



Technology: Greening the Smokestack Manufacturers find new source of profits



Russ Hewitt's Graphic Technology of Maryland Inc., a Jessup-based printing company, has differentiated itself from competitors with its eco-friendly alternatives. Photo by Lisa Helfert.

Russ Hewitt saw the first signs of a market shift back in 2003.

Scattered clients of Graphic Technology of Maryland Inc., a Jessup-based printing company, began asking about printing magazines, reports and marketing materials in an environmentally sensitive manner. So Hewitt, Graphic Technology's president, began investigating options.

"It was a tremendous undertaking," he said.

However within five years, Graphic Technology secured three internationally recognized certifications as a participant in sustainable forestry. Meanwhile, Hewitt modified plant operations. He replaced petroleum-based inks with vegetable-based products, hazardous cleaners, coatings and varnishes with water-based alternatives, and press blankets with eco-friendly products manufactured in a low-solvent process.

The switch to green operations generated a few extra costs, but company officials determined they could produce environmentally friendly publications for almost the same price as traditional publications.

"There's no pot of gold for us at the end of this rainbow, but it has given us a way to differentiate ourselves in a highly competitive industry," Hewitt said. "We can educate our customers that green doesn't mean expensive. You can do the right thing and we're not asking anybody to spend more money."

More and more manufacturers are switching to green technologies. They do it on principle. They do it for marketing edge. But increasingly, manufacturers are switching to green technologies, products and processes for the large and sometimes surprising financial benefits.

"Profit is not a four-letter word," said Mary Ellen Mika, a supply chain manager with Michigan-based office furniture manufacturer Steelcase Inc. Mika was addressing the "Greening the Supply Chain" conference in Linthicum last June, sponsored by the Regional Manufacturing Institute of Maryland.

Steelcase has been greening its own operations and subsidizing green initiatives among its suppliers.

"We're finding benefits we never would have imagined through this program," Mika said.

For example, Dubois Chemical did a trial greening of a small chemical-treatment line in a Steelcase plant. The experiment, which included implementing a lower-temperature manufacturing process and adding technologies to recycle water and chemicals through the line, cut the production line's consumption of water by 80 percent, energy by 60 percent and chemicals by 25 percent. The revamped line's labor requirement fell 50 percent while the amount of waste it generated plummeted 90 percent. Ultimately, the green experiment is saving Steelcase \$1 million annually, Mika said.

H&L Advantage, a supplier of plastic parts to Steelcase, invested \$7,000 in a green audit of its operations and identified \$400,000 in possible savings, Mika said. The firm implemented changes, including systems to lower its use of energy, hydraulic oil, chiller chemicals and the chemicals that color plastic that reduced H&L's operating expenses by 20 percent and enabled it to double the size of its plant while quadrupling production.

"Because of this program, we are working with stronger suppliers who have higher profit margins and experience fewer financial problems," she said.

Officials at Maryland's Department of Environment have been approached by a growing stream of manufacturers looking to green their operations, said Laura Armstrong, the department's pollution prevention coordinator.

The department operates three programs to help manufacturers and other companies cut their use of energy, water and chemicals, switch to sustainable supplies, maximize the efficiency of existing equipment and lower their production of solid waste, hazardous waste and harmful emissions.



Graphic Technology has invested in green technologies including eco-friendly press blankets manufactured in a low-solvent process. Photo by Lisa Helfert.

“The focus of the program here is on efficiency,” Armstrong said. “We really only look at things that save companies money.”

One of the department’s clients, Procter & Gamble, began seeking out ways to green operations in Baltimore County.

Plant managers invested in a green technology — a machine to fill bottles of nail polish — that cut the line’s acetone use in half and lowered the plant’s chemical expenses, said Frank Lengel, site environment manager.

Green manufacturing initiatives can also be simple, but calculated, plans to maximize the efficiency of plant equipment, said Mike Rothmeier, founder of Simple Solutions, a Baltimore County engineering firm that specializes in helping manufacturers become more efficient.

“I have a client that put together a checklist for shutting down all the major capital equipment at the end of the day,” he said. “It seems like a boring activity and they’d be doing most of that anyway, but now they are saving \$3,500 a month on their electricity bill.”

“Look for the low-cost solutions first,” Rothmeier added. “There are dollars laying all over the place. You just have to lean over and pick them up.”

Drew Greenblatt, president of Marlin Steel Wire Products in Baltimore, did just that. Marlin began shipping its waste steel, which amounted to several tons a month, to a recycler. The plant also switched to using 100 percent recycled steel, recycled packaging materials and recycled wood for fixtures that Marlin builds.

The switch boosted Marlin’s revenues and gave the company a marketing edge in an industry that faces stiff competition from Chinese plants.

“It’s good for the environment, it’s good for the country, and it helps me keep an extra guy employed here at the factory,” Greenblatt said. “We are definitely migrating more into this [green] program.”

By [Linda Strowbridge](#) | Corridor Inc. Assistant Editor

Originally published February 2009

<http://www.corridorinc.com/content/view/670/123/>