

## AV Intelligence: Green AV Systems

Energy efficiency is half the battle. The other half is environmental responsibility. The second in a two-part series.

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By Brian E. Huff, CTS-D

In William McDonough's book *Cradle to Cradle*, the ideal device design uses zero virgin raw materials, emits no harmful toxins, and keeps 100 percent of the device's components out of landfills. This requires a complete life-cycle architecture that incorporates recycled materials in manufacturing, an extended serviceable life, and the ability to easily and cost-effectively disassemble and recycle its components. With few exceptions, this is something simply unattainable in the pro AV industry as we currently know it.

As a practical matter, until the cost to procure high-quality recycled raw materials is lower than virgin materials, and the cost to disassemble and recycle old AV products is low enough to make it profitable, the situation is unlikely to change. Notable exceptions—areas where AV equipment can confidently be considered green—are refurbished projector lamps and LEED-compliant AV furniture with the Forest Stewardship Council and GreenGuard labels.



In the meantime, AV designers can still take steps to reduce the environmental impact of new systems and upgrades. One obvious way is to reuse serviceable racks and hardware, as well as power amplifiers and any other equipment with long lifecycles. Including the estimated power usage and savings of specified gear when integrating AV systems should be an engineering standard along with providing other product data.

Because reliability is critical to successful pro AV systems design, equipment that is outdated, unnecessarily power-hungry, or unreliable should not be reused, but it need not end up in a landfill. AV pros can work with the owner/client to find a use for the device in an application elsewhere in their organization. The owner might also donate the AV equipment to a charity, raffle it off to employees, or sell it on Craigslist.

The important thing is, if none of those options is feasible, the owner has an ethical responsibility (and in some states a legal obligation) to see that old equipment is discarded in an environmentally responsible manner. California's Proposition 65 and Europe's Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) directives are just a few of the regulations that describe requirements for disposing of electronics waste. It's expected that e-waste regulations will become more numerous and that they'll be more aggressively enforced. To locate a local electronics donation or recycling program go to [www.proavmagazine.com/ecycling](http://www.proavmagazine.com/ecycling).

To help out even further, many manufacturers, such as Apple, Christie, Dell, Kramer, LG, NEC,

Panasonic, Samsung, Sony, and Toshiba already have take-back, trade-in, or e-waste recycling programs. Some even throw in free shipping for the used equipment.

You may not think of it this way, but e-cycling creates an opportunity for the enterprising integrator, namely to offer pro AV recycling and disposal services. While there is no federal e-waste recycling mandate, and state recycling programs are a patchwork of inconsistent requirements, 19 states plus New York City have enacted some type of legislation, and 15 additional states have legislation pending. With the e-waste industry expected to reach more than \$11 billion in 2009, this is an opportunity for integrators to become recycling experts and add e-waste sorting and transport to their roster of services. Providing a price for equipment dismantling, haul away, and appropriate recycling should be part of every price quotation on any renovation or upgrade project.

Keep in mind, the National Electric Code now requires 100-percent cable abatement, even if it's contained within conduit, because abandoned cable can present "fire-grade fire accelerants." Insulated copper cable is fetching approximately 70 cents per pound. Factor in fees for removal, transport, and responsible disposal of the millions of tons of abandoned cable in existing construction and you have a compelling case for a whole new business segment in our industry.

What other ways can we minimize the environmental impact of the AV systems we use? Local product sourcing is one. The U.S. Green Building Council awards LEED building points for products manufactured less than 500 miles from the construction site. If you're aware of equivalent products that are manufactured locally, why not use them? Lower shipping costs and support for the local economy are a few of the obvious benefits of this approach.

And clearly, efficient office and shop practices are a no-brainer. Reducing paper waste, turning off computers and monitors, properly recycling batteries, and audio/videoconferencing are a few ways forward-thinking companies are learning to become more environmentally responsible and cost effective.

Environmental responsibility is not a passing fad. Let's make sure the pro AV industry is not left out of this unprecedented surge of economic opportunity.

**Brian E. Huff, CTS-D, LEED AP is a senior consultant at Acentech. He's a member of InfoComm's Green AV Task Force and ANSI Standards Committee.**

To read part one, go to [www.proavmagazine.com/GreenAVDesign](http://www.proavmagazine.com/GreenAVDesign).

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