

<b>BusinessWeek</b>		<b>Archives</b>				Click for Nov. 10, '97 Issue
<b>REGISTER</b>	<b>BW HOME</b>	<b>BW CONTENTS</b>	<b>BW PLUS!</b>	<b>BW DAILY</b>	<b>SEARCH</b>	<b>CONTACT US</b>

[Return to main story](#)

## Environment

# 'A SOCIETY THAT REUSES ALMOST EVERYTHING'

Corporate America's traditional response to pollution concerns and regulations has been to clean up the mess that spews from smokestacks and waste pipes. More than two-thirds of the billions of dollars industry spends on the environment goes for such costly "end-of-pipe" controls.

Now, some companies are adopting a more sophisticated approach. They are considering the environmental impact of products and services over their entire lifetimes. That might mean using one industry's dross as another's raw material--such as turning power-plant ash into gypsum board. Or it might mean redesigning products to make them easier to reuse, recycle, or incinerate. Or substituting cleaner technologies, such as telecommuting for car travel. "One can imagine a society that reuses almost everything," says Jesse H. Ausubel, director of the human environment program at Rockefeller University.

**ELUSIVE SAVINGS.** The approach is called "industrial ecology," and some companies are beginning to find that it makes sense. At an innovative site in Kalundborg, Denmark, four industrial facilities--an oil refinery, a coal power plant, a gypsum wallboard factory, and a pharmaceutical plant--pass energy, wastewater, and some products back and forth, says Massachusetts Institute of Technology researcher John R. Ehrenfeld. In the U.S., Ford Motor Co. began a program to recycle plastic bumpers into taillight housings and new bumpers--saving money in the process.

Perhaps the best example of industrial ecology in action is Xerox Corp. In the early 1990s, copiers coming off lease were piling up in its warehouses. Several European countries were floating proposals, some later enacted into law, to require companies to take back packaging and discarded products. And archrival Canon Inc. began recycling toner cartridges.

Xerox responded with an "asset recycle management" plan to cut factory waste and reuse or recycle more parts. Engineers now design copiers to last longer and use more parts in common. Designers have cut the number of chemicals they use from 500 to 50 to facilitate recycling. Print and toner cartridges come with prepaid return labels,

boosting reuse rates to as much as 60%. The effort saves Xerox more than \$200 million a year, estimates Patricia A. Calkins, manager of environmental products and technology.

Often, however, savings are more elusive. Germany's bmw is a leader in designing cars that can be easily disassembled and recycled. But so far, the costs of collecting and disposing of the nonmetal parts of discarded cars outweigh the benefits, executives say. In the U.S., ibm promotes eco-friendly products, such as its ramac disk drives, made with less energy and fewer materials. But the recycled plastics that are used to make them cost more than virgin materials. Turning eco-friendliness into a cost advantage "will be the next big step," concedes Diana J. Bendz, ibm's director of environmentally conscious products.

**COMPUTER DILEMMA.** Another challenge is figuring out the best eco-friendly strategy. Is it better to recycle obsolete computers or to dump them and save on energy and transportation costs? Researchers don't always have the answers. Indeed, academics still argue about whether paper or plastic grocery bags are "greener."

But few doubt that there is plenty of room for improvement. Right now, estimates Rockefeller's Ausubel, the U.S. and other developed nations use materials and energy with only 5% efficiency. With innovative industrial ecology measures, that percentage could be boosted dramatically.

*By John Carey in Washington*

[Return to main story](#)

<a href="#">REGISTER</a>	<a href="#">BW HOME</a>	<a href="#">BW CONTENTS</a>	<a href="#">BW PLUS!</a>	<a href="#">BW DAILY</a>	<a href="#">SEARCH</a>	<a href="#">CONTACT US</a>
--------------------------	-------------------------	-----------------------------	--------------------------	--------------------------	------------------------	----------------------------

**BusinessWeek**

Updated Oct. 30, 1997 by bwwebmaster

Copyright 1997, Bloomberg L.P.

[Terms of Use](#)