U.S. Department of Health & Human Services

Sustainability Report and Implementation Plan 2020

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Executive Summary

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 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 work groups 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 29.4 percent reduction in GHG emissions from fiscal year (FY) 2008 to FY 2019. 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. Additionally, HHS has 4,677 vehicles located throughout the United States in metropolitan, rural and remote sites, and in over 38 countries. The Department's vehicle fleet consists of a wide range of vehicles, however the acquisition and use of alternative fuel vehicles is a priority.

The HHS OpDivs with landholding authority are 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.

During the COVID-19 pandemic in FY 2020, HHS adopted a maximum telework policy for eligible employees and contractors. This policy resulted in a significant reduction in occupancy of HHS buildings beginning in mid-March 2020 and continuing through June. HHS anticipates an improvement in facility energy efficiency, water efficiency and waste management and diversion due to this reduction in building occupancy.

For FY 2021 and FY 2022, 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 recognizes that achieving full sustainability throughout HHS daily operations and missions requires the participation of all roughly 79,250 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 and prepare newsletters, 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

1. FACILITY ENERGY EFFICIENCY

FY 2019 Energy Intensity Progress (Btu/GSF):

23.1% reduction from FY03
0.7% increase from FY18

FY 2020-FY 2021 Plan:

2% reduction in FY20 from FY19
1% reduction in FY21 from FY20

HHS focuses on improving facility energy efficiency through dedicated energy reduction projects, renovations and upgrade projects, and new construction. Facility evaluations identify projects that can be bundled into performance contracts or with scheduled upgrades and renovations. Employee energy efficiency awareness and outreach is another strategy used to engage the HHS workforce in the effort to improve facility energy efficiency.

Implementation Status

Meeting the 30% energy intensity reduction goal as compared to FY 2003 has been a challenge for HHS due to the Department's large percentage of energy-intensive facilities. HHS-owned laboratories, such as state-of-the-art biological safety laboratories, vivariums, and hospitals account for 15,539,149 square feet, which is 51.1% of the total HHS energy goal subject square footage. These buildings require 100% outdoor air 24 hours per day and require anywhere from 6 to 15 air changes per hour. These specialized laboratory requirements are necessary to maintain appropriate temperature and humidity, which impedes HHS' ability to reduce energy intensity. Additionally, 18.1% of the HHS energy goal subject square footage consists of energy-intensive hospitals and outpatient healthcare facilities.

In FY 2019, all HHS OpDivs, except NIH, experienced a decrease in energy use. Due to the magnitude of NIH, the net effect on energy use intensity was a slight increase. Two factors caused the NIH increase at the Bethesda campus: 1) a 7.3% increase in cooling degree days requiring increased cooling capacity, and 2) a reduction in output from the cogeneration system, which decreased the source energy credit and reduced the excess heat gained from the system.

NIH completed three Utility Energy Services Contracts (UESCs) in FY 2018 and FY 2019 for a combined estimated annual savings of 66,660 million British thermal units (MMBtu), 33,377 kilogallons (kgal) of water, and $3.2M. The energy conservation measures (ECMs) included a variety of heating, ventilating, and air-conditioning (HVAC) improvements, lighting retrofits, efficiency controls, water conservation measures (WCMs), and retro-commissioning measures.

In FY 2019, NIH completed construction of a thermal energy storage tank system (TESS) that saves energy costs and increases the chilled water capacity and reliability at the Bethesda campus in Maryland. It consists of a partially buried eight million-gallon storage tank providing 45,000-ton hours of chilled water at a discharge rate of 5,000 tons per hour, and stores chilled water produced by the chillers in the NIH Central Utility Plant (CUP) during off-peak hours. During the peak hours, when chilled water demand is high, the storage tank supplements the existing chillers' capacity. The estimated annual electric cost savings of the TESS is $1.3M. Additionally, TESS makes the plant's operation more flexible, and provides emergency chilled water due to power loss, chiller plant failure or pipe leaks.

CDC upgraded chiller plants on the Roybal and Chamblee campuses in FY 2019 and full operation of the projects begins in FY 2020. The upgrade included new energy efficient chillers, chilled water sub-metering for optimal monitoring and management, and chiller plant centralization on one campus.

In FY 2019, FDA installed phase one of a multi-phased building controls upgrade project on the Jefferson Laboratories Complex (JLC) campus with phase two, valued at $210,400, currently under construction. The project includes

installing occupancy sensors in the labs and administration areas to monitor after-hours occupancy and reduce air changes per hour based on occupancy. At the FDA Muirkirk Road Complex (MRC) Module 1 (MOD1) Laboratory Building, two air handling units (AHUs) were replaced with higher efficiency models. The project cost is $1.1M and the estimated annual energy and water savings is 86,909 kilowatt-hours (kWh); 69,600 gallons of water and $21,573.

For FY 2018 through FY 2020, IHS was appropriated a total of $249M of Maintenance and Improvement (M&I) funding, above the sustainment amount needed for healthcare facilities, to reduce the Backlog of Essential Maintenance and Repair (BEMAR). The funding will upgrade building equipment to energy-efficient models and improve building envelop components, such as roofs and windows, for an overall reduction to facility energy use.

In FY 2019, the HHS Program Support Center completed light emitting diode (LED) lighting retrofit project in the 5600 Fishers Lane building that upgraded 2,227 lamps, thus reducing energy use of the lights by less than half for an estimated annual savings of $25,920. Phase two of the project will be completed in FY 2021 with estimated annual savings of 958,000 kWh and $113,300. The project cost will be $19,180 after a utility rebate of $109,600 is applied.

Priority Strategies & Planned Actions

HHS relies heavily on facility evaluations to identify and prioritize ECMs. For example, the NIH Bethesda campus will implement two follow-on projects to the existing utility energy services contracts (UESCs) that are estimated to increase the total savings of the contracts to 24,715 MMBtu of energy, 12,625 kgal of water, and $1.2M. The CDC National Institute for Occupational Safety and Health (NIOSH) Cincinnati, Ohio campus will implement Phase II of the existing UESC in FY 2021. The ECMs include variable frequency drives (VFDs) on cooling tower fans to reduce electricity use by as much as 777 megawatt hours (MWh), LED lighting upgrades to reduce electric energy use by 6,821 MWh, lighting controls to reduce electrical use by 60.5 MWh, and sub-metering for chilled water and steam to enhance monitoring and operation.

CDC designed the Roybal South Parking Deck to be a net zero parking deck with an estimated completion date of early 2021. The parking deck includes a solar photovoltaic (PV) system, electric vehicle (EV) charging stations, and rainwater reclamation to provide wash-down of the deck and eliminate potable water use.

In FY 2020 and FY 2021, construction on the CDC Chamblee Cooling Plant Centralization project continues. The new plant provides a chilled water interconnection between the campus central cooling plant and the campus data center, allowing the use of highly efficient water-cooled chillers in lieu of less-efficient air-cooled chillers for primary cooling. Additionally, in FY 2020 through FY 2022, CDC plans to upgrade the Roybal campus laboratory building automation system to optimize energy efficiency while still maintaining mission-critical labs and improving the Lawrenceville campus boiler plant condensate return and boiler feed systems.

FDA is designing a new chiller plant at JLC and is expected to be completed by September 2020 with construction scheduled for late 2021. Water saving measures, such as the use of basin-less cooling towers and condensate recovery, are being studied and incorporated into the project.

In FY 2020, FDA begins a project to upgrade the MRC domestic water pipe insulation, HVAC water pumps, and AHUs. FDA financed the $8M capital investment directly using both FY 2018 and FY 2019 funds and the annual energy savings are estimated at 993,787 kWh, 16,566 therms, and $95,567. MRC completed an investment grade audit and construction projects are pending award for late FY 2020 or FY 2021. Identified ECMs include AHU replacements; controls, cooling tower, boiler, pump systems, and valve improvements; lighting and controls retrofits; exterior window and joints caulking and repairs; and a solar PV system installation. Additional MRC energy savings projects under design in FY 2020 include building vestibule upgrades, HVAC upgrades, LED lighting retrofit, and ventilation improvements. The preliminary estimated total investment is $8.4M with an annual energy savings of $183,688.

2. EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING

FY 2019 Performance Contracting – Investment value and number of new projects awarded:

$0.00/0 projects in FY19

FY 2020-FY 2021 Plan:

$0.43M/2 projects in FY20

TBD in FY21

HHS utilizes performance contracting when agency funds are not available for energy and water efficiency projects. The life cycle of performance contracts from analysis to construction is typically a minimum of two years for HHS. Often, HHS facility management will modify existing performance contracts to implement additional ECMs. Therefore, performance contracts are not typically awarded annually.

Implementation Status

In FY 2019, no new performance contracts were awarded. NIH completed three UESCs in FY 2018 and FY 2019 for a combined estimated annual savings of 66,660 MMBtu, 33,377 kgal of water, and $3.2M.

FDA's most recent UESC was the MRC Phase 7 with ECMs covering HVAC controls, pump replacements, solar film installation, lighting retrofit and building envelope improvements. The project was completed in FY 2019 and has estimated annual energy savings of 15,669 MMBtu per year and $313,700 for a simple payback period of 7.7 years.

Priority Strategies & Planned Actions

As previously mentioned, the NIH Bethesda campus will implement two follow-on projects to the existing UESCs with an investment value of $427,000 and will increase the savings of UESCs to a total of 24,715 MMBtu of energy, 12,625 kgal of water, and $1.2M. The CDC NIOSH campus will implement Phase II of the existing UESC in FY 2021 that is estimated to reduce energy use by as much as 7,660 MWh. FDA MRC completed an investment grade audit and construction projects are pending award for late FY 2020 or FY 2021. HHS sites continue to consider performance contracting for future facility evaluations and financing mechanisms for identified projects.

3. RENEWABLE ENERGY

FY 2019 Renewable Electricity Use:

10.1% of total electricity in FY19

FY 2020-FY 2021 Plan:

10.1% of total electricity in FY20

10.5% of total electricity in FY21

HHS continues to identify on-site renewable energy projects as facilities complete energy evaluations and during major renovations or upgrade projects. On-site renewable energy technologies are included in new design projects to the greatest extent practicable. HHS continues to purchase renewable energy credits (RECs) to meet mandated renewable electricity requirements where on-site generation falls short.

Implementation Status

In FY 2019, 10.1% of the total HHS electricity use was from renewable sources. These sources included 64.2% from purchases of RECs, 26.5% from green-energy purchases, and 9.3% generated on-site.

In FY 2019, HHS increased on-site generated renewable electricity by 30% as compared to FY 2018. New PV projects at the NIH National Institute of Environmental Health Science (NIEHS) net zero warehouse, the IHS Fort Yuma Health Care Center, and a full year of operation of the IHS Phoenix Medical Center PV system contributed to this increase. Additionally, there was an overall increase to most existing HHS PV systems.

Priority Strategies & Planned Actions

For example, the new CDC Roybal South Parking Deck to be completed in FY 2021 includes a 360-kW PV system which will help the structure achieve net zero energy performance. CDC plans to install a 170-kW PV system at its San Juan campus in FY 2021. NIH will analyze rooftop and parking garage-mounted PV systems in its Bethesda and Poolesville locations. The most recent investment-grade audit at FDA MRC identified a solar photovoltaic system for implementation and awaits the final report to determine the economic feasibility of the project. IHS will use $3.5M of FY 2020 Green Infrastructure funding to design and install a PV system on the Northeast Ambulatory Care Center (NEACC) in Phoenix, Arizona. The project is expected to be completed in FY 2022. IHS will also expand the existing PV system at the IHS Fort Yuma Health Center using $1.5M of FY 2020 Green Infrastructure funding with an estimated completion date of mid-2021.

4. WATER EFFICIENCY

FY 2019 Water Intensity Progress (Gal/GSF):

21.1% reduction from FY07
8% increase from FY18

FY 2020-FY 2021 Plan:

3% reduction in FY20 from FY19
1% reduction in FY21 from FY20

HHS focuses on improving water efficiency through infrastructure upgrades, leak detection and prevention, metering, and implementing no-cost or low-cost water conservation measures (WCMs). WCMs are primarily implemented through performance contracts or bundled in HHS-funded upgrade projects. HHS also works to improve the efficiency of research water use in laboratories.

Implementation Status

Potable water use at HHS includes both domestic and research water. Rarely are these consumptions metered separately. Therefore, water use at HHS tends to fluctuate due to changing research and mission priorities in hospitals and laboratories. Weather plays a key part in water use at HHS due to the extreme energy-intensive operations of the hospitals and laboratories. The 7.3% increase in cooling degrees at the NIH Bethesda campus generated a much higher cooling load in its central utility plant, which happens to be one of the largest chiller plants in the United States based on cooling capacity. The higher cooling load caused the chilled water system to use more potable water to operate the cooling towers. Additionally, CDC experienced undetectable water leaks in an aged underground piping system causing an increase in water use. The leaks were repaired in late FY 2019 and new meters were installed to improve monitoring capabilities.

In FY 2019, NIH worked on several WCMs throughout facilities as part of performance contracts and operations projects. At the NIH Research Triangle Park in North Carolina, a performance contract included new chillers, cooling towers, and a water reclamation system that uses municipal wastewater for cooling tower make-up. The Poolesville location also employs a gray water system using rejected building water for cooling tower make-up supply. NIH repaired and replaced condensate units and heat exchangers at the Bethesda and Poolesville locations. Steam traps were tested, repaired, and replaced at the Bethesda campus to reduce water loss through the steam condensate system. These projects have an annual estimated savings of 12.6 million gallons (Mgal) and $252,500.

NIH Bethesda campus facility management also began modifying hot water systems to hospital patient rooms to create a flow system with minimal dead pipe ends. Recent problems with bacterial growth in hospital hot water systems have required major flushing of hot water to reduce bacterial load and the risk to immunocompromised patients. This expensive project demonstrated a major improvement in the level of problem bacteria in patient area water, and NIH reduced the reliance on dumping large amounts of hot water while flushing systems.

In FY 2019, the FDA JLC National Center for Toxicological Research (NCTR) Building 14 renovation was completed and included an efficient plumbing design estimated to reduce water use by 44% relative to the baseline building.

Priority Strategies & Planned Actions

HHS will use the planned facility evaluations for FY 2020 to identify new WCMs and implement projects.

The NIH follow-on UESC projects will continue to address steam trap, condensate unit, and plumbing fixture upgrades for an estimated 12,625 kgal of water savings. CDC plans to improve the Lawrenceville boiler plant condensate return and boiler water feed systems to reduce make-up water in FY 2020 through FY 2021.

In FY 2020, FDA is designing a new chiller plant at JLC to include water saving measures such as the use of basin-less cooling towers and condensate recovery. Construction is anticipated to begin in FY 2021. A cooling tower replacement project is under design for the Irvine lab with anticipated construction in FY 2021. Additionally, a project at MRC to upgrade HVAC water pumps and install heating water pump drives is pending award in FY 2020. The investment grade audit completed at MRC highlighted cooling tower and boiler system improvements that would reduce water consumption. FDA is awaiting the final report to determine the economic feasibility of the projects.

5. HIGH PERFORMANCE SUSTAINABLE BUILDINGS

FY 2019 Sustainable Buildings Progress:

16 sustainable Federal buildings
5.3% of buildings / 8.5% of gross square footage (GSF)

FY 2020-FY 2021 Plan:

8.6% of GSF in FY20
8.8% of GSF in FY21

HHS design guidelines for new construction and major renovations include the use of the 2016 Guiding Principles and Leadership in Energy and Environmental Design (LEED) standards at both the agency and OpDiv levels. HHS OpDivs strive to bring existing buildings up to Guiding Principle standards through renovation projects.

Implementation Status

In FY 2019, NIH started the renovation of the Building 10 E Wing on the Bethesda campus that incorporates significant energy-saving features, such as chilled beam technology for HVAC systems in the laboratories and offices. The chilled beam technology is successful in other NIH buildings and is a major advancement over traditional laboratory and office HVAC systems because it reduces high air change rates that require energy use to condition outside air and move air through filters and ductwork.

As previously mentioned, the new CDC Roybal South Parking Deck to be completed in FY 2021 will operate as a sustainable net zero energy structure with a large PV array and electric vehicle charging stations.

The JLC NCTR Building 14 renovation was completed in FY 2019. The 56,322 square foot office and laboratory building was redesigned to LEED standards with the following sustainable highlights: 1) approximately 85 percent of the existing building's walls, roofs, and floors were re-used; 2) the mechanical design achieved a 12.3% energy reduction relative to the baseline building; 3) the plumbing design achieved a 44% reduction in water use relative to the baseline building; and 4) the exterior office spaces have large windows that allow natural light into the workspace.

FDA has three new projects that meet sustainable standards. The Winchester Engineering and Analytical Center (WEAC) facility in Massachusetts will be LEED Silver and meet the Guiding Principles. This project is approximately 25% complete with completion scheduled for the end of 2021. The new $8M office building in San Juan, Puerto Rico is a LEED Silver design/build project currently in procurement and pending award in FY 2020. District Office staff will relocate from the Lab building to the new office building, which will provide more space for lab activities. The $17.6M Gulf Coast Seafood Laboratory in Dauphin Island, Alabama will be replaced by a design/build LEED facility and is pending award in FY 2020 with anticipated construction in FY 2022/2023. The new building will have improved energy and water use intensities; however, an overall increase in energy use is expected due to an increased scope of the mission and programs.

In FY 2019, IHS completed the Barrow and Savoonga Duplex Staff Quarters in Alaska, which were designed and built to earn LEED Homes certification.

Priority Strategies & Planned Actions

CDC funded the new B108 office tower and Campus Improvements Project for the Chamblee Campus. Construction will begin in FY 2021 and be completed in FY 2024. The office space design will accommodate 1,600 staff, target net zero energy performance, maintain compliance with Guiding Principles, and expand on-site renewable energy generation. This project will also include upgrades to a central utility plant, and is anticipated to be CDC's first LEED Platinum certification.

IHS has two additional new designs awaiting construction: 1) the Dilkon Health Care Center in Arizona, which is a LEED Gold healthcare certification design, and 2) the Salt River Pima Maricopa Indian Community Northeast Ambulatory Care Center (SRPMIC NEACC) in Arizona, which is also a LEED certified design.

6. WASTE MANAGEMENT AND DIVERSION

FY 2019 Non-hazardous Waste Management and Diversion:

18,172 metric tons of non-hazardous solid waste generated*
68.4% diverted and 31.6% sent to treatment and disposal facilities

FY 2020-FY 2021 Plan:

1% reduction in non-hazardous solid waste generated in FY20 from FY19
69% diverted and 31% sent to treatment and disposal facilities in FY20

1% in non-hazardous solid waste generated in FY21 from FY20
70% diverted and 30% sent to treatment and disposal facilities in FY21
**not including construction and demolition waste*

HHS continues to maximize efforts to expand waste management and diversion by encouraging staff and contractors to reduce waste generation, increase recycling where practicable, and reinforce the thoughtful use, handling, and disposal of hazardous materials.

Implementation Status

In FY 2019, NIH converted a pilot program for plastic film recycling to a full-blown program coupled with the continuation and expansion of its recycling of plastic water and saline bottles and rigid medical device packaging. NIH also expanded their award-winning solvent recycling program.

Many OpDiv offices are moving to drastically reducing waste by using paperless systems and electronic records or forms. Additionally, OpDivs employ excess supply sharing as exemplified by the FDA Free Supplies Program which more than doubled in FY 2019, saving roughly $54,325 on office supplies. HHS facility personnel are focusing on working collaboratively with research scientists to reduce laboratory waste, particularly plastic waste.

HHS updated contract language and LEED standards for new construction and renovations to require 70% diversion of construction and demolition debris from landfills.

Priority Strategies & Planned Actions

HHS facilities personnel have determined that on most HHS campuses, the greatest impact can be made by addressing laboratories and research waste. Facilities personnel and scientists work together to address the various areas of waste. The following are just a few examples of future projects: 1) NIH and FDA will update waste disposal guides for campuses addressing all areas of campus waste; 2) personnel will identify designated areas to recover lab and medical waste for recycling and deploying messaging; and 3) NIH is developing a pilot program to use large carts for medical pathological waste (MPW) to replace the large quantities of small boxes used weekly.

Implementation Summary: Fleet Management

1. TRANSPORTATION / FLEET MANAGEMENT

FY 2019 Petroleum Reduction Progress (Gal):

35.2% reduction in petroleum fuel since 2005
15.1% reduction in petroleum fuel since FY18

FY 2020-FY 2021 Plan:

2% reduction in FY20 from FY19
2% reduction in FY21 from FY20

FY 2019 Alternative Fuel Use Progress (Gal):

170% increase in alt fuel since 2005
36% decrease in alt fuel since FY18

FY 2020-FY 2021 Plan:

6% increase in FY20 from FY19
6% increase in FY21 from FY20

HHS primarily leases GSA vehicles for domestic use. HHS replaces vehicles based on age, mileage, and serviceability and is replacing all sedans and light duty conventional-fuel vehicles with low-GHG and alternative fuel vehicles such as

hybrids and/or total electric vehicles. Flexible-fuel vehicles are deployed where infrastructure is readily available. Where alternative fueling is not available, HHS uses low-GHG and electric vehicles.

Implementation Status

The Department's 4,677 vehicle fleet consists of a wide range of vehicles: 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. The fleet is primarily used domestically, except as needed to support CDC's international operations. In order to perform our mission most efficiently, HHS uses compact sedans for almost all vehicle assignments with a limited number of larger vehicles. Where weather can cause treacherous driving conditions, 4-wheel-drive sport utility vehicles are used.

In FY 2019, petroleum fuel use was 15.1% less than FY 2018 primarily due to the addition of hybrid and plug-in vehicles and presumably less Fleet travel throughout the Department. Alternative fuel use at HHS varies widely by OPDIV. The reduction of alternative fuel use in FY 2019 as compared to FY 2018 was due to the inability of employees to procure alternative fuel (mainly E-85) at the time of fueling.

In FY 2019, NIH acquired 15 low-emission, plug-in, and bio-diesel vehicles and purchased alternative fuel 65% of the time when it was available. NIH maintained a vehicle count of 75% alternative fuel or fully-electric vehicles.

HHS collects and utilizes agency fleet operational data through deployment of vehicle telematics in 407 domestic fleet vehicles, and 184 vehicles in 13 international locations. In addition, FDA uses the GSA Fleet Drive-thru system to track real-time fuel consumption throughout the year.

Priority Strategies & Planned Actions

HHS plans to take part in the GSA telematics program that should start before the end of FY 2020. HHS will install telematics in light- and medium-duty vehicles over the next two years.

NIH is analyzing fuel management information systems and vehicle idle mitigation technologies to improve fuel consumption throughout the fleet.

HHS OpDivs will continue to decrease fleet size and replace conventional fuel vehicles with more fuel-efficient vehicles.

Implementation Summary: Cross-Cutting Operations

1. SUSTAINABLE ACQUISITION / PROCUREMENT

FY 2019 Sustainable Acquisition Progress:

5.9% of contract actions and 7.4% of obligations (in dollars), for a total of $1,627M in contract actions with statutory environmental requirements

FY 2020-FY 2021 Plan:

6% of contract actions and 7.5% of obligations (in dollars)
6.1% of contract actions and 7.6% of obligations (in dollars)

HHS contracting activities follow the Federal Acquisition Regulation (FAR), HHS Acquisition Regulations (HHSAR) and OpDiv or Staff Division (StaffDiv) specific policies to meet statutory mandates for biobased products, energy efficient products, recycled content and other sustainable attributes for the acquisition of goods and services.

Implementation Status

Due to personnel changes in program and contracting offices, HHS is working to reestablish collaborative procedures throughout the OpDivs and StaffDivs and reinvigorate the sustainable acquisitions program. In FY 2019, the HHS sustainable acquisitions lead emailed information on training courses and guidelines to OpDiv and StaffDiv contracting offices. In addition, program management and contract offices collaborated early in project lifecycles to increase the number of sustainable acquisitions and ensure that the appropriate sustainability clauses were included.

HHS is a member of the Sustainable Acquisition and Materials Management Practices (SAMM) and the Consolidated Acquisition Guideline (CAG) Working Groups, which are interagency groups. The information provided in the monthly meetings is shared with HHS procurement managers to keep them updated on Federal legislative and administrative mandates, training opportunities, webinars lessons learned and tools to improve sustainable acquisition.

Priority Strategies & Planned Actions

HHS OpDivs proactively strive to achieve data entry accuracy through ongoing training, supervisory review, and random quarterly contract file audits of the data reported to the Federal Procurement Data System (FPDS) as well as utilizing FedDataCheck, a procurement analytics software. This tool automatically scans FPDS award information for FAR violations and data inconsistencies to improve the quality and accuracy of sustainable green procurements.

In FY 2021 and FY 2022, HHS will concentrate on purchase card transactions under the micro purchase threshold. HHS requires purchase card holders to take green procurement training annually and HHS plans to highlight sustainable green procurement in the purchasing guide that is currently under revision.

The HHS Green Procurement Managers team will meet quarterly in FY 2021 to discuss federal acquisition topics from SAMM meetings, procedures to increase reporting accuracy, sustainable procurement training, and collaborative processes to improve procurement efficiencies. CDC continues to require 1102 series contracting staff, Contracting Officer's Representatives (CORs), purchase cardholders and approving officials to complete periodic green procurement training to stay current on sustainability requirements and initiatives.

The HHS Centers for Medicare and Medicaid Services (CMS) is in the process of implementing a new software solution called CMS Acquisition Lifecycle Management (CALM). CALM is an integrated team-based platform that assists users with all phases of the acquisition plan. The intent is to capture sustainable acquisitions within this system to allow for greater oversight and understanding of CMS' sustainable requirements.

The FDA Green Procurement Manager is collaborating with the electronics stewardship lead to establish new business processes for the review of equipment requests from FDA's approved technologies list. This business process will incorporate more stringent reviews of items for energy-efficient attributes, including the Electronic Product Environmental Assessment Tool (EPEAT) and Energy Star. FDA is also developing external training and materials for dissemination to their contracting officers to encourage the inclusion of explicit environmental and biobased attributes in their statements of work or statement of objectives.

2. ELECTRONICS STEWARDSHIP

FY 2019 Electronics Stewardship Progress:

99.4% of newly purchased or leased equipment met energy efficiency requirements
100% of electronic equipment disposed using environmentally sound methods*
**Reuse, donation, recycling, transfer, sale, or demanufacturing.*

HHS OpDiv Chief Information Officers and Personal Property Managers are responsible for electronics stewardship within the Department. OpDivs ensure information technology (IT) equipment purchases and disposals meet the HHS Policy for Electronic Stewardship and participate in the EPA Federal Electronics Challenge to facilitate sustainable practices.

Implementation Status

In FY 2019, NIH purchased 22,790 EPEAT certified laptops, desktops and monitors for a total cost of $30.7M. To save paper and reduce energy use, HHS OpDivs implement automatic duplexing and print management features on all eligible agency computers and imaging equipment and measure and report compliance to the greatest extent practicable.

HHS OpDivs employ IT asset management systems to track the life-cycle of electronics and ensure sustainable end-of-life (EOL) disposal. In FY 2019, 100% of the NIH surplus electronic equipment (14,691 pieces) was disposed using the following environmentally sound methods: 1) 2,130 items were donated, 2) 22 items were transferred to other Federal Agencies, 3) 570 items were redeployed, and 4) 11,969 items were recycled. FDA participates in the GSA

Exchange Sales Program and in FY 2019 and FY 2020 to date, has accumulated more than $80K in credits that will be used towards future IT equipment purchases. FDA also implemented an internal excess property screening program that repurposed more than 1,000 items in FY 2019 throughout FDA. At 5600 Fishers Lane, the IT department disposed and recycled 1,851 pieces of equipment through the Unicor electronics recycling program, a nationwide network of electronics recycling centers that convert donated electronics into recyclable materials for resale thus helping reduce landfill congestion.

HHS OpDiv IT departments are moving toward cloud resources to minimize data center footprint and improve the reliability, efficiency, and cost of data management. NIH closed one data center in FY 2019 and plans to close three additional data centers by the end of FY 2020, as its computing resources to move to cloud technologies. CDC has moved its Enterprise Email System to the Microsoft (MS) Cloud Email, and is currently moving electronic storage to the MS Cloud. These actions will reduce the number of servers onsite. Migration is underway and will be finalized in FY 2021, which will yield substantial savings.

Priority Strategies & Planned Actions

In FY 2020 and FY 2021, HHS OpDivs will maintain existing electronic stewardship procedures while continuously working to improve results and promote sustainable electronics usage. Each OpDiv continues to increase awareness on EPEAT and Energy Star purchases, power management features, duplex printing, and EOL compliance focusing on the areas where the OpDiv may need more attention.

HHS OpDivs continue to analyze cloud computing to reduce data center footprint, save energy, and improve computing reliability and efficiency. Additionally, laptops will be primarily deployed as they use less electricity than desktop models and provide greater portability for HHS employees.

3. GREENHOUSE GAS EMISSIONS

FY 2019 Scope 1&2 Greenhouse Gas (GHG) Emissions:

29.4% reduction from FY 2008
0.3% reduction from FY 2018

HHS uses the DOE Federal Energy Management Program GHG emissions report to identify and target high emission categories and implement specific actions to address the identified high emission areas. For HHS, the highest focus is on Scope 1 and 2 GHG emissions generated by energy use in building and laboratory operations. HHS also 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.

Implementation Status

In FY 2019, HHS achieved significant energy reductions through ECMs implemented by performance contracting and direct-funded projects as described in Section 1 of this document, Facility Energy Efficiency.

HHS new building construction and renovation projects are designed to reduce energy use intensity and GHG emissions. HHS strives to achieve net zero energy designs as described in Section 5 of this document, High Performance Sustainable Buildings. Where net zero cannot initially be met, HHS focuses on maximizing efficiency.

Priority Strategies & Planned Actions

HHS OpDivs continue to implement on-site renewable-energy efforts to the greatest extent practicable in efficiency projects, renovations and new construction. These clean energy technologies reduce the generation of GHG emissions.

Laboratory sustainability and plug loads are a growing emphasis for HHS facilities. Significant research and procedures are underway to improve the efficiency of laboratory equipment use such as ultra-low temperature 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.