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Electronics vs. paper: Who's greenest of all?

Memphis-based International Paper argues paper is more eco-friendly

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Digital Age options have us making modern choices:

Do I pay bills with a check in the mail, or do I bank online? Do I buy the newspaper, or do I read its Web site? Do I curl up with a book, or with an e-reader?

Convenience has typically dictated the decision. But as green becomes the new black, the environment is coming into its own as a decision maker or decision breaker.

The modern (if unofficial) zeitgeist clearly puts pixels over paper.

Electronics are rechargeable and reusable, and no trees were harmed in their makings. Forests are chopped down to print bills, books and newspapers, which are typically used only once and tossed aside.

But the paper industry is firing back. It counters that electronics are environmentally costly to make (with lead, mercury, arsenic, gold and silver), suck coal-fire-powered electricity to run and create a multi-ton and toxic waste stream after short lives.

"Consumers are bombarded with messages from the bank to the phone company, urging them to stop communicating using paper, telling you it's not environmentally friendly," said Teri Shanahan, International Paper's vice president of commercial printing. "It sounds like what they're really trying to do is save money, and if they were honest, that's what they'd tell you."

IP's new Web site, down2earthonline.com, is the Memphis company's newest tool to fight public perception about the paper industry. It covers everything from the industry's carbon footprint, to recycled paper and forest management.

The site -- based on industry and government data, Shanahan said -- claims 20 percent less carbon dioxide is produced by a person reading a printed, daily newspaper versus reading the paper online for 30 minutes.

The site also claims that 60 percent of the energy used for the pulp and paper industry comes from carbon-neutral renewable resources. Mostly fossil fuels power the Internet, the site said, with 90 percent of the power used for the electronics industry purchased off the grid.

However, a 2009 study of Amazon's Kindle reader device showed that its carbon emissions are offset in the first year of its life. The book and newspaper industry, said the report from San Francisco-based Cleantech Group LLC, harvested 125 million trees in 2008 "not to mention wastewater that was produced or its massive carbon footprint."

Apple Inc. is clear and direct about its 10.2 million metric tons of greenhouse gas emissions. More than half of its emissions come from product use, and it notes that its 2009, 20-inch iMac uses just a hair more energy per idle hour than a 60-watt, incandescent light bulb.

How does your computer stack up? Find out with the Electronic Product Environmental Assessment Tool from the Portland, Ore.-based Green Electronic Council.

EPEAT.net evaluates desktops, laptops and monitors on 51 environmental criteria developed by industry leaders and the U.S. Environmental Protection Agency.

Web sites like these and new studies are beginning to crop as up Americans are becoming more and more conscious of the impact of their electronics.

"We're becoming a more digitized society, and as people replace their gadgets, they're less likely to upgrade if it's going to have a negative effect on the environment," said Emma Ritch, senior research analyst with Cleantech Group. "When a new gadget comes out, the response here in Silicon Valley is that half the people are excited and half the people worry about the e-waste it creates."

However, 38 percent of Apple's harmful emissions come from manufacturing, and it claims that using toxic substances like arsenic, mercury and polyvinyl chloride are "the greatest environmental challenge facing our industry today," according to its Web site.

These substances are bad for the environment and extremely bad for the impoverished men, women and children who pull parts from "recycled" electronics in some foreign countries, said John Shegerian, founder of Fresno, Calif.-based Electronic Recyclers International Inc.

"These kids and adults don't have the right tools, so they burn off the plastic (computer) carcass, mine copper and gold out of the computer using acid dips, and they scar their hands," Shegerian said.

While Americans have traditions in recycling aluminum, glass and paper, some 54 percent of e-waste ends up in landfills each year, Shegerian said, but he believes the statistic will eventually trend lower. And recycling may be the bridge to the pixels and paper debate.

"There is a value to Kindles and iPads, but there are still people who enjoy getting ink on their fingers," Shegerian said. "We can live in the best of both worlds if we can keep both above ground. We solve a lot of the energy and environment issue and we can still enjoy the products."