



HPE Standard-00007-02

Vendor Requirements for Hardware Recycling

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Abstract	This standard defines the requirements for Vendors and Subvendors who—in the process of fulfilling an HPE contract, recycle or dispose of electronic hardware products, parts, components, or materials.
Applicability	The requirements in this standard apply to all Vendors and all Subvendors who—in the process of fulfilling an HPE contract, including but not limited to contracts for production, handling, storage, repair and transportation services for HPE—recycle or dispose of HPE brand and non-HPE brand electronic hardware products, parts, components, or materials.
Status	Approved by HPE Legal

1. Introduction

The requirements in this standard apply to all Vendors and all Subvendors who—in the process of fulfilling an HPE contract, including but not limited to contracts for production, handling, storage, repair and transportation services for HPE—recycle or dispose of HPE brand and non-HPE brand electronic hardware products, parts, components, or materials.

2. General Compliance Requirements

- 2.1 Vendors and Subvendors must comply with the [HPE Supplier Code of Conduct \(Responsible Business Alliance\)](#) and the [HPE Global Human Rights Policy](#). Vendors directly contracted by HPE must sign and return to HPE the [Supplier Social and Environmental Responsibility Agreement](#). These documents are available at the [HPE Policies and Standards](#) webpage.
- 2.2 Vendors must demonstrate a history of regulatory compliance. Government agency or independent input (such as environmental facility reports from Environmental Data Resources or Dun & Bradstreet) may be used to document history of compliance.
- 2.3 Vendors must notify their designated HPE Vendor Manager within 24 hours of any occurrence that could materially affect or interrupt the Vendor's ability to perform services for HPE. In addition, any occurrences that involve security, health, safety, environmental, or labor issues that could negatively impact HPE's interests must be reported to the HPE Vendor Manager without delay.
- 2.4 Vendors must comply with all laws, regulations and other government requirements that pertain to their business, including but not limited to environment, health and safety, and import and export laws. In addition, they must obtain and maintain all applicable permits, licenses, approvals, agreements, and other required government or regulatory documents.
- 2.5 Vendors must implement and maintain an emergency response plan to prepare for and respond to emergency situations, including fires, medical emergencies, and uncontrolled releases of hazardous or harmful materials.
- 2.6 Vendors must agree to implement and comply with the HPE Hardware Recycling requirements set forth in this document and cascade these requirements to all Subvendors processing Covered Materials.
- 2.7 In the event the HPE Hardware Recycling requirements conflict with any laws, Vendors must adhere to the applicable legal requirements. To the extent, local conditions require variations with the provisions from this Standard, Vendor must acquire HPE approval in writing to the solution or disposition in advance.
- 2.8 Vendors must comply with the [HPE Media Handling Standard](#) for information security, document number HPE-00019-00, on the [HPE Supplier Portal](#); registration required.
- 2.9 Vendors must have an environmental management system with performance requirements, and maintain ISO-14001 or RIOS™ (Recycling Industry Operating Standard™) certification.
- 2.10 Unless otherwise specified by HPE, materials are to be recycled to the extent technically and economically practical.



3. Reuse, Resale, or Donation of Whole Units, Parts, or Components

Vendors engaged in any reuse, resale, or donation of hardware whole units, parts, or components must comply with [HPE Standard-00007-03 Vendor Requirements for Hardware Reuse](#) and use HPE approved vendors and processes.

4. Landfill Avoidance

In addition to any restrictions imposed by law, Covered Materials that are or contain the following, whether broken (including shred) or intact, must not be landfilled. Vendor shall send removed materials to processing, recovery, or treatment facilities that are properly licensed to receive the material, and that utilize technology designed to safely and effectively manage the materials. In the event that options below are not viable, exceptions to this rule may be granted as a last resort subject to prior approval of HPE.

- Cathode ray tubes (CRTs),
- Flat panel displays (e.g., liquid crystal displays [LCDs] and plasma screens)
- Circuit boards
- Mercury lamps or switches
- Batteries, all types
- Any other electronic components containing lead, mercury, cadmium, hexavalent chromium, beryllium, or polychlorinated biphenyls (PCBs)

5. Information Security

5.1 Data-containing devices must be destroyed in the following manner:

- a. Hard Disk Drive (HDD) platters, Solid-State Drive (SSD) memory chips, and other non-volatile memory components must be sent to smelting operations where complete melting is achieved. Complete melting of aluminum HDD platters at an aluminum foundry shall be considered as equivalent to smelting for the purposes of this standard.
- b. Prior to shipping from an electronics recycler to a smelter, HDDs must be degaussed or physically damaged, and SSD memory chips or other non-volatile memory components must be physically damaged. Physically damaged means milling, shredding, crushing or otherwise altering the physical state of the hardware to deter theft and data mining during transit from the hardware recycler to smelting operations.
- c. Peripheral data storage media such as CDs, DVDs and tapes that may contain sensitive data must be incinerated, or otherwise processed in accordance with National Institute of Standards and Technology (NIST) Special Provision (SP) 800-88. After processing in accordance with NIST SP 800-88, or If peripheral data storage media is known to be blank (such as when shipped in retail packaging) or to contain only non-sensitive data (such as product instruction manuals or drivers), peripheral storage media is eligible for recycling such as, but not limited to, recovery and reuse of Polycarbonate in CDs and DVDs.

Note

HPE entities, HPE repair suppliers, or other parties handling HPE or HPE customer data-containing devices on behalf of HPE must comply with the [HPE Media Handling Standard](#) prior to shipping the devices to hardware recyclers. (Document number HPE-00019-00 on the [HPE Supplier Portal](#), registration required.)

5.2 When requested by the HPE Vendor manager in advance of processing, Vendors must provide documents verifying destruction of data devices, including device serial numbers and date of destruction. Vendors must make such documentation available within 30 business days after receipt of the affected material.

6. Site Security and Controls

6.1 **Physical Security:** Business processes and physical locations must be designed and maintained in a manner to ensure the protection of Covered Materials from the time of receipt, including any transit or third-party transfer, until final disposition. Protection systems must be based on the degree of risk and shall include some elements of the following:

- Facility security protections (such as access control, alarm system, closed-circuit television [CCTV], building construction, fencing and gates, lighting);
- Security process controls (such as badging and identification, HR processes, concealed theft prevention, incident reporting and escalation, training, yard controls);
- Business process controls (such as disposition, inventory control, loading and unloading);
- In-transit controls (such as driver requirements, security seals, and truck security).



- 6.2 **Workforce:** Vendors must perform adequate pre-employment screening (unless prohibited by law) before assigning any employee or contractor work access to Covered Materials. Work rules must be documented and enforced to facilitate the security of Covered Materials and to prevent unauthorized use or resale of Covered Materials. Employees must be trained on the requirements for all transactions completed on behalf of HPE and the training must be documented. If hiring foreign migrant works, Vendors must follow the [Hewlett Packard Enterprise Supply Chain Foreign Migrant Worker Standard](#).
- 6.3 **Processing:** Vendors providing recycling services for Covered Materials must ensure that those operations occur in a timely fashion and under appropriate security conditions to prevent unnecessary stockpiling, and that Covered Materials are recycled or disposed as specified and are not diverted. HPE reserves the right to audit or witness Vendor operations at any time.
- 6.4 **Storage:** Vendor storage and processing areas must be secured to prevent theft or unauthorized access or removal or value degradation. All Covered Materials must be stored and processed in covered or contained areas to prevent releases of hazardous substances to the environment. Specifically, Covered Materials must be protected from weather (such as wind, rain, or snow) during storage, and must not be stored (as a method to hold items for potential future processing) for more than 90 days unless a longer period of time is authorized under applicable law and approved by the HPE Vendor Manager.
- 6.5 **Accounting:** Vendors must provide an accounting to HPE of all Covered Materials they have processed. Accountings may include, but are not limited to, material balance reports on materials received and material processed or disposed; outlines of the downstream flow of materials through the point of final processing and disposition; and information on the amount of materials received, processing methods, commodity generated, where sent, and transaction receipts.
- 6.6 **Infrastructure and Business Interruption:** Vendors' operations must be scalable and able to support large volume accounts without delays or adverse impacts to compliance with these standards. Vendors must have adequate equipment and support infrastructure (such as staff, storage space, equipment, process capabilities) to meet current volume requirements and have the ability to scale up operations when necessary.
- 6.7 **Financial Stability:** Vendors must be in conformance with all regional and country requirements for financial solvency and must not be undergoing bankruptcy proceedings.

7. Transboundary Shipment

- 7.1 Covered Materials exported across country borders must be disclosed to the HPE Vendor Manager. This may be addressed pursuant to Section 9.1, by the Supplier actively providing the HPE Vendor Manager with a written, current, complete downstream Subvendor disclosure including the Subvendor legal names, locations, and Covered Materials being processed.
- 7.2 Vendors must be able to report all applicable export information in detail including but not limited to: quantities, make, model, serial number, type of product, destination, and importer of record.
- 7.3 Any required permits or government consents for transboundary shipments must be secured before shipment.
- 7.4 Vendors who are authorized by HPE to conduct resale of Electronic Hardware and who perform any transaction involving the sale of material must maintain a documented Restricted Party List (RPL) process as described in the [HPE Standard-00007-03 Vendor Requirements for Hardware Reuse](#) and must demonstrate that a RPL check was performed prior to sale. In addition to HPE requirements for resale of Electronic Hardware, Vendors may be obligated by law to maintain a process to ensure that no transfer of material is conducted with any banned or restricted party—Vendor is responsible to identify and comply with related legal requirements.
- 7.5 Supplier must not export, ship or otherwise transport any Covered Materials from developed countries (defined to include any country that is a Member of the Organization for Economic Cooperation and Development [OECD] or the European Union [EU]) to developing countries (defined as any country that is not a Member of the OECD or EU) except insofar as such exports are in compliance with applicable laws, the Basel Convention, and HPE's Policy on [Export of Electronic Waste to Developing Countries](#).

8. Insurance

- 8.1 Vendors must maintain general liability, comprehensive liability, and pollution liability insurance that is sufficient to comply with applicable regulatory requirements or a minimum of \$1,000,000 (U.S.) per occurrence/\$2,000,000 (U.S.) in aggregate. Exceptions may be granted by HPE where coverage is not available in a particular country or where processes and volumes do not justify the levels of coverage specified above. Vendors must comply with HPE's risk management requirements unless a documented exemption is provided by HPE.
- 8.2 Vendors must maintain financial insurance, or bonding instruments through an independent party or corporate parent to cover the maximum facility closure costs, where disposal costs may exceed \$10,000 (U.S.).
- Closure cost estimates must be reassessed and documented at least once every two years.
 - Closure plans documenting how materials will be managed and how the facility will be properly decommissioned at the time of closure must be maintained and updated at least every two years.



8.3 Vendors must maintain Single Limit Public Liability and Property Damage Insurance, Statutory Worker’s Compensation Insurance, and Employers Liability insurance, Automobile Liability, Technology Errors and Omissions insurance, Employee Dishonesty or crime coverage insurance, and excess liability insurance, in conformance with HPE’s risk management requirements. Insurance certificates providing proof of HPE thresholds must be checked and recorded annually.

Table 1. HPE Requirements

Workers Compensation	As Required by Law
Employers Liability Insurance	\$1,000,000 per accident
	\$1,000,000 per employee
General Liability	\$1,000,000 per occurrence
	\$2,000,000 General Aggregate
Automobile Liability	\$1,000,000 minimum
Professional Liability Insurance (TE&O)	\$1,000,000 minimum
Fidelity Bond/Crime Insurance	\$1,000,000 minimum
Property/Warehouse Liability	\$1,000,000 minimum

9. Subvendor Use and Audits

- 9.1 Vendor must disclose the identity of all Subvendors used to perform recycling services for Covered Materials, throughout their entire downstream supply chain through Final Disposition.
- 9.2 Vendors must verify and maintain documentation that any Subvendors they employ to provide recycling or disposal services for Covered Materials will and do comply with this Standard, including the HPE Supplier Code of Conduct, Global Human Rights Policy, Median Handling Standard, but Subvendors do not need sign and return the Supplier Social and Environmental Responsibility Agreement unless they are directly contracted by HPE. Vendors must agree that any such subcontract will impose on the Subvendor all requirements to which the Vendor is subject in its contract with HPE. Vendors will ensure that Subvendors comply with these requirements.
- 9.3 Except for those Subvendors that HPE advises Vendor in writing do not require audits, Vendor must conduct annual audits of each of its direct Subvendors to document conformance with this Standard at all sites and operations, regardless of their location, that are used to provide services with respect to “Designated Materials.” Vendor’s audits of its Tier One Subvendors may be conducted by Vendor or third-party auditors selected by Vendor.
- 9.4 Vendor must ensure that annual audits are performed on each Subvendor that is not its direct Subvendor that is providing services with respect to Designated Materials. The audits must document conformance with this Standard at all sites and operations, regardless of their location, that are used to provide such services and may be conducted by Vendor, by Subvendors with respect to their own downstream Subvendors, or by third-party auditors. Some portion of the audits must be conducted on-site.
- 9.5 In all agreements with Subvendors, Vendor must reserve the right but not the obligation for HPE or HPE’s designated third party to conduct on-site audits of Subvendors. Vendors shall ensure that this requirement cascades down to any and all subsequent tiers, thereby ensuring that all vendors in the supply chain are being audited annually and reserve the right for HPE or HPE’s designated third-party auditor to conduct on-site audits. Vendor shall provide evidence and results of audits to HPE upon request.
- 9.6 The on-site audit must assess all elements including, but not limited to, those elements covered in Section 10.3. The Vendor shall make available to HPE, upon request, documentation and results of all audits of Subvendors.
- 9.7 Vendor must alert HPE Vendor Manager of new Subvendors 30-days prior to the vendor change and, at the request of HPE, provide information required by 9.2 through 9.6.



10. Audits of Vendors and Documentation

- 10.1 HPE reserves the right to conduct audits and assessments of all Vendor sites and operations, regardless of their location, that are used for handling, storage, or processing of Covered Materials to document conformance to HPE standards. Such audits may be conducted by HPE or a third-party auditor selected by HPE. HPE reserves the right to conduct these audits on-site.
- 10.2 Corrective actions must be managed by the Vendor in close cooperation with the HPE Vendor Manager to ensure the implementation of expedient remedial corrective action per audit program specifications. Records related to actions to correct deficiencies and documented management activities must be retained.
- 10.3 Upon request, Vendors must make available to HPE, records and information related to their internal self-assessment process and supply copies of records and relevant information to HPE. Records and information include, but are not limited to, material tracking documents, material balances, unit counts, materials analysis, shipping records, disposal records, emissions monitoring, employee medical testing, inspection reports, regulatory notices, training records, and spill or release reports. Results from audits and assessments will measure conformance to this Standard and the terms of the contract. Vendors are required to show documentation on an ongoing basis and will be audited in areas including but not necessarily limited to:
- Financial stability
 - Insurance coverage
 - Business continuity
 - Physical and building security protections
 - Permits, licenses, etc.
 - Asset mgmt. tracking mechanisms
 - Data destruction practices, software utilized, and tracking
 - Environmental health and safety management system
 - Document control practices
 - Training records
 - Waste generation
 - Facility operations
 - Ethics and business practices
 - Management and account structure

11. Approved Dispositions

- 11.1 **Mercury:** Lamps, LCDs (liquid crystal displays), batteries, switches, and components containing mercury must be processed by technology designed to safely and effectively manage such mercury-containing items.
- 11.2 **Batteries:** Batteries must be processed by technology designed to safely and effectively manage the recycling and recovery of lead, acid, cadmium, nickel, copper, zinc, and other metals present in batteries.
- 11.3 **CRTs (cathode ray tubes):** CRTs must be processed using a technology designed to safely and effectively manage the recycled material, such as a leaded-glass recycler or a lead smelter.
- 11.4 **Printed circuit boards (PC boards):** Batteries and mercury must be removed prior to PC board recycling. PC boards must be processed by a smelter, other thermal process, or chemical process that utilizes effective and safe technology to recover precious metals (such as gold) and heavy metals (lead and other metals) for reuse and that controls emissions and disposition of lead, tin, mercury, cadmium, arsenic, chromium, beryllium, and halogenated materials.
- 11.5 **Plastics:** (Listed in order of priority) Plastics must be recycled for reuse in products, parts, components, materials, or as a substitute for other raw materials; or when recycling is not economically practical processed for energy recovery; or disposed of by incineration. In all cases, the facility must monitor and control emissions and residues. See section 11.8 on incineration for related information.



- 11.6 **Printing Supplies:** Printing supplies collected as part of hardware recycling (for example, a print cartridge present in a printer at the time of its collection) must be recycled or disposed of in an environmentally responsible manner compliant with applicable laws and regulations. Specified printer cartridges must be processed using a specified Inkjet cartridge and LaserJet toner cartridge return and recycling program in countries where specified programs are available.
- 11.7 **Metals:** All other metals not listed elsewhere in this section must be recycled by liberation of metal items (manually or mechanically), volume reduction for transport (shredding, baling, etc.), and refining by smelters or foundries (or similar) for the purpose of preparing the metal for reuse. To maximize recycling rates, sending whole products to a smelter is not authorized without approval from HPE and demonstration that the smelter is capable of capturing all of the following for reuse: copper, precious metals (such as gold and silver); steel and aluminum; and, for CRT devices, lead.
- 11.8 **Incineration:** Incineration of Designated Materials or any material classified as hazardous waste must meet destruction and removal efficiency (DRE) regulations. The incinerator must meet 99.99% destruction removal efficiency (DRE) for all regulated hazardous contaminants and 99.9999% DRE for dioxins.
- 11.9 **Packaging:** Any packaging materials received by a Vendor must be recycled in a process that destroys any HPE branding or markings prior to any further use or sent to a Subvendor that can process packaging so that any HPE branding or markings will be destroyed prior to any further use.
- 11.10 **Other Dispositions:** Any other disposition is not authorized unless approved in advance by HPE.

12. Definitions

- 12.1 **Covered Materials:** Electronic hardware products, parts, components or materials, whether HPE brand or non-HPE brand, that are handled, stored, transported, or processed by a Vendor or Subvendor pursuant to a recycling services contract or other arrangement with HPE.
- 12.2 **Designated Materials:** A subset of Covered Materials that, because of their properties, require special care. They are: (i) printed circuit boards, plastics containing hazardous flame retardants, cathode ray tubes (CRTs) and CRT glass, batteries, mercury- and polychlorinated biphenyls (PCBs)-containing lamps and switches, whether broken (included shredded) or intact, and any other items containing lead, mercury, cadmium, hexavalent chromium, beryllium, or PCBs; and (ii) products that include such materials. "Designated Materials" do not include material following the point of Final Disposition.
- 12.3 **Disposal:** Landfill, incineration without energy recovery, and any other disposition of electronics hardware products, parts, components, or materials that is not for resale, reuse, recycling, or energy recovery.
- 12.4 **Disposition:** Management of unwanted electronic hardware products, parts, components, or materials for resale, reuse, recycling, or disposal.
- 12.5 **EHS:** Environmental, Health and Safety.
- 12.6 **Electronic Hardware:** All electrically powered computing, printing, video display, audio, peripheral input/output (e.g., keyboard, mouse, remote control) or other equipment operated by electrical current (e.g., batteries, power supply, power cord, etc.), whether HPE or other brand. This includes, but is not limited to, products for sale or lease, sample and prototype products, factory scrap managed by HPE, obsolete inventory, customer or reseller returns, trade-in, components, subassemblies, and whole units.
- 12.7 **Energy Recovery:** Processing of materials to generate and collect energy, such as through incineration of material to create steam and drive electrical turbines.
- 12.8 **Final Disposition:** The point at which the output fractions from recycling or residuals (a) have been subjected to final disposal (including through land disposal) or energy recovery; or (b) are converted into a material that needs no further processing in order to be directly used in other manufacturing processes.
- 12.9 **Foreign Migrant Worker:** An individual that migrates from his or her home country to another country for specific purposes of employment.¹

¹ Excludes foreign workers with permanent residency and/or professional employees on short or long-term international assignments. Professional employees are defined as those engaged in work that is predominantly intellectual and varied in character as opposed to more routine mental, manual, mechanical, or physical work; such work involves the consistent exercise of discretion and judgment in its performance and is of such a character that the output produced or the result accomplished cannot be standardized in relation to a given period of time.



- 12.10 **Recycling:** Recycling means processing of electronic hardware products to recover usable or marketable raw materials (ingredients in manufacturing) or other products such that the original products lose their identity. Recycling does not include processing to return products to use in their original form (for example, repair, remanufacturing, or refurbishment for the purpose of reusing computers).
- 12.11 **Resale:** Sale of a used electronic hardware product for its original intended purpose with or without prior repair or refurbishment.
- 12.12 **Reuse:** Use of an electronic hardware product, part, or component for its original intended purpose with or without prior repair or refurbishment.
- 12.13 **Subvendor:** Any third party who provides services to or on behalf of HPE's Vendors with respect to recycling, reuse, or disposal of electronic hardware products, parts, components, or materials.
- 12.14 **Vendor:** Any third party who either manages first tier Vendors (sometimes known as "Tier 0" Vendors) or provides first tier services to or on behalf of HPE with respect to recycling, reuse, or disposal of electronic hardware products, parts, components, or materials. The term "**Supplier**" has the same meaning, such as used in the title of referenced documents including but not limited to the "Supplier Code of Conduct."
- 12.15 **Vendor Manager:** The designated HPE employee or representative responsible for managing HPE's relationship with a Vendor, Vendor's understanding and compliance to HPE standards and policies, and Vendor responsiveness to corrective action.

13. References

[HPE Media Handling Standard](#) (pdf file)

[HPE Standards of Business Conduct](#)

[HPE Supplier Code of Conduct](#) (pdf file)

[Supplier Social and Environmental Responsibility Agreement](#) (pdf file)

[HPE Standard-00007-03 Vendor Requirements for Hardware Reuse](#) (pdf file)

[Export of Electronic Waste to Developing Countries Policy](#) (pdf file)


[The e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment](#)

[R2 Practices for Use in Accredited Certification Programs for Electronic Recyclers](#)



14. Revision History

Revision, Date, Change Number	Brief Description of change
A, 01-Aug-2015	Initial release for Hewlett Packard Enterprise
B, 25-Jul-2018	Links updated and other minor editorial changes. Removal of "reuse" allowance
C, 15-May-2019	Clarifies scope of applicability
D, 26-Aug-2019	Require EMS certification and clarify data destruction



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