

MANAGING

Cutting The Costs Of Energy Use

By James Worsham

When Armando Petruccelli, general manager of his family's beauty-products firm, decided that he needed to cut costs and boost profits, one area he pored over was the company's energy expenses.

That meant taking a long, hard look at the lighting and heating systems in Petruccelli International's warehouse in Flushing, N.Y., next to busy LaGuardia Airport. There, the firm stores chairs and equipment as well as supplies of shampoos and brushes.

To reduce energy use, Petruccelli installed more-efficient lighting in the warehouse, in his offices, and in exit signs as well as outside the building. Then he replaced an oil-burning, forced-air heating system in his warehouse with gas-fired, infrared heaters that hang from the ceiling and spread heat much as radiators do in homes. The annual savings in energy bills came to \$4,260, and the time it would take to recover the renovation costs through energy savings was estimated at 4.4 years.

"It's been a great thing," says Petruccelli. "We're hoping to do more."

The Petruccelli firm got some help in its renovations from a voluntary federal program called Energy Star Small Business, run by the U.S. Environmental Protection Agency. The program aids small companies that need technical help to make their facilities more energy-efficient.

The program was begun in 1996 in response to congressional concern that the agency wasn't doing enough for small businesses. One earlier program was designed to help large businesses as well as local and state governments, and another was directed at individual buildings.

Energy Star has about 525 participants, and the agency hopes to have 1,500 by year's end. The major focus is on reducing energy used in lighting and in heating and air-conditioning systems.

Jerry Lawson, the EPA's Energy Star program director, says that because about 23 million small businesses account for

slightly more than half the nation's economic output, energy savings by these companies would have a significant impact. "If all American small businesses cut their energy costs by 30 percent," says Lawson, "more than \$15 billion a year would go straight to their bottom line."

Improving The Light

The usual starting point for increasing energy efficiency and reducing costs is light-

A federal program gives small firms the technical know-how they need to make their facilities more energy-efficient.

not catching the attention of the customers, he says, and even the lighting in the office spaces left a lot to be desired.

So Cochran installed lighting that not only is more energy-efficient but also shows the furnishings in truer, brighter colors, he says. In addition, motion sensors installed in the restrooms turn on the lights only when someone enters.

Cochran says he thinks new lighting in the office area has helped boost sales.



PHOTO: LISA QUINONES—BLACK STAR

To trim energy expenses at Petruccelli International's warehouse in Flushing, N.Y., Armando Petruccelli, general manager of the beauty-supplies firm, improved lighting efficiency and installed gas-fired, infrared heaters that are suspended from the ceiling.

ing—in public areas as well as in offices, warehouses, and even restrooms. "Lighting usually provides the quickest payback," says Lawson.

That's just what happened at Casual Creations Inc., a home-furnishings firm in Mary Esther, Fla., on the Gulf Coast near Pensacola.

The lights at Casual Creations weren't showing off the merchandise very well, says Fred Cochran, the firm's president. Furniture looked plain and drab and was

A \$6,500 investment reduced energy bills by \$5,000 the first year, Cochran says, with the total payback time estimated at 1.4 years.

"Early into the process, we're very pleased," he says. "There's been significant savings from the get-go."

Lighting was also a problem for Larry Stanley, president and CEO of Empire Bolt & Screw, a parts-distribution company in Spokane, Wash.

Stanley had already begun efforts to

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solve it when he heard about the Energy Star program. Participation entitles the business to a copy of a guidebook, *Putting Energy Into Profits*, so Stanley compared his plans with the program's recommendations.

"It gave me the opportunity to go through the guide and do the double-check to see if there was something that I missed," he says.

He hadn't missed much. He decided to replace 8-foot fluorescent lights with 4-foot lights because they last longer, cost less to burn, and yet produce more light. Illumi-

replace the systems, Lawson explains.

Because his warehouse needed both lighting and heating changes, Petrucci decided on a major renovation. In addition to the lighting, he opted for radiant-heat infrared heaters. He got help for the project from George Kritzer, a certified energy manager and principal in Imagineers Unlimited, an energy consultancy in Hillsdale, N.J.

The system's high-temperature ceramic burners heat Petrucci's warehouse "the same way as the sun heats the earth," says Kritzer.



PHOTO: ©SCOTT FISHER

To show the true colors of the home furnishings displayed at Casual Creations in Mary Esther, Fla., Fred Cochran, president, installed energy-efficient lighting.

nation is crucial in his warehouse, where employees have to deal with many small hardware items, such as screws and bolts, and with small labels.

The payback time is an estimated 4.6 years.

For many companies, lighting is a good place to start, says Lawson, not only because it's the easiest and least costly fix but also because the savings achieved often can be used as a down payment on renovation or replacement of heating and air-conditioning systems. "You can leverage your lighting savings into the next investment," he says.

However, improving the energy efficiency of heating and air-conditioning systems can be more complicated. Although lighting can be improved just about any time, heating and cooling systems are usually not changed until it becomes time to make major renovations or

Examples Abound

Energy-use reductions achieved by other small firms through the Energy Star program suggest ways that companies everywhere can trim their energy costs.

For example, the owner of seven Subway sandwich-store franchises in Oklahoma cut his energy costs by 40 percent by installing more-energy-efficient lighting, heating and air conditioning, ceiling fans, and ice makers in his stores.

The investment in equipment was recovered through energy-cost savings in just three years.

A country inn in Massachusetts made the lighting in its guest rooms more energy-efficient and installed meters to monitor electricity use of lights and appliances. A rebate for some of the costs from the local utility helped to cut the payback time to only a month.

The owners of an antiques center in

New York state persuaded their landlord to put on a new roof, and they paid for insulation, which has reduced their annual gas bill by \$400.

The cost of the insulation will be recovered, they estimate, in less than three years.

The program's goals are broader than just boosting the bottom line for small businesses. It aims to reduce not only energy use but also energy-plant emissions, which subside as electricity demand decreases.

Empire Bolt's Stanley, a self-described conservationist, says, "Anyone with an interest or a concern in the environment should have an interest in this."

A firm that joins the Energy Star Small Business program receives the free guide, technical information, and help with finding financing for energy upgrades.

In return, EPA program officials request that the firm share its experiences with the agency so they can be passed along to potential participants, Lawson says.

To find out about joining, call the toll-free hot line at 1-888-STAR-YES (1-888-782-7937) or visit the program's World Wide Web site at www.epa.gov/smallbiz. **NB**

Energy Savers

The U.S. Environmental Protection Agency's Energy Star Small Business program recommends a five-stage, "stair-step" approach to cutting energy use:

1. Lighting: Upgrade with more-energy-efficient, longer-lasting, and less-expensive lights and lighting hardware.

2. Tuneup: Give your building a general energy "tuneup." Look for things such as leaky duct work and improperly functioning machinery.

3. Load Reduction: Install motion sensors for lights in less-frequented areas such as restrooms. Seal cracks to prevent the loss of heated or cooled air. When adding equipment, look for an Energy Star seal, which means that the product is certified as energy-efficient.

4. Heating/Cooling Distribution: Make sure that your fans, pumps, and duct work are functioning properly. Check air vents to make sure they haven't been closed inadvertently, as can happen, for example, when a vacuum cleaner passes over them.

5. Heating/Cooling Plant: After going through the first four steps, you might have reduced your overall heating and cooling needs. Look for smaller and more-energy-efficient units.