



U.S. Department of Health and Human Services

Sustainability Report and Implementation Plan

2019

Submitted: September 20, 2019 revision

**U.S. Department of Health and Human Services**  
**2019 Sustainability Report and Implementation Plan**

**Table of Contents**

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Executive Summary .....	1
Implementation Summary: Facility Management.....	2
1. FACILITY ENERGY EFFICIENCY.....	2
2. EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING .....	3
3. RENEWABLE ENERGY .....	4
4. WATER EFFICIENCY .....	5
5. HIGH PERFORMANCE SUSTAINABLE BUILDINGS .....	6
6. WASTE MANAGEMENT AND DIVERSION .....	7
Implementation Summary: Fleet Management .....	8
1. TRANSPORTATION / FLEET MANAGEMENT .....	8
Implementation Summary: Cross-Cutting Operations .....	9
1. SUSTAINABLE ACQUISITION / PROCUREMENT .....	9
2. ELECTRONICS STEWARDSHIP .....	10
3. GREENHOUSE GAS EMISSIONS.....	12
Agency Priorities and Highlights .....	132
Agency Identified Priorities .....	132
Notable Projects and Highlights .....	133

## Executive Summary

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The U.S. Department of Health and Human Services (HHS) Sustainability Program, led by the HHS Chief Sustainability Officer (CSO), engages the HHS community to promote a culture of quality improvement and to lead the advancement of human health, environmental stewardship, and sustainability through partnership and innovation. HHS uses an interdisciplinary, collaborative approach to sustainability with all employees, contract personnel, and the private sector, to develop and implement sustainability endeavors connected with agency functions. These functions include design, construction, operation and maintenance of sustainable buildings, facilities and infrastructure; improvement of fleet and vehicle efficiency and management, procurement of sustainable products and services; minimization of waste and pollution prevention; and responsible management of electronic equipment and data centers.

The HHS Sustainability Program achieves sustainability goals with the help of appointed goal managers across the HHS Operating Divisions (OpDivs). Goal managers serve as champions for sustainability to promote widespread adoption of sustainable practices throughout the agency. Additionally, HHS has dedicated sustainability teams and workgroups that focus on efforts and initiatives for energy and water efficiency, high performance buildings, fleet management, electronic stewardship, sustainable acquisition, and employee outreach to reduce greenhouse gas (GHG) emissions.

HHS incorporates the fundamentals of sustainability into the daily operations of campuses and facilities, resulting in a 30.8 percent reduction in GHG emissions from fiscal year (FY) 2008 to FY 2018. These reductions are reported from efforts in 30.4 million (M) square feet (SF) of primarily energy and water intensive laboratories, hospitals, vivarium, and specialized research facilities. The square footage covers roughly 3,800 buildings and several General Services Administration (GSA) delegated buildings that are located throughout the nation in urban and rural areas, as well as remote areas of native-American communities. Reducing energy and water use intensities is a significant challenge when trying to meet the tight operating requirements of such critical health care and research facilities.

HHS landholdings OpDivs include the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Indian Health Service (IHS), and the National Institutes of Health (NIH). These OpDivs are semi-autonomous in operations as they are funded independently. Therefore, while sustainability is coordinated and fostered at an HHS level, the operations budget is managed at the OpDiv level.

For FY 2020 and FY 2021, the top HHS strategic priorities to advance efficiency and sustainability in agency operations, meet or exceed goals, and achieve cost savings are:

- Implement energy and water saving efficiency measures through performance contracting and direct agency funding;
- Design and construct new buildings and renovations to achieve the maximum energy, water and waste efficiencies practicable; and
- Increase focus on laboratory sustainability addressing laboratory equipment, supplies, waste, and processes to reduce waste and increase efficiencies.

The HHS sustainability and facility workforce understands that achieving full sustainability throughout HHS daily operations and missions requires the participation of all roughly 80,500 employees. To this end, HHS conducts outreach efforts throughout the year including World Water Day, Earth Day, Energy Action Month, and America

Recycles Day. The OpDivs form individual Green Teams to improve sustainable actions at the office level, prepare newsletters and presentations, workshops, lunch series/walks, posters, and other outreach mechanisms to raise awareness. HHS conducts a sustainability awards program and a children's poster contest to further increase awareness and reward participation. All the activities envisioned in this report are subject to availability of appropriations.

## Implementation Summary: Facility Management

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### FACILITY ENERGY EFFICIENCY

#### **FY18 Energy Intensity Progress (Btu/GSF):**

23.6% reduction from FY03

12.6% increase from FY17

#### **FY19-FY20 Plan:**

0.75% reduction in FY19 from FY18

1% reduction in FY20 from FY19

#### **Implementation Status:**

HHS OpDivs focus on making energy efficiency investments, installing and monitoring energy meters and submeters, tracking monthly energy data (often using Energy Star Portfolio Manager), and using this data to improve energy management and performance. OpDivs perform audits to determine deep energy retrofits and larger impact projects. In FY 2018, these strategies resulted in an overall reduction of 23.6 percent in energy use intensity from the 2003 baseline. FY 2018 experienced a 12.6% increase in energy intensity from FY 2017 due to extreme weather conditions in both the summer and winter.

The most significant challenge to improving energy efficiency is energy-intensive laboratories requiring 24/7 operations, 100 percent outdoor air, and a high frequency of air changes. These operating constraints are hard to overcome, and have the largest net affect when renovations and construction projects bring legacy labs up to current standards.

Despite this challenge, HHS OpDivs make an impact wherever possible as shown in the following examples:

- In FY 2019, CDC replaced two inefficient chillers with new models that are 13 percent more efficient. To date, electricity savings from the new high-efficiency chillers resulted in a net savings of 361,200 kilowatt hours (kWh) per year.
- In FY 2018 and FY 2019, IHS upgraded heating and cooling equipment with high efficiency models using \$174M aimed to reduce the backlog of essential maintenance and repair (BEMAR).
- At the Research Triangle Park (RTP) campus in North Carolina, NIH commissioned a municipal water reclamation project for use in cooling towers, and a central plant chilled water efficiency upgrade. The agency's first net-zero building came on-line at this location in FY 2018.
- The HHS Program Support Center (PSC) upgraded fluorescent lighting in both the Hubert H. Humphrey (HHH) Building and 5600 Fishers Lane. In the HHH Building, nearly 30,000 fluorescent light bulbs have been replaced with light emitting diode (LED) bulbs for an estimated annual savings of 1,480,000 kWh and

\$153,000. Phases 1 and 2 of the 5600 Fishers Lane project included almost 2,000 LED bulbs for an estimated annual savings of \$35,420.

### **Priority Strategies & Planned Actions**

HHS will continue to incorporate energy efficiency into all new construction and renovation projects. Additionally, HHS uses performance contracting to facilitate continual progress in meeting energy reduction goals.

In FY 2020 and FY 2021, CDC will implement the Roybal Campus Utility Energy Services Contract (UESC) Phase II to improve lighting system efficiency and implement energy submeters. The CDC Chamblee Campus will also complete a cooling plant centralization project in FY 2019 through FY 2020 that will provide a chilled water interconnection between its central cooling plant and on-campus self-served buildings, allowing for highly-efficient water-cooled chillers to be used in lieu of less-efficient air-cooled chillers for primary (duty) cooling.

FDA has the following energy conservation measures (ECMs) in the pipeline for FY 2019:

- Implement ECMs at the Maryland Muirkirk Road Complex (MRC), California Irvine and Alabama Gulf Coast Seafood Laboratory (GCSL) locations;
- Complete a roof replacement project at GCSL to upgrade to new more energy-efficient construction;
- Award MRC UESC Phase 8 and pay directly with FDA funding;
- Complete heating, ventilating, and air-conditioning (HVAC) and controls upgrade project design at Irvine;
- Continue the Arkansas Jefferson Laboratories Complex (JLC) phased upgrade to building controls system;
- Install efficiency measures at JLC Buildings 14 and 53A as part of the renovation project;
- Complete design of new JLC chiller plant; and
- Replace heating water piping and insulation at GCSL (to be done in FY 2020).

In FY 2019 and FY 2020, FDA will install a direct digital continuous commissioning system that will map all monitoring points on the JLC campus and allow the metering of individual equipment, such as air handling units (AHUs) and variable air volume boxes. The software will calculate how much energy each piece of equipment is using providing real-time data.

In FY 2019 and FY 2020, the IHS hospital in Claremore, Oklahoma, will replace a steam boiler with a heating water boiler and loop that will reduce heating costs and reduce maintenance and operational requirements.

PSC continues the lighting retrofit project at 5600 Fishers Lane, which entails replacing 13,696 fluorescent lamps with energy-efficient light emitting diode (LED) bulbs for an estimated annual savings of \$70,095. The project may be completed as part of a performance contract that would include daylighting controls.

### **EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING**

#### **FY18 Performance Contracting – Investment value and number of new projects awarded:**

\$2.6M/1 project in FY18

#### **FY19-FY20 Plan:**

\$24.9M / 3 projects in FY19

\$1.5M / 3 projects in FY20

## Implementation Status

HHS uses performance contracting to complete Energy Independence and Security Act of 2007 (EISA) covered facility evaluations and to identify and implement energy- and water-efficiency and renewable energy projects. New staff complete performance contracting training prior to launching new contracts.

In FY 2018, CDC installed ECMs under the Atlanta Campuses UESC Phase I. The ECMs included:

- LED lighting upgrades to reduce electric energy use by 2,658,562 kWh;
- Lighting controls (occupancy sensors, etc.) to reduce electricity costs;
- 439-kilowatt (kW) solar photovoltaic (PV) to increase renewable energy capacity;
- Sub-metering for chilled water and steam for enhanced monitoring and management; and
- Well-water for HVAC make-up to reduce potable water consumption by 3,531 kilogallons (kGal).

In FY 2018, FDA installed ECMs under Phase 7 of the MRC UESC. The estimated annual energy savings is 15,669 million British thermal units (MMBtu) per year and \$313,700, for a simple payback period of 7.7 years. In FY 2018, FDA awarded MRC Phase 8a at \$0.9M with full funding from the FY 2018 Buildings and Facilities (B&F) fund. The estimated annual energy savings are \$22,100 from hot water pump upgrades and AHU replacement. In FY 2019, MRC Phase 8 will be awarded with full funding from the FY 2019 Non-recurring Expense Funding (NEF) and the FY 2018 B&F fund. The contract investment is \$5.5M with annual energy savings of \$85,000 and replaces six AHUs and installs domestic water pipe insulation.

In FY 2018, IHS implemented the Phoenix Indian Medical Center (PIMC) UESC. The ECMs included boiler improvements, HVAC upgrades, lighting upgrades, 250-kW photovoltaic system installation, transformer replacements, and water system upgrades. The estimated annual energy savings of the first phase is 9,400 MMBtu per year or \$282,000 per year, which equates to a 24 percent reduction in electricity, 3 percent reduction in natural gas, and 50 percent reduction in water. Also, the solar panels provide a covered outdoor gathering space and shaded parking.

NIH signed two new UESC contracts in FY 2019, valued at \$13.7M for the NIH Bethesda Campus. Each UESC project covers multiple buildings for lighting and water fixture improvements, and condensate units and steam traps replacement. These projects are estimated to save nearly \$1.2M annually on energy and water costs.

## Priority Strategies & Planned Actions

HHS will continue to maximize the use of performance contracting to implement energy and water efficiency projects and renewable energy systems.

CDC will award Phase II of the Atlanta Campuses UESC in FY 2020 at \$9M to upgrade LED lighting, improve lighting controls, submeter chilled water and steam, and recover AHU condensate. The estimated annual savings are 19,361 MMBtu and 14,087 kilogallons (kGal) of water.

In FY 2019 and FY 2020, FDA will continue implementation of MRC UESC phases to meet energy and water efficiency goals. For example, the MRC Phase 8b preliminary investment-grade audit was completed in FY 2019 and identified 11 ECMs with estimated annual savings of \$183,700 at a project cost of \$6.4M. The MRC Phase 9 preliminary investment grade audit is complete with 3 ECMs for electrical service and emergency generator upgrades. Both proposals are under revision and negotiation, with anticipated award in FY 2020.

In FY 2020, IHS will identify potential UESC projects to take advantage of the contracting mechanism and improve energy efficiency throughout the IHS system of healthcare facilities.

## **RENEWABLE ENERGY**

### **FY18 Renewable Electricity Use:**

18.8% of total electricity in FY18

### **FY19-FY20 Plan:**

16% of total electricity in FY19

15% of total electricity in FY20

### **Implementation Status**

HHS implements on-site renewable energy projects using performance contracting wherever possible and cost effective. OpDivs conduct energy evaluations to identify opportunities and also purchase Renewable Energy Credits (RECs).

In FY 2018, CDC completed a 250-kW solar PV array at the Lawrenceville campus as part of the Atlanta UESC.

At FDA, on-site generated renewable energy came from a 1.1-megawatt (MW) roof top photovoltaic (PV) system at Irvine that generated 1,580 MWH of electricity and a solar thermal system at MRC.

In FY 2018, IHS implemented a 300-kW PV array at the new Fort Yuma Healthcare Center in California and began construction of an on-site solar project as part of the PIMC UESC. Additionally at IHS, new design-build contracts require the feasibility of constructing a solar hot water heating system capable of delivering at least 30 percent of the hot water demand, and an on-site renewable energy system capable of providing at least 7.5 percent of the annual electrical load based on available funding and life-cycle cost effectiveness.

### **Priority Strategies & Planned Actions**

HHS OpDivs will continue to work with energy services companies to include PV and thermal renewable energy projects in performance contract ECMs.

In FY 2020, IHS will complete the PIMC UESC on-site solar project and construct the 184-kW PV rooftop system and approximately 22,000 SF parking lot PV panel system at the new IHS Dilkon Health Center.

For FY 2020 through FY 2021, CDC will install a 200-kW PV system on the Roybal Campus South Parking Deck and a 170-kW PV system at the San Juan Campus.

## **WATER EFFICIENCY**

### **FY18 Water Intensity Progress (Gal/GSF):**

26.9% reduction from FY07

26.3% reduction from FY17

### **FY19-FY20 Plan:**

1% reduction in FY19 from FY18

1% reduction in FY20 from FY 19

### **Implementation Status**

In FY 2018, HHS significantly reduced water use intensity by 26.3 percent as compared to FY 2017. These savings primarily resulted from the NIH Bethesda Campus facility management initiating an ongoing extensive leak detection program that identified and resolved several issues.

HHS has a large amount of water-intensive laboratory and vivarium spaces, and much of the research procedures performed in these facilities requires the use of water. The type of research or analytical testing performed and/or the frequency of performance may change, which, in turn, affects the amount of water used in a facility.

In FY 2018, CDC expanded current water monitoring services with a new contract to include Lawrenceville Campus. The service measures water flow, sends real time alerts and updates CDC maintenance employees to spikes in water usage.

Two new IHS facilities, Southern California Youth Regional Treatment Center and Fort Yuma Health Center, are net zero for water. These two facilities make up 2.6 percent of the IHS owned and operated facilities. The design of the IHS Northern California Youth Regional Treatment Center is also net zero water.

In FY 2018 and FY 2019, NIH awarded two large UESCs (over \$13M) covering multiple buildings on the NIH Bethesda campus that included water fixture improvements and replacement of condensate units and steam traps with an estimated total savings of \$834,000 per year.

### **Priority Strategies & Planned Actions**

HHS OpDivs will continue to primarily use performance contracts to implement WCMs. Direct agency funding is used when possible to fund water-efficiency projects. Additionally, new construction and renovation projects include water-efficiency measures in plumbing fixtures, HVAC systems, lab systems, and infrastructure or storm water uses.

In FY 2020, CDC will expand water monitoring services with a new contract for water meters at the Fort Collins, Colorado campus. In addition, the CDC will award and implement the Roybal UESC Phase II from FY 2020 to FY 2021. This effort will include air-conditioning (AC) condensate recovery for HVAC make-up to reduce potable water consumption by as much as 14,087 kGal and \$203,000 per year.

The design of a new chiller plant at FDA JLC is underway and is expected to be completed by September 2019. FDA is studying water-saving measures, such as the use of basin-less cooling towers and condensate recovery that can be incorporated into the project.

The IHS Claremore hospital will replace a steam boiler with a closed-system heating water boiler and loop that will reduce water use and reduce maintenance and operational requirements.

In FY 2020, NIH RTP will complete a UESC WCM to use grey water from a nearby municipal waste water treatment plant for make-up water in cooling towers. NIH will also repair defective heat exchangers at the Poolesville and Bethesda Campuses for an estimated savings of \$488,700 per year.

## **HIGH PERFORMANCE SUSTAINABLE BUILDINGS**

### **FY18 Sustainable Buildings Progress:**

- 16 sustainable Federal buildings
- 5.3% of buildings / 8.6% of gross square footage (GSF)

### **FY19-FY20 Plan:**

- 7.5% of buildings in FY19
- 7.8% of buildings in FY20



## Implementation Status

HHS strives to achieve high-performance building standards throughout its offices, administration buildings, laboratories, hospitals, and health centers. Each OpDiv is working to bring existing buildings up to the 2016 Guiding Principles and incorporate LEED standards into agency and OpDiv design guidelines.

For example, in FY 2018:

- CDC completed the construction of the Fort Collins Freezer Building to sustainable guidelines and applied for Fitwel certification. Fitwel is the leading certification system that optimizes buildings to support health.
- FDA continued the design of a new Winchester Engineering and Analytical Center (WEAC). The new \$54M, 64,000 GSF building design is LEED Silver.
- IHS completed the Fort Yuma Healthcare Center in Winterhaven, California; a 76,300 SF, \$47.5M, LEED Gold-certified out-patient facility. The projected annual energy usage is 963 MWh, excluding occupant loads, which is about half the energy use of similar facilities. It was also designed to be a net zero water facility.

## Priority Strategies & Planned Actions

The CDC Lawrenceville Building B design will be LEED certified. Additionally, the new Roybal Campus Parking Deck Project includes sustainable design features such as a rooftop PV and will be the first net zero energy parking structure for HHS. CDC is also planning four Fitwel certifications on the Roybal Campus.

In FY 2020, FDA will complete the JLC Building 14 and 53A renovation. This project incorporates sustainable and high performance principles in the planning, design, building, operating, and maintaining of all facilities.

In FY 2019 through FY 2021, IHS will construct the IHS Dilkon Health Center, the Salt River Pima Maricopa Indian Community Northeast Ambulatory Care Center, the Savoonga Duplex Staff Quarters, and the Barrow Alaska Staff Quarters Multi-Plex, all of which were designed to earn LEED certifications.

## WASTE MANAGEMENT AND DIVERSION

### FY18 Non-hazardous Waste Management and Diversion:

15,350.2 metric tons of non-hazardous solid waste generated\*  
28.1% sent to treatment and disposal facilities (71.9% diverted)

\*not including construction and demolition waste

## Implementation Status

In FY 2018, HHS diverted 71.9 percent of non-hazardous waste from landfills. OpDiv diversion rates varied as follows: CDC - 49.6 percent, IHS - 9 percent, NIH - 90.5 percent, FDA - 39 percent, and Centers for Medicare and Medicaid Services (CMS) - 83 percent.

HHS continuously encourages staff and contractors to reduce waste generation and increase waste recycling, and to reinforce the thoughtful use, handling, and disposal of hazardous materials. Specific examples include:

- Integrated pest management programs to remove or reduce pest attractants and reduce or eliminate the use of chemical pesticides;
- Contract language and LEED standards for new construction and renovations to require 70 percent diversion of construction and demolition debris from landfills;
- Monitoring and control of hydrofluorocarbon (HFC) refrigerants to reduce or eliminate atmospheric losses;

- Reducing the acquisition and use of hazardous laboratory chemicals by substituting less hazardous chemicals or by reclaiming and reusing solvents;
- Recycling or substituting high-volume hard-to-recycle materials such as Styrofoam packing materials;
- Working with vendors to reduce packaging or provide more sustainable packaging materials; and
- Reusing gently used or excess office or lab supplies and equipment.

### Priority Strategies & Planned Actions

HHS has set minimum waste diversion rates of 50% non-hazardous waste and 50% construction and demolition waste. OpDivs often exceed these rates and are encouraged to improve.

- CDC has a diversion goal of 72 percent for FY 2020. CDC is conducting a waste characterization study at all CDC campuses to assess current recycling efforts, identify gaps and areas for improvement, and engage local staff in recycling. CDC is working with recycling ambassadors at various campuses and is capturing recycling data in leased spaces.
- IHS has diversion goals of 10 percent in FY 2019 and 50 percent in FY 2025.
- The NIH goal is to maintain the current level of diversion and continue to make incremental improvements. NIH will convert the plastic film pilot into a regular recycling program in building receiving areas on the Bethesda Campus. Additionally, NIH will recycle saline and water irrigation plastic bottles and rigid packaging of medical devices in operating rooms, and continue to implement a web-based waste disposal authorization process.
- FDA has a diversion goal of 41 percent in FY 2019 and will continue to make incremental improvements. Sustainable laboratory green teams address such issues as waste prevention in laboratories.
- CMS will continue to promote recycling and composting through outreach and awareness campaigns. Two-sided document printing and copying has been incorporated as the default for all printers and copiers (with the exception of drawing printers).

## Implementation Summary: Fleet Management

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### TRANSPORTATION / FLEET MANAGEMENT

#### **FY18 Petroleum Reduction Progress (Gal):**

24% reduction in petroleum fuel since 2005

9% increase in petroleum fuel since FY17

#### **FY19-FY20 Plan:**

5% reduction in FY19 from FY18

5% reduction in FY20 from FY19

### Implementation Status

HHS has 4,954 vehicles located throughout the United States in metropolitan, rural and remote sites, and in over 38 countries. The Department has a wide range of vehicles, including sedans, light and heavy trucks, box and refrigerated vehicles, vans and minivans, specialty vehicles (such as aerial bucket trucks and police and fire emergency vehicles), animal transport vehicles and grounds maintenance vehicles. HHS vehicles are also used to attend functions, trainings, and meetings outside of local commuting areas and at multiple locations on a daily basis. HHS primarily leases GSA vehicles for domestic use with the exception of CDC's international

operations. For efficiency, HHS primarily uses compact sedans with a limited number of larger vehicles. Where weather conditions demand it, HHS uses 4-wheel-drive sport utility vehicles to meet the mission.

HHS experienced a 9% increase in petroleum fuel use since FY 2017 due to the increase in the size of vehicles assigned to a rural region that required all-wheel or 4-wheel drive vehicles. This allowed the regional employees to travel in such conditions as several inches of snow and unpaved roads.

### **Priority Strategies & Planned Actions**

HHS replaces vehicles based on age, mileage, and serviceability. In FY 2019, HHS will continue to replace sedans and light duty conventional-fuel vehicles with low GHG and alternative fuel vehicles (AFVs) such as hybrids and total electric vehicles. E-85 (flexible-fuel) vehicles are deployed where infrastructure is readily available. Where AFV fueling is not available, HHS uses low greenhouse gas and electric vehicles.

HHS collects and utilizes agency fleet operational data through deployment of vehicle telematics. Telematics is currently used in 407 domestic fleet vehicles, and 184 vehicles in 13 international locations. HHS plans to take part in the GSA (Geotab) pilot program beginning in FY 2019. HHS plans to install telematics in light and medium duty vehicles over the next two years. The fleet size is decreasing from the baseline and some conventional fuel vehicles have been replaced with hybrids and electric vehicles. Plans are to continue with this vehicle replacement approach.

## **Implementation Summary: Cross-Cutting Operations**

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### **SUSTAINABLE ACQUISITION / PROCUREMENT**

#### **FY18 Sustainable Acquisition Progress:**

6% of contract actions and 4.4% of obligations (in dollars), for a total of \$926.2M in contract actions with statutory environmental requirements

#### **Implementation Status**

HHS follows the policies and strategies outlined in the Federal Acquisition Regulation (FAR) to meet statutory mandates requiring purchasing preference for recycled-content, Energy Star-qualified and Federal Energy Management Program (FEMP)-designated, and bio-preferred and bio-based products designated by the U.S. Department of Agriculture (USDA).

In FY 2018, HHS provided its acquisition workforce with sustainable acquisition training, focusing on bio-based products and on including sustainability requirements in applicable contracts. HHS OpDivs in turn detail procedures for their procurement staff.

IHS keeps its contracting staff up to date on new green procurement requirements and reinforces existing regulations through ongoing training and outreach efforts. These efforts have resulted in increased green procurement awareness among IHS contracting staff, as evidenced by discussions during monthly meetings. For example, a green procurement presentation was given at the IHS Chief Contracting Officer Conference, followed by a question and answer period.

The IHS Division of Acquisition Policy (DAP) successfully integrated the Green Procurement Checklist (GPC) into the annual Acquisition Management Review audits for its offices across the United States. The GPC is now a mandatory requirement for all IHS contracting personnel and is utilized during the market research phase. IHS

contracting officers and contract specialists are required to have the GPC as a part of their supply contract files. The IHS acquisition staff was trained on the appropriate use and application of the various clauses to meet statutory and Executive Order goals. For example, IHS DAP Headquarters staff has a 98 percent compliance rating with meeting agency sustainability goals, which was determined by a review of FY 2018 supply contract files.

All members of the NIH acquisition workforce are required to take green purchasing training every two years. This includes contracting officer representatives, program and project managers, purchase card holders, card approving officials, and contracting officers. NIH purchases bio-based fuels for fleet vehicles. Furthermore, 100 percent of the diesel fuel acquired for NIH fleet vehicles is a bio-based B20 diesel fuel and NIH also uses E85 for AFVs. New ultra-low temperature (ULT) freezers at NIH must be Energy Star-certified, and NIH purchased 106 Energy Star-certified ULT freezers in FY 2018.

CMS procurement offices continuously look for sustainable acquisitions opportunities. In FY 2018, CMS completed 14 actions with a total of \$12M in sustainable acquisitions, which accounts for 0.46 percent of CMS total contract actions.

### **Priority Strategies & Planned Actions**

In FY 2019 and FY 2020, HHS has a target of 6% of contract actions with statutory environmental requirements, and a corresponding target of 4.4% of obligations in dollars.

HHS OpDivs will continue to ensure that the proper sustainability clauses are part of all acquisitions and will review a sampling of those acquisitions annually. OpDivs will also continue to require green purchasing training for acquisition workforce to ensure that it is included in both credit card purchases and contracts.

FDA will continue to leverage its Policies and Procedures SharePoint site to promote sustainable acquisitions. It has multiple links to green policies and resources throughout the Government, such as: EPA laws and regulations; USDA bio preferred guidance, GSA Green Procurement Compilation and SFTool, and the EPEAT search registry. The site is a major source for FDA's sustainable needs and market research efforts and is utilized by contracting officers, contract specialists, purchase card program participants and program personnel. In addition, the FDA Office of Acquisitions and Grants Services (OAGS) continues to conduct in-house training for FDA acquisitions personnel.

The IHS green procurement Lead will provide training on FAR 52.212-5, *Contract Terms and Conditions Required to Implement Statutes or Executive Orders*, to assure the inclusion of green clauses in future contracts as applicable. The green procurement lead will provide quarterly IHS-wide webinar trainings as needed.

Recurring training assures employees are familiar with the federal requirements to purchase environmentally preferable products and services. Purchasing bio-based fuel has been prioritized, as referenced in the fleet management section. The NIH has also required all new ULT freezers be Energy Star-certified, resulting in the purchase of 106 Energy Star-certified ULT freezers in FY 2018 and an estimated 474,911 kWh/year and \$52,240/year in savings.

In FY 2020 and FY 2021, CMS will set a target of one percent for purchases of bio-based products, energy efficient product purchases and increased recycled content purchases.

## **ELECTRONICS STEWARDSHIP**

### **FY18 Electronics Stewardship Progress:**

97% of newly purchased or leased equipment met energy efficiency requirements

99% of equipment with power management enabled\*  
100% of electronic equipment disposed using environmentally sound methods  
\*excluding exempted equipment

## Implementation Status

The responsibility for acquiring and managing electronic equipment to promote energy efficiency and environmental stewardship of electronics, including acquisition, management, and disposal at end of life is delegated to HHS OpDiv Chief Information Officers (CIOs) and Personal Property Managers. The OpDivs reported their FY 2019 strategies, initiatives and actions to HHS in their annual Sustainability Implementation Plans (SIP).

During FY 2018, CDC's Information Technology Services Office (ITSO) maintained all of its established goals for acquisition and disposal of electronic equipment by utilizing UNICOR R2 certified recyclers, as well as maintained 100 percent power management. The CDC ITSO was awarded two HHS Green Champions Awards recognizing their electronic stewardship efforts to purchase more energy efficient equipment and more effectively track their electronic equipment.

The NIH has closed 71 of its 108 data centers: 16 of 42 (38 percent) of tiered data centers and 55 of 66 (83 percent) of non-tiered data centers. NIH plans to close three additional data centers by FY 2020.

At 5600 Fishers Lane, PSC implemented procedures to automatically initiate energy saving settings on equipment that does not have automatic power saving settings.

## Priority Strategies & Planned Actions

The CDC ITSO will continue to:

- Maintain the GSA Global Strategic Sourcing (GSS) Blanket Purchase Agreement (BPA) to ensure that information technology (IT) equipment purchases meet current Electronic Product Environmental Assessment Tool (EPEAT) and Energy Star requirements;
- Manage 4-year life cycle for all client computing equipment managed with CDC ITSO Developed Asset Management Tracking System;
- Implement power management on all client-based computing devices; and
- Manage and implement automatic duplexing on all network-based printers.

CDC is in the process of moving its enterprise email system to the cloud, thereby reducing the number of servers on premises. Migration is underway and will be finalized in FY 2020.

CDC ITSO Hardware Committee identified the very efficient power supplies being used in the new Dell 7390 2-in-1 laptops and made these devices our new standard, thereby recognizing great power savings as they are installed throughout the enterprise.

The NIH will continue to:

- Increase awareness of EPEAT purchasing and maintain acquisition and end-of-life compliance;
- Work with the NIH acquisitions communities to ensure procurement of equipment that meets sustainable electronics criteria;
- Implement automatic duplexing and other print management features on all eligible agency computers and imaging equipment; measure and report compliance;
- Ensure environmentally sound disposition of all agency excess and surplus electronics, consistent with federal policies, and measure and report compliance;

- Improve tracking and reporting systems for electronics through the lifecycle; and
- Identify opportunities for data center owners and cloud contract holders to achieve cost savings.

## **GREENHOUSE GAS EMISSIONS**

### **FY18 Scope 1 & 2 Greenhouse Gas (GHG) Emissions:**

30.8% reduction from FY 2008

11% increase from FY 2017

### **Implementation Status**

HHS uses the U.S. Department of Energy FEMP GHG emission report to identify and target high emission categories and implement specific actions to address the identified high emission areas. Therefore, the highest focus is on Scope 1 and 2 GHG emissions and, specifically, reducing energy and improving efficiency of building and laboratory operations.

HHS continues to focus on promoting green commuting habits for employees to reduce GHG emissions. Public transportation, car and van pools, and teleworking are emphasized through the promotion of transit subsidies, enhanced access to public transportation, and employee outreach.

Significant energy reductions have been achieved through ECMs implemented by performance contracting. HHS-funded projects achieving energy reductions include building controls upgrades, HVAC equipment upgrades, and lighting projects. In FY 2018, energy intensity use and GHG emissions increased from FY 2017 due to both a significantly colder winter and hotter summer in the locations of the HHS largest energy use facilities.

HHS new building construction and renovation designs are contributing to the reduction of energy use intensity and the generation of GHG emissions. HHS is striving to achieve net zero energy designs as shown in the NIEHS net zero warehouse, the CDC design/build of a net zero laboratory, and the CDC net zero parking structure. Where net zero cannot initially be met, HHS focuses on maximizing efficiency. For example, the IHS Fort Yuma Healthcare Center is expected to reduce GHG emissions by 51 percent compared to median properties of similar use and type when compared with Energy Star Portfolio Manager metrics. These buildings will serve as case studies for future HHS designs.

### **Priority Strategies & Planned Actions**

HHS OpDivs will continue to use performance contracting as described above to implement ECMs and major campus energy improvements. OpDivs will continue to implement on-site renewable energy projects, and to analyze new projects HHS facilities as described above.

Laboratory sustainability and plug loads are a growing emphasis for HHS facilities. Significant research and procedures are being completed to improve the efficiency of laboratory equipment use such as ULT freezers. HHS facilities personnel are working closely with scientists to determine more sustainable laboratory operations.

Facilities and campus master plans continue to be updated to address long-term energy capacity, security, climate resiliency and efficiency with an emphasis on sustainability. New construction and renovations will strive to reduce energy use and GHG emissions, with a goal of reaching net zero energy where possible.

## Agency Priorities and Highlights

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### **AGENCY IDENTIFIED PRIORITIES**

Sustainable and resilient facilities and operations are critical to support HHS as it ensures mission readiness. HHS facility master plans and sustainability priorities will include resiliency planning, net zero energy, waste and water designs, and other best practices.

HHS will continue to leverage strong OpDiv programs to achieve a successful sustainability program. As a part of its commitment to the health of the American people, the CDC Sustainability Office will continue to promote health and wellness as a part of a sustainable lifestyle. The CDC Sustainability Office will pursue this through Atlanta-area and national design and health leadership partnerships. The CDC partnership with the Atlanta Better Buildings Challenge, the CDC Sustainability and Health Webinar Series, and Fitwel certification are some notable FY 2018 projects that promoted awareness of the health and built environment connection. In its commitment to improving employee health and reducing absenteeism rates, CDC has set a goal of achieving Fitwel certification for one existing building per quarter for applicable facilities and for all planned new construction.

### **NOTABLE PROJECTS AND HIGHLIGHTS**

The HHS Green Champions Awards program recognizes the exceptional performance of HHS energy management personnel in implementing projects, programs, and alternative financing contracts to meet the requirements of the Energy Policy Act of 2005 (EPACT 05), the EISA 2007, and current executive orders. In FY 2018, 157 employees and 11 projects received awards in the various awards categories.

The CDC Inorganic and Radiation Analytical Toxicology (IRAT) Branch recently won an individual laboratory Government section award in the 2018 International Laboratory Freezer Challenge (ILFC). To win this award, the IRAT Branch initiated several best practices including: throwing away unnecessary samples to conserve freezer space, regularly replacing air filters, digitizing their inventory to decrease searching time, and increasing the temperature of over half of their freezers from -80°C to -70°C. Their efforts also contributed to CDC winning an ILFC organizational award in the government division. The IRAT Branch's cold storage management practices are estimated to save 98,000 kWh per year, demonstrating substantial cost and energy savings for CDC both now and in the future.

NIH conducted a pilot 2019 Freezer Challenge for labs to go beyond the NIH Freezer Policy to increase reliability and decrease energy consumption. The pilot ran for 90 days, included 8 labs, one biorepository, 123 ULT freezers and 86 lab-grade freezers resulting in saving approximately \$15,000. NIH anticipates expanding the challenge and participating in the 2019 ILFC.