



## Businesses Can Save Money— and the Environment

**M**any proactive businesses have been surprised at how easy it is to make voluntary improvements in their energy use. By using less energy, businesses can help the environment while reducing their company's overhead. They can lower the environmental risks associated with global warming, and, at the same time, their stockholders will benefit from long-term reductions in operating costs.

Today, the United States is the world leader when it comes to pumping carbon dioxide—a major contributor to global warming—into the atmosphere. Each U.S. citizen contributes about 22 tons of carbon dioxide emissions per year, whereas the world average per capita is about 6 tons.

In 1996, the industrial sector accounted for 33 percent of U.S. emissions from the use of fossil fuels. The commercial sector accounted for 16 percent. Both sectors rely heavily on electricity for meeting energy needs. From 1990-1997, almost three-quarters of commercial emissions were attributable to electricity consumption for lighting, heating, cooling, and operating appliances.

Many U.S. businesses, such as manufacturers and more recently the insurance sector, now recognize that the potential costs and impacts of climate change may represent a serious challenge to their future economic well-being.

At the same time, although the impacts on industry may be severe, climate change solutions may offer economic opportunities to firms that position themselves to take advantage of new markets in energy-efficient products and renewable energy technologies. Through energy-efficient technologies and initiatives that reduce greenhouse gas emissions, thousands of U.S. companies already are saving money on their energy bills, increasing productivity, improving their facilities and operations, and manufacturing better products.

There are a number of climate-friendly and cost-saving measures businesses can do. Companies vary widely—from manufacturing and industrial firms to service, retail, and other commercial operations—but most of these suggestions address basic operating functions common to all types of businesses.

### Smart Lighting and Insulation

Take advantage of the sun to heat, light, and power your work space. If your company is building or retrofitting an office, help make sure that it meets or



exceeds the energy and lighting codes. Turn the lights off whenever they are not being used, or use sensor devices to turn lights on and off. Retrofit older lighting fixtures with fluorescent lighting and energy-saving electronic ballasts. Use task lighting (oriented to the task at hand) rather than general, overhead lighting.

Energy-efficient lighting, ventilation, heating, and cooling technologies have cut many companies' total energy bills by 30 percent or more. One New Jersey company, Warner-Lambert, replaced more than 100,000 fluorescent and incandescent lamps with more efficient bulbs, in addition to taking other energy efficiency measures, and reduced carbon dioxide emissions from electricity use by 11,000 tons per year. The upgrade alone saved \$1,400,000 per year in energy costs and reduced other air emissions, including more than 90 million grams (90 metric tons) of sulfur dioxide and 40 million grams (40 metric tons) of nitrogen oxides annually.

### **Energy-Efficient Equipment**

Purchase equipment with power management energy-saving features such as copiers, fax machines, scanners, consumer electronics, exit signs, and heating and cooling equipment. Computer monitors with the ENERGY STAR® label can be up to 60 to 80 percent more efficient in sleep mode than monitors without the label. If your computer monitor does not have the ENERGY STAR label, then turn it off when it's not in use. A typical office could save approximately 50 percent on the energy costs for office equipment by taking advantage of the power management features of ENERGY STAR-labeled equipment.

### **Conduct an Energy Assessment of Industrial Operations**

Schedule an energy and waste assessment or use the Climate Wise Tier 1 Action Checklist to

develop a comprehensive action plan for reducing emissions and improving productivity in boiler systems, air compressors, and other systems. Even energy-intensive companies are finding opportunities to improve their efficiency and save money. Companies like the DuPont Corporation and Bethlehem Steel are finding that third-party and employee audits can lead to energy efficiency opportunities worth \$30 million and more. Small and medium-sized companies also can save. Cosmair's Clark facility (a division of L'Oreal) has saved more than \$2 million from energy efficiency improvements that the company has had underway since 1990.

### **Take Advantage of Renewable Technologies**

Purchasing or investing in renewable energy technologies (wind, solar, biomass, small hydropower, and geothermal) can reduce greenhouse gas emissions and provide job opportunities for individuals entering this growing field. Some companies install solar photovoltaics on their facilities' roofs to meet their electricity needs. As these alternative energy sources become more popular, they can meet the environmental and economic concerns of any business entity. Businesses can save 40 to 80 percent on electric or fuel bills by replacing conventional water heaters with a solar water heating system.

Alternatively, companies can take advantage of "green power" offered by certain utilities. Green power is electricity produced by using renewable energy sources. Purchasing green power sometimes means paying a slightly higher price for energy but has the benefit of polluting less and being more environmentally friendly than power generated by fossil fuels.

### **Better Transportation**

Consider encouraging your employees to bike, carpool, or use

public transportation. Think about introducing telecommuting either part- or full-time. Evaluate your company's vehicle fleet for size and purpose and make changes accordingly, such as switching to a cleaner fuel. Each employee who leaves his or her car at home two days a week can reduce CO<sub>2</sub> emissions by 1,590 pounds annually. Alternatives also include parking-cash out incentive programs or subsidies for use of public transportation.

### **Protect Ecosystems**

If you have office grounds, landscape them with plants native to the area. Not only will they require less water and help protect valuable habitat, but also plants store ("sequester") carbon during photosynthesis. An average tree can sequester 50 pounds of carbon in a year.

### **Paper Products**

Use 100 percent recycled paper (avoid chlorine-bleached paper). Reuse paper within the office, including fax paper. Eliminate fax cover sheets whenever possible. Recycle—it takes about one-third less gross energy to make one sheet of recycled paper than it does to make one sheet of virgin paper. Let office supply companies know that you want your products in recycled or recyclable packaging. In 1997 BankAmerica, a WasteWise partner of the year, reduced its paper use by more than 773,000 pounds of paper and saved \$570,000 by using 15-pound rather than 20-pound paper ATM envelopes, putting the corporate telephone directory on-line, and revising and eliminating monthly and weekly reporting procedures.

### **Lead By Example**

A number of companies and corporations are highly regarded for their product quality, ethics, or standing in the community. Businesses also can be known for the steps they have taken to

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reduce their firm's greenhouse gas emissions through corporate incentives such as financial assistance for employees who use public transportation, carpooling, and telecommuting. Corporate policies on energy reductions that involve employees and the company's day-to-day operations will have a positive impact on the climate inside and outside the office—and on your company's bottom line.

### To Find Out More

See EPA's Green Lights program and DOE/EPA's ENERGY STAR programs at <http://www.energystar.gov>

Visit EPA's website on global climate change at <http://www.epa.gov/globalwarming>

Especially see EPA's Small Business website at <http://www.epa.gov/globalwarming/visitorcenter/smbusiness/index.html>

Visit EPA's Climate Wise website at <http://www.epa.gov/climatewise/>

Point your browser to EPA's WasteWise website at <http://www.epa.gov/wastewise>

Check out the Alliance to Save Energy's website at <http://www.ase.org>