U.S. Environmental Protection Agency
2018 Sustainability Report and Implementation Plan

Executive Summary

In fiscal year (FY) 2017, the U.S. Environmental Protection Agency (EPA) once again demonstrated leadership among federal agencies in the charge to reduce its energy and environmental footprint. The EPA met or exceeded its goals for energy efficiency, water conservation, high performance sustainable buildings and solid waste diversion. In FY 2017, the EPA mainly focused on completing or continuing progress on energy efficiency improvement projects. Following are a few highlights of the EPA's FY 2017 sustainability performance and initiatives, which are described further in its Energy Conservation and Management Program FY 2017 Annual Report:

Energy Efficiency and Renewable Energy

The EPA's FY 2017 reported energy intensity was 251,833 British thermal units (Btu) per gross square foot (GSF), a reduction in energy intensity of 36.8 percent compared to FY 2003. The EPA completed construction or ongoing work on energy efficiency projects in FY 2017 and continued to focus on consolidating its laboratory space to realize energy and cost savings. The agency will continue to closely manage its energy use and make further progress in reducing its energy intensity.

Through a blanket purchase agreement (BPA) of renewable energy certificates (RECs) and existing green power contracts, the EPA exceeded its goals for meeting at least 10 percent of agencywide electric and thermal energy use with renewable electric and alternative energy and at least 10 percent of agencywide electric energy use with renewable electric energy.

In FY 2017, the EPA completed required energy and recommissioning assessment requirements, using "desk audits" as a cost-effective assessment approach for four facilities that collectively comprise more than 48 percent of the total energy use of the EPA's facilities that are covered under the Energy Independence and Security Act (EISA). As of FY 2017, the EPA has installed electric, natural gas and steam meters at 100 percent of its reporting facilities. In FY 2017, the EPA had advanced metering projects underway at one laboratory facility. Advanced metering hardware was in place, under design or under construction to capture 79.4 percent of agencywide reportable energy consumption.

Water Conservation

In FY 2017, the EPA reduced its water use by 34.6 percent compared to FY 2007. The EPA's water intensity in reporting laboratories was 23.3 gallons per GSF in FY 2017 (84.8 million total gallons), compared to FY 2007 water intensity of 35.6 gallons per GSF (136.5 million total gallons). The EPA also continued to reduce industrial, landscaping and agricultural (ILA) water use. The EPA estimates that it used 2.2 million gallons of nonpotable water for ILA applications in FY 2017, which is 98.4 percent lower than its FY 2010 use of 135.2 million gallons.

Sustainable Buildings

In FY 2017, eight of the EPA's owned buildings greater than 5,000 square feet—or 25.5 percent (by square feet of the agency's Federal Real Property Profile)—met the *Guiding Principles*. In addition to internally certifying buildings under the *Guiding Principles for Sustainable Federal Buildings*, the EPA uses other systems to benchmark the environmental performance of its real property portfolio.

The EPA has set its own internal waste diversion goal of 60 percent, and the agency exceeded that target by achieving a waste diversion rate of 67.8 percent in FY 2017.

The agency continues to focus on the statutory requirements of the Energy Policy Act (EPAct) of 2005 and EISA. The EPA has identified the following strategic priorities in the near term:

- Master Planning: The EPA has master plans underway at several key facilities. Master planning allows the agency to plan capital projects more effectively and strategically address sustainability.

- Energy Savings Performance Contract (ESPC): EPA is committing to a $34 million ESPC in FY 2018 and starting the process for a large-scale utility energy savings contract (UESC) at an additional facility.

- Fleet Management Information System: EPA is automating data collection on vehicle needs, usage and fuel, allowing the agency to improve its analysis of fleet efficiency and utilization through a commercial off-the-shelf software system.

- Environmental Management Systems (EMSs): EPA is continuing the agency's commitment to EMSs, as a way to set objectives, targets and metrics for achieving sustainability goals.

- Strategic Purchasing: The EPA's category management and strategic sourcing efforts increasingly rely on the General Services Administration (GSA) and Federal Best in Class contracts that already have sustainability and energy efficiency requirements applicable to the entire government built in.

Implementation Summary

1. Facility Management:

FACILITY ENERGY EFFICIENCY

FY 2017 Status: 36.8 percent energy intensity reduction from FY 2003

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The EPA far exceeded EISA requirements to reduce energy intensity 30 percent by 2015 and continues to reduce energy intensity at its reporting laboratories. The agency is also continuing to meet its target of assessing and commissioning its EISA- covered facilities every 4 years.	Laboratories, which make up all EPA reporting facilities, are inherently energy intensive. The agency must work to balance energy efficiency with the air quality requirements necessary for employee safety and health.	The EPA will continue to use advanced metering and master planning to monitor and right-size the agency's reporting facilities.

EFFICIENCY MEASURES, INVESTMENT AND PERFORMANCE CONTRACTING

ESPC and UESC investment in FY 2017: $4.3 million for the ESPC in Edison, New Jersey
FY 2017 direct energy investment: $5.7 million

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The EPA will sign an ESPC contractor for its Research Triangle Park (RTP), North Carolina, campus by September 30, 2018.	The EPA has incorporated the RTP ESPC project elements into its annual budgeting process, avoiding more than $50 million of planned B&F projects.	The EPA will continue to review and evaluate additional ESPC/UESC projects.

RENEWABLE ENERGY

FY 2017 Status: 48.3 percent renewable electricity

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The EPA commissioned and activated a solar power array at the agency's Edison, New Jersey, facility through a 25-year power purchase agreement in FY 2018 and is now receiving renewable electricity for 40 percent of the facility's needs at 4 cents per kilowatt-hour (kWh) less than the current rate.	One percent or less of the EPA's energy use is supplied by onsite renewable and alternative energy generation systems at its facilities. The EPA works with the Defense Logistics Agency to procure a blanket purchase agreement for Renewable Energy Credits (REC), in addition to individual green power delivery contracts when cost- effective.	The agency will meet its statutory renewable electricity requirements in FY 2018 with a combination of purchased RECs and the onsite generation at its facilities. The agency will also commission a recently installed ground-source heat pump at the agency's Corvallis, Oregon, facility.

WATER EFFICIENCY

FY 2017 Status: 34.6 percent reduction in potable water intensity compared to FY 2007

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The agency is continuing to meet its target of assessing its EISA-covered facilities every 4 years for potential water conservation measures.	Although the EPA had far exceeded previous water efficiency targets, water usage has increased on an annual basis from FY 2015 to FY 2016 and from FY 2016 to FY 2017, due to weather and other factors.	The EPA will review the agency's Water Management Plans for potential projects to reduce water intensity on a year-to-year basis and will review its potential water reduction projects from previous EISA assessments to reduce the year-to-year water intensity.

HIGH PERFORMANCE SUSTAINABLE BUILDINGS

FY 2017 Status: 25.5 percent of GSF meets the *Guiding Principles for Sustainable Federal Buildings*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
In FY 2018, the agency continued to evaluate opportunities to incorporate the *Guiding Principles* into new and updated project designs and utilized its GreenCheck process to ensure the *Guiding Principles* and other sustainability aspects are incorporated in renovation projects.	More than a quarter of the EPA's owned inventory (by gross square footage) already meets the *Guiding Principles*. Master planning efforts help determine where and how to best invest its buildings and facilities funds to achieve sustainability progress and meet operational needs.	The EPA is in the design stage for major renovations at several buildings. Pending project funding, design and construction will continue over the next several years, and the *Guiding Principles for Modernization* will be incorporated into these projects to the maximum extent practicable. The EPA is also revamping its GreenCheck process to improve the tracking and completion of sustainable building requirements in construction and renovation projects at agency-owned buildings.

WASTE MANAGEMENT AND DIVERSION

FY 2017 Status: 67.8 percent of non-hazardous solid waste and 94.4 percent of C&D debris diverted

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
EPA locations implement source reduction and reuse through their EMSs. The EPA's waste diversion rate of 67.8 percent in FY 2017 exceeded its internal target of 60 percent waste diversion. Currently, 86 percent of EPA reporting locations have a composting program.	EMSs have the potential to help EPA facilities achieve strong environmental and sustainability performance while simultaneously improving operational efficiency and reducing costs.	One location will expand its recycling program and implement a composting effort under a new 5-year waste management contract signed in FY 2018. The EPA will continue to look for opportunities at additional locations.

2. Fleet Management:

TRANSPORTATION / FLEET MANAGEMENT

FY 2017 Status: 41.8 percent petroleum reduction from FY 2005; 7.2 percent overall alternative fuel use

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The EPA focuses on increasing fleet efficiency and improving asset utilization and management through fleet right-sizing, vehicle allocation assessments, alternative fuel usage and fleet data analysis. Petroleum consumption will continue to decrease as the EPA fleet is right-sized, while alternative fuel will likely remain constant relative to the EISA FY 2005 baseline.	Alternative fuel infrastructure near EPA locations is limited, so the EPA has focused on automating data collection and improving data analysis and quality in order to uncover opportunities for enhancing fleet efficiency and utilization.	The EPA will continue to conduct onsite Fleet Compliance and Operation Review Enterprise (FleetCORE) assessments at various locations. The agency will deploy its FleetCommander fleet management information system to automate the management of vehicle assets and operational data, installing and training staff in 50 percent of its locations by July 2019.

3. Cross-Cutting:

SUSTAINABLE ACQUISITION / PROCUREMENT

FY 2017 Status: Percentage point difference of sustainable contract actions from prior year: 2.6 percent
Percentage point difference of value of contracts with sustainable requirements from prior year: 2.8 percent

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
Surveys will be issued to identify skill/knowledge gaps and/or opportunities for improvement in FY 2018. As of April 2018, 151 EPA employees registered for FAC 018-Green Purchasing for Civilian Acquisition; of those, 117 employees (77 percent) completed the course, and the remaining 23 percent will have completed it by the end of FY 2018.	Reliance on Federal Procurement Data System-Next Generation (FPDS-NG) data has had a material impact on the progress of sustainable acquisition strategies within EPA contracting.	The EPA will continue to plan and monitor its progress with respect to sustainable acquisitions to demonstrate improvements in data or increases in compliance In FY 2019-2020, the EPA will focus on category management and strategic sourcing efforts, since the Agency is increasingly relying on the General Services Administration (GSA) and federal Best in Class contracts that include sustainability requirements applicable to the entire government. The EPA will continue to advise its acquisition community about contractor-provided reports for biobased purchases by issuing policy reminder notices, to the extent practicable, in FY 2018.

ELECTRONICS STEWARDSHIP

FY 2017 Status: 89 percent of equipment acquisition meets EPEAT requirements, 97.4 percent of equipment has power management and the EPA is 100 percent compliance with disposal guidelines

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
Eighty-nine percent of EPA locations actively track whether their new electronics acquisitions meet the Federal Energy Management Program's low-standby power requirements. In FY 2017, 89 percent of the monitors, personal computers, laptops, multifunction devices, printers, copiers, scanners, televisions, slates and cell phones, at EPA reporting locations acquired, were EPEAT-registered, and all excess and surplus electronics were disposed of consistent with federal policies on recycling and disposal of electronic assets.	The EPA has many laboratories, and 80 percent have written policies to ensure that their specialized laboratory equipment (e.g., chromatographs, spectrometers) is considered for reselling, reusing or recycling before disposal.	In coordination with EMSs, the EPA will continue to promote electronics stewardship awareness among employees and managers. The EPA will continue to develop its internal systems for tracking and reporting EPEAT-registered electronics. In coordination with EMSs, the EPA will continue to enable and maintain power management on all eligible electronics and ensure laboratory equipment is considered for reuse or recycling before decommissioning or disposal.

GREENHOUSE GAS EMISSIONS (GHGs)

FY 2017 Status: 50.8 percent reduction in Scope 1 and 2 emissions compared to FY 2008

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
The EPA continues to translate and track its data on energy use and other sources into direct and indirect emissions associated with facility energy consumption; emissions from its fleet and equipment; fugitive emissions associated with building fire suppression and mobile air conditioning equipment; research process emissions; and emissions from activities at its leased office and support space.	The EPA has already cut its Scope 1 and 2 emissions in half since FY 2008.	The strategies described in previous sections will all contribute to keeping the EPA's Scope 1 and 2 emissions much lower than they were in FY 2008. Without the availability of the GSA's Footprint tool, the EPA is examining alternatives to survey employees and track its Scope 3 emissions from commuting.