



# Integrating Electronics Stewardship Into Your Environmental Management System

Updated: 6/29/2012

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## PURPOSE

This document highlights how electronics stewardship can be incorporated into an Environmental Management System, utilizing the framework of the International Organization for Standardization (ISO) Standard 14001:2004.

## INTEGRATING ELECTRONICS STEWARDSHIP INTO YOUR EMS

Executive Order (E.O.) 13514, *Federal Leadership in Environmental, Energy and Economic Performance*, requires federal agencies and their facilities to continue to use their Environmental Management Systems (EMS) to ensure implementation of the activities necessary for meeting the goals of the E.O. These goals include specific requirements in federal electronics stewardship for agencies and their facilities.

The table starting on page 2 provides suggestions for incorporating electronics stewardship into the elements of your organization's EMS, utilizing the framework of ISO 14001:2004(E). The table also includes examples or references to specific Federal Electronics Challenge (FEC) resources that may assist you in evaluating and integrating electronics stewardship into your organization's EMS.

## CONTACT INFORMATION

If you have questions related to this resource or need other assistance with the Federal Electronics Challenge, please contact your Regional Champion: <http://www2.epa.gov/fec/technical-assistance>.

Visit the FEC online: <http://www2.epa.gov/fec/>

E-mail the FEC: [fec@epa.gov](mailto:fec@epa.gov)

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EMS Element (ISO 14001)	Integrating Electronics Stewardship	Examples and Useful FEC Resources
4.2 Environmental policy	Determine if electronics stewardship, data center management, sustainable acquisition, energy efficiency, and reuse/recycling activities are part of your commitments to continual improvement, prevention of pollution, and compliance with legal and other requirements.	<p>Federal Legislation, Regulation, and Executive Orders Relevant to Federal Electronics Stewardship  <a href="http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship">http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship</a></p> <p>Federal Acquisition Regulation Clauses Applicable to Electronics Stewardship  <a href="http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012">http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012</a></p> <p>Overview of GSA Personal Property Disposal Process for Federal Electronics  <a href="http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012">http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012</a></p>
4.3.1 Environmental aspects	<p>Evaluate activities within all three electronics life-cycle phases (acquisition and procurement, operation and maintenance, end-of-life management) for identifiable environmental aspects and impacts.</p> <p>Include personnel from procurement and contracting, facility and property management, information technology, and resource or environmental management, on the team identifying and ranking aspects and impacts.</p>	<p>Activity: Purchase of new electronics  Aspect: Consumption of natural resources  Impact: Depletion of natural resources</p> <p>Activity: Use of office electronics and data centers  Aspect: Energy use, water use  Impact: Depletion of natural resources</p> <p>Activity: Disposal of electronics  Aspect: Disposal of hazardous materials  Impact: Potential pollution of natural resources</p>
4.3.2 Legal and other requirements	<p>Include related laws, regulations, and Executive Orders that apply to electronics acquisition, use and disposal, and data center management.</p> <p>Consider your agency-specific policies and guidance as "other requirements," including:</p> <ul style="list-style-type: none"> <li>• Strategic Sustainability Performance Plan</li> <li>• Electronics Stewardship Implementation Plan</li> <li>• Green/Environmentally Preferable Purchasing/Sustainable Acquisition Plan</li> </ul>	<p>Federal Legislation, Regulation, and Executive Orders Relevant to Federal Electronics Stewardship  <a href="http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship">http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship</a></p> <p>Federal Acquisition Regulation Clauses Applicable to Electronics Stewardship  <a href="http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012">http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012</a></p>

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EMS Element (ISO 14001)	Integrating Electronics Stewardship	Examples and Useful FEC Resources
	<ul style="list-style-type: none"> <li>Data Center Consolidation Plan</li> </ul>	<p>Overview of GSA Personal Property Disposal Process for Federal Electronics  <a href="http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012">http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012</a></p>
4.3.3 Objectives, targets, and programs	<p>Define objectives and targets specific to electronics stewardship or assess how electronics stewardship activities may support achievement of other goals and objectives.</p> <p>Establish Environmental Management Programs (EMPs) to achieve objectives and targets within a specified time frame. EMPs could address electronics stewardship/FEC participation, data center management, sustainable acquisition, energy efficiency, or reuse/recycling.</p>	<p>Objective: Integrate sustainable acquisition into electronic equipment purchases.            Target: Meet 95% of electronic product requirements with purchases of products registered with the Electronic Product Environmental Assessment Tool (EPEAT).</p> <p>Objective: Decrease energy use.            Target: Enable ENERGY STAR features on 100% of eligible computers and monitors.</p> <p>Objective: Reduce liability associated with hazardous waste disposal.            Target: Recycle 100% of obsolete electronic equipment utilizing third-party certified electronics recyclers.</p>
4.4.1 Resources, roles, responsibility and authority	<p>Include personnel from procurement and contracting, facility and property management, information technology, and resource or environmental management on the EMS team, and clearly define their roles towards achieving electronics stewardship objectives and targets.</p> <p>Assign responsibility and resources for any EMPs you may have created that have objectives and targets impacted by electronics stewardship activities.</p>	<p>10 Easy Steps for a Successful Federal Electronics Challenge Partnership:  <a href="http://www2.epa.gov/fec/ten-steps-successful-federal-electronics-challenge-partnership-6282012">http://www2.epa.gov/fec/ten-steps-successful-federal-electronics-challenge-partnership-6282012</a></p>
4.4.2 Competence, training and awareness	<p>Identify training, educational or awareness needs for those involved in electronics stewardship (including employees). This training, education or awareness campaign may include:</p> <ul style="list-style-type: none"> <li>Sustainable acquisition/Green purchasing</li> <li>Power management and energy efficiency measures</li> <li>Automatic duplexing</li> <li>Property management</li> </ul>	<p>Presentation materials on electronics stewardship topics:  <a href="http://www2.epa.gov/fec/webinars-events#past">http://www2.epa.gov/fec/webinars-events#past</a></p> <p>Promotional posters for raising employee awareness:  <a href="http://www2.epa.gov/fec/publications-and-resources#general">http://www2.epa.gov/fec/publications-and-resources#general</a></p>

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4.4.3 Communication	Consider including electronics stewardship results in internal and external communications.	The Electronics Environmental Benefits Calculator can translate electronics stewardship activities into quantifiable environmental benefits: <a href="http://www2.epa.gov/fec/publications-and-resources#calculator">http://www2.epa.gov/fec/publications-and-resources#calculator</a>
4.4.4 Documentation  4.4.5 Control of documents	Determine which documents related to electronics stewardship should be included in these requirements, such as: <ul style="list-style-type: none"> <li>• Electronics stewardship policies and guidance (both facility and agency level)</li> <li>• Acquisition and procurement documentation (market research, contracts, leases)</li> <li>• IT asset management documentation</li> <li>• Property management and disposition documentation (including records of transfers for donation or recycling and media sanitization records)</li> <li>• Data center management documentation</li> </ul>	
4.4.6 Operational control	Ensure that all significant aspects related to electronics stewardship are addressed by operational controls.  Develop and implement control procedures to ensure that personnel from procurement and contracting, facility and property management, information technology, and resource or environmental management act as electronics stewards.	Resources outlining best practices and procedures for electronics stewardship: <a href="http://www2.epa.gov/fec/publications-and-resources">http://www2.epa.gov/fec/publications-and-resources</a>
4.4.7 Emergency preparedness and response	Emphasize how the purchase of environmentally preferable products, and proper management of electronic equipment that may contain materials of concern, reduce the potential for incidents requiring emergency response.	EPEAT-registered products have reduced levels of toxic constituents.
4.5.1 Monitoring and measurement	Evaluate possible measurement of electronics stewardship activities, such as: <ul style="list-style-type: none"> <li>• Percentage of electronic units purchased that are EPEAT-registered</li> <li>• Percentage of computer and monitors with ENERGY STAR features enabled</li> <li>• Percentage of imaging equipment and computers set to duplex by default</li> </ul>	Baseline Survey and Annual Reporting Form <a href="http://www2.epa.gov/fec/baseline-survey-reporting">http://www2.epa.gov/fec/baseline-survey-reporting</a>  The Electronics Environmental Benefits Calculator can translate electronics stewardship activities into quantifiable environmental benefits: <a href="https://www2.epa.gov/fec/publications-and-resources#calculator">https://www2.epa.gov/fec/publications-and-resources#calculator</a>

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	<ul style="list-style-type: none"> <li>• Number of units sent for reuse, donation and recycling</li> <li>• Reduction in solid and hazardous waste</li> <li>• Reduction in energy use</li> <li>• Reduction in data center PUE</li> </ul> <p>Develop procedures and/or tracking systems for monitoring progress towards objectives and targets related to electronics stewardship.</p>	
4.5.2 Evaluation of compliance	<p>Understand electronics stewardship legal and other requirements and evaluate your compliance with these requirements.</p> <p>Utilize internal agency reporting, or reporting necessitated by legal and other requirements, to perform periodic compliance checks.</p>	<p>Federal Legislation, Regulation, and Executive Orders Relevant to Federal Electronics Stewardship  <a href="http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship">http://www2.epa.gov/fec/federal-legislation-regulation-and-executive-orders-relevant-federal-electronics-stewardship</a></p> <p>Federal Acquisition Regulation Clauses Applicable to Electronics Stewardship  <a href="http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012">http://www2.epa.gov/fec/far-clauses-applicable-electronics-stewardship-6142012</a></p> <p>Overview of GSA Personal Property Disposal Process for Federal Electronics  <a href="http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012">http://www2.epa.gov/fec/overview-gsa-personal-property-disposal-process-federal-electronics-6262012</a></p>
4.5.3 Nonconformity, corrective action and preventive action	<p>Designate appropriate personnel from procurement and contracting, facility and property management, information technology, and resource or environmental management responsibility, for investigating and correcting non-conformance with electronics stewardship requirements in your EMS.</p>	<p>Acquisition and procurement personnel may verify the EPEAT registration status of delivered electronic equipment and take appropriate actions to correct nonconformance with contract or lease requirements.</p> <p>IT personnel may implement and track enabling of ENERGY STAR and automatic duplexing features and take corrective action to ensure enabling on all applicable equipment.</p>
4.5.4 Control of records	<p>Include records of evaluation and conformance with electronics stewardship requirements of your EMS.</p>	<p>Baseline Survey and Annual Reporting Form  <a href="http://www2.epa.gov/fec/baseline-survey-reporting">http://www2.epa.gov/fec/baseline-survey-reporting</a></p>



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4.5.5 Internal audit	Ensure that electronics stewardship activities are included in the activities to be considered in either internal or external audits of the EMS.	
4.6 Management review	<p>Summarize the objectives and targets related to electronics stewardship in the EMS management review.</p> <p>Ensure that the management review considers recommendations to improve electronics stewardship.</p>	<p>Resources outlining best practices and procedures for electronics stewardship:  <a href="http://www2.epa.gov/fec/publications-and-resources">http://www2.epa.gov/fec/publications-and-resources</a></p>