

3M**Stemwinder**

A newspaper for the 3M Twin Cities community

IN 60 SECONDS

Making energy efficiency a competitive advantage

There's no special secret ... no magic wand.

3M's ability to reduce energy consumption year after year is a tribute to the knowledge, hard work and perseverance of employees around the world.

3M Energy Policy

3M ensures the effective use of energy to produce and deliver products and services to our customers. The objectives of this policy are to improve energy consumption efficiency, reduce cost, optimize capital investment, reduce environmental emissions and conserve natural resources.

Steve Schultz is hard-pressed to single out one individual who has done an exceptionally good job of conserving energy at 3M. That's because energy conservation is being practiced so successfully at 3M sites around the world that virtually every site team has made incredible gains in recent years.

Since 2000, 3M has challenged 150 company sites to reduce their energy consumption 4 percent a year. They've exceeded that goal each year, reducing the impact of increased energy prices and avoiding more than \$190 million in costs to 3M. How can that happen in this time of rising costs and energy shortages, which affect 3M operations all over the world?

"We aren't shooting from the hip," said Schultz, manager, Energy Management Program, Plant Engineering. "We have a consistent approach — one that's fairly unique in business today — and we're giving it a lot of attention."

A three-part program

The 3M approach starts with awareness. Through meetings, newsletters and posters, employees learn what kind of energy comes into their facility, how much they use each year and what it costs.

Second, employees look at the equipment they have and make sure they are operating it efficiently. That can be as simple as turning off a piece of machinery when it's not in use or as demanding as maintaining the equipment in top working order. It also means, for exam-



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— Steve Schultz, manager, Energy Management Program, Plant Engineering

ple, developing standard operating practices for shutting down and starting up equipment.

Finally, employees are alert to the possibilities for improvement and identify special projects, such as upgrading a lighting system, purchasing motors that are more efficient or acquiring new technology, all of which can significantly reduce energy consumption.

Building awareness

"It makes a lot of sense," Schultz said. "Awareness is first. You can't look for

ways to improve if you don't understand the energy you're already using. And it doesn't make sense to spend money on capital improvements if you aren't efficiently operating the equipment you already have."

Schultz is surprised to see many companies skip over the first two parts and jump right into capital expenditures.

"If you don't build awareness and pay attention to what you're doing every day, spending all the money in the world won't bring you the energy savings you want," he explained.

In the lead

3M spends a large amount of money each year on natural gas, electricity and fuel oil. Of the total energy used by 3M, about 70 percent is consumed in the United States, with the remainder used internationally. At the company's 55 largest sites (32 in the United States and 23 abroad), designated energy champions lead the conservation efforts. This is another key to success, according to Bert Bridger, director, Plant Engineering.

"The energy champion is the leader at their facility," he said. "This is the go-to person at the plant — the one ultimately responsible for obtaining the results we want to achieve."

Their teams have representation from Plant Engineering, Manufacturing and other major functions.

"That way, they can be boundaryless when they go through the facility looking for opportunities," Bridger added.

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Pairing up

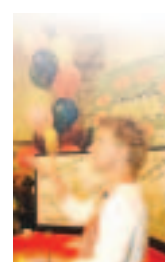
Post-it® Software Notes will be easily accessible to virtually millions of consumers, thanks to an innovative collaboration with Microsoft.

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Under the big top

A festive atmosphere greeted those who attended a recent recognition event for 3M's customer service employees in the Twin Cities.

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**Changing with the times**

3M TV is breaking new ground as it moves into webstreaming. 3M TV WebStream is an exciting new platform that will allow content to be delivered 24/7 to internal and external audiences using the intranet and the Internet.

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Six Sigma poster session

Employee engagement and enthusiasm was evident at the Finance organization's recent Six Sigma poster session, which showcased their impressive results.

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Save money

3M Reimbursement Accounts offer active 3M employees a convenient way to save money to cover health and dependent care costs — and lower their taxes.

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COMMUNITY FOCUS**3M participates in new museum**

3M and the 3M Foundation have donated more than \$1 million in cash and 3M products to the National Museum of the American Indian. This Smithsonian Institution museum is the first-

ever national museum dedicated to the portrayal of Native American life, history, arts and culture. A number of 3Mers, including members of 3M's Native American Council, recently took part in the museum's grand opening.

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Thanksgiving with a twist

Add an element of excitement to your holiday meal by serving something different this year. A local chef shares some of his favorite nontraditional Thanksgiving recipes.

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SIX SIGMA UPDATE

Go to intranet.mmm.com/sixsigma for the latest news.

From the Cover

Making energy efficiency a competitive advantage

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Sharing best practices

The energy champions share information and their best practices — another key to success. They have contributed about 1,500 projects to a corporate energy database, which they use as a resource for new ideas. In addition, a quarterly dashboard report is published on each facility and its programs.

“This report is widely circulated,” Bridger said. “It shows how well each site is doing. We publish information by

business, by plant and at the corporate level.”

The Energy Management function also conducts regular webcasts for key 3M personnel worldwide. In October, the function held a webcast for 3M’s Asia Pacific operations, followed the next day by webcasts for U.S. and European facilities.

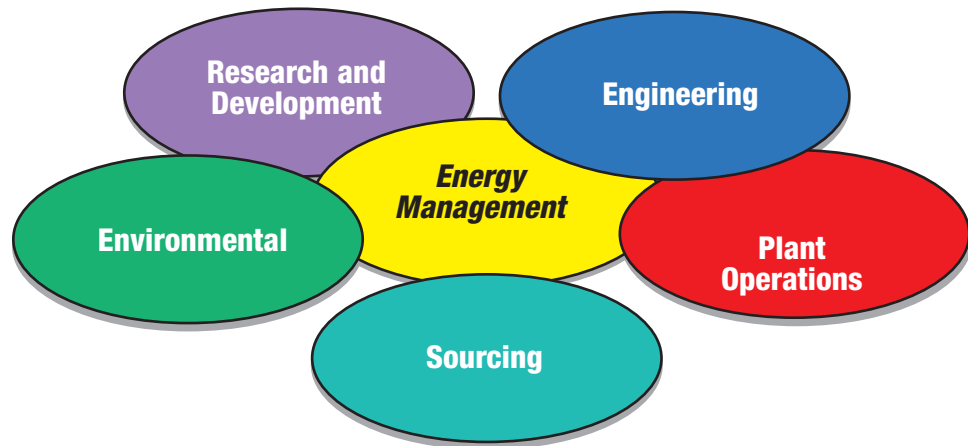
In addition, the energy teams use Six Sigma methodology to help identify the biggest energy users at the plant. They also use Six Sigma to streamline plant operations.

Finally, the Energy Management Program annually presents awards recognizing exceptional energy performance. This year, the sites are being rated on how they’ve improved their energy efficiency per unit of product, the value of the projects they’ve implemented and how effectively their energy team has functioned. The awards will be announced next February.

A big impact

Saving energy isn’t just about saving money; it has a positive impact on the environment as well. Being energy efficient means fewer natural resources are being consumed and that the generation of pollution is being prevented.

“We’ve made a real commitment to reduce our impact on the environment,” Schultz said. “We want to protect natural resources, and we partner with the U.S. Department of Energy, the U.S. Environmental Protection Agency [EPA] and other organizations to make that happen.” Environmental targets have been



intranet.mmm.com/ehs/energy/index.htm

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— Bert Bridger,
director,
Plant Engineering

updated and include a new target specifically for greenhouse gas (GHG) emissions. 3M’s new goal is to reduce global GHG emissions 50 percent by 2005 (from a 1990 base year). The company also has joined the EPA Climate Leaders program and set a goal, through this program, to reduce U.S. GHG emissions 30 percent by 2007 (from a 2002 base year).

3M earns highest industrial honor

In 2004, 3M was named ENERGY STAR* Partner of the Year by the EPA and the U.S. Department of Energy. The ENERGY STAR award recognizes 3M’s commitment to energy efficiency, but 3M was further singled out for integrating energy management into the company’s operational strategies. “Partner of the Year” is ENERGY STAR’s highest industrial honor.

Energy conservation is part common sense and part innovation. But mostly it’s about people doing good work.



“We have tools and resources people can use,” Schultz concluded. “Our energy teams are implementing strategies worldwide to improve energy efficiency. We’re sharing best practices and learning from each other. We’re encouraging employees to be energy-efficient in their everyday activities. We’re tracking energy use at each site, generating reports and giving people the data they need to make good decisions.”

And that’s the kind of energy that’s well worth using.

*ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency.

Benefits of managing energy:

- conservation of natural resources
- increased productivity
- lower production costs
- safer work environment
- reduced emissions, including dioxide



Energy teams are a key to success

Facility energy teams are vitally important to ensure that the company continues to achieve its energy use objectives. Each 3M location is encouraged to have an energy champion and an energy team. Experience has shown that the best energy cost reduction results are achieved by:

- having a management-supported energy champion and team at each location;
- tracking energy use and costs on the corporate energy data system;
- driving energy savings and cost reduction with Six Sigma;
- sharing best practices at energy conferences and on the energy cost reduction database;
- using tools and information provided on the Corporate Energy Management Web site; and,
- taking advantage of available assistance, for specific projects, from 3M’s global engineering organization.



Facility energy teams, such as the Ribeirao Preto team from 3M Brazil, are vitally important to ensure that the company continues to achieve its energy use objectives.

Practice these top 10 energy-saving tips

With oil and natural gas prices up sharply this year, it’s important that we all do everything we can to minimize the impact. There are many ways you can curb your energy use — and even the smallest efforts make a difference. Here are 3M’s top 10 energy-saving tips.

Turn it off

1. Turn off the lights when you leave a room. For example, if no one is sitting in a conference room, why have the lights blazing?
2. Turn off computers, monitors, copiers and printers at night and on weekends.
3. Turn off factory equipment when possible, and operate equipment to minimize energy use.

4. In the lab, use ovens only when needed. Turn fume hoods with controls down to 50 percent when not in use. If there’s no control, switch them off if you can safely do so.

Plan ahead

5. Dress for the weather. Lowering the heat by 1 degree has been shown to reduce heating costs by 3 percent. During air-conditioning season, raising the temperature 1 degree reduces cooling costs by 5 percent. Consider keeping a sweater or blazer at your workstation.
6. If it’s possible to control the temperature in your workstation, keep it at an even temperature (70 F in the winter and 75 F in the summer).

7. Obtain approval before bringing in an electric fan or other comfort device.
8. Help each other. If a co-worker is on vacation, check to make sure lights and equipment are turned off. If you are the last one to leave for the day, do quick energy checks as you leave your work area.

Think about it

9. Practice the same energy habits at work as you do at home. Would you leave your home with all the lights on and all your electrical devices running?
10. Look for energy-saving opportunities around your work area and submit your ideas to your location’s energy team.

