

# Projector Recycling

## An Environmental Responsibility

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### I. ABSTRACT

With the advent of new and emerging electronic waste (e-waste) mandates, the time has come for hardware manufacturers and commercial end users of electronic equipment – like data and video projectors – to get serious about keeping the environment safe and clean.

FORTUNATELY, many projector manufacturers are already going down this path, diligently working to develop next-generation products made from safer, more environmentally friendly materials that comply with these increasingly stringent requirements. As for the multitude of products reaching end-of-life, projector suppliers have begun to offer various recycling and trade-in programs designed to help ensure outdated hardware is properly and cost-effectively removed, replaced and reused.



This paper explores some of the e-waste challenges manufacturers and businesses face, overviews the various projector recycling and trade-in programs available today, and lists the advantages of selecting a projector line that offers a built-in program designed to help save the environment, save costs and keep all parties in compliance.

### II. CHALLENGES

According to Pacific Media Associates, a whopping 5.4 million projectors were sold between 2003 and 2006. Since hardware products like projectors are being replaced an average of every two to four years, the numbers infer that many of those 5.4 million projectors are reaching end-of-life now...or will soon.

#### **But what happens to old projector hardware?**

Unfortunately, only a small percentage of outdated hardware is actually recycled. The rest goes into landfills. In fact, the US Environmental Protection Agency (EPA) estimates that more than four million tons of "e-waste" hits landfills each year. E-waste is loosely defined as "electronic products nearing 'end-of-life'". This is a serious point of concern because many components of such equipment are considered toxic, particularly those containing lead, mercury and cadmium. If not disposed of properly, these substances can cause harm to the environment and to people.

**MANUFACTURER CHALLENGE - RoHS Directive:** To reduce the amount of toxins in landfills and ensure proper disposal of electronics equipment, on July 1, 2006, the Restriction of Hazardous Substances (RoHS) directive was introduced in Europe. Today, manufacturers throughout Europe, Canada, Japan, China, Australia and certain US states, including California, Maine and New York are responsible for self-declaring that products comply with RoHS directives. Non-compliance may result in the banning of products, or a penalty such as a fine and/or imprisonment, not to mention the potential loss of sales and even damage to a brand or corporate image.

While the RoHS directive is forcing manufacturers to develop next-generation products using safer materials for the future, **it doesn't take care of the millions of tons of e-waste being placed in landfills now.**

**COMPANY CHALLENGE – Proper Disposal:** Although Europe and many countries in Asia have national laws that govern e-waste, currently the US does not. According to IDC's 2005 Commercial PC Survey, 51 percent of respondents in US organizations say they don't have a recycling program in place. But congress is addressing several new bills that may create tax incentives or credits to encourage companies to recycle through manufacturer-developed programs. Many states and municipalities have already authorized e-waste laws, some of which enforce steep fines and other penalties on companies that ignore recycling and disposal requirements.



4 MILLION TONS OF E-WASTE!

5.4 MILLION PROJECTORS SOLD

Because It's your Image

NEC

### III. SOLUTION: PROJECTOR RECYCLING AND TRADE-IN PROGRAMS

The RoHS directive has prompted many projector providers to offer formalized recycling and trade-in programs to their business customers. At the same time, e-waste laws are forcing companies to take the matter of proper disposal more seriously and responsibly.

The good news is that recycling of hardware components is on the rise. According to Market Velocity, provider of turnkey solutions for hardware trade-in, recycling and donation programs, approximately 150 million computers, monitors and projectors were recycled in 2005 alone. Recycled materials such as plastic, glass, steel, gold, lead, mercury and cadmium are used in the manufacture of new products.

On the back end, projector recycling programs typically involve contracting with a licensed recycling facility, which evaluates and separates the components then shreds the products. From there, the materials are again separated and then sent to other mills for further processing.

On the front end, these programs vary widely in requirements, costs and effort.

**Recycling Only.** Some require companies to self-package old projectors and pay for shipping. A few even charge a small fee to cover recycling costs. Others allow for the arrangement of free pick-up of their branded product anytime, and with no further purchases necessary. Companies simply enter information into the manufacturer's recycling website and print out a pre-paid shipping bill. The manufacturer does the rest. In most cases, once the hardware is recycled, the end user will receive an official certificate to prove that old equipment has been properly recycled.

**Recycling with Trade-In.** Some manufacturers take their recycling program a step further by offering a value for the return of pre-owned branded products, which can then be applied to the cost of new projectors. Most often, the outdated hardware is sent back by the company and, upon inspection of the old equipment and confirmation that a new branded projector is purchased, a check is issued. Recycling and shipping fees are usually included with these kinds of programs and an official certificate of disposal is also provided for each unit.

### IV. NEC'S RECYCLING AND TRADE-IN PROGRAMS COVER THE BASES

NEC is in the unique position of providing its business customers with the one-two combination of a recycling program AND a trade-in program. Together, the programs allow the whole process of return, recycle and repurchase to happen simultaneously and cost-effectively.

**NEC's Eco-Care Recycling Program** ensures the proper disposal of all manufacturers' projectors up to 40 pounds. For a small one-time fee plus shipping, businesses can either package up old materials or have NEC supply the necessary packing materials. Once the hardware is recycled, official disposal certificates are provided.

**NEC's PowerUp Trade-In Program** gives users of projectors nearing end-of-life the opportunity to step up to the latest technology. Users are offered a free quote value for the return of BOTH pre-owned branded products and/or competitive projectors, which can then be applied to the cost of new projection equipment (<http://necsam.tradeups.com>).

The biggest advantage of Eco-Care and PowerUp is that when used together they offer a "one stop shop" method of properly clearing out all obsolete projection equipment - regardless of the make and model-in exchange for the newest technology.



### V. BENEFITS OF PROJECTOR RECYCLING AND TRADE-IN PROGRAMS

The benefits of projector recycling and trade-in programs are evident and abundant. The bottom line? Everyone wins!

**For the Environment and Consumer:** Recycling conserves resources for future generations. At the same time, it reduces the need for new landfills and incinerators, which are costly to operate and ultimately increase consumer taxes. Recycling also prevents the emission of toxic gases and water pollutants that subsequently impact health and wellness.

**For the Business End User:** Compliance with municipal or state mandates eliminate potential fines and help keep companies in good standing, while demonstrating corporate responsibility. Trade-in programs also offer a cost-effective method for businesses to earn money by returning obsolete projection equipment and applying those dollars to a newer technology.

**For the Projector Manufacturer and Reseller:** Recycling programs help ensure manufacturers and resellers offer business customers a method in which to properly dispose of obsolete products. The trade-in aspect allows both groups to promote new technology and offer attractive discounts on next-generation products. Further, compliance with RoHS directives enable projector suppliers to continue making and selling environmentally-friendly products both nationally and globally, without concerns about penalties or loss of sales.

### VI. RESOURCES

While RoHS is still a very new directive, it will soon play a much larger role in the development and manufacture of new projector products. Today, the UL provides a certification program called the **Restrictive Substance Compliance Solutions program (UL-RSCS)** to help organizations confidently declare RoHS compliance. The program incorporates a balance of testing, education, and planning for continued conformity. Details about this program can be found at [www.ul.com/rscs](http://www.ul.com/rscs).

It's important to check the projector manufacturer's website for details about specific recycling and trade-in programs. Additionally, the EPA devotes a section of its site to "e-Cycling", which includes FAQs about e-waste, market trends, regulations/standards, along with a list of publications for valuable information on the subject go to <http://www.epa.gov/e-Cycling/index.htm>.

Finally, businesses should ask the following before selecting a projector line:

- Do the products comply with the company's state/municipality mandates (can be tricky if business has locations in different states)?
- Are the products RoHS-compliant?
- Does the line have any additional eco-friendly benefits (e.g., low brightness settings to extend lamp life)?
- Does the manufacturer offer a recycling program?
- Does the manufacturer offer a trade-in program?

### VI. CONCLUSION

In the coming years, the projector industry can expect e-waste mandates to play a larger role in the manufacture and selection of certain brands. As a result, environmentally friendly projector programs will become a critical part of the overall purchase decision making process.

For more information, call 1.800.NEC.INFO or visit [www.necvisualsystems.com](http://www.necvisualsystems.com)

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