

2022 Smithsonian Institution Sustainability Plan

Section 1. Smithsonian Institution Sustainability Plan Summary

As a trust instrumentality of the United States, the Smithsonian is committed to the goals which Executive Order 14008 set for federal agencies and is focused on leading by example when making improvements in environmental, energy, and economic performance to develop a robust portfolio to confront the climate crisis. The goals established by the Executive Order complement Smithsonian's ongoing efforts to increase sustainability while underscoring our mission and values.

In the coming years, it is our priority to reduce Scope 1, 2, and 3 Green House Gas emissions by reducing energy usage in our existing buildings through major renovations, existing building commissioning and increased energy audits. The Smithsonian Facilities Office of Facilities Management and Reliability as well as the Office of Planning Design and Construction are leading these efforts. The Smithsonian, specifically the Collections Program with support from the Office of the Under Secretary of Science and Research and the Office of the Under Secretary for Museum and Culture, is actively working toward assessing the temperature and humidity requirements for our collections and ways to reduce the considerable energy usage it takes to achieve those narrow parameters.

The Smithsonian Institution is committed to growing our sustainability efforts, engaging our staff on the importance of finding sustainable and resilient solutions, educating visitors and the public about the climate crisis, and making strategic decisions to mitigate the impacts of a changing climate will building a resilient and sustainable future.

Section 2. Priority Actions Towards Goals

A. 100 Percent Carbon Pollution-Free Electricity

The Smithsonian Institution is taking several priority actions to increase carbon pollution-free electricity (CFE) to 100% by 2030. Priority actions in FY 2022 include the following:

- The Smithsonian will continue to purchase Renewable Energy Credits, typically for a two-year delivery period, as funding permits. These REC purchases will not only offset Smithsonian's greenhouse gas emissions but will also support green power credits in projects pursuing LEED certification.
- Smithsonian facilities will be screened and assessed for cost effective renewable energy development including on-site solar generation using power purchase/energy service agreements. Additionally, the Smithsonian will incorporate requirements for electric generated from renewable sources in long-term electric supply contracts to support goal-level renewable electric requirements.

B. 100 Percent Zero-Emission Vehicle Fleet

The Smithsonian has 497 vehicles in its fleet that are primarily operated in a campus setting supporting facilities operations, horticultural activities, animal care and conservation, and

security. The fleet also supports off-campus scientific research and artifact collection activities. The Smithsonian will continue efforts towards electrification of the fleet and conduct a comprehensive upgrade and data validation of the Fleet Management Information System.

- In response to E.O. 14008, a comprehensive assessment of the Smithsonian fleet and locations is also planned to identify opportunities for electrification of the fleet, with a project completion date of October 2022. In parallel, the Smithsonian will continue efforts to secure funding for the annual vehicle replacement program, GSA Vehicle Leasing, and electrification activities.
- Activities in support of the upgrade and data validation of the FMIS includes the hiring of a Fleet Management Analyst to specifically manage all systems that produce fleet data and strengthen data reporting. In concert, the Smithsonian will pursue Federal Automotive Statistical Tool (FAST) training for new staff to further fortify data reporting requirements as well as develop data reporting standard operating procedures.
- The exercise to right size the fleet should be completed in November 2022 and robust vehicle sharing program implemented by September 2022. Apart from GSA-leased vehicles, the Smithsonian is targeting roll out of telematics in FY 2023 for our agency-owned vehicles.

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

i. Design and Construction for Net-Zero Emissions

The Smithsonian is updating its Smithsonian Directive SD422 Sustainable Design of Smithsonian Facilities. The policy includes the 2020 Guiding Principles for Sustainable Federal Facilities. The policy also requires that at a minimum Building shall comply with the current appropriate LEED certification system and version at time of design award. In addition to LEED certifications projects will be evaluated for certification in the LEED Zero Certifications, Living Building Challenge and Well Building.

- Projects of less than \$2.5 million: — LEED Certification
- Projects greater than or equal to \$2.5 million, but less than \$5 million: — LEED Silver certification
- Projects greater than or equal to \$5 million: — LEED Gold certification

ii. Increasing Energy Efficiency

The Smithsonian actively plans to increase energy efficiency and reduce scope 1 and 2 GHG emissions by identifying and implementing low- or no-cost energy conservation measures relating to HVAC controls, lighting retrofits, and comprehensive steam trap maintenance. The Institution also continues to investigate collection space environmental standards to ensure they are applied in an efficient manner, in part by having them more closely follow seasonal changes.

- The Smithsonian will conduct quality-assurance reviews to ensure system efficiency and performance meet applicable LEED certification standards. The Institution will also work to identify and implement energy conservation measures via building audits to implement low-cost control measures and lighting retrofits to the extent practical.

iii. Increasing Water Efficiency

Decreasing water use continues to be a Smithsonian strength. We will focus on improving the efficiency and reducing leaks within our fountains and animal exhibits at the National Zoo. We'll identify and implement water improvement measures via existing building commissioning and ongoing energy audits.

- In FY2022, the Smithsonian plans to continue building systems monitoring via advanced metering infrastructure. It will utilize real time data to assess water usage characteristics and will monitor sub-meters recently installed. This will improve existing processes and place controls on those processes if cost effective.
- Existing mechanical cooling equipment controls will also be updated to ensure water is used efficiently and ongoing maintenance practices are used.
- Smithsonian Gardens is in the process of designing, installing, and maintaining landscapes for reduced water use. This work will be ongoing.

D. Reducing Waste and Pollution

The Smithsonian Institution is recognized as an important resource in the quest for sustainability of our planet and the survival of creatures large and small that are impacted by human action. To this end, several avenues are traveled by the Smithsonian to reduce landfill waste thus minimizing further pollution of our planet. SI's waste reduction efforts go beyond the confines of the institution by routinely engaging governmental and non-governmental agencies and the public to include education of future leaders of the world, the K-12 students and their educators. SI began or advanced the following goals in FY 2022:

- Increase recyclable materials and compost diversion from landfills – SI tracks waste diversion through a Recycle Task Force to ensure awareness of upward and downward trends and to track results of advancement efforts
- Provide education on avoiding waste creation and on waste diversion opportunities – Education events and signage are used to help educate staff and visitors on the harm caused by waste and ways that each person can make a difference
- Compost operations – SI operates an in-house in-vessel compost system to reclaim elephant manure and animal bedding from the National Zoo and is exploring the options for restarting of compost operations at restaurants that exist on SI properties
- Phase out single use plastics used on SI properties – single use plastics such as food containers, plastic bags, plastic cutlery, beverage containers are the least valuable in the recycle market and cause great harm to the environment. The goal is to ensure the continued search for alternatives.

E. Sustainable Procurement

The Smithsonian's overall strategy for sustainable acquisition and procurement is to look for practical ways to increase sustainable purchases through contract management.

- The Smithsonian Institution continues to provide central paper supplies to all offices with recommended recovered fiber content levels for uncoated printing and writing papers which ensures nearly 100% usage of EPA recommended printing and writing papers.

- The Smithsonian Institution includes statutory environmental requirements in all its design and construction contracts.

F. Climate- and Sustainability-Focused Federal Workforce

This Smithsonian Institution focuses the federal workforce on climate and sustainability issues by ongoing training opportunities.

- Prepare staff for responding to extreme weather events via collections emergency preparedness training.
- Smithsonian climate working group will be hosting conversations with staff from across the Institution to better understand how units and programs are approaching climate change communication with respect to mechanisms, impacts, and solutions.

Section 3. Progress Examples

Net-Zero Emissions Buildings, Campuses, and Installations

The Institution is requiring LEED Gold for the Revitalization of the Historic Core (RoHC) project which will completely renovate both the Smithsonian Castle and Arts and Industry Building. The Hirshhorn Sculpture Garden project is seeking LEED Sustainable SITES Gold certification and is expected to be awarded for construction in FY23. The Smithsonian collections storage facility (Pod 6), which will be a jointly occupied building with the National Gallery of art, is currently being advertised for construction award in FY22 and is seeking LEED Gold certification. The Smithsonian Environmental Research Center's Green Village is presently under contract as a design build construction project and will be certified passive house.

Reducing Waste and Pollution

The Smithsonian Sustainability Matters Newsletter published 4-6 times a year packs educational and inspirational stories on upcoming events, ways to help in sustainability and highlights of successful endeavors. Compost events for staff provide an opportunity to mingle with the compost team and hands on experience with compost that can be used in their gardens. The award-winning Banners to Bags program continues to divert hundreds of pounds of banner material from the landfill into a unique one-of-a-kind shopping bag adorned with a label to further advertise the importance of reusing materials in creative ways. The goal for 2022 is to hold 2 major sustainability education events with at least one K-12, publish 4 editions of Smithsonian Sustainability Matters and sell 1000 Banner Bags.

Sustainable Procurement

The Smithsonian has partnered with Amazon Business to promote and prefer products with sustainable certifications under the Smithsonian Amazon Business account. All purchase cardholders at the SI, when shopping for goods, will see sustainable and climate pledge friendly products first on their search results when looking for eligible items that qualify under these sustainable categories. Additionally, Compact by Design is a new sustainability certification created by Amazon to identify products that have a more efficient design. With the removal of excess air and water, products require less packaging and become more efficient to ship. At scale, these small differences in product size and weight lead to significant carbon emission

reductions. The Smithsonian is able to track those purchases in the Business Analytics section of the SI Business account and cardholders are reminded periodically to select sustainable products in their purchasing activities.