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

RENEWABLE ENERGY

FY 2017 Status: 48.3 percent renewable electricity

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

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	More than a quarter of the	The EPA is in the design stage for
continued to evaluate	EPA's owned inventory (by	major renovations at several
opportunities to incorporate the	gross square footage) already	buildings. Pending project
Guiding Principles into new	meets the Guiding Principles.	funding, design and construction
and updated project designs and	Master planning efforts help	will continue over the next
utilized its GreenCheck process	determine where and how to	several years, and the <i>Guiding</i>
to ensure the Guiding	best invest its buildings and	Principles for Modernization will
Principles and other	facilities funds to achieve	be incorporated into these projects
sustainability aspects are	sustainability progress and meet	to the maximum extent
incorporated in renovation	operational needs.	practicable.
projects.		
		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	EMSs have the potential to	One location will expand its
reduction and reuse through their	help EPA facilities achieve	recycling program and implement
EMSs. The EPA's waste	strong environmental and	a composting effort under a new
diversion rate of 67.8 percent in	sustainability performance	5-year waste management
FY 2017 exceeded its internal	while simultaneously	contract signed in FY 2018.
target of 60 percent waste	improving operational	The EPA will continue to look for
diversion. Currently, 86 percent	efficiency and reducing costs.	opportunities at additional
of EPA reporting locations have		locations.
a composting program.		

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

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 Op	perational Context	Priority Strategies & Planned Actions
locations actively track whether their new electronics acquisitions meet the Federal Energy Management Program's low-standby power requirements. In FY estimates	the EPA has many laboratories, and 80 percent have written olicies to ensure that their pecialized laboratory equipment e.g., chromatographs, pectrometers) is considered for eselling, reusing or recycling efore 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	The EPA has already cut its	The strategies described in
and track its data on energy	Scope 1 and 2 emissions in half	previous sections will all
use and other sources into	since FY 2008.	contribute to keeping the EPA's
direct and indirect emissions		Scope 1 and 2 emissions much
associated with facility energy		lower than they were in FY 2008.
consumption; emissions from		
its fleet and equipment;		Without the availability of the
fugitive emissions associated		GSA's Footprint tool, the EPA is
with building fire suppression		examining alternatives to survey
and mobile air conditioning		employees and track its Scope 3
equipment; research process		emissions from commuting.
emissions; and emissions from		
activities at its leased office		
and support space.		