely existing NIST infrastructure, existing capacity in a closed loop of recycled cooling water, minimal new hardware costs, and saves an estimated 3.6 million gallons of fresh water per year. When combined with other new water systems upgrades, the Gaithersburg campus saves an estimated 8.9 million gallons per year as compared to previous standard practices.

D. Reducing Waste and Pollution

The Department's approach to reducing hazardous and non-hazardous waste generation and increasing waste diversion and recycling includes, continued implementation of Portfolio Manager's® Waste Module to improve tracking of non-hazardous waste generation and diversion; prioritizing actions to reduce single-use plastic products use at Department facilities; enhancement and expansion of successful recycling programs; and education and awareness programs and events to promote reuse and recycling. A few examples of the Department and its

OU's progress toward meeting this goal include:

- A robust waste diversion program at the U.S. Patent and Trademark's (USPTO) main campus in Alexandria, VA, which sends zero waste to local landfills. This program employs a multitude of waste diversion methods and continues to explore additional methods available in the current market.
- A unique Department Green Store concept, shared with other federal agencies and implemented at OU facilities, that allows employees of the Department's headquarters facility in Washington, DC to donate unused or gently used office supplies to the "Green Store." Donated items are then offered to other Department employees, reducing the purchase of new supplies, reusing/repurposing current supplies, and diverting supply waste from going to the landfill.

E. Sustainable Procurement

The Department's approach in using the power of Federal purchasing to increase acquisition of sustainable products and services includes: review of the Federal Procurement Data System (FPDS) element of EPA-Designated Products and Recovered Materials/Sustainability; management of the Department's portfolios through an enterprise services organization to provide shared services; streamline and centralize acquisition and procurement procedures; and utilization of government-wide category management vehicles. A few examples of the Department and its OU's progress toward meeting this goal include:

- Increasing awareness of sustainability activities for the Department's acquisition community through targeted presentations at the 2022 Big "A" Acquisition Conference, an annual event, including presentations on the Department's climate policy and how acquisition relates to broader climate initiatives, and discussions on how sustainability and greenhouse gas emissions may be priced and factored into evaluations.
- Recognizing achievement in sustainable acquisitions by creating and launching a sustainability category as part of the Department's Chief Acquisition Officer award program. This award will be given at the 2023 Big "A" Acquisition Conference in the May 2023 timeframe.

F. Climate- and Sustainability-Focused Federal Workforce

The Department's approach to creating a climate- and sustainability-focused workforce includes fostering a culture of knowledge and practice for climate adaptation through its expanded climate literacy training programs, interagency working groups, implementation of Departmental Administrative Order 216-22 *Addressing the Climate Crisis*, and recognition of employees doing important climate and sustainability-related work through awards programs like the Department's Annual Energy and Environmental Stewardship Awards and the Sustainability, Energy, and Environmental (SEE) Ambassadors Program. A few examples of the Department and its OU's progress toward meeting this goal include:

- Re-designing web-based training and education program by the Department's Office of Sustainable Energy and Environmental Programs, which includes four tracks: Climate Literacy, Sustainability 101, Environmental Compliance, and Technical Development. Trainings and educational series are offered to all Department employees through the Commerce Learning Center and are recorded for future use. Since October 2021, the Department has provided training to more than 1,500 employees on topics such as

Climate 101, *Greenhouse Gas Accounting*, and the *America the Beautiful Initiative*. The Department has also partnered with other federal agencies to offer joint training on both climate and sustainability topics.

- Educating both federal employees and external stakeholders on NOAA’s science-based information on climate. Examples of NOAA’s far-reaching climate literacy programs include: Climate.gov; Climate Smart Communities Initiative; Sea Grant; Digital Coast; Climate Literacy and Energy Awareness Network (CLEAN); the Federal Adaptation and Resilience Group; and the Federal Climate Engagement and Capacity Building Interagency Working Group.
- Providing cross-training opportunities for the acquisition workforce through the following Government-wide courses: Green Logistics: Planning for Sustainability; How to Integrate Green into Acquisition; GSA Schedules and Sustainable Acquisition; Sustainable Procurement Program.

G. Incorporating Environmental Justice

The Department’s approach to incorporating environmental justice principles into all Department operations includes a focus on addressing the needs of vulnerable communities through mission- and operational- related functions. A few examples of the Department and its OU’s progress toward meeting this goal include:

- Identifying a strategic objective in the Department’s 2022-2026 Strategic Plan to “Foster Inclusive Capitalism and Equitable Economic Growth.”
- Focusing on underserved communities through NOAA’s Infrastructure Investment and Jobs Act (IIJA) implementation.

H. Accelerating Progress through Partnerships

The Department’s approach to accelerating progress through partnerships includes both internal and external collaboration with other federal agencies, universities, and industry to achieve the Department’s missions and improve operational efficiency while meeting targets set forth in E.O. 14057. A few examples of the Department and its OU’s progress toward meeting this goal include:

- Providing technical assistance on greenhouse gas reductions, energy efficiency, renewable energy, climate and sustainability literacy, and performance contracting through the Department’s interagency agreement with the Department and the National Renewable Energy Laboratory.
- Collaborating on *The America the Beautiful Initiative*, a partnership between the Department of Commerce, Department of Interior, Department of Agriculture, and the White House Council on Environmental Quality to advance locally led conservation and restoration in public, private, and Tribal lands and waters toward addressing three threats: disappearance of nature, climate change, and inequitable access to the outdoors.
- Improving catastrophe models, exploring opportunities to co-develop products, and providing access to/educating the industry on NOAA’s climate data through a partnership with the insurance industry.
- Collaborating with NOAA, the American Society of Civil Engineers (ASCE) and the University of Maryland (UMD) Center for Technology and Systems Management to accelerate the development of climate-smart engineering codes and standards. This

collaboration will advance the use of NOAA-produced climate science and understanding within engineering practice for the design and construction of climate-resilient infrastructure, through developing and updating ASCE codes and standards.

- Developing USPTO's internal Climate Working Group, formed in response to the Administration's priorities on meeting sustainability and climate targets. This group has two separate, but intertwined groups to focus on capital improvements and revisions to internal practices that will result in a reduced carbon footprint and adjustments to the USPTO mission-related policies and practices that facilitate sustainable innovation. The Climate Working Group is revitalizing existing programs, introducing and vetting new programs, and engaging USPTO employees to leverage their dynamic backgrounds and vast knowledge base. This group contains at least one representative from every office within the USPTO to foster cross-office coordination and innovation.

3. Progress Examples

Additional examples of the Department's progress toward meeting the goals set forth in E.O. 14057 include:

100 Percent Carbon Pollution-Free Electricity

- Conducting space and seating analysis of each facility where NOAA National Environmental Satellite Data and Information Service (NESDIS) employees are located. The study will analyze the current carbon footprint related to the number of employees at each facility and then will be used to develop updated floor plans and to understand how the new telework/remote policy will impact future space and seating needs. The results are expected to help optimize facility utilization and reduce the energy use and greenhouse gas emissions of NESDIS-occupied space.
- Surveying all employees on both the NIST Gaithersburg and Boulder campuses to validate demand for privately-owned electric vehicle charging needs, to determine number and location of Level II charging stations. Once the survey is complete, NIST will install the charging stations as planned.

Net-Zero Emissions Buildings, Campuses, and Installations

- Renovating historic laboratory space on the NIST Boulder campus through multi-year, phased renovation by wing. Completed wings meet LEED Gold certification requirements and 30% more energy efficient systems, meeting the ASHRAE 90.1 Standard. Completion of the renovation of all five wings is expected in 2023.
- Constructing a new facility at the NIST Gaithersburg campus to serve as the Response Robotics Test Facility, to include rainwater management bio-retention plantings and pond, reduced indoor and outdoor water use, advanced water and energy metering, interior lighting controls, reduced exterior light pollution, and use of low-emitting materials.
- Installing a new ground source heat pump at NOAA NWS's Springfield, MO Weather Forecasting Office. With the completion of this new system, the NWS has a total of 17 geothermal ground source heat pumps in operation.
- Utilizing ESPC ENABLE identified ECMs to complete energy retrofits and install renewable energy systems at National Marine Fisheries Service (NMFS) facilities.

- Completing construction of new NOAA Barrow facility in the Alaskan Arctic, with a climate-resilient foundation designed with options for both temperature measurements/monitoring and cooling of the tundra below the facility. The U.S. Green Building Council awarded the facility LEED Silver in January 2022.

Reducing Waste and Pollution

- Implementing an oil sampling program for NWS facilities' stand-by generators. This program has reduced waste by replacing the oil in the generators through periodic sampling and testing instead of changing the oil on a regular basis. The program is estimated to save 2,300 gallons of lube oil for an estimated total of \$35,500 annually in avoided operations costs.

Accelerating Progress through Partnerships

- Establishing an ESPC contracting vehicle, utilizing expertise from the Census Bureau Contracting Office, to be used by any NOAA-owned facilities where a contract is valid. This effort will help NMFS facilities to make progress in meeting 100 percent carbon-free electricity and net-zero facilities through facility upgrades/improvements, including more efficient lighting, water, heating, ventilation, and air conditioning, simple controls, solar photovoltaic, seawater pumps, and wind energy.
- Engaging with the space and meteorological agencies of other nations to exchange data and support scientific advancement. Data delivered through these partnerships enables the National Weather Service, scientists across NOAA and throughout the commercial sector, and private citizens to promote and protect the nation's security, environment, economy, and quality of life. Earth and weather observation satellites are acquired and operated through partnerships that include NESDIS, other federal programs and agencies, and the commercial space industry.