

**U.S. DEPARTMENT OF  
ENERGY**

**ELECTRONICS  
STEWARDSHIP PLAN**

**July 2007**

Office of Health, Safety, and Security  
Office of Nuclear Safety and Environment

**U.S. Department of Energy  
Electronics Stewardship Plan  
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**1. PURPOSE**

This U.S. Department of Energy (DOE) Electronics Stewardship Plan highlights actions to be taken in 2007 and beyond to advance the Department's sustainable electronics stewardship initiatives and provide leadership in the management of Federal electronic assets. This 2007 Electronics Stewardship Plan builds upon achievements made through implementation of previous plans prepared annually since 2005, and proposes additional actions and assistance initiatives to foster continuous improvement in the Department's electronics stewardship. The Plan addresses the management of the Department's electronic assets throughout their life-cycle by focusing on: (1) purchasing of "green" electronic products (e.g., desktop computers, notebooks and monitors); (2) reducing the environmental impacts of electronic products; and (3) managing obsolete electronics in an environmentally safe manner.

**2. BACKGROUND**

On November 15, 2004, DOE, along with ten other Federal agencies and the Executive Office of the President, signed a Memorandum of Understanding to improve the environmental management of Federal electronic assets throughout their life-cycle (i.e., procurement, operation and disposition). In early 2007, Executive Order 13423 "Strengthening Federal Environmental, Energy, and Transportation Management" and its instructions for implementation were issued, which identified additional requirements and goals for sustainable electronics stewardship. Accordingly, DOE's 2007 Electronics Stewardship Plan identifies actions to be taken to meet or exceed these new requirements and goals, and actions to be taken to meet or exceed the Office of Management and Budget's reporting requirements for completion of the Environmental Stewardship Scorecard.

**3. ELECTRONICS STEWARDSHIP PLAN ELEMENTS**

DOE's Electronic Stewardship Plan elements are contained in the following table which identifies the action items and target completion dates. The table also includes current achievements. The Electronics Stewardship Plan's action items are organized and presented in four categories: (1) General; (2) Acquisition and Procurement; (3) Operations and Maintenance; and (4) End of Life Reuse and Recycling. This plan will be updated annually.

## ELECTRONICS STEWARDSHIP PLAN ELEMENTS

ACTION ITEM	TARGET COMPLETION DATE	ACTUAL COMPLETION DATE
<b>GENERAL ACTIONS</b>		
<p>DOE will continue its commitment to programmatic excellence and continuous improvement in the practice of electronics stewardship, addressing the three lifecycle phases: green procurement, energy efficient operations and maintenance and the extension of the useful lifespan of equipment, and the environmentally safe disposition of surplus electronics, including reuse and recycling. Ongoing actions will be re-evaluated during the Electronic Stewardship Plan update which occurs in July each year.</p> <p><i>Current Achievements -</i></p> <p>On November 15, 2004, DOE signed the <i>Memorandum of Understanding Promoting Sustainable Environmental Stewardship of Federal Electronic Assets</i> and joined the Federal Electronics Challenge (FEC).</p>	July 2008	
<p>DOE will continue to grow its “Green Electronics Partnership,” building its integrated “Green Team” to promote electronics stewardship among its information technology, procurement, property management, energy efficiency, and environmental staff, managers, and offices.</p> <p>“Green Team” intra-agency Points of Contact will meet quarterly starting in September 2007.</p> <p><i>Current Achievement -</i></p> <p>On June 12, 2007, the DOE Green Team was awarded the first <i>Closing the Circle Award for Electronics Stewardship</i>, recognizing the joint accomplishments of the integrated partnership among the DOE procurement, information technology, property management, and environmental staff.</p>	July 2008	
<p>DOE will actively encourage its remaining major facilities who are not FEC partners to either join the FEC or adopt FEC practices as indicated in the EO 13423 Instructions.</p>	July 2008	

<p><i>Current Achievements –</i></p> <ul style="list-style-type: none"> <li>• In June 2005, the DOE Chief Information Officer (CIO) and Agency Environmental Executive issued a memo to all DOE program and field elements stating the Department’s commitment to sustainable environmental stewardship of Federal electronic assets and encouraging site participation as FEC Partners.</li> <li>• As of June 2007, sixteen DOE sites are FEC Partners, encompassing more than half of the major DOE facilities and workforce, an increase from eleven in June 2006.</li> </ul>		
<p>DOE representatives will actively participate in the Federal Electronic Stewardship Working Group (FESWG), including attending monthly meetings, annual conferences, and retreats, and be proactively involved in committees and workgroups.</p>	<p>July 2008</p>	
<p>In April 2007, DOE established the DOE Environmental Management Systems Assistance Network (EMSAN) to provide consultation, technical assistance, and training to DOE field and program elements for Environmental Management Systems (EMS). During 2007-2008, EMSAN will employ individual consultations, monthly conference calls, and at least three major facility visits to support DOE facilities in their integration of the electronics stewardship requirements of EO 13423 into their EMS goals, objectives, strategies, and targets.</p>	<p>July 2008</p>	
<p>The DOE Office of Nuclear Safety and Environment will expand the DOE Headquarters EMS to incorporate prototype objectives and targets for electronics stewardship as a model for other sites.</p>	<p>January 2008</p>	
<p>DOE will encourage its sites to strive for recognition of achievement in electronics stewardship.</p> <p><i>Current Achievements –</i></p> <ul style="list-style-type: none"> <li>• As of June 2007, DOE sites have won ten FEC Awards including two Gold Awards, three Silver</li> </ul>	<p>June 2008</p>	

<p>Awards, and five Bronze Awards.</p> <ul style="list-style-type: none"> <li>• In 2006 and 2007 DOE Pollution Prevention (P2) Star awards were presented to five DOE sites for exemplary environmental stewardship of electronic assets.</li> </ul>		
<p>DOE will update its Pollution Prevention Performance Tracking and Reporting System to incorporate EO 13423-related performance measures for:</p> <ul style="list-style-type: none"> <li>• environmentally preferable purchasing of Electronic Product Environmental Assessment Tool (EPEAT)-registered computers and monitors;</li> <li>• reuse of surplus electronics; and</li> <li>• recycling of end-of life electronics by DOE sites.</li> </ul> <p>DOE sites will monitor progress toward achieving electronics stewardship goals and strategies and track data to report accomplishments under the Executive Orders 13423, 13101, and others, and DOE Order 450.1, Environmental Protection Program, to DOE, OFEE, FEC, and OMB for Scorecard purposes.</p> <p><i>Current Achievement –</i></p> <ul style="list-style-type: none"> <li>• DOE was the first major federal agency to incorporate FEC reporting requirements into its pollution prevention progress reporting data calls. Forty-three DOE sites participated in the December 2006 DOE electronics stewardship data call.</li> </ul>	February 2008	
<p>The DOE outreach campaign on life cycle environmental management of electronic assets including EO 13423 will educate DOE Federal and contractor personnel to integrate electronics stewardship strategies and sustainable practices into EMS through at least three continuous improvement workshops at DOE facilities across the country.</p>	July 2008	
<p>The DOE Green Team partnership will provide educational materials, briefings, and training concerning EO 13423 and federal electronics stewardship initiatives to DOE information technology managers, procurement specialists, property management , and environmental personnel. Green Team</p>	July 2008	

<p>representatives will brief Site Pollution Prevention Coordinators on electronics stewardship in monthly teleconferences. The Green Team will also produce electronics stewardship articles for newsletters and websites, as well as electronics stewardship presentations at DOE conferences.</p>		
<b>ACQUISITION AND PROCUREMENT ACTIONS</b>		
<p>DOE Order 450.1 will be revised to integrate new EO 13423 electronics stewardship acquisition goals into DOE site Environmental Management Systems. The sustainable practices to attain these new goals will include a requirement for environmentally preferable desktop computers, notebooks, and monitors registered with the EPEAT network. Facilities will be encouraged to purchase electronics at an EPEAT level of Silver or higher if available.</p> <p><i>Current Achievement:</i> To promote the purchase of “green” computers and monitors, DOE was the first major federal agency operating through the DOE CIO and DOE Common Operating Environment to establish a procurement requirement specifying a preference for desktop computers, notebooks, and monitors qualified through the EPEAT in March 2006.</p>	<p>May 2008</p>	
<p>DOE will conduct outreach activities to educate federal and contractor IT and procurement staff at DOE sites on the EO 13423 requirements for environmentally preferable electronics procurement, including conference calls, workshops, newsletter articles, and conference presentations.</p>	<p>July 2008</p>	
<p>The DOE Office of Procurement and Assistance will amend the DOE Acquisition Regulations (DEAR) to require EPEAT-registered electronics computers and monitors in DOE acquisition contracts as appropriate, upon approval of an EPEAT standard by the Federal Acquisition Regulation (FAR) Plan. Facilities will be encouraged to purchase electronics at an EPEAT level of Silver or higher if available.</p> <p><i>Current Achievement:</i> In anticipation that the FAR will add a standard for EPEAT-registered electronic products, in June 2007 the DOE Office of Procurement and Assistance published and distributed an Acquisition Letter specifying DOE purchase of EPEAT-registered electronics products.</p>	<p>May 2008</p>	

<p>DOE will update its Pollution Prevention Performance Tracking and Reporting System to incorporate EO 13423-related performance measures for acquisition of EPEAT-registered electronics equipment. DOE sites will monitor progress toward achieving operations and maintenance goals and strategies and track data to report accomplishments under the Executive Orders and Order 450.1 to DOE, OFEE, FEC, and OMB for Scorecard purposes.</p> <p><i>Current Achievements –</i></p> <ul style="list-style-type: none"> <li>• Forty three DOE sites participated in the FY 2006 DOE electronics stewardship data call to report EPEAT-certified acquisitions.</li> <li>• More than 10,000 EPEAT certified computers and monitors were purchased by DOE in FY 2006, most at a Silver level.</li> </ul>	<p>February 2008</p>	
<p><b>OPERATIONS AND MAINTENANCE ACTIONS</b></p>		
<p>DOE Order 450.1 will be revised to integrate new electronic operations and management strategies into DOE site Environmental Management Systems. Strategies will based upon the EO 13423 goals for enabling electronics power management capabilities of desktop computers, notebooks, and monitors and the extension of life for electronics to four years or more. The Order will also specify that DOE sites are to monitor progress toward achieving the new electronic stewardship operations and maintenance goals and report data to assess progress reporting under the Executive Orders including 13423.</p>	<p>May 2008</p>	
<p>The DOE Common Operating Experience (COE) and DOE sites will implement best management practices and expand efforts to reduce energy consumption, including:</p> <ul style="list-style-type: none"> <li>• After-hours shut down of non-critical electronics and electrical equipment in conjunction with network security;</li> <li>• Energy Star power management features as default; and</li> <li>• Implementation and evaluation of power management tools (e.g., EZ Off software).</li> </ul>	<p>July 2008</p>	

<p>DOE will promote the extension of the useful lifespan of electronics equipment, striving to extend the lifespan of computers and monitors to four years or more, in accordance with EPA guidance for improved operations and maintenance, and encourage the timely reuse and donation of surplus electronics. Further, DOE (in coordination with the FESWG) will evaluate the utility of extending the useful lifespan of computers and monitors in the light of established departmental policy for the reuse of surplus electronics and the recycling of end-of-life electronics, as well as DOE's support for more energy efficient and less greenhouse gas producing computers and monitors.</p> <p><i>Current Achievements:</i></p> <p>DOE HQ established the DOE COE in 2005, consolidating fourteen different IT operations into one organization, improving procurement, operations and maintenance. DOE COE has extended all HQ CRT monitors to an indefinite lifespan, preserving them for as long as operations allow. The average lifespan for HQ desktops currently exceeds four years.</p>	<p>July 2008</p>	
<p>DOE will conduct outreach activities to educate federal and contractor IT staff at DOE sites on the EO 13423 requirements for environmental operations and maintenance, including energy efficient and conservation practices and extension of equipment lifespan, including conference calls, workshops, newsletter articles, and conference presentations.</p>	<p>July 2008</p>	
<p>DOE will update its Pollution Prevention Performance Tracking and Reporting System to incorporate EO 13423-related performance measures for enabling electronics power management capabilities and extending the operating lifespan of electronics equipment to four years or more. DOE sites will monitor progress toward achieving operations and maintenance and lifespan goals and strategies and track data to report accomplishments under the Executive Orders and Order 450.1 to DOE, OFEE, FEC, and OMB for Scorecard purposes.</p> <p><i>Current Achievements –</i></p>	<p>February 2008</p>	



<ul style="list-style-type: none"> <li>Forty three DOE sites participated in the FY 2006 DOE electronics stewardship data call to report energy efficient and Energy Star related acquisitions.</li> </ul>		
<b>END OF LIFE REUSE AND RECYCLING ACTIONS</b>		
<p>DOE Order 450.1 will be updated to include new EO 13423 requirements for the reuse and recycling of electronics, establishing goals, strategies, and targets to be integrated into Environmental Management Systems. Updated strategies will be upgraded to reflect the new EO 13423, including the General Services Administration Computers for Learning Program under EO 12999, internal and external reuse programs, and the utilization of accredited recycling services for disposition of end-of-life electronics, such as:</p> <ul style="list-style-type: none"> <li>EPA Recycling Electronics and Asset Disposition (READ) Services Government Wide Acquisition Contract;</li> <li>Federal Prison Industries (UNICOR) Electronic Recycling Program;</li> <li>General Services Administration Federal Supply Service Multiple Award Schedule 899 Reclamation, Recycling, and Disposal Services; and</li> <li>Recyclers that are in good standing in a professional recycling association, such as the International Association of Electronics Recyclers (IAER) or Institute of Scrap Recyclers (ISR).</li> </ul> <p>The Order will also reference the EPA <i>Guidelines for Materials Management to Plug-In To e-Cycling</i> as found at <a href="http://www.epa.gov/epaoswer/osw/consERVE/plugin/guide.htm">www.epa.gov/epaoswer/osw/consERVE/plugin/guide.htm</a> as well as more recent EPA guidance to the safe disposition of surplus electronics.</p>	<p>May 2008</p>	
<p>DOE will conduct outreach activities to educate federal and contractor IT workers, property managers, and cybersecurity staff at DOE sites on the EO 13423 requirements for the reuse and recycling of end-of-life electronics, including conference calls, workshops, newsletter articles, and conference presentations.</p>	<p>July 2008</p>	

<p>DOE will encourage all DOE program and field elements to participate in the 2008 Electronics Reuse and Recycling Campaign (ERRC) to attain the objective of increasing the recycling volume and number of participating facilities.</p> <p><i>Current Achievement –</i></p> <ul style="list-style-type: none"> <li>• In the 2006 federal Electronics Recycling and Reuse Challenge (ERRC), eleven DOE sites participated and DOE reused and recycled half million pounds of surplus electronics, winning the 2006 ERRC Agency Award.</li> <li>• DOE’s Kansas City and Waste Isolation Pilot Plants won 2006 ERRC Facility Awards; Brookhaven and Lawrence Livermore National Laboratories were finalists.</li> <li>• In the 2007 ERRC, eighteen DOE sites participated and DOE recycled more than six hundred thousand pounds, winning the 2007 ERRC Agency Award.</li> <li>• Idaho National Laboratory and Strategic Petroleum Reserve won 2007 ERRC Facility Awards.</li> </ul>	<p>June 2008</p>	
<p>DOE will update its DOE Pollution Prevention Performance Tracking and Reporting System to incorporate EO 13423-related performance measures for reporting annual quantitative performance on the reuse and recycling of surplus electronics and track data, and reporting accomplishments under the Executive Orders and Order 450.1 to DOE, OFEE, FEC, and OMB for Scorecard purposes.</p> <p><i>Current Achievement –</i></p> <ul style="list-style-type: none"> <li>• Forty-three DOE sites participated in the December 2006 DOE electronics stewardship data call to report recycling and reuse of surplus electronics.</li> </ul>	<p>February 2008</p>	
<p>DOE regulations, including the DEAR (once the FAR is revised) and DOE Order 450.1, will be revised to ensure that leased computers and monitors reverting to the lesser at the end of the lease period must be disposed of in a sustainable manner, through reuse, donation, sale, or recycling using sound environmental management practices.</p>	<p>May 2008</p>	

