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*The Center for the New American Dream worked with a group of public and private procurement agents and other stakeholders to develop the following Principles for Purchasing Environmentally Preferable Computers, Monitors and Peripherals.*

## **Principles for Purchasing Environmentally Preferable Computers, Monitors, and Peripherals**

As institutional purchasers, many in procurement are dedicated to reducing the negative environmental and health consequences of our purchasing decisions. Computers are a particular concern due to their high prevalence in the waste stream (over 500 million computers will become obsolete over the next few years), hazardous chemical constituents, and significant energy use. We are committed to purchasing computers, monitors, and peripherals (hereinafter referred to as “computers”) with a reduced effect on human health and the environment and minimal disposal liabilities and costs, which also meet price and performance requirements. We urge industry to support our request for environmentally preferable computers that meet the following principles:

### **I. Design for the Environment and Human Health**

- A. Eliminate or reduce hazardous, carcinogenic, and mutagenic substances in computers including, but not limited to: cadmium, chlorinated plastics, halogenated flame retardants, hexavalent chromium, lead, and mercury (such as those included in RoHS<sup>1</sup>).
- B. Reduce material use and utilize the greatest amount feasible of reused, remanufactured, and/or recycled materials/parts in computers.
- C. Facilitate the recycling of computer components including, but not limited to: avoiding glues and welded connections, clearly labeling plastics, using universal fasteners (screws, snaps, etc.), using single resin plastics, and ensuring toxic components are easily separable.
- D. Incorporate upgradeability features into computers including, but not limited to: modular design, expandable memory, owner transferability, and other features that extend the product life and simplify continued use beyond the original owner.
- E. Use packaging and shipping material that contains reused and/or recycled material; is reusable and/or recyclable in the geographic region where the product is sold; and is collected by the vendor for reuse and/or recycling. Efforts should also be made to minimize the use of packaging and shipping material.

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<sup>1</sup><sup>1</sup> The Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) is a European directive that states that as of July 1, 2006, no new electrical and electronic equipment in the UK and EU countries can contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, or polybrominated diphenyl ethers. The directive can be viewed at <[http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_037/l\\_03720030213en00190023.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_037/l_03720030213en00190023.pdf)>

## **2. Promote Energy Efficiency and Improve User Health**

- A. Meet the most up-to-date Energy Star specifications for computers, ship computers with all specified power management features enabled, and include all necessary information and technical support to ensure that equipment users can easily and simply install and maintain power management features on their equipment.
- B. Minimize health risk to users including, but not limited to: ergonomic product design and reducing emissions during use (electrostatic fields, electric fields, magnetic fields, noise, etc.).

## **3. Ensure Safe and Environmentally-Sound End-of-Life Management**

- A. Provide take-back and end-of-life management services that ensure computers are reused (preferable) and/or recycled to the greatest extent feasible in a way that minimizes harm to the environment and human health. Toxic elements should not be sent to municipal solid waste (non-hazardous waste) landfills or incinerators.
- B. Do not send hazardous waste to developing countries for disposal or recycling in accordance with the Basel Convention. This does not include working equipment, parts, or materials intended for reuse or resale. Equipment, parts, and materials may be sent to developing countries for repair only if assurances can be made that hazardous components will not be disposed of in developing countries as a result.<sup>2</sup>
- C. Disclose how taken-back computers are handled, reused, repaired, recycled, and/or disposed.
- D. Meet high standards of worker protection in both the United States and overseas. This includes employment practices that protect workers from hazardous exposures and that enable employees to take action to protect their own health.

## **4. Manufacture Responsibly**

- A. Comply with all applicable environmental regulations (e.g. the Montreal Protocol on Substances that Deplete the Ozone Layer), practice pollution prevention techniques that reduce waste and conserve energy and water, and strive for continuous environmental improvement (e.g. ISO 14001 certification).
- B. Provide technical support/training to users including, but not limited to, information on energy management features.
- C. Encourage all companies involved in production, distribution, and management of computers (component manufacturers, recyclers, etc.) to observe environmental management practices such as having a green supply chain program, environmental management system, etc.
- D. Obtain credible eco-labels and third party certifications for products such as, but not limited to: TCO, Blue Angel, etc.
- E. Disclose the use of toxic materials in computers such as those on the OSPAR List of Chemicals for Priority Action<sup>3</sup> and Proposition 65 List.<sup>4</sup>

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<sup>2</sup> The Basel Convention and the Basel Ban Amendment provide a framework for the transboundary management and disposal of hazardous waste. More specifically, the Basel Ban Amendment prohibits the export of hazardous waste to countries that do not belong to the European Union, the Organization of Economic Cooperation and Development (OECD), or Liechtenstein. The convention can be viewed at <<http://www.basel.int/text/con-e.pdf>> and the amendment can be viewed at <<http://www.basel.int/pub/baselban.html>>

<sup>3</sup> OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic) List of Chemicals for Priority Action includes 1) Polychlorinated dibenzodioxins (PCDDs); 2) polychlorinated dibenzofurans (PCDFs); 3) short chained chlorinated paraffins (SCCP); 4) mercury and organic mercury compounds; 5) cadmium; 6) lead; 7) organic tin compounds; 8) brominated

These principles have been developed in consultation with purchasers and other experts to assist institutional computer procurement. This effort was coordinated by the Center for a New American Dream with participation by the following:

City of Atlanta  
City and County of Denver  
City of Portland Bureau of Purchases  
City of Seattle  
Center for Environmental Health  
Clean Production Action  
Clever Name Here, Inc.  
Consultant for Alameda County Waste Management Authority  
Environment Canada  
Full Circle Environmental, Inc.  
Gracestone, Inc.  
GrassRoots Recycling Network  
Iowa Department of Natural Resources  
Massachusetts Operational Services Division  
National Wildlife Federation Campus Ecology Program  
Nebraska State Recycling Association  
New York City Alliance Against Sexual Assault  
Northeast Recycling Council  
Oregon Department of Administrative Services, State Procurement Office  
Pacific NW Pollution Prevention Resource Center (PPRC)  
Sandia National Lab Pollution Prevention  
Silicon Valley Toxics Coalition  
Snohomish County  
TCO Development  
Terra Choice Environmental Services  
University of Tennessee Center for Clean Products and Clean Technologies  
U.S. DOE Pacific Northwest National Laboratory  
U.S. EPA Region 10  
Virtual Scavengers Project, Inc.  
Walla Walla County Resource Conservation Committee  
Women's Health & Environmental Network (WHEN)

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flame retardants; and 9) dibutylphthalate and diethylhexylphthalate. The list can be viewed at  
<[http://www.ospar.org/eng/doc/ANNEX05\\_updated%20priority%20list.doc](http://www.ospar.org/eng/doc/ANNEX05_updated%20priority%20list.doc)>

<sup>4</sup> Proposition 65 (California's Safe Drinking Water and Toxic Enforcement Act of 1986) requires the Governor to publish a list of chemicals, at least once a year, known to the state to cause cancer or reproductive toxicity. The list can be viewed at  
<[http://www.oehha.ca.gov/prop65/prop65\\_list/Newlist.html](http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html)>