

2008



# Innovations Review

Making green the new business as usual

e

ENVIRONMENTAL DEFENSE FUND

finding the ways that work



# A new frontier has emerged at the intersection of business and the environment.

Environmental sustainability is no longer the purview of boutique eco-brands. And it is no longer just about compliance with regulations or securing positive press coverage. It's about driving cost savings through efficiencies, creating new markets and securing competitive advantage. Smart companies realize that what is good for the environment is also good for business.

But after taking care of the basics—like switching to energy-saving lighting, buying recycled office supplies and printing double-sided—what is the next step? With this new annual review, Environmental Defense Fund aims to showcase some of the most promising new trends and best practices. Our goal is to provide a variety of actionable ideas and some inspiration for more dramatic change.

The new processes, products and technologies highlighted in this report were selected based on four key criteria: good for business, good for the environment, ready to be implemented and innovative. We did not include ideas that are still in the R&D stage or those that have already been widely implemented or documented. In some cases, we selected innovations that have already been fully tested and put into commercial use; in other cases, we chose to highlight promising early-stage ideas.

The categories included in this first report are areas in which Environmental Defense Fund has significant expertise (such as packaging, energy and transportation) or where there are substantial opportunities for innovation (such as IT and insurance). We anticipate covering different categories in future editions.

Within each category, we attempted to provide a range of ideas: from incremental changes to more radical, business-model innovations; and from those that offer quick implementation and a short payback period to longer-term, more involved “game-changers.” Additional resources and links are available on our website.



Ideas for this report were collected through interviews with more than 40 experts, a review of leading business and trade publications and nominations from companies. Based on information collected from the companies involved and third party sources, each idea was assessed by technical and subject area experts and reviewed by an advisory panel. (Refer to the Methodology section, page 31, for complete details on our data collection, criteria and screening process.)

It is important to note what this report is not: It is not a comprehensive inventory of all worthy innovations.

There are simply too many good ideas for that to be possible. Nor is it a list of “top green companies.” Many of the companies named in this report are coping with huge environmental footprints. However, the innovations they developed represent a positive step in the right direction. It is also not a review of cutting-edge technologies. In many cases, the innovations are low-tech methods that require more openness to change than advanced technology.

We hope this report contributes to the current dynamic dialogue around business and the environment. Above all, we hope it starts a process of bringing best practices to light so that they can spread more rapidly. We welcome your input on how we can make this report more useful and, most importantly, we want to hear what you are doing. We look forward to highlighting even more innovative practices in next year’s report.

More online: [edf.org/InnovationsReview](http://edf.org/InnovationsReview)

**Additional Resources:** Access more information and tools related to applying these innovations to your company.

**Nominations:** If your company is doing something innovative at the intersection of business and the environment, we want to know about it. Please click on the nominations form. We will review all projects for consideration in next year’s report.

# 2008 Highlights

How can your company take environmental management to the next level? The following examples highlight

	Opportunities	Innovations	Business Benefits
REAL ESTATE	Your roof is under-utilized real estate, but solar panels present a high hurdle rate.	<b>Solar power purchase agreements:</b> Fixed-rate solar power is attainable without upfront capital expenditures or ongoing operating costs (p. 7).	Predictable energy costs.
	Artificial lighting, heating and cooling are used far more than necessary in most buildings.	<b>Passive systems:</b> Low energy lighting, cooling and heating systems, which use sunlight and naturally warm or cool air, are technically and financially feasible (p. 9).	Reduced energy costs. Increased productivity due to more comfortable environment for employees.
OPERATIONS & MANUFACTURING	Rising, unpredictable energy costs threaten profitability.	<b>Institutionalized energy efficiency:</b> Model program illustrates how a global corporation can build energy efficiency into its operations (p. 12).	Reduced energy costs.
	Mitigating environmental problems after the fact is costly and inefficient.	<b>Co-generation plus:</b> A mix of co-generation plus on-site renewable power production can produce reliable, lower-cost energy (p. 11).	Reliable, efficient power.
FLEETS	Rising gas prices make operating sales, service and delivery fleets increasingly expensive.	<b>Telematics:</b> A suite of technologies boost fleet efficiency (p. 14).	Reduced fuel costs, higher productivity and better customer service. A one-year payback period for some fleets.
	Unnecessary packaging generates unnecessary costs.	<b>Dematerialization:</b> Packaging, and the products themselves, can be redesigned to reduce weight and volume (p. 16).	Reduced costs for materials, inventory and shipping. Space on shelf for more products. Opportunity to enhance brand.
PACKAGING		<b>Maximized PCR:</b> Traditional barriers to post-consumer recycled (PCR) content have been broken (p. 17).	Opportunity for reduced costs and to enhance brand.
	Traditional insurance may not sufficiently reward your investment in green building features.	<b>Green building insurance:</b> New insurance products recognize the reduced risk and superior quality of certified green buildings (p. 19).	Potentially lower cost insurance. Assurance of restoring green properties to original condition after a loss.
FINANCE		<b>Large-scale telecommuting programs:</b> Boost telecommuting rates through technology, new processes and changes in corporate culture (p. 20).	Reduced real estate and operating costs. Increased employee productivity and retention.
	Long commutes and gridlock traffic are draining employees' time and morale.	<b>Company-run transit:</b> Getting employees out of traffic via private, wifi-equipped buses reduces stress and time wasted in traffic (p. 21).	Attractive employee benefit. Enhanced employee satisfaction.
HUMAN RESOURCES			

proven methods by which companies are generating business and environmental benefits.

Environmental Benefits	Applicability
Reduced carbon dioxide (CO <sub>2</sub> ) emissions. More renewable power added to grid.	Any company that owns its own building. However this tool relies on state and local incentives as a component of financing.
Reduced CO <sub>2</sub> emissions.	New or retrofitted office, warehouse, retail and manufacturing facilities.
Reduced CO <sub>2</sub> emissions.	Any company with multiple office or manufacturing sites.
Reduced CO <sub>2</sub> emissions. More renewable power added to grid.	Any manufacturing facility.
Reduced solid waste. Fewer toxins and virgin materials used and other benefits, depending on the product.	Any company producing a consumer or business to business product.
Reduced CO <sub>2</sub> emissions.	Available in various configurations by a number of vendors, telematics is applicable to sales, service and delivery fleets.
Fewer virgin resources consumed. Reduced CO <sub>2</sub> emissions and solid waste.	Any company producing a packaged consumer or business to business product.
More incentives for companies to implement green upgrades.	Any company that has invested in, or is considering, green building features.
Reduced energy use and CO <sub>2</sub> emissions.	Any company with an office-based workforce.
	Large companies in metropolitan areas without significant public transportation.

## More innovations

### INDUSTRY-SPECIFIC INNOVATIONS

New products, services and methods are transforming industries.

**Shipping:** New flight pattern reduces fuel consumption (p. 25)

**Retail:** In-store e-waste recycling (p. 18)

**Banking:** Low-carbon investment targets (p. 27); green mortgages (p. 27)

**Food & agriculture:** Generating energy from food waste (p. 26)

### GAME-CHANGERS

These radical innovations represent a complete departure from business as usual.

Net-zero energy office building (p. 8)

Closed-loop apparel production (p. 13)

Solar-powered web hosting (p. 18)

Bagless retailer (p. 26)

Use-based auto insurance (p. 28)