

## **Environmentally Preferable Procurement Guidelines for Information Technology (IT) Equipment in Health Care**

### **Part I: The Issue**

*(Prepared by Health Care Without Harm and the Computer TakeBack Campaign)*

Healthcare providers have a significant opportunity to influence the market towards environmentally sound products by negotiating contracts with their vendors that ask for these products and practices. By implementing these guidelines, health care facilities can ensure that electronic manufacturers begin to redesign products with minimal use of harmful materials, and that they take back their products at the end of useful life to safely reuse and recycle.

#### **The Environmental and Health Issues**

Over the past few decades, high tech manufacturers have produced millions of electronic products that have provided businesses and individuals with greater efficiency, convenience and productivity. The health care industry increasingly purchases and uses IT equipment in all aspects of its operation. Unfortunately, the manufacture, use and disposal of IT products have a broad range of adverse environmental and health impacts.

Due to the higher sales and shorter life spans of IT equipment, electronic waste has become one of the world's fastest growing waste streams. In the U.S., it is predicted that between 315 million and 680 million computers will become obsolete within the next few years<sup>1</sup>. Moreover, the average electronic product contains many hazardous materials, such as:

- chlorinated plastics in cable wiring
- brominated flame retardants in circuit boards
- heavy metals like lead and cadmium in Cathode Ray Tube (CRT) monitors
- mercury in Liquid Crystal Display (LCD) or flat panel monitors.

**IT equipment contains chemicals that are known or probable teratogens, persistent bioaccumulative substances, carcinogens, reproductive toxins, endocrine disruptors, and mutagens.** Thus, extending the life of IT equipment through upgrades and reuse minimizes the pollution and resource consumption associated with making new equipment. Furthermore, by encouraging the transition to safer chemicals, the health care industry can play an important role in helping to promote more sustainable IT equipment.

Separate box:

teratogenic = linked to birth defects

persistent = not easily excreted from the body

bioaccumulative = magnifies up the food chain

carcinogenic = cancer causing

reproductive toxin = linked to birth defects

endocrine disruptor = disrupts the hormonal system

mutagenic = causes mutations in cells

It is estimated that 70% of the heavy metals found in landfills (including mercury and cadmium) come from discarded electronic products<sup>2</sup>. When these products are improperly disposed of in landfills and incinerators, they can release heavy metals and other hazardous substances to contaminate groundwater and pollute the air. However, original equipment manufacturers currently bear little or none of the financial burden or responsibility for safely managing discarded electronic equipment at the end of life. **Instead taxpayers, local governments and end users such as hospitals end up paying the real costs that accrue from the degraded public health and environment. Establishing take-back requirements for manufacturers can help alleviate these costs and encourage design of less toxic alternative products.**

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<sup>1</sup> National Safety Council, *Electronic Product Recovery and Recycling Baseline Report*, Washington DC.

<sup>2</sup> "Computers, E-Waste, and Product Stewardship: Is California Ready for the Challenge," May 11, 2001, Report for the US Environmental Protection Agency, Region IX, pg. 13.

Another critical issue is the significant amount of energy consumed by electronic equipment. Computers and office equipment use 74 billion kWh of electricity per year. This is equivalent to the total electricity used by 7 million households. Most of the energy used to power electronic products comes from fossil fuel-based energy sources, i.e. coal, gas and oil—all of which contribute to global warming, ozone depletion, and air pollution – and subsequent degradation of human health and the environment. Encouraging the development of IT equipment that conserves energy can slow this degradation.

**The Price and Cost issues:**

Many hospitals are now faced with the problem of what to do with their electronic waste. This poses a significant expense and potential liability that hospitals can minimize by applying a *Total Cost of Ownership* approach to their procurement decisions. *Total Cost of Ownership* incorporates the end-of-life disposal costs into the analysis that guides the purchasing decision-making process. This approach encourages purchasing and IT managers to include an electronic product's end-of-life disposal costs in the overall cost for new equipment and to then compare these total costs between the various vendors. Since hospitals purchase new IT equipment in large quantities, purchasing managers are in a good position to minimize overall costs by including these end-of-life costs in the overall bid.

Separate boxes:

To better understand end-of-life management issues for electronic assets in healthcare facilities, including the Health Insurance Portability and Accountability Act (HIPAA), please refer to Hospitals for a Healthy Environment's document *Healthier Choices for Electronic Equipment: From Procurement to End-of-Life* document found at <http://www.hcwh.org/goingGreen>

Disk Sanitization web page from HIPAA advisory from Phoenix Health Systems. Includes the Department of Defense guidelines and white papers on electronic data destruction methods. <http://www.hipaadvisory.com/tech/disksan.htm>

The following organizations have good resources:

Silicon Valley Toxics Coalition: [www.svtc.org](http://www.svtc.org)

Clean Production Action: [www.cleanproduction.org](http://www.cleanproduction.org)

Computer Take Back Campaign: [www.ctbc.com](http://www.ctbc.com)

INFORM: [www.informinc.org](http://www.informinc.org)

Health Care Without Harm: [www.hcwh.org](http://www.hcwh.org)

Hospitals for a Healthy Environment: [www.h2e-online.org](http://www.h2e-online.org)

Center for a New American Dream: [www.newdream.org](http://www.newdream.org)