

PURPOSE

This resource briefly outlines different options available to federal agencies for recycling of federally-owned electronic equipment. For information on recycling non-federal equipment, please see the U.S. Environmental Protection Agency (EPA) eCycling website: <http://www.epa.gov/ecycling/>.

INTRODUCTION

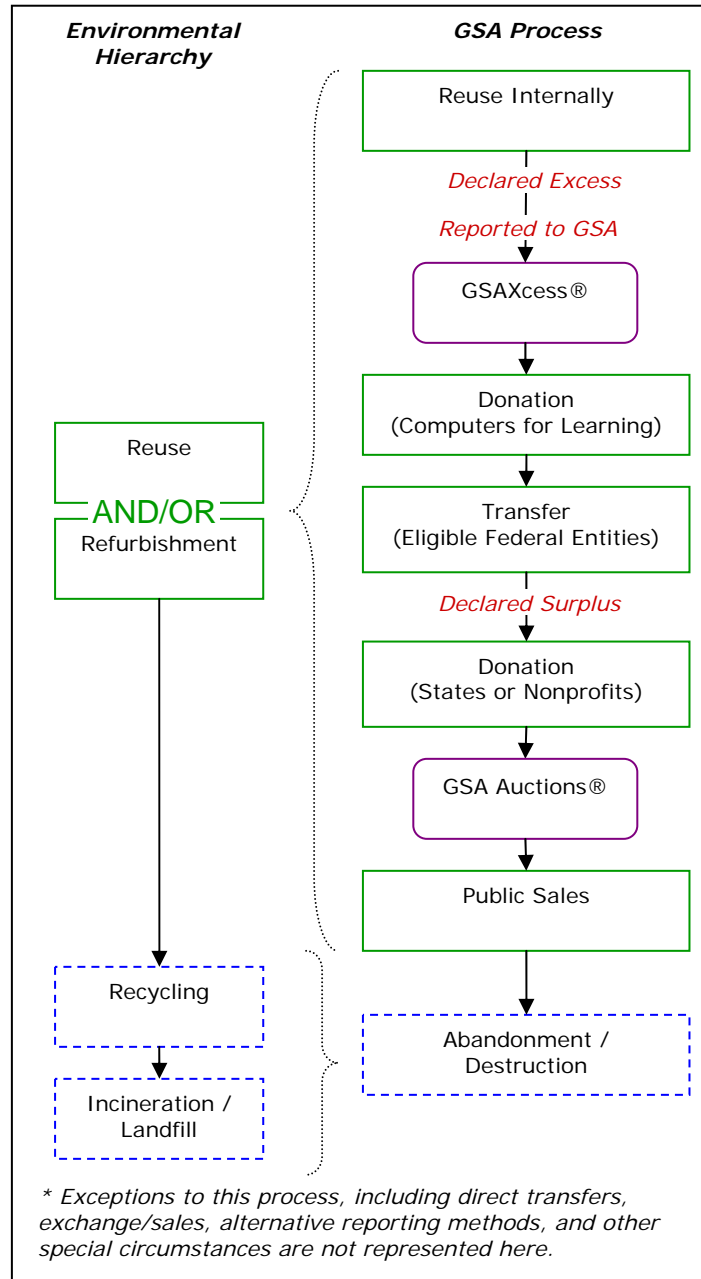
Used electronics that are broken or obsolete may have no reuse value but may be made of valuable materials, such as precious metals, copper and plastic, that can be recovered by recycling. Broken or obsolete electronics should be recycled in an environmentally sound manner.

The following environmental hierarchy – from most to least preferred - should be followed for managing end-of-life electronics:

- Reuse
- Refurbishment¹
- Recycling
- Incineration or Landfilling

This environmental hierarchy captures the specific end-of-life processes required by federal regulation and facilitated by the General Services Administration (GSA) (see box on right).

Federal Management Regulation (FMR) Subchapter B - Personal Property, 41 Code of Federal Regulations (CFR) 102, mandates reuse of personal property, to the extent practicable. This recycling resource presumes that a facility has fully considered reuse and refurbishment options prior to



¹ Refurbishment is the repair and/or upgrade of electronic equipment to make it usable (if it is broken) or more valuable (if it is obsolete).

moving down the end-of-life electronics management hierarchy to consider recycling options. Federal property sent for recycling must be declared for abandonment/destruction.

Federal agencies and facilities should also be aware of, and adhere to, relevant federal, state and local laws related to electronics reuse, recycling, and disposal.

Federal agencies and facilities must coordinate with their property management personnel prior to conducting any activity pertaining to the reusing or recycling of electronic equipment.

Other Federal Electronics Challenge (FEC) resources address the GSA personal property disposal process and electronics reuse options.

Why Recycling?

Executive Order (E.O.) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, requires agencies to employ environmentally sound practices with respect to the agency's disposition of all agency excess or surplus electronic products.

RECYCLING OPTIONS FOR CIVILIAN FACILITIES

Civilian facilities have a number of options available to assist them in recycling their electronic equipment:

- Use an electronics recycler certified to the Responsible Recycling (R2) Practices for Use in Accredited Certification Programs or the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Waste;
- Use UNICOR;
- Use manufacturer take-back services for electronics recycling; or
- Select and use another environmentally responsible electronics recycler.

For information on how to prepare electronic equipment for recycling, please see FEC's resource, *Preparing to Recycle Used Electronic Equipment*, available at: http://www.federalectronicschallenge.net/resources/docs/prepare_recycle.pdf.

For information on properly packaging used electronic equipment, please see FEC's resource, *Packaging Used Electronics for Transportation*, available at: <http://www.federalectronicschallenge.net/resources/docs/fecpack.pdf>.

Recycling activities are handled through the Defense Reutilization and Marketing Service (DRMS) for Department of Defense (DoD) organizations. Please see RECYCLING PROCESS FOR DEFENSE FACILITIES, below.

Using a Certified Recycler

There are existing recycling certification programs, such as the R2 Practices and e-Stewards, that EPA and the FEC believe advance environmentally safe practices and include standards for use in third party certification of such efforts.

Use of either an R2 certified or e-Stewards certified electronics recycler meets your federal requirements to employ environmentally sound practices with respect to disposition of electronic products. Use of these certified recyclers requires no further due diligence.

IMPORTANT NOTE: Recycling facilities are certified at the facility level. A multi-facility or national organization must independently certify each of their locations. Due to the length of time required for certification, these multi-facility or national organizations may have some facilities that are certified and some that are not yet certified. Check to determine which facility location will be used to recycle your electronics, and ensure that specific facility is certified.

To find an R2 certified recycler, please check the R2 Solutions website:
<http://www.r2solutions.org/index.php?submenu=Recyclers&src=gendocs&ref=R2CertifiedRecyclers&category=Main>.

To find an e-Stewards certified recycler, please check their online map for recyclers indicated by markers as **certified** to the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Waste: <http://e-stewards.org/find-a-recycler/>. Please note that recyclers indicated by markers as **qualified** by BAN under the Electronic Recyclers Pledge of True Stewardship program are NOT third-party certified and do not meet federal due diligence requirements.

IMPORTANT NOTE: There may be a number of recyclers that are undergoing the certification process for these standards. These recyclers are NOT third-party certified and do not meet federal due diligence requirements until their certification is complete and they are listed on the applicable website as certified.

Using UNICOR

Federal agencies and facilities may use UNICOR to recycle their electronics. UNICOR is a wholly owned government corporation whose mission is to train and employ inmates housed in Federal prisons. UNICOR receives no Congressional appropriations, but instead sustains its operations through the sale of goods and services to primarily Federal agencies.

IMPORTANT NOTE: UNICOR is working towards R2 certification at all of its facilities that perform electronics recycling. Please check with UNICOR and third party certifiers to determine which facilities have been certified. If you are utilizing a UNICOR facility that is not yet R2 certified, the FEC recommends you practice due diligence to ensure that the selected facility utilizes environmentally sound practices, in accordance with E.O. 13514 (see PERFORMING DUE DILIGENCE FOR ELECTRONICS RECYCLERS below).

More information is available on UNICOR's website: <http://www.unicor.gov/recycling/>.

Using Manufacturer Take-Back Services for Electronics Recycling

Federal agencies and facilities may use manufacturer take-back services through one of two methods: exchange/sales or abandonment/destruction.

- *Exchange/Sales:* When replacing personal property with similar items, the value of the old items may be used to reduce the cost of the replacement item either by exchange (trade-in) or sale with a manufacturer or vendor.
- *Abandonment/Destruction:* If the manufacturer is willing to take-back obsolete and/or broken equipment, federal agencies may declare the property for abandonment and destruction and use manufacturer take-back services.

IMPORTANT NOTE: Electronics taken-back by a manufacturer may not necessarily be reused, refurbished, recycled or disposed of in an environmentally sound manner. Federal agencies and facilities must exercise due diligence when returning used electronics to manufacturers (see **PERFORMING DUE DILIGENCE FOR ELECTRONICS RECYCLERS** below).

Certain restrictions and reporting requirements apply to exchange/sales and abandonment/destruction declarations. See GSA's *Personal Property Disposal Guide*, available at: http://www.gsa.gov/graphics/fas/5-06-00389_R2-yWC-w_0Z5RDZ-i34K-pR.pdf, for more information.

Selecting and Using Another Environmentally Responsible Recycler

Federal agencies and facilities may also choose and contract with a local electronics recycler that meets their needs:

- Federal agencies and facilities may utilize GSA's Environmental Services Schedule (GSA 899-5), a multiple award schedule of electronic waste or hazardous material recycling contractors. Federal agencies and facilities should be aware that the selection of recyclers on this schedule was based on the business, not the environmental, practices of the recycler.
- The U.S. Environmental Protection Agency's eCycling website includes links to manufacturer and retailer Plug-In To eCycling program websites, and links to other organizations that provide assistance in finding local electronics recyclers: <http://www.epa.gov/epawaste/consERVE/materials/ecycling/donate.htm>.
- Local or state environmental or solid waste agency may have local collection programs or databases of vendors who recycle obsolete electronics.

IMPORTANT NOTE: When not utilizing a certified recycler, federal agencies and facilities must practice due diligence to ensure that the electronics recycler they select utilizes environmentally sound practices, in accordance with E.O. 13514 (see **PERFORMING DUE DILIGENCE FOR ELECTRONICS RECYCLERS** below).

RECYCLING PROCESS FOR DEFENSE FACILITIES

Defense Reutilization and Marketing Service (DRMS) manages all electronic equipment end-of-life activities for Department of Defense (DoD). DoD property is handled according to the same priorities as civilian agency property.

DoD-owned electronic equipment, when excess to your organization's needs, must be reported as excess to DRMS. DRMS handles the disposal of all excess property received from the military services.

PERFORMING DUE DILIGENCE FOR ELECTRONICS RECYCLERS

If a federal agency or facility opts to use a certified recycler, they do not need to perform additional due diligence because due diligence activities have been performed through the third-party certification process to ensure these recyclers follow environmentally sound recycling practices.

IMPORTANT NOTE: When not utilizing a certified recycler federal agencies and facilities must practice due diligence to ensure that the electronics recycler they select utilizes environmentally sound practices, in accordance with E.O. 13514.

The following FEC tools can help federal organizations perform due diligence:

- *Checklist for Selection of Electronics Reuse and Recycling Services* provides a brief checklist to assist in the initial selection of an electronics recycler, and is available online at: <http://www.federalelectronicschallenge.net/resources/docs/select.pdf>.
- *Guidelines for On-Site Reviews of Electronics Recyclers* provides in-depth guidance for completing an on-site review of electronic recycler to help ensure the selection of an environmentally responsible vendor, and is available online at: http://www.federalelectronicschallenge.net/resources/docs/onsite_review.pdf.

REFERENCES AND RESOURCES

The Federal Management Regulations, 41 CFR 102, are available online from the U.S. Government Printing Office, at: <http://ecfr.gpoaccess.gov/>.

The National Center for Electronics Recycling provides a list of electronics recycling laws in effect at their website: <http://www.electronicsrecycling.org/public/ContentPage.aspx?pageid=14>.

The text of Executive Order 13514 is available from FedCenter at: <http://www.fedcenter.gov/programs/eo13514/>.

Information about the Responsible Recycling (R2) Practices for Use in Accredited Certification Programs is available at the R2 Solutions website: <http://www.r2solutions.org/>.



Recycling of Electronic Equipment

Updated: 10/05/2010

Information about the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Waste is available online at: <http://e-stewards.org/>.

Information regarding UNICOR's electronics recycling services is available online at the UNICOR website: <http://www.unicor.gov/recycling/>.

Additional information about DRMS is available online at the DRMS website: <https://www.drms.dla.mil/>.

Additional resources that address end-of-life issues are available online from the FEC, at: <http://www.federalelectronicschallenge.net/resources/eolmngt.htm>.

CONTACT INFORMATION

If you have questions related to this resource or need other assistance with the Federal Electronics Challenge, please contact your Regional Champion. The list of FEC Regional Champions is available at <http://www.federalelectronicschallenge.net/champions.asp>.

Partners may also request technical assistance via email to partner@electronicschallenge.net.

FEDERAL ELECTRONICS CHALLENGE

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