

Subject: ELECTRONICS STEWARDSHIP POLICY

1. PURPOSE. This Order conveys policy, delegates authority, and assigns responsibility to ensure that the United States Department of Transportation (DOT or Department) and its Operating Administrations meet all requirements related to environmentally responsible procurement, management, and disposal of electronic equipment used for DOT operations, pursuant to the Resource Conservation and Recovery Act of 1976 (RCRA), as amended; the Pollution Prevention Act of 1990 (PPA); the Energy Independence and Security Act of 2007 (EISA); the National Defense Authorization Act for Fiscal Year 2015, Subtitle D, “Federal Information Technology Acquisition Reform” (FITARA), as amended; Executive Order (EO) 13834, *Efficient Federal Operations*; and other applicable requirements set forth in law, regulations, or executive actions. With this Order, the Department will prioritize actions that cut costs, reduce energy and environmental impacts, and enable more effective accomplishment of its mission.
2. CANCELLATION AND EFFECTIVE DATE. This Order cancels DOT Order 4358, *Electronics Stewardship Policy*, issued November 12, 2013. This Order is effective upon issuance.
3. APPLICABILITY. This Order applies to all DOT employees and contractors responsible for the procurement, management, operation, or disposal of DOT electronic equipment.
 - a. For the purpose of this Order, Operating Administration (OA) refers to the nine DOT OAs, plus the Office of the Secretary (OST), Office of the Assistant Secretary for Research and Technology, and the Office of Inspector General.
 - b. The requirements of this Order apply to all electronic equipment operated by the Department. The Office of the Chief Information Officer (OCIO) is responsible for effective stewardship of all information technology (IT), which includes electronic equipment.
 - c. OA Administrators are accountable for ensuring that all OA activities related to the procurement, management, and disposition of electronic equipment comply with this Order, where applicable.

- d. OAs must comply with all relevant laws, regulations, executive actions, and other directives, including those set forth in Appendix I of this Order, along with any legal requirements not cited herein, or established after issuance.
 - e. The requirements of this Order are not intended to restrict or inhibit DOT's ability to fulfill its mission or adversely affect in a material way the Department's operations or the safety of the traveling public.
 - f. This Order is intended solely to improve the internal management of the Department. It is not intended to and does not create any right or benefit, substantive or procedural, enforceable by any party against the United States, the Department, or its entities, officers, employees, or agents, or any other person.
 - g. For the actions contained in this Order, "must" conveys statutory or regulatory requirements, and "should" or "may" convey recommendations for efficient and effective implementation.
4. AUTHORITIES AND REFERENCES. See Appendix I for a list of authorities and guidance documents.
5. DEFINITIONS. See Appendix II for a list of key terms.
6. POLICY. It is the policy of the Department to meet all electronics stewardship requirements in a manner that increases efficiency, optimizes performance, eliminates unnecessary use of resources, and protects the environment. In accordance with EO 13834 goals for energy reduction, waste management, and acquisition, and the Office of Management and Budget (OMB) Circular No. A-11, DOT will manage all life cycle phases of electronic equipment to reduce energy and environmental impacts, and to promote cybersecurity and resiliency.
- a. The Department will implement a comprehensive strategy to comply with electronics stewardship requirements in the following areas:
 - 1) Acquisition of Environmentally Preferable Electronics;
 - 2) Operations and Maintenance of Electronics;
 - 3) End-of-Life Management of Electronics; and
 - 4) Data Center Optimization and Consolidation.
 - b. Sections 8–11 of this Order cover specific requirements, exclusions, and suggested practices for efficient and effective electronics stewardship.

- c. DOT's purchase of goods and services are primarily governed by the following (referred to in this Order as the "DOT Acquisition Documents"): the Federal Acquisition Regulation (FAR), Department of Transportation Acquisition Regulation (TAR), Transportation Acquisition Manual (TAM), and the Federal Aviation Administration (FAA) Acquisition Management System (AMS). Refer to Appendix I of this Order and the DOT Sustainable Acquisition Policy for more detail.
 - d. The Department will track electronics stewardship metrics as required by Federal mandates. Section 12 of this Order sets forth reporting requirements.
 - e. The Sustainability Governance and Engagement directives described in the Overarching Sustainability Policy are intended to facilitate and support OA actions to implement the requirements in this Order.
 - f. OAs should also follow requirements related to this Order that are found in DOT's current Sustainable Acquisition, Pollution Prevention and Waste Management and Energy Management Policies, or any subsequent updates that supersede them.
7. **RESPONSIBILITIES.** The following personnel are responsible for implementing this Order.
- a. **DOT Chief Sustainability Officer (CSO):** The Secretary of Transportation has delegated to the Assistant Secretary of Administration the duties of CSO pursuant to 49 Code of Federal Regulations (CFR) § 1.38(c)(2). The CSO serves as the senior official responsible for the day-to-day management, implementation, performance, and compliance with all applicable energy, environmental, and sustainability statutes, regulations, executive actions, and other requirements. Related to the requirements of this Order, the CSO will:
 - 1) Represent DOT on sustainability matters with officials from the Federal Executive Branch, Congress, and all other external stakeholders;
 - 2) Communicate all energy, environmental, and sustainability requirements to the OAs and report to the Secretary and Deputy Secretary of Transportation on the adequacy and effectiveness of DOT's implementation of the requirements;
 - 3) Coordinate with all appropriate Secretarial Offices to implement this Order;
 - 4) Review and approve all sustainability-related reports submitted to oversight agencies, such as the Department of Energy (DOE), OMB, and the Council on Environmental Quality (CEQ), on behalf of the Secretary;
 - 5) Enter into partnerships with other Federal agencies, on behalf of DOT, to advance sustainability performance; and

- 6) Ensure that life cycle management strategies for electronic equipment are implemented in accordance with statutory requirements and EO 13834 goals.
- b. **DOT Assistant Secretary for Administration:** Provides Departmental leadership and develops DOT policy on issues related to human resources, security, acquisition and grants, information services, energy, environmental management and sustainability, transportation, facilities, and space management.
- c. **DOT Assistant Secretary for Budget and Programs/Chief Financial Officer (CFO):** Serves as the principal advisor to the Secretary of Transportation on the development, review and presentation of the Department's budget resource requirements and allocations. The CFO provides oversight of the Department's program performance and is responsible for all aspects of financial management.
- d. **DOT Office of the Chief Information Officer (OCIO):** Serves as the department-wide authority for effective stewardship of IT and meeting all Federal and statutory requirements related to acquisition, operation and maintenance (O&M), and end-of-life of electronic equipment and information. Related to the requirements of this Order, the OCIO will:
 - 1) Coordinate with the CSO and senior procurement officials on electronics stewardship policies, guidance, implementation and reporting;
 - 2) Ensure acquisition of energy efficient electronic equipment as required by 42 United States Code (U.S.C.) § 8259b, 42 U.S.C. § 8259b(e), and 48 CFR § 23.704;
 - 3) Ensure that power management and data center energy efficiency requirements are met;
 - (a) Coordinate efforts to ensure that ENERGY STAR® features are enabled on all applicable DOT IT equipment;
 - (b) Track and report electronic equipment purchases and contract actions and power management implementation status, consistent with available reporting requirements and systems;
 - 4) Participate in the Federal Electronics Stewardship Working Group and shares information with stakeholders as appropriate;
 - 5) Coordinate with the DOT Property Management Office on General Services Administration (GSA) reporting and inventory, and for reporting on IT end-of-life management; and

- 6) Ensure that IT equipment at the end of its useful life for DOT¹ are reused elsewhere within the Federal community or donated per the Federal Management Regulation (FMR) 102-39, Exchange/Sale to reduce acquisition costs.
- e. **DOT Office of the Senior Procurement Executive (OSPE):** Facilitates the accomplishment of DOT's mission by providing effective, ethical, sustainable, state of the art business policies, practices, and services in acquisition, financial assistance management, and competitive sourcing. Related to the requirements of this Order, OSPE will:
- 1) Coordinate and communicate with the OCIO and FAA Acquisition Executive, as appropriate, on procurement requirements related to electronics acquisitions, including changes to the DOT Acquisition Documents;
 - 2) Perform procurement and acquisition oversight responsibilities, including Procurement Management Reviews (PMRs) of the OA contracting offices and lead Acquisition Strategy Review Boards, to ensure contract awards meet both Federal and Departmental acquisition requirements regarding electronics;
 - 3) Provide guidance for reporting data in the Federal Procurement Data System-Next Generation (FPDS-NG) related to sustainable acquisition of electronic equipment;
 - 4) Identify acquisition strategies to help meet sustainable acquisition requirements for electronic equipment and oversees implementation of these strategies; and
 - 5) Ensure that members of the contracting workforce complete the required training for their appropriate Federal Acquisition Certification level in contracting through current Federal or Departmental online learning platforms, to include Sustainable Acquisition.
- f. **DOT Senior Real Property Officer:** Oversees the siting, acquisition, and operations of DOT facilities, and the integration of DOT facilities into regional and local planning initiatives. Provides analysis and recommendations on data center optimization and consolidation activities.
- g. **DOT OST; Office of Facilities, Information, and Asset Management; Energy and Resource Efficiency Program (EREP):** Related to the requirements of this Order and in coordination with the OCIO and OSPE, EREP will:
- 1) Develop electronics stewardship policies to improve energy efficiency, reduce waste, and reduce costs;

¹ Equipment at the end of its useful life may still contain information or data subject to a litigation hold. Each OA must preserve any information or data subject to a litigation hold before the IT equipment is reused or donated.

- 2) Provide strategy development, oversight, evaluation, methodology, and assistance for implementation of all sustainability policy;
- 3) Assist the CSO in communicating all energy, environmental, sustainability and electronics stewardship requirements to the OAs; and
- 4) Aggregate and assemble electronics stewardship data for DOT-wide internal and external sustainability reports.

- h. **DOT Property Management Office, Office of Facilities, Information, and Asset Management:** Provides Departmental leadership and develops DOT policy on issues related to property management and end-of-life management of electronics. In coordination with the OCIO, is responsible for GSA reporting and inventory and tracking and reporting on electronics end-of-life management.
- i. **DOT Office of the General Counsel (OGC):** Interprets and provides guidance at a Departmental level on new and existing environmental and sustainability statutes, regulations, executive actions, and other requirements. Reviews contracts and ensures they meet all applicable statutes, regulations, EOs, and other legal requirements² for OST, or other OAs as requested.
- j. **OA Administrator:** Ensures that OA conforms and implements all applicable requirements for electronics stewardship set forth in this Order. The OA Administrator may delegate responsibilities as necessary. Related to the requirements of this Order, OA Administrators will:
 - 1) Issue data calls and analyzes data for reporting progress milestones;
 - 2) Incorporate electronics stewardship goals into performance reviews;
 - 3) Ensure that employees with sustainability and/or electronic equipment responsibilities receive regular electronics stewardship training;
 - 4) Communicate new requirements throughout the OA;
 - 5) Ensure that electronics stewardship information is tracked and reported to the appropriate reporting systems at the minimum intervals and that reporting requirements are incorporated into relevant contracts;
 - 6) Ensure Chief of Contracting Office is carrying out electronics acquisition policies and disseminating this information across the organization;
 - 7) Implement electronics stewardship program in a manner consistent with all relevant laws, regulations, and executive actions; and

² For FAA, the review of contracts to ensure they meet all applicable statutes, regulations, EOs, and other requirements will be performed by the FAA Office of the Chief Counsel.

- 8) Ensure that offices follow National Institute of Standards and Technology (NIST) Special Publication 800-88 Guidelines for Media Sanitization to remove DOT data and software from IT prior to disposition.
- k. **OA Chief Information Officer (CIO):** Ensures the OA meets all applicable life cycle requirements for electronics stewardship set forth in this Order. Related to the requirements of this Order, the OA CIO will:
 - 1) Acquire equipment that meets statutory requirements for energy efficiency;
 - 2) Identify and implement best life cycle management business practices for electronic equipment that minimize consumption of energy and resources;
 - 3) Ensure that equipment is appropriately managed in accordance with Federal guidance on reuse, donation, transfer, sale, de-manufacturing, and recycling of electronics;
 - 4) Ensure adoption, development, and implementation of OA electronics stewardship management policies and procedures; and
 - 5) Track and report on OA electronics stewardship performance.
- l. **OA Chief Acquisition Officer:** Awards and administers contracts and ensures compliance with the DOT Acquisition Documents and procedures related to acquisition. In conjunction with key stakeholders, ensures that all applicable contracts and acquisition tools meet the requirements of this Order.³ The OA Chief Acquisition Officer may delegate responsibilities to meet the requirements. Related to the requirements of this Order, the OA Chief Acquisition Officer will:
 - 1) Procure products and services that comply with this Order;
 - 2) Ensure contracting officers enter purchase information into FPDS-NG as required, including attributes required to track sustainable procurement for reporting requirements;
 - 3) Issue procurement policy and guidance in support of electronics acquisition requirements and share best practices;
 - 4) Ensure that relevant DOT contract actions, including procurements with best-in-class (BIC) and government wide contracts, leases, purchases made with government purchase cards, and, where appropriate, purchases below the micro-purchase threshold include required sustainability clauses;
 - 5) Assess procurement data (contracts) at least annually to track performance, meet targets, and implement corrective actions as needed;

³ For FAA, this requirement applies to the extent that the policy, herein, is consistent with 49 U.S.C. § 106(f)(2).

- 6) Review and analyze electronics acquisition indicators, including the preparation of any required internal and external reports;
- 7) Develop and implement corrective action plans for OA as needed;
- 8) Ensure electronics acquisition awareness activities occur;
- 9) Consult with technical experts (e.g. program/project managers) to select the product or service that meets all applicable standards or otherwise minimizes overall environmental impact when multiple environmental standards apply to a product or service; and
- 10) Ensure that contractors comply with electronics acquisition requirements.

m. **Contracting Officer Representative (COR)/Procurement Request (PR) Initiator:**
Related to the requirements of this Order, COR/PR initiator will:

- 1) Consult early in the procurement process with appropriate stakeholders and technical staff (e.g., OA CIO, OA facilities manager, environmental specialists, contracts specialist) to facilitate procurement planning;
- 2) Develop specifications and performance requirements that meet all relevant requirements set forth in law, regulations, or executive actions for green products and services;
- 3) Develop statements of work (SOWs) to promote the reuse of products, and acquisition of products and services that meet the Department's electronics stewardship and sustainable acquisition requirements, and administer contracts to ensure that vendors are meeting SOW requirements;
- 4) Prepare Request for Waiver or justification documentation where appropriate;
- 5) Include all applicable environmental and energy conservation objectives associated with the acquisition of electronic equipment as stated in this Order, including O&M and end-of-life considerations;
- 6) Identify areas where a significant positive environmental impact can be achieved through acquisition of electronic equipment or services;
- 7) Review new and upcoming contract actions to ensure electronics stewardship requirements are met; and
- 8) Complete sustainable acquisition training offered through current Federal or Departmental online learning platforms.

8. ACQUISITION OF ENVIRONMENTALLY PREFERABLE ELECTRONICS. Procuring environmentally preferable electronic equipment can advance environmental and energy performance goals, while reducing costs. In addition, the use of category management (CM) and government wide acquisition vehicles to meet sustainability goals will increase administrative efficiency and better leverage the government's buying power.

- a. Pursuant to EO 13834, OAs must acquire, use, and dispose of electronic equipment and services in accordance with statutory mandates for purchasing preference, and the DOT Acquisition Documents.
- b. In accordance with the OMB memorandum M-19-13 and Section III(C)(1) of the EO 13834 Implementing Instructions, OAs must prioritize the use of CM solutions, including government wide contracts and BICs to meet applicable electronics stewardship requirements and increase Spend Under Management (SUM).
- c. Pursuant to 42 U.S.C. § 8259b, OAs must purchase ENERGY STAR®-labeled or Federal Energy Management Program (FEMP)-designated energy efficient electronic equipment.
- d. Pursuant to 42 U.S.C. § 8259b(e), when procuring off-the-shelf electronic equipment that uses standby power, OAs must purchase products that use no more than one watt or the lowest wattage available in their standby mode when life cycle cost-effective and practicable and when the utility and performance of the eligible product is not compromised by the lower wattage requirement. Refer to the [DOE Low Standby Power Products](#) website for more information.
- e. In accordance with 48 CFR § 23.704, OAs must purchase Electronic Product Environmental Assessment Tool (EPEAT®)-registered electronic products, unless they do not meet performance requirements or will not be life cycle cost-effective. FAA must follow the AMS requirements for the purchase of EPEAT®-registered electronic products.
- f. Contracting officers must include appropriate FAR or AMS clauses in all contracts for electronic equipment subject to ENERGY STAR®, FEMP, and EPEAT® requirements.
- g. OAs must procure electronic equipment that is non-ozone depleting, non-toxic or a less toxic alternative, and contains recovered materials, to the maximum extent possible.
- h. OAs should use CM solutions and the IT Hallway on the GSA Acquisition Gateway to identify electronic equipment that is consistent with Federal sustainable acquisition requirements.
 - 1) For hardware, GreenCheck tags identify contract vehicles that are consistent with energy efficiency and environmental requirements.

- i. OAs should acquire electronic products with other positive environmental attributes, as identified in the Federal Electronics Challenge (FEC) resource, Key Environmental Attributes for Electronics Acquisition.
 - j. OAs should acquire, to the extent possible, electronic products that are accessible to individuals with disabilities, as required by 29 USC § 794d.
 - k. OAs must, to the maximum extent possible, fill requirements for personal property by using existing agency electronics or by obtaining excess electronics from other Federal agencies in lieu of new procurements, in accordance with FMR 102-36, Disposition of Excess Personal Property.
 - l. OAs must consider the use of FMR 102-39, Replacement of Personal Property Pursuant to the Exchange/Sale Authority, to reduce the cost of replacement personal property when procuring replacement electronic equipment.
 - m. OAs should evaluate virtualization options to reduce hardware and software distribution to individual users.
 - n. OAs must ensure that all relevant contract actions for procurement of environmentally preferable products and services are correctly reported in FPDS-NG. OAs may use alternate methods to report verified data for procurements not captured in FPDS-NG, such as purchases under the micropurchase threshold.
 - o. OAs should follow other acquisition requirements in DOT's Sustainable Acquisition Policy.
 - p. This Order shall not be construed to preclude the provision of reasonable accommodations to qualified employees, as needed.
9. OPERATIONS AND MAINTENANCE OF ELECTRONICS. Proactive Operation and Maintenance (O&M) strategies can extend the useful life of electronic equipment, reduce costs, conserve energy, and support resiliency.
- a. OAs must comply with the printing policies set forth in DOT Order 1360.5C, DOT Information Technology Policy and Administration of Print Services, consistent with GSA Bulletin FMR B-37, Federal Print Management Practices.
 - b. OAs should operate electronic equipment in a sustainable manner through a variety of means including the following practices, unless such equipment is exempt due to mission requirements:

- 1) Enable power management on all DOT electronics, to the extent practicable, pursuant to the Implementing Instructions for EO 13834;
 - 2) Utilize multifunctional printers rather than single function devices;
 - 3) Periodically evaluate the number and variety of electronics issued to each employee with regard to their duties;
 - 4) Follow guidance to improve the O&M of electronics, including the National Strategy for Electronics Stewardship and the FEC Improving Operation and Maintenance of Electronic Equipment Guidance; and
 - 5) Refer to processes described in the TAR, TAM, and AMS as applicable for guidance on exempt products.
- c. Unless exempt due to mission requirements, OAs should establish a four year or greater replacement cycle for desktop, laptop, and tablet computers, except where new hardware is required to support new software and, where appropriate, include an option in new maintenance contracts to extend warranties to keep equipment running for four years.
- d. OAs should report progress annually toward meeting electronics O&M goals for the Annual Sustainability Report and Implementation Plan. Section 12 of this Order explains all relevant reporting requirements.

10. END-OF-LIFE MANAGEMENT OF ELECTRONICS. DOT employees and facilities use a variety of electronic equipment to support the Department's mission. Proper stewardship of this equipment is critical, as many types of electronic equipment contain heavy metals such as lead, mercury, and other toxic or hazardous materials. Responsible disposal of electronic equipment helps to safeguard human health and the environment.

- a. In accordance with OMB circular No. A-11, OAs should plan upfront for recycling, reuse, donation, or take-back at the end-of-life phase for all electronic equipment.
- b. Pursuant to 42 U.S.C. § 6961, 42 U.S.C. § 6902(b), and 42 U.S.C. § 13101(b), OAs must dispose of excess and surplus electronics in a manner that reduces waste and complies with all Federal, State, and local requirements with regard to non-hazardous solid, hazardous, and toxic waste management and disposal.
- c. OAs must dispose of electronics in accordance with EO 13834(2)(f) and (2)(g). GSA FMR Bulletin B-34 identifies the following hierarchy for the disposition of excess and surplus electronics and return of leased electronics, from most to least preferred:
 - 1) Reuse electronics to extend the useful life.
 - (a) Transfer within DOT under FMR 102-39;

- (b) Transfer to another agency under FMR 102-36 or to an educational organization under EO 12999;
 - (c) Donate (through GSA) to states and eligible nonprofit organizations; and
 - (d) Sell to the public in accordance with FMR 102-38.
 - 2) Recycle through manufacturer take-back programs or certified recyclers.
 - (a) Federal recycling programs include UNICOR and U.S. Postal Service BlueEarth.
 - 3) Dispose of Federal electronic equipment at appropriate facilities, not in landfills or incinerators.
- d. Prior to disposition of electronics, OAs must adhere to DOT's policy for media sanitization (NIST SP 800-88r1 – Guidelines for Media Sanitization).
- 1) OAs should consult the NIST Computer Security Resource Center for current versions of NIST standards; and
 - 2) OAs should coordinate any media sanitization activities with the appropriate Records Management and Information Security staff and, for information or data subject to a litigation hold, with the appropriate OA General Counsel staff prior to execution.
- e. If OAs are transferring used (but operational) electronic equipment to international recipients, all international requirements must be met.
- f. Pursuant to 40 U.S.C. § 529 and GSA FMR Bulletin B-27, DOT must submit to GSA, following the close of each fiscal year, an annual report of personal property furnished to any non-Federal recipient. In addition, EO 12999 requires agencies to report to GSA any excess computers and related peripheral equipment that is transferred directly to schools and non-profit educational institutions. Finally, FMR 102-39 requires the Department to submit to GSA a summary report on transactions made under the exchange/sale authority of 40 U.S.C. § 503 during the fiscal year (FY) preceding the report. Section 12 of this Order lists the relevant reporting requirements.
- g. OAs must report the percent of electronic equipment disposed of using environmentally sound methods in the Annual Sustainability Report and Implementation Plan.
- h. OAs should follow other requirements for responsible management of electronic equipment waste found in DOT's Pollution Prevention and Waste Management Policy.
11. DATA CENTER OPTIMIZATION AND CONSOLIDATION. Data center consolidation, cloud solutions, and energy efficient management of servers can generate significant cost savings for real estate, software, and utilities, while enhancing cybersecurity and resilience.

- a. Pursuant to 44 U.S.C. § 3601, DOT must submit annually to OMB:
 - 1) An inventory of the data centers owned, operated, or maintained by or on behalf of the Department; and
 - 2) A multi-year strategy to achieve the consolidation and optimization of the data centers that includes performance metrics, a timeline, and calculations of associated investment and cost savings.
 - (a) DOT must also implement the data center strategy and report quarterly to OMB on related progress and improvements.
- b. The Department actively manages its data center footprint in conjunction with its continued support of cloud first initiatives.
 - 1) OAs must provide a justification and seek approval in order to budget funds for a new agency-owned data center or significantly expanding an existing agency-owned data center, per M-19-19. In the absence of M-19-19 or follow-on guidance, the Department will require a similar justification.
- c. To successfully consolidate and optimize data centers, DOT should pursue the best practices outlined in OMB Memorandum M-19-19 (or any update that supersedes it). In the absence of M-19-19 or follow-on guidance, the Department will continue to pursue best practices for data center management, including:
 - 1) Reduce application, system, and database inventories to essential enterprise levels by increasing the use of virtualization to enable pooling of storage, network, and computer resources, and dynamic allocation on-demand;
 - 2) Evaluate options for the consolidation and closure of existing data centers, where practical, in alignment with the OMB Cloud Smart Strategy, or successor;
 - 3) Pursue automated monitoring and management tools for data centers, such as data center information management, to replace the manual collection and reporting of operational data and inventory; and
 - 4) Identify and report the number of underutilized production servers in each data center, and reduce the number of these servers over time.
- d. When developing a data center strategy, OAs should consider their mission goals first, then pursue consolidation and closure, followed by optimization strategies such as server virtualization, availability, energy metering, and increased utilization.

- e. OAs should install sub-meters, including advanced energy meters, in data centers where cost effective and beneficial for tracking energy performance and improving energy management.
- f. OAs should ensure appropriate coordination between facility staff and data center managers to implement practices that promote energy efficient management of servers and Federal data centers, consistent with OMB's Federal Cloud Computing Strategy, Data Center Optimization Initiative (DCOI) memorandum, and any future data center management policies and optimization strategies.
- g. OAs should use the FEMP resources and practices included in Appendix I to improve the energy efficiency of their data centers.
- h. Section 12 of this Order lists reporting requirements relevant to data centers.
- i. OAs should comply with related requirements in DOT's Energy Management Policy.

12. SUMMARY OF REPORTING REQUIREMENTS. OAs must use the monitoring and documentation systems listed in the table below to meet the requirements of this Order. These systems are generally web-based and proprietary to the Federal government.

Reporting Module	Purpose	Data Attributes to Report	Reporting Frequency
Annual Sustainability Report and Implementation Plan	Provide summary of strategies, progress, implementation priorities, and planned actions related to electronics stewardship	Implementation status of prior year goals, electronics stewardship progress, and priority strategies (approved by OCIO).	Annually, no later than March 15, or date mutually agreed upon between the OA and EREP
Internal OA Sustainability Scorecard	Report OA progress on electronics stewardship requirements for the Departmental Sustainability Report and Implementation Plan and OMB Scorecard for Efficient Federal Operations/Management	Report OA-level electronics stewardship metrics as needed to support DOT reporting requirements (refer to the OMB Scorecard for Efficient Federal Operations/Management requirements)	As needed to support DOT and internal OA reporting requirements
Electronics Stewardship Reporting	Report on DOT-wide Electronics Stewardship performance	Refer to most recent data call. Metrics may include EPEAT®, ENERGY STAR® and FEMP-	As needed to support DOT and internal OA

Reporting Module	Purpose	Data Attributes to Report	Reporting Frequency
		designated product purchases, Power Management, or End-of-Life Procedures (data provided and reported by OCIO)	reporting requirements
Report of Exchange/Sale Transactions	Summary report on transactions made under the exchange/sale authority of 40 U.S.C. § 503	Refer to report requirements in 41 CFR § 102-39.85	Annually for prior FY
Non-Federal Recipients Report	Track personal property furnished to non-Federal recipients and excess electronic equipment transferred to schools and education non-profits	Refer to report requirements in 41 CFR parts 102-36.295 and 102-36.300	Annually for prior FY
Federal Procurement Data System – Next Generation (FPDS-NG) (https://www.fpds.gov/)	Report number of contracts and value to track government spending across categories. Required for all contracts/orders over the micro-purchase threshold and all modifications to the contracts/orders.	Total number and value of contracts that include required sustainability clauses for: <ul style="list-style-type: none"> • EPA-designated products; • Recovered Materials and Sustainability; • Biobased; • Energy-efficient; and • Environmentally Preferable 	Ongoing, as contract actions are entered into FPDS-NG
Integrated Data Collection (IDC) – for DCOI/FITARA	Support OMB oversight over Federal data centers and agencies' implementation of the DCOI, per 44 U.S.C. § 3601	Meet requirements as stated in OMB Memorandum M-19-19 and 44 U.S.C. § 3601 Includes inventory of data centers, strategic plan, milestones	Quarterly and annually See details at: datacenters.cio.gov/reporting

13. POLICY UPDATES AND/OR REVISIONS. This Order must be reviewed to determine whether updates or revisions are necessary at least once every three years. In the interim, all applicable laws revised by Congress and all new executive actions or guidance related to waste management are considered incorporated by reference.

14. POLICY EXCEPTION REQUIREMENTS. OA Administrators may submit a request for an exception to the CSO, through EREP. Approvals for exceptions to the requirements of this Order should be coordinated with DOT's OGC.
15. DISTRIBUTION. This Order is distributed to all OST offices listed in Section 7 of this Order, and all OA Administrators, OA CIO, OA Chief Acquisition Officers, and the FAA Acquisition Executive.
16. CONTACT. If you have specific questions related to this Order, please contact EREP (M-90) at DOTsustains@dot.gov.

Keith Washington
Deputy Assistant Secretary for Administration,
Chief Sustainability Officer

Keith Washington

12/18/2020

APPENDIX I: LIST OF AUTHORITIES AND REFERENCES.

1. Public Laws and Statutes

- a. [Energy Independence and Security Act of 2007](#) (EISA) ([42 U.S.C. § 8259b](#)).
- b. [Energy Policy Act of 1992](#) (EPAct), as amended by the [Energy Policy Act of 2005](#) ([42 U.S.C. § 8259b](#)).
- c. [National Defense Authorization Act for Fiscal Year 2015](#), Pub. L. No. 113-291, Subtitle D, “Federal Information Technology Acquisition Reform” (FITARA) ([40 U.S.C. § 11319](#), [44 U.S.C. § 3601](#)).
- d. [Pollution Prevention Act of 1990](#) (PPA) ([42 U.S.C. §§ 13101–13109](#)).
- e. [Stevenson-Wydler Technology Innovation Act of 1980](#) ([15 U.S.C. § 3710](#)).
- f. Resource Conservation and Recovery Act (RCRA) of 1976 ([42 U.S.C. § 6901–6992k](#)).
- g. [Toxic Substances Control Act of 1976](#) (TSCA) ([15 U.S.C. §§ 2601–2692](#)).

2. Regulations

- a. Code of Federal Regulations, [40 CFR §§ 28, 260–265](#).
- b. [Department of Transportation Acquisition Regulation \(TAR\)](#), 48 CFR parts 1200-1299.
- c. [Federal Acquisition Regulation \(FAR\) Part 23](#), Environment, Energy, and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace (48 CFR § 23) (not applicable to FAA).
- d. [Federal Aviation Administration \(FAA\) Acquisition Management System \(AMS\)](#).
- e. [Federal Management Regulation \(FMR\), Subchapter B-Personal Property](#), 41 CFR parts 102-31–102-42.

3. Executive Actions

- a. [EO 13834](#), Efficient Federal Operations, May 2018.
- b. [EO 13221](#), Energy Efficient Standby Power Devices, 66 Fed. Reg. 40569, July 2001.
- c. [EO 12999](#), Educational Technology: Ensuring Opportunity for All Children in the Next Century, 61 Fed. Reg. 17227, April 1996.
- d. [Implementing Instructions](#) for EO 13834, Efficient Federal Operations, CEQ, April 2019.
- e. [OMB Circular No. A-11](#), Preparation, Submission, and Execution of the Budget, June 2019.
- f. [OMB Federal Cloud Computing \(Cloud Smart\) Strategy](#), June 2019.
- g. [OMB Memorandum M-19-19](#), Update to Data Center Optimization Initiative, June 2019.

4. Guidance and Directives

- a. CEQ/EPA/GSA National Strategy for Electronics Stewardship, Interagency Task Force on Electronics Stewardship), July 2011.
- b. DOT Acquisition Manual (TAM).
- c. DOT Order 1360.5C, IT Policy and Administration of Print Services.
- d. [GSA Bulletin FMR B-27, Annual Executive Agency Reports on Excess and Exchange/Sale Personal Property](#), July 2010.
- e. [GSA Bulletin FMR B-34, Disposal of Federal Electronic Assets](#), February 2012.
- f. [GSA Bulletin FMR B-37, Federal Print Management Practices](#), April 2013.
- g. [NIST Special Publication 800-88 Rev. 1](#), Guidelines for Media Sanitization, National Institute of Standards and Technology, December 2014.
- h. DOT Order 1011.1A, Processing Reasonable Accommodation Requests by DOT Job Applicants and Employees with Disabilities.

5. Online Resources

- a. EPA: [Certified Electronics Recyclers](#)
- b. EPA: [Comprehensive Procurement Guidelines](#)
- c. EPA: [ENERGY STAR®](#) Power Management Calculator
- d. EPA: [Federal Green Challenge](#)
- e. EPA: [Improving Operation and Maintenance of Electronic Equipment Guidance](#), June 2012.
- f. EPA: [Incorporating Environmental Criteria in Electronics Acquisition](#), Federal Electronics Challenge, June 2012.
- g. EPA: [Overview of GSA Personal Property Disposal Process for Federal Electronics](#), June 2012.
- h. EPA: [Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing](#)
- i. EPA: [Resource Conservation and Recovery Act \(RCRA\) Overview](#)
- j. EPA: [Top 12 Ways to Decrease the Energy Consumption of Your Data Center](#) Brochure, September 2016.
- k. FEMP and Lawrence Berkeley National Laboratory (LBL): [Data Center Efficiency Center of Expertise](#)
- l. FEMP: [Energy Efficiency in Data Centers](#)
- m. FEMP: [Energy-Efficient Products](#)
- n. FEMP: [Low Standby Power Product Purchasing Requirements and Compliance Resources](#)
- o. GSA: [Green Procurement Compilation \(GPC\)](#)
- p. GSA: [Personal Property Management Policy](#) (information on handling e-waste)
- q. GSA: OMB: [IT Dashboard](#)
- r. NIST: [Computer Security Resource Center](#)

APPENDIX II. KEY TERMS.

1. ***Acquisition or Procurement:*** Obtaining goods or services by contract, using funds for supplies or services (including construction) by and for the use of the Federal government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, or demonstrated and evaluated. Acquisition begins when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation, selection of sources, contract award and financing details, contract performance and administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.
2. ***Best-In-Class (BIC):*** An acquisition designation to identify government-wide contracts that are vetted, well-managed, and recommended or required (pursuant to OMB Memoranda or other policy), and satisfy key criteria defined by OMB.
3. ***Category Management (CM):*** The strategic business practice of buying common goods and services as an enterprise to eliminate redundancies, increase efficiency, and deliver more value and savings from the Government's acquisition programs.
4. ***Certified Recycler:*** “Certified” recyclers are those that have demonstrated to an accredited, independent third-party auditor that they meet specific standards to safely recycle and manage electronics. GSA FMR Bulletin B-34 recognizes two certification programs for the disposal of Federal electronic assets: the Responsible Recycling (R2) program and the e-Stewards program.
5. ***Clause:*** Term or condition used in contracts or in both solicitations and contracts, and applying after contract award or both before and after award.
6. ***Cloud Computing (Cloud):*** The National Institute of Standards and Technology (NIST) defined several cloud deployment models as progressive increases in management by vendors, from Infrastructure as a Service (IaaS) where vendors provide the infrastructure and hardware, to Platform as a Service (PaaS) where vendors provide a managed environment for a customer’s application, to Software as a Service (SaaS) where vendors provide a fully managed application and customers need only supply their data. In practice, many major vendor offerings no longer have such well-defined boundaries. Notwithstanding the term’s common usage, the term “cloud” is most accurately applied to those solutions that exhibit five essential characteristics of cloud computing, as defined by NIST: on-demand service, broad network access, resource pooling, rapid elasticity, and measured service.
7. ***Contract Action:*** Any oral or written, authorized action that results in the purchase, rent, or lease of supplies or equipment, services, or construction using appropriated dollars over the

micro-purchase threshold, or modifications to these actions regardless of dollar value. Contract action does not include grants, cooperative agreements, other transactions, real property leases, requisitions from Federal stock, training authorizations, or other non-FAR based transactions.

8. **Data Center:** Any facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be: (A) a free-standing structure; or (B) a facility within a larger structure that uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment.
9. **Department of Transportation Acquisition Regulation (TAR):** The TAR contains DOT policy and procedures for acquisition that may impact contractors and potential offerors. The TAR implements and supplements the FAR (does not apply to FAA).
10. **Department of Transportation Acquisition Manual (TAM):** The TAM contains DOT internal policy, procedures, and instructional guidance for acquisitions at DOT. The TAM implements and supplements the FAR and TAR (does not apply to FAA).
11. **DOT Acquisition Documents:** The documents that govern DOT's purchase of goods and services, including the FAR, TAR, TAM, and AMS (for FAA only).
12. **Electronic Equipment:** Any item powered by electricity that has logic circuitry enabling the item to perform its intended function. In other words, equipment that plugs into or may be plugged into an electric power source or runs on batteries, including desktop computers, laptops, monitors, printers, copiers, servers, televisions, cellular and landline telephones, and tablet computers. This does not include the manipulation, movement, transmission, or reception of data or information by DOT.
13. **End-of-Life Management:** The management of a product that is no longer used, stored, or reused, and has reached its end-of-life. The management options for a product at end-of-life include recycling or disposal.
14. **FAA Acquisition Management System (AMS):** Establishes an acquisition life cycle management system for FAA, including both a contracting and program management system. AMS policy takes precedence over all other FAA policy dealing with any aspect of lifecycle acquisition management and related disciplines. FAA follows the AMS, rather than the FAR.
15. **FEMP-Designated Product:** A product that is designated under FEMP as being among the highest 25 percent of equivalent products for energy efficiency (42 U.S.C. § 8259b(a)(4)).

16. **ENERGY STAR®:** An Environmental Protection Agency (EPA) program that helps consumers identify energy efficient products that save them money and offer the features and functionality they value. ENERGY STAR® products are third party certified and verified. The EPA maintains lists of products that meet ENERGY STAR® specifications at www.energystar.gov.
17. **ENERGY STAR®-Labeled Product:** A product that is rated for energy efficiency under EPA's ENERGY STAR® program (42 U.S.C. § 8259b(a)(2)).
18. **Environmentally Preferable Products:** Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose (48 CFR § 2.101).
19. **Electronic Product Environmental Assessment Tool (EPEAT®):** A system to help purchasers evaluate, compare, and select electronic products based on their environmental attributes. The EPEAT® Registry includes products that have been declared by their manufacturers to be in conformance with the Institute of Electrical and Electronics Engineers (IEEE) 1680 Family of Environmental Assessment Standards. EPEAT®-registered products must meet criteria in the multiple performance categories, such as material selection, design for end-of-life, energy conservation, and packaging. The EPEAT® Registry and performance criteria are at www.epeat.net. All EPEAT®-registered products are required to meet the ENERGY STAR® technical specifications for that product, in addition to meeting other environmental performance criteria.
20. **Executive Action:** Includes EOs, presidential memoranda, implementing instructions, and other documents issued by the Executive Office of the President.
21. **Federal Acquisition Regulation (FAR):** A set of regulations governing the Federal government's purchasing process. Ensures purchasing procedures are standard and consistent, and conducted in a fair and impartial manner.
22. **Federal Procurement Data System-Next Generation (FPDS-NG):** A database system for U.S. government procurement and Federal contracting data. The FPDS-NG system allows for millions of procurement transactions from across the Federal government to be recorded and reported upon in real-time.
23. **Hazardous Material:** Waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from many sources, ranging from industrial manufacturing process wastes to batteries and may come in

many forms, including liquids, solids, gases, and sludges. EPA's regulations regarding identification of hazardous waste are codified at 40 CFR § 261.

24. **Information Technology (IT):** Any equipment or interconnected system or subsystem of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information by the executive agency; equipment used by the executive agency directly or by a contractor under a contract with the executive agency that requires the use – (i) of that equipment; or (ii) of that equipment to a significant extent in the performance of a service or the furnishing of a product.
25. **Landfill:** A permitted solid waste disposal unit where non-hazardous solid waste is placed in or on the land.
26. **Life Cycle Cost-Effective:** The life cycle costs of a product, project, or measure are estimated to be equal to or less than the base case (i.e., current or standard practice or product) in accordance with 10 CFR § 436.
27. **Meter:** An electromechanical or solid state device that cumulatively measures and records aggregated utility usage data for use in customer billing or energy management.
28. **Ozone Depleting:** Designated as a Class I or Class II substance by the EPA in 40 CFR § 82, meaning it contributes to stratospheric ozone depletion.
29. **Performance Requirements:** Basic business functions or operational criteria that a product or service must meet to fulfill mission needs.
30. **Power Management:** Also known as Computer Power Management. This is a computing feature that allows users to control the amount of electrical power consumed by an underlying device, with minimal impact on performance. It enables the switching of devices in various power modes, each with different power usage characteristics related to device performance.
31. **Procurement Request (PR) Initiator:** The PR initiator represents the program, project and/or organization that has the need for the product or service procured. They provide the programmatic and technical expertise and serve as the responsible party for the initiation of the PR. The PR Initiator is often also the COR but in some cases may be distinct from the COR, if the PR lacks the appropriate COR certifications. In these cases, the COR and PR work together to ensure sustainable requirements are met in the acquisition process.

32. ***Recovered Materials:*** Waste material and byproducts that have been recovered or diverted from solid waste, but does not include those materials and byproducts generated from, and commonly reused within, an original manufacturing process. See “EPA: Comprehensive Procurement Guidelines” (CPG) in Appendix I: Authorities and References, above. The CPG is a program authorized in 42 U.S.C. § 6962 that designates items that must contain recovered materials when purchased by Federal agencies or government contractors using appropriated Federal funds.
33. ***Reuse:*** The use of a product or material again for the same purpose in its original form or with little enhancement or change.
34. ***Recycling:*** A process of collecting a product or material, separating and processing it and then returning it to the economic mainstream in the form of raw materials; or reconstituting into a new finished good.
35. ***Server:*** A computer that services and manages networked resources for client devices such as: desktop computers, notebook computers, thin clients, wireless devices, other computer servers and other networked devices. Computer servers primarily respond to requests and are accessed via network connections, and not through direct user input devices such as a keyboard or mouse.
36. ***Server Utilization:*** Fraction of total computing resources engaged in useful work.
37. ***Spend-Under-Management (SUM):*** The percentage of an organization’s spend that is actively managed according to category management principles.
38. ***Standby:*** Level of power consumption that occurs when a device is in the lowest power-consuming mode—typically when the product is switched off or not performing its primary purpose.
39. ***Statement of Work (SOW):*** The portion of a contract that establishes and defines all non-specification requirements for the contractor's efforts, either directly or with the use of specific cited documents.
40. ***Stewardship:*** Activities that support the development of programs, infrastructure, technical capabilities, outreach, training, research, and other general capabilities including consultative services to protect and enhance environmental quality at the national, state, local, and tribal levels.

41. ***Sustainable Acquisition:*** Also known as Green Purchasing, refers to purchasing products with environmental benefits and purchasing services under which these products will be supplied or used. Federal agencies are required to purchase sustainable products and services, as required by various laws, EO 13834, the FAR and the FAA AMS. While sustainable acquisition is the primary focus of FAR Part 23, it is also addressed in FAR Parts 2, 4, 7, 8, 10, 11, 12, 36, 39, 42, and 52. Sustainable Acquisition applies to all acquisitions and contracting mechanisms used by Federal agencies, including service contracts, leases, purchases made with government purchase and fleet cards and purchases below the micro-purchase threshold.
42. ***Take-Back Program:*** A program in which a manufacturer takes the physical responsibility for products or packaging at the end of their useful lives. By accepting used products, manufacturers can acquire low-cost feedstock for new manufacturing or remanufacturing activities, and offer a value-added service to the buyer.
43. ***Toxic:*** Describing any chemical or mixture that may be harmful to the environment.
44. ***Virtualization:*** In computing, consolidating workloads on to fewer devices while allowing each workload to behave as though it is on its own device.