U.S. Department of Energy

2018 Sustainability Report & Implementation Plan

Report to the White House
Council on Environmental Quality (CEQ) and
Office of Management and Budget (OMB)

SEPTEMBER 14, 2018

Table of Contents

U.S. Department of Energy (DOE)
2018 Sustainability Report & Implementation Plan (SRIP)

Executive Summary

This is the Department of Energy's (DOE or Department) action plan to carry out Executive Order 13834, *Efficient Federal Operations* (E.O. 13834). It is designed to be a plan that can, and will over time, propel DOE to become the leader in the government for efficiency. DOE will become a leader not only in energy and water efficiency, but in all the elements of the Executive Order, allowing DOE to sustain its mission for decades to come.

The following steps are key to the action plan:

1. **We will understand our performance.**
2. **We will identify projects that can save the Department money and pursue them with vigor.**
3. **We will actively engage with our stakeholders and private sector partners to ensure quality contracting and project execution.**
4. **We will identify and eliminate barriers to new opportunities.**
5. **We will cheer our successes.**

E.O. 13834 directs Federal agencies to manage their buildings, vehicles, and overall operations to optimize energy and environmental performance, reduce waste, and cut costs. DOE will continue to reduce facility energy and water usage and intensity by encouraging installation of advanced building level meters, implementing cost-effective efficiency measures, and exploring alternative financing options for infrastructure upgrades. DOE will continue to modernize and recapitalize our infrastructure, streamline our footprint, and right-size our infrastructure to match mission through sustained investments. DOE will continue to explore on-site energy generation opportunities that maximize our use of reliable, resilient, clean energy, including renewable energy, small modular nuclear technology, microgrids, and combined heat and power where they can ensure continuation of our operations and resilience to disruption from any source, including accidents, natural disasters, and physical- or cyber-attacks.

DOE mission activities will continue to grow; to counter the costs and potential environmental impacts of this growth, DOE will follow the key steps of our action plan as we identify, evaluate, and implement opportunities to reduce and optimize our sites through facility, waste, and fleet management. Facility management will focus on the adoption of technologies that reduce energy and water consumption, procurement of ENERGY STAR certified and Electronic Products Environmental Assessment Tool (EPEAT) registered products, and the continued evaluation of assets as required under *42 USC §8253*. Procurement opportunities will be assessed, as applicable, for sustainability, whether they include clauses for biobased products, products with recycled content, or other environmentally-friendly attributes as required by statute. DOE will focus on preventing or reducing pollution at its source wherever feasible. Pollutants and waste that cannot be prevented through source reduction will be diverted from entering the waste stream through environmentally-safe and cost-effective reuse or recycling initiatives. Fleet management will focus on fleet optimization, vehicle right-sizing, and the use of alternative fuels. DOE will continue to reduce petroleum consumption and increase alternative fuel use as required under *42 USC §6374e*. By continuing to improve efficiency in the management of DOE's sites, the Department is optimizing environmental performance while reducing costs.

Implementation Summary

1. Facility Management:

FACILITY ENERGY EFFICIENCY

E.O. 13834 Section 2(a) requires agencies to "(a)chieve and maintain annual reductions in building energy use and implement energy efficiency measures that reduce costs."

***FY 2017 Status**: 37% reduction in energy consumption per gross square foot from FY 2003 baseline*
***Statute(s)**: 30% reduction in energy consumption per gross square foot in goal-subject buildings by FY 2015 from a FY 2003 baseline (42 USC §8253). §8253(b)(1) "each agency shall, to the maximum extent practicable, install in Federal buildings owned by the United States all energy and water conservation measures with payback periods of less than 10 years."*
***Projected Progress FY 2018:** TBD, no later than FY 2018 Annual Energy Report (AER)*
***Projected Progress FY 2019:** TBD, no later than FY 2018 AER*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE leverages infrastructure investments to improve the sustainability and efficiency of its operations. DOE uses strategies such as redesigning interior space, upgrading aging equipment, and installing energy meters and sub-meters according to the DOE metering plan to monitor, benchmark, and help identify opportunities to reduce facility energy consumption. Meters allow sites to identify where energy is most consumed and target their efforts. DOE sites continue to conduct energy audits to comply with the Energy Independence and Security Act of 2007 (EISA), §432. The audits are used to identify efficiency and conservation measures along with assessing performance of implemented measures. Sites also incorporate energy efficiency and sustainability evaluations into all on-site facility projects using appropriate checklists.	DOE excludes approximately 15% of its total square footage from the facility energy efficiency goal in accordance with the *Guidelines Establishing Criteria for Excluding Buildings from the Energy Performance Requirements of §543 of the National Energy Conservation Policy Act, as Amended by the Energy Policy Act of 2005*. These excluded facilities make up 35% of total energy use. Most excluded facilities are high energy mission-specific facilities (HEMSF) engaged in scientific research and industrial processes that are critical to meeting mission and extremely energy-intensive compared to typical government building assets. Additional HEMSFs are anticipated in the near future due to mission increases, such as Exascale computing.	The Sustainability Performance Office (SPO) will continue to measure and benchmark performance, assist programs in identifying high-value, high impact, cost-effective energy efficiency projects at sites by analyzing site data and working with the Federal Energy Management Program (FEMP) and site personnel to identify projects that can help offset mission-driven increases in energy demand and increase the resilience of our energy infrastructure. DOE will focus efforts on promoting and sharing best practices from energy efficiency project successes to assist DOE sites in improving facility energy management and performance. Sites will continue to install building level meters on facilities with high energy use. Building performance data will be entered into EPA's Portfolio Manager (PM) as required and used by SPO and other offices to identify areas of opportunity. In the next 1–2 years, DOE will focus on re-commissioning or retro-commissioning programs for top energy intensive buildings. Sites will also continue to adopt and implement recommendations from the Better Building's Smart Labs Initiative. As cost-effective, sites will utilize energy management. DOE will encourage sites to pursue DOE's ISO 50001 Ready Program. DOE will continue to explore opportunities for on-site energy generation using advanced resilient technologies. For example, a study is underway to determine the feasibility and applicability of siting a small modular reactor at a DOE laboratory.

EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING

E.O. 13834 Section 2(d) requires agencies to "(u)tilize performance contracting to achieve energy, water, building modernization, and infrastructure goals."

Number of projects FY 2017: *None*
Statute(s): *Statute provides authority to enter into contracts (42 USC §8287).*
Number of projects FY 2018: *TBD*
Number of projects FY 2019: *TBD*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE emphasizes life-cycle cost analysis when selecting projects for funding. Return on investment and net present value are calculated per OMB Circular A-94 "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs." Other financial calculations may be performed (using 10 CFR Part 436) to determine payback period, internal rate of return, and project cost effectiveness, with regard to environmental and social benefits. In FY 2018, at least four major sites have started exploring opportunities for performance-based contracts.	Energy Performance Contracts are complex and resource intensive with lengthy contractual performance periods given DOE's low-cost electricity contracts. Furthermore, conducting business at DOE sites exacerbates contracting complexities compared with some other agencies, due to additional safety and security procedures. The Department has a well-defined process to evaluate its Energy Performance Contracts for cost effectiveness and potential risks prior to implementation.	DOE will continue to leverage all available funding opportunities to implement efficiency measures, including performance contracts, to improve facility efficiency. To facilitate high quality projects under energy performance contracts, DOE will ensure that all key stakeholders in the performance contracting process, especially agency legal and procurement staff, are appropriately trained to effectively understand and develop performance contracts. DOE will explore energy efficiency investment opportunities in its facilities, specifically those that will achieve deeper energy savings. DOE will also explore the use of performance contracts for on-site energy generation projects to increase DOE's energy security and resilience utilizing advanced technologies including small modular reactors or combined heat and power plants. DOE facility and utility managers will continue targeting performance contracting to modernize aging facility and utility infrastructure. In addition, DOE will use commercial off-the-shelf data analytical tools to determine the life-cycle cost-effectiveness of efficiency conservation measures reported in DOE's Sustainability Dashboard. DOE's SPO will assess the top 25% of energy-intensive sites for potential investment opportunities in efficiency measures over the next two years. Annually, DOE sites will continue to assess 25% of covered buildings (75% of total site energy use) for energy and water efficiency measures as required by EISA §432. DOE will use this data as a platform for engaging programs and sites on potential cost saving opportunities.

RENEWABLE ENERGY

E.O. 13834 Section 2(b) requires agencies to "(m)eet statutory requirements relating to the consumption of renewable energy and electricity."

FY 2017 Status: *6.3% (WITHOUT Bonus) or 12.6% (WITH Bonus) On-site, 12.1% renewable energy certificates (RECs) [24.7% total]*
Statute(s): *By FY 2013 and each year thereafter, use 7.5% renewable electricity as a percentage of overall facility electricity use (42 USC §15852).*
Projected Progress FY 2018: *7.5%*
Projected Progress FY 2019: *7.5%*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
To meet renewable energy goals, DOE has installed on-site renewable energy at DOE facilities as well as off-site from federal facilities, installed combined heat and power processes, biomass plants, and purchased RECs. DOE has also utilized its Renewable Energy Planning and Optimization (REopt) tool to prioritize and identify renewable energy potential and projects that can be implemented by FY 2020.	The economic feasibility of renewable energy systems continues to challenge DOE sites, as low-cost electricity at some DOE sites extends payback periods.	To increase our use of renewable energy, DOE will utilize advanced analytical tools, such as REopt, to determine feasibility for renewables at the various site locations. DOE will continue to explore alternative financing options such as Power Purchase Agreements (PPA) to construct and operate renewable generation systems. DOE will also examine a variety of alternative energy sources and energy storage capabilities for implementation to increase the resilience of our energy infrastructure, wherever feasible. Where appropriate, long-term off-site renewable sources and RECs will be considered for purchase if necessary to meet statutory requirements. DOE will work to encourage inter- and intra-agency collaboration to share best practices and lessons learned from investing in on-site renewable energy sources. Sites with mission-critical energy-security concerns will begin evaluating microgrid applications, such as local generation and energy storage, over the next few years. SPO continues to work with DOE sites to evaluate the feasibility of installing renewable energy systems.

WATER EFFICIENCY

E.O. 13834 Section 2(c) states that agencies are required to "(r)educe potable and non-potable water consumption and comply with stormwater management requirements."

FY 2017 Status: *26% reduction in potable water consumption per gross square foot from FY 2007 baseline*
Statute(s)*: Statute encourages water conservation (42 USC §6834 and 42 USC §8253) and establishes stormwater runoff requirements (42 USC §17094).*
Projected Progress FY 2018: *TBD, no later than FY 2018 AER*
Projected Progress FY 2019: *TBD, no later than FY 2018 AER*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE developed a Strategic Water Management Plan in FY 2016 that analyzed sites' potential for achieving water consumption reductions. The plan concluded the most cost-efficient water conservation measures are reducing water use through operational changes and best management practices; sites are continuing to adopt these practices. Other identified measures in the plan included retrofitting and replacing equipment and processes and leveraging alternative financing options to implement capital projects. DOE sites continue to conduct water audits to comply with EISA §432. The audits are used to identify water conservation measures, and assess the performance of implemented measures. Several DOE sites are employing proactive water management strategies by converting once-through cooling systems to closed-loop systems through reuse of process water, gray water, and stormwater runoff. In addition to complying with stormwater management regulations, some DOE sites harvest rainwater to enhance on-site water conservation and stormwater management efforts.	The reliance on water-intensive, mission-critical activities presents a unique challenge for DOE. Many DOE sites use water for evaporative cooling towers, and process heat removal for offices, as well as industrial applications such as cooling accelerators, supercomputers, and data centers. In addition, some sites have a low payback or no payback associated with water reductions due to no-cost water use agreements with local municipalities or use of on-site wells. In addition, wildfires at large sites in the western U.S. can result in significant unplanned water use for firefighting.	DOE will continue to implement the Strategic Water Management Plan to increase water efficiency. More sites are focusing their water use efficiency efforts on repairing leaks and replacing water and steam-intensive equipment. Building on the successes of sites, DOE will continue to deploy closed-loop, capture, recharge, and/or reclamation systems, as applicable. Reducing process water consumption and addressing chilled water utilization efficiencies through a water management plan continue to be core strategies undertaken by DOE. These best practices and lessons learned will be shared throughout the DOE complex. In the next 1–2 years, DOE will focus on identifying the potential for water reduction projects. As feasible, sites will conduct periodic water balances to determine water sources, uses, and losses. Any inflow and infiltration issues, steam leakages, or underground non-potable and potable water leakages will be identified and addressed. High efficiency technologies will be installed during the rehabilitation of existing buildings and in the design of new buildings for more efficient water management. The use of electricity generators for electric and non-electric application such as desalination or other water treatment applications will help ensure that water is managed effectively in support of DOE mission and in communities surrounding its facilities, especially in water constrained regions of the United States.

HIGH PERFORMANCE SUSTAINABLE BUILDINGS

E.O. 13834 Section 2(e) requires agencies to "(e)nsure that new construction and major renovations conform to applicable building energy efficiency requirements and sustainable design principles; consider building efficiency when renewing or entering into leases; implement space utilization and optimization practices; and annually assess and report on building conformance to sustainability metrics."

FY 2017 Status: *9% by Gross Square Foot or 8% by building count*
Statute(s): *High-performance green federal buildings are based on 42 USC §6834, 42 USC §8253, 42 USC §8254, and 42 USC §17091 to §17094.*
Projected Progress FY 2018: *TBD, no later than FY 2018 AER*
Projected Progress FY 2019: *TBD, no later than FY 2018 AER*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
In FY 2017, DOE achieved a 1 percentage point increase in the number of owned buildings meeting the Guiding Principles (GPs) as well as a 1 percentage point increase of owned gross square feet (GSF) meeting GPs.	DOE facilities include unique scientific laboratories, accelerators, light sources, supercomputers and data centers, industrial facilities, and traditional office space environments. As a result, DOE is challenged with integrating sustainability into mission-critical, energy intensive, and aging infrastructure, particularly for existing buildings. DOE has experienced difficulties in meeting energy and water targets for existing buildings according to the 2016 Guiding Principles for Sustainable Federal Buildings. To help address this, DOE plans to combine efforts with EISA audits and facility condition assessments to identify potential projects at target buildings. DOE has a unique challenge in meeting the goal for new buildings in that the Department requires that all new construction and major building renovations greater than $50 million must be LEED Gold certified, absent a waiver from the Project Management Executive (See DOE Order 413.3B).	DOE will continue to actively promote energy management, cost-effective energy conservation measures, and building-level and data center metering. In the next 1–2 years, DOE will use an integrated process with annual EISA audit findings and the GPs to assess and evaluate building and operating conditions to understand our performance. We will then identify areas for improvement; establish operational goals for environmental performance; and incorporate goals into building management. Identified life-cycle cost-effective projects will be implemented as feasible. DOE will compare building performance with energy performance benchmarks annually and regularly monitor building energy performance against historic performance data and peer buildings. DOE will continue to install building level meters, and sites will conduct analyses of water use, identify and, as appropriate, repair leaks, eliminate single pass cooling, optimize cooling tower operations, and use water efficient products. DOE will work with its programs to ensure LEED Gold and the GPs requirements are well-understood and implemented into all new construction and major renovation projects.

WASTE MANAGEMENT AND DIVERSION

E.O. 13834 Section 2(f) requires agencies to "(i)mplement waste prevention and recycling measures and comply with all Federal requirements with regard to solid, hazardous, and toxic waste management and disposal."

FY 2017 Status: *57% municipal solid waste (MSW) diverted; 56% construction and demolition (C&D) waste diverted*
Statute(s): *The statute outlines that, "wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible," and "waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment" (42 USC §6902). See also 42 USC§ 6901 to §6992; 42 USC §11001 to §11050; 42 USC §13101.*
Projected Progress FY 2018: *TBD, no later than FY 2018 AER*
Projected Progress FY 2019: *TBD, no later than FY 2018 AER*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE sites continue to independently report on the management of toxic chemicals in accordance with the requirements of Emergency Planning and Community Right-to-Know Act (EPCRA) §301–§313. Waste minimization programs are established at many DOE sites to reduce the generation and toxicity of waste. Reporting is tracked through EPA's Toxic Release Inventory (TRI) web-based reporting program (TRI-MEweb). In addition, DOE diverts a portion of its non-hazardous MSW and non-hazardous C&D debris through the implementation of various recycling, recovery, and reuse methods and strategies.	DOE sites use chemical management systems to provide supply-chain efficiency, establish tighter control of chemical purchases, and identify alternatives. These systems assist with chemical inventory reduction by tracking expired and excess chemicals.	DOE will continue to use source reduction as the primary waste management strategy. DOE will also track the acquisition and use of hazardous chemicals and materials at the site-level, as well as promote the use of alternative and less toxic chemicals and materials whenever possible. DOE will share lessons learned and best practices from successful and innovative MSW and C&D recycling programs and net zero waste programs with sites and laboratories. In the next 1–2 years, DOE will continue to implement integrated pest management and improved landscape management practices to reduce and eliminate the use of toxic and hazardous chemicals and materials. DOE will look for opportunities to further reduce fugitive emissions, and consider the potential application of alternative products where feasible. Sites will reduce waste generation through elimination, source reduction, and recycling, as well as maintain or increase their waste diversion rates.

2. Fleet Management:

TRANSPORTATION/FLEET MANAGEMENT

E.O. 13834 Section 3(c) states that within 120 days of the date of the E.O. (i.e. September 14, 2018), "(t)he Secretary of Energy, in coordination with the Secretary of Defense, the Administrator of General Services, and the heads of other agencies as appropriate, shall ***review existing Federal vehicle fleet requirements*** and report to the Chairman of CEQ and the Director of OMB regarding opportunities to optimize Federal fleet performance, reduce associated costs, and streamline reporting and compliance requirements." (***Emphasis added***).

FY 2017 Status: *35.5% reduction in petroleum consumption and 177% increase in alternative fuel consumption relative to FY 2005 baseline*
Statute(s): "*By October 1, 2015, and each year thereafter, achieve at least a 20 percent reduction in annual petroleum consumption and a 10 percent increase in annual alternative fuel consumption, as calculated from the FY 2005 baseline" (42 USC §6374e(a)(2)). See also 42 USC §13212.*
Projected Progress FY 2018: *Interim Targets: 20% reduction in petroleum consumption; 10% increase in alternative fuel consumption*
Projected Progress FY 2019: *Interim Targets: 20% reduction in petroleum consumption; 10% increase in alternative fuel consumption*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE optimizes fleet performance by right-sizing and right-typing its fleet as detailed in the current Vehicle Allocation Methodology (VAM). DOE has reduced associated fleet management costs by modernizing the Department's fleet. DOE has also streamlined reporting and compliance requirements by leveraging the Asset Level Data (ALD) capabilities in the General Services Administration (GSA) Federal Fleet Management System (FedFMS) to facilitate external reporting and provide data to support fleet management decisions.	While DOE is able to reduce fleet size at certain sites and national laboratories, increased and accelerated defense-related missions will likely continue to require overall fleet growth. Fleet composition with respect to vehicle types and inventory must be continually evaluated and adjusted as supported missions evolve. Annual utilization reviews of prior FY data must be conducted on an annual basis as required in 41 CFR 109-38.5105 and 38.5106. EPAct 2005 Section 701 requires that agencies use alternative fuel in all dual fueled alternative fueled vehicles (AFVs) except in vehicles for which the agency received a waiver. DOE struggles to achieve this goal due to the remote locations of its various sites and lack of availability of alternative fuel options.	DOE will continue to implement the VAM in 2018 and 2019. In 2020, the VAM will be updated by DOE Headquarters. Sites continue to annually assess their fleet inventory for replacement opportunities and right-sizing. Agency-owned light duty to medium duty vehicles older than six years will be replaced if and when authorized in the Annual Appropriations Act. Where mission-compatible and cost-effective, DOE will move from agency-owned vehicles to the GSA Fleet during 2018, 2019, and 2020. DOE will use the most recent ALD when making fleet operations, management, acquisition, and disposal decisions. The agency will continue efforts to improve the accuracy of ALD data in GSA Drive-thru and FedFMS in 2018. DOE will enable FedFMS to auto-capture fuel, mileage, maintenance, and repair costs from SmartPay3® fleet credit card transaction reports starting in 2019. Electric vehicle acquisition and charging station installations are expected to increase in the next two years.

3. Cross-Cutting Categories:

SUSTAINABLE ACQUISITION/PROCUREMENT

E.O. 13834 Section 2(g) requires agencies to "(a)cquire, use, and dispose of products and services, including electronics, in accordance with statutory mandates for purchasing preference, Federal Acquisition Regulation requirements, and other applicable Federal procurement policies."

FY 2017 Status: *16.3% contracts with environmental clauses; 55.12% contract dollars with environmental clauses*
Statute(s): *Federal procurement of biobased products (7 USC §8102), products with recycled content (42 USC 6962), energy efficient products and products with low standby power (42 USC 8259b, 42 USC 6361), non-ozone depleting (42 USC 7671l.).*
Projected Progress FY 2018: *TBD*
Projected Progress FY 2019: *TBD*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE purchases products that are water efficient (WaterSense), biobased (USDA BioPreferred), non-ozone depleting (Significant New Alternative Policy), non-toxic (Safer Choice labeled), fuel efficient (SmartWay products), and made from recycled content in accordance with the Federal Acquisition Regulation and the DOE Acquisition Regulation. To support sustainable acquisition activities, DOE hosts bi-monthly Sustainable Acquisition Working Group (SAWG) meetings to provide participants with the most current sustainable acquisition information and encourage peer-to-peer knowledge exchange. DOE also offers a web-based accredited two-hour training module on Federal sustainable acquisition. DOE's GreenBuy Award Program annually recognizes sites which purchase products from the Priority Products List, which is a compilation of product types with the least environmental, social, and economic impact. In FY 2017, eight DOE sites won GreenBuy awards for implementing exceptional sustainable acquisition programs.	DOE sites leverage Federal purchasing dollars to achieve mission goals, while also reducing the environmental impact of their operations and improving the marketplace for safer and more sustainable products.	To continue progress in sustainable acquisition, DOE will share information, tools, resources, and best practices to assist sites and programs in their efforts to purchase more sustainably. DOE will continue to incentivize sustainable acquisition efforts through the GreenBuy Awards Program and offer trainings and assistance through the SAWG bi-monthly meetings. DOE will engage with stakeholders to identify new sustainable acquisition opportunities. Over the next 1–2 years, DOE will improve the quality of data and tracking of sustainable acquisition through the Federal Procurement Data System (FPDS). DOE will look for opportunities to incorporate criteria or contractor requirements into procurements and reduce supply chain emissions. DOE will identify ways to engage directly with suppliers to provide products that meet sustainability requirements and allow sites to pilot their use in site operations. The results of these pilots will be shared with other sites. DOE is also planning to increase the use of online marketplaces to streamline the identification and procurement of more sustainable products.

ELECTRONICS STEWARDSHIP

E.O. 13834 Section 2(g) requires agencies to "(a)cquire, use, and dispose of products and services, including electronics, in accordance with statutory mandates for purchasing preference, Federal Acquisition Regulation requirements, and other applicable Federal procurement policies."

***FY 2017 Status**: 90% of eligible electronics procurements meeting EPEAT requirements; 84% of eligible equipment with power management; 79% of eligible printers utilizing duplex printing features; 87% compliance with disposal guideline;*
***Statute(s):** Procure (A) an Energy Star product or (B) a FEMP designated product (40 USC §8259b) and dispose of excess property as promptly as possible (40 USC §524). See also 40 USC §549; 40 USC §527; 15 USC 3710(i).*
***Projected Progress FY 2018:** TBD*
***Projected Progress FY 2019:** TBD*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE purchases and leases environmentally sustainable electronic products in accordance with the Federal Acquisition Regulation, the Department of Energy Acquisition Regulation, and the U.S. EPA's Recommendations of Standards and Ecolabels for Federal Green Purchasing. Thirteen DOE sites were recognized with 2018 EPEAT Purchaser Awards from the Green Electronics Council. DOE published an Information Brief for sites in August 2017, highlighting the availability of EPEAT-registered mobile phones and providing instructions on finding and purchasing these products. DOE enables and maintains power management on eligible ENERGY STAR certified desktop computers, monitors, and laptop computers. Eliminating power management exemptions for computers saved DOE approximately 2 million kilowatt hours of electricity and $251,000 in electricity costs in FY 2017. Overall, power management across the Energy Department saved $7.3 million in FY 2017.	Sites were unable to meet goals for purchase of EPEAT-registered televisions due to limited availability of products (only two manufacturers register their television products). Additionally, power management performance was significantly impacted by the disabling of power management at a large DOE site in FY 2017, which was done in response to cybersecurity concerns. Disposal of electronics, in lieu of reuse or recycling, is only used when electronics cannot be radiologically cleared for release. These recycling-ineligible electronics make up less than 1% of end-of-life electronics each year.	To assist sites in finding and purchasing EPEAT-registered products in all applicable categories, DOE will continue to provide regular training and guidance on sustainable acquisition for electronics; facilitate site collaboration through the Sustainable Acquisition Working Group; and provide technical assistance through a sustainable acquisition hotline. In the next 1–2 years, DOE will continue to address issues with purchasing EPEAT-registered televisions. DOE has been working with EPEAT and television manufacturers to encourage the registration of additional products. DOE will purchase EPEAT-registered devices from the new registries for mobile phones and servers. DOE will publish an Information Brief on the new server registry after it opens later in 2018. DOE will publish an additional Information Brief highlighting acceptable power management exemptions and the cost savings associated with eliminating unnecessary or inappropriate exemptions. DOE will work to eliminate unnecessary power management exemptions at sites in FY 2018.

GREENHOUSE GAS EMISSIONS

E.O. 13834 Section 2(h) requires agencies to "(t)rack and, as required by section 7(b) of this order, report on energy management activities, performance improvements, cost reductions, ***greenhouse gas emissions***, energy and water savings, and other appropriate performance measures." (***Emphasis added***).

FY 2017 Status: *43.3% reduction in Scope 1 & 2 GHG emissions from the FY 2008 baseline.*

Implementation Status	*Operational Context*	*Priority Strategies & Planned Actions*
DOE has achieved significant reductions in Scope 1 & 2 greenhouse gas (GHG) emissions from the FY 2008 baseline. Emissions have been reduced through fuel efficiency advances, travel and fleet fuel consumption reductions, waste prevention, and fugitive emissions management. DOE will continue to perform site-level fugitive emissions management assessments while considering the use of potential alternatives to certain high global warming potential gases.	At many DOE sites, mission-related activities are expected to increase, expanding demand for energy and electricity. As a result, DOE will be challenged to sustain reductions.	To counter the cost and potential environmental impacts of mission growth, DOE will target additional lifecycle cost-effective emissions reductions and expanding commuting options. DOE will continue to look for opportunities to further reduce fugitive emissions, and to consider the potential application of alternative products where feasible. DOE will expand on-site clean energy generation at its sites in order to decrease transmission and distribution loss emissions and purchase off-site clean energy as feasible. In the next 1–2 years, DOE will continue to perform site-level energy assessments and implement cost-effective energy conservation measures to maximize efficiency. DOE will continue to share best practices during the Fugitive Emissions Working Group to improve fugitive emissions management.