2022 Environmental Protection Agency Sustainability Plan

1. Environmental Protection Agency Sustainability Plan Summary

The U.S. Environmental Protection Agency (EPA) will lead the Federal Government through fully implementing the requirements of Executive Order (EO) 14057. To achieve this, EPA's initial operating principle will be to opt toward full implementation of each EO 14057 long-term goal from the outset, using innovative and flexible practices, schedules, and other means to supplement any funding or logistical challenges. In this way, EPA will continue the sustainability progress it has made over the past two decades, with the following priorities:

- Achieve 100 percent direct green power purchases.
- Transition to electrification of its fleet.
- Commit to achieving net-zero building emission goals, including immediate review of all planned construction in order to maximize energy efficiency and sustainability options.
- Achieve energy- and water-efficiency improvements through facility planning and upgrades.
- Prioritize sustainable purchasing and waste reduction.

2. Priority Actions Towards Goals

Following are EPA's progress and plans for the priority actions of EO 14057.

A. 100 Percent Carbon Pollution-Free Electricity

EPA will increase its carbon pollution-free electricity (CFE) procurement to meet the EO 14057 goals of using 100 percent CFE annually and 50 percent CFE on a 24/7 hourly basis, as expeditiously as feasible and prior to the EO 14057 required date of 2030. EPA is striving to use greater than 45 percent CFE for its electric needs in FY 2022 through the following priority actions:

- In FY 2021, EPA identified a source for its energy attribute certificates (EAC) purchase to match 11.9 percent of the agency's electricity use, and in April 2022, EPA analyzed its reporting locations' total CFE percentage from purchased electricity by eGRID subregion, which is 39 percent.
- By the end of FY 2022, EPA will ensure that it purchases enough delivered green power and EACs to supplement its existing onsite renewable energy generation to exceed the Energy Policy Act of 2005 renewable electricity requirement of 7.5 percent.
- Pending the release of the EO Implementing Instructions, EPA will use its net-zero buildings facility profiles to begin setting annual CFE targets, research utility-level and regional EAC options, evaluate opportunities for onsite generation and battery storage through performance contracting, and determine an updated, cost-effective strategy that aligns with EO 14057 guidance to increase EAC purchases.
- During FY 2022, EPA has continued to install advanced electric meters in its owned facilities to tie into its enterprise energy management system to help facilitate meeting the requirement of 50 percent CFE on a 24/7 hourly basis.

B. 100 Percent Zero-Emission Vehicle Fleet

To achieve a vehicle fleet comprised of 100 percent zero-emission vehicles (ZEVs), EPA's goal will be that all new vehicle leases and purchases commencing in FY 2023 will be ZEVs, where economically and logistically feasible. Medium- and heavy-duty vehicle needs will undergo rigorous review to determine if a ZEV option is reasonably available, with view toward fostering the transition to ZEVs.

- During FY 2022, EPA has been researching incremental costs of fleet electrification and will continue to do so in future ordering cycles, to be completed by February FY 2023.
- EPA completed the General Services Administration's (GSA's) acquisition cycle on June 1, 2022, nearly meeting its ZEV target from the Council on Environmental Quality (CEQ) and is working to ensure the ZEV orders are fulfilled as expected.

- In summer 2022, EPA will conduct "FleetCORE-Z" assessments in Regions 7 and 5 to assess electric vehicle supply equipment (EVSE) installation opportunities at those sites and document lessons learned for the agency to support future ZEV acquisitions.

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

i. Design and Construction for Net-Zero Emissions

EPA is taking steps to achieve net-zero greenhouse gas (GHG) emissions from its facilities by 2045, including a 50 percent GHG emissions reduction from an FY 2008 baseline.

- As of FY 2019 (pre-pandemic), EPA's Scope 1 and 2 GHG emissions were 46.7 percent below the FY 2008 baseline.
- A net-zero master plan that lays out the strategy for achieving the 2045 net-zero GHG emissions goal for all EPA facilities is currently being developed and will be completed in FY 2022.

ii. Increasing Energy Efficiency

EPA has reduced its energy intensity 41.4 percent through a three-pronged approach of facility master planning, consolidating operations, and energy savings performance contracts (ESPCs). Master planning identifies infrastructure improvements, such as mechanical systems upgrades and consolidation of operations, that can reduce energy use intensity.

- ESPCs are underway at two of EPA's largest energy-consuming laboratories in Research Triangle Park (RTP), North Carolina, and Ann Arbor, Michigan. ESPC construction was recently completed at RTP (see Section 3), and EPA plans to award the Ann Arbor ESPC in FY 2022.
- Per EO 14057, EPA will set annual targets for reporting sites and promote energy conservation at non-covered sites, toward its agency-specific FY 2030 energy intensity reduction goal, to align with the agency's GHG reduction goal and pending further guidance and tools from CEQ and the Federal Energy Management Program (FEMP). In the meantime, as part of its "ConservE" program EPA assigns annual facility-specific targets to reduce energy intensity in each lab where it pays utilities; in FY 2022 each facility's targeted reduction is 1.75 percent.

iii. Increasing Water Efficiency

EPA has exceeded its water reduction targets set under EOs since 2007 and is now focused on water savings from its facility consolidation efforts, ESPCs, and master planning for infrastructure replacement projects that will reduce energy and water use at its facilities.

- EPA has already reduced agencywide water intensity by 43.5 percent from a FY 2008 baseline, through a combination of plumbing fixture upgrades, cooling tower efficiency improvements, elimination of single-pass cooling, and landscape irrigation reduction.
- EPA will set annual targets toward achieving its FY 2030 water intensity reduction goal per EO 14057, pending guidance from CEQ on goal requirements; in the meantime, EPA set facility-specific targets through its "ConservW" program, encouraging each facility to achieve a 2 percent annual reduction in water consumption per year where possible.
- EPA will look for new sustainable landscaping practices and opportunities to reduce irrigation.

D. Reducing Waste and Pollution

EPA will expand its waste reduction, recycling and composting best practices to 1) ensure that at least 65 percent of its non-hazardous solid waste and 75 percent of its construction and demolition debris is diverted from landfills in FY 2022 and 2) position itself to meet higher waste diversion goals in the future (e.g., 75 percent for non-hazardous solid waste by 2030).

- In FY 2022, EPA compiled waste management best practices and encouraged facility environmental management system (EMS) coordinators to replicate them.
- In FY 2022, EPA will identify options for salvaging and recycling construction and demolition debris and recycling non-conventional items, such as plastic films/bags, bubble wrap, pens, mechanical pencils, packaging material and disposable gloves.
- As part of the cross-agency strategy to advance EPA's organizational excellence in its FY 2022-2026 *Strategic Plan*, EPA included a transition to a paperless work environment and is beginning to identify a priority workflow for the transition.

E. Sustainable Procurement

EPA strives to continually increase sustainable acquisition compliance by growing industry-specific expertise; streamlining acquisition processes; and better monitoring and tracking efforts to leverage more sustainable, effective, and efficient methods for fulfilling Agency procurement requirements. In addition to meeting sustainable procurement requirements of statutorily mandated programs (ENERGY STAR/FEMP, CPG, BioPreferred, SNAP) and - per EO 14057 - EPA programs (Safer Choice, WaterSense, SmartWay, Recommendations of Specifications, Standards, and Ecolabels):

- In FY 2022, EPA will review FY 2023 and beyond budgets and the acquisition forecast database to consider and prioritize pilot projects that target categories that have the greatest potential to impact emissions reductions or climate risk.
- In FY 2022, EPA will explore working with GSA to require vendors taking part in the GSA Commercial Platforms Initiative to either provide only products meeting federal sustainable purchasing requirements or show the compliant products higher on the list to maximize procurement of these items.
- In FY 2022, EPA will begin to collect data on sources of single-use plastic generated through procurement streams and operations.
- In FY 2022, EPA will identify products in typical procurements that may contain PFAS and lead by example in implementing and documenting approaches to avoid those products.
- In FY 2022, EPA will continue to exceed all small-business related requirements and goals.

F. Climate- and Sustainability-Focused Federal Workforce

EPA develops and delivers training, prepares educational materials, and engages employees to understand and participate in sustainability, climate adaptation, and environmental stewardship initiatives, with the goal of mobilizing the workforce to weave sustainability into all operations.

- In FY 2022, EPA continued encouraging employees (including new hires during orientation) to take the Agency's existing EMS awareness training, which emphasizes the importance of actively reducing EPA's environmental footprint and will be updated by the end of FY 2022.
- In FY 2023, EPA will begin the process to require all EPA employees take annual Environmental Management System training. The training will review agency requirements and the objectives/targets of individual EPA locations and will provide guidance on how employees can take actions that help achieve the agency's sustainability targets, including those who work remotely or are on significant telework schedules.
- The Agency's Climate Adaption Plan requires EPA employees to take climate adaptation training.

G. Incorporating Environmental Justice

Environmental justice is a high priority at EPA as reflected in the Agency's FY 2022-2026 *Strategic Plan*, through the *Plan's* programmatic goals and cross-agency strategies that are supported by long-term performance goals EPA will use to monitor and communicate progress. As one example of how EPA is incorporating environmental justice into its EO 14057 response, EPA will work to identify opportunities and sites for EVSE installation where they might reduce smog in the surrounding community.

H. Accelerating Progress through Partnerships

EPA participates in many partnerships with public and private sector entities with the goal of advancing sustainability, both in its own operations and more broadly.

- EPA is working with FEMP to explore opportunities to enable EPA to meet energy-related goals, identify affordable solutions, facilitate public-private partnerships, and provide energy leadership to the country by identifying and leveraging government best practices.
- EPA and GSA are convening Regional Sustainability Workgroups among all federal agencies in each region to identify regional coordination opportunities to advance effective EO 14057 implementation.
- EPA convened its Future of Work Governing Body as a senior management group that will guide the transition; look for challenges and opportunities across all aspects of EPA operations, including sustainability; and will ensure that as the workplace changes, those changes are reflected in updated training and EO 14057 goals and metrics.

3. Progress Examples

While EPA has made progress over the years in a number of its sustainability goals, following are some specific areas of progress so far in FY 2022.

ESPC Completion at EPA's Most Energy-Intensive Lab
Construction of an ESPC at EPA's RTP, North Carolina, campus that began in 2019 was completed in 2021; all energy conservation measures were operational by January 2022. RTP is EPA's largest energy-using facility, comprising of more than 30 percent of the agency's annual energy consumption. Improvements included: high-temperature hot water piping installation; ventilation and controls replacement; heating, cooling and air flow upgrades; optimization of the boiler system that provides hot water and steam to research areas; and installation of 15,000 LED light bulbs and replacement of light fixtures. This ESPC is expected to reduce RTP's energy consumption by 37 percent and utility costs by $2.5 million. Construction phase savings are expected to be finalized in July 2022, but as of June 2022, approximately 70 percent of the savings anticipated by the energy services company have been realized.

Facility Planning and Consolidation
As of June 2022, all of EPA's laboratories where the agency directly pays the utilities, which is the case for nearly all of EPA's laboratories, have completed the master planning process to identify infrastructure replacement needs, mechanical improvements, and other efficiencies that can help reduce energy, water and GHG emissions. This planning effort has also helped EPA realize its goals to consolidate operations and retire facilities and lab and office areas that are no longer needed. In FY 2022, EPA has released over 300,000 rentable square feet, which has avoided over $12 million in lease costs and will result in a substantial reduction in utility consumption and costs, waste and commuting miles.

Progress on Electrifying EPA's Fleet
EPA has already increased its purchases of ZEVs—taking delivery of four vehicles in the first two quarters of FY 2022, and ordering 28 more in the third quarter, representing 29 percent of EPA's orders in the FY 2022 GSA ordering cycle. Three of the orders were all-electric vehicles, and one was an all-electric pickup truck; since much of EPA's vehicle needs entail driving long distances on difficult terrain while hauling equipment, successful use of this ZEV could help increase buy-in among fleet managers and vehicle operators. EPA has also added EVSE evaluation to its assessments of facilities' fleets and is conducting two such assessments in summer 2022 to inform staff on ZEV requirements in future ordering cycles.

Waste Reduction Through Reuse Programs at EPA Headquarters
EPA supports reuse programs to reduce waste generation, keep materials out of landfills and save money. In FY 2021, EPA Headquarters' EMS developed a systematic process for identifying unwanted supplies and equipment from space consolidation activities, personnel retirements, and employee relocations. EPA inventoried unwanted items, created a Supply Swap, and invited employees to "shop the swap" for free. Data on the amount of materials transferred through the Supply Swap will be available near the end of FY 2022. EPA's Cincinnati location also has a Laboratory Reuse Center that allows researchers to donate unwanted supplies (e.g., glassware, pipettes, syringes), which are offered to other EPA researchers rather than buying new supplies. Between 2016 and 2021, the Laboratory Reuse Center saved EPA more than $53,000 in laboratory supply purchases.

Paper Reduction Initiatives
EPA's Go Paperless initiative, which will identify and explore opportunities to move the Agency from paper-based activities to fully automated processes, is included in the Agency's FY 2022-2026 *Strategic Plan*. EPA locations also promote double-sided printing; reusing paper printed on one side for drafts; electronic archiving; and electronic laboratory reports. The Region 7 Laboratory recently transitioned to paperless laboratory reports, which allowed it to avoid new paper purchases for 18 months and to reduce

the number of boxes of paper records generated annually from 200 to one. In FY 2022, Region 5 asked senior managers to pledge to encourage employees to continue implementing the electronic-based habits that took root during the COVID-19 pandemic.