
PC Recycling in Japan

Japan's Law for Promotion of Effective Utilization of Resources (often referred to as the Recycling Promotion Law) was enacted in 1991 to promote increased recycling of a variety of products and materials. One of the law's major goals was the promotion of product designs that facilitate waste reduction, recycling, and reuse. In 2001, the law was revised to address personal computers.

It is estimated that 51 percent of households in Japan own personal computers, for a total of 24 million units. The government predicts that the number of discarded computers will grow significantly over the next few years. Until the revised Recycling Promotion Law was implemented, management of discarded PCs was the responsibility of municipalities.

This revised law embraces the principle of extended producer responsibility (EPR) by requiring manufacturers to establish collection and recycling systems for used computers.

As of April 2001, the law required recycling of PCs discarded by businesses. Since October 1, 2003, it has required recycling of PCs discarded by households.

The revised law also requires manufacturers of small batteries and of electronic products that contain them to establish a recovery system for rechargeable batteries, including nickel-cadmium, nickel-metal hydride, lithium-ion, and small sealed lead-acid batteries.

Products Covered

The revised Recycling Promotion Law covers PCs and small peripherals such as the mouse and keyboard. These peripherals are only accepted along with the computer itself. At this time, the law is silent on

larger peripherals such as printers and scanners.

Unlike the European Union's Directive on Waste Electrical and Electronic Equipment (WEEE Directive), enacted in 2003, the law establishing a recycling program for personal computers in Japan does not give manufacturers responsibility for financing the collection and recycling of orphan products, that is, those produced by manufacturers that are no longer in business.

Industry Implementation

The Japanese Electronics and Information Technology Association (JEITA), an industry trade association, is spearheading industry efforts to comply with the legislation. JEITA operates the recycling program for PCs on behalf of manufacturers representing 98 percent of the personal computer market.

Financing

The revised Recycling Promotion Law creates two different financing structures for used computers. For those purchased prior to October 1, 2003, recycling is financed by end-of-life fees ranging from \$27 to \$37. These fees apply to all personal computers, including orphan products. For personal computers purchased after October 1, 2003, the costs of recycling are included in the price of the product.

Collection

The PC collection system is largely dependent on Japan Post, the federal postal service, acting on behalf of JEITA. Collection of discarded computers takes place at 20,000 post offices nationwide. Japan Post also provides a service to collect equipment from private residences.

For computers purchased before October 1, 2003, the end-of-life fees are the same, regardless of whether units are brought to a post office or picked up at home. Computers sold after October 1, 2003, bear the PC Recycling Mark and are collected free of charge by Japan Post. In Tokyo, municipal authorities also offer collection services, but will assess a surcharge in addition to the recycling fee for products purchased before October 1, 2003.

The postal service is responsible for sorting computers by brand and ensuring that they are transported to the appropriate recycling facility. Many of these facilities are operated by PC manufacturers.

Highlights and Analysis

Financing. The revised recycling law establishes Japan's first EPR program for an electronic product that uses a front-end financing mechanism (whereby the costs of recycling are included in the product price). While it is too early to assess the law's effectiveness, it

will be interesting to see whether it has an influence on Japanese programs that rely exclusively on end-of-life fees, such as the Home Appliance Recycling Law.

Collection. The arrangement whereby Japan Post provides collection depots is a unique approach to creating a widespread and easily recognizable collection infrastructure.

Design incentives. Unlike the material restrictions embraced by the European Union's Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive), the revised law does not prohibit the use of any substances or require manufacturers to implement specific design-for-environment practices. However, it is important to note that Japanese manufacturers of consumer electronics and PCs have been world leaders in design for environment, particularly in eliminating hazardous substances such as lead and brominated flame retardants.