

# Earth Day 2011

## 3M and Its Customers Are Inventing a Better Tomorrow Through 3M's Sustainable Technologies and Products

Consumers may not realize that some televisions use up a good chunk of electricity in their homes. 3M is inventing a better tomorrow by helping customers reduce their environmental footprint with innovative products like 3M™ Dual Brightness Enhancement Film (DBEF) designed to help cut LCD TV energy consumption by up to 32 percent. This is just one example of 3M know-how enabling the development of entire families of energy-saving products for customers, while reducing its own environmental footprint.

Since 1990, 3M has made great strides in [preventing pollution](#) from its own operations by reducing emissions of volatile organic compounds (VOCs) by 96% -- from 255 million pounds to 10.9 million pounds and by cutting its greenhouse gas emissions by more than two-thirds (77%). It is through the company's sound practices that consumers and customers can reap the benefits in their businesses by reducing their own environmental impact.

"At 3M, we are experts at problem-solving, whether it's our own environmental challenges or that of our customers. Harnessing the chain reaction of new ideas, we create game-changing technologies and products in the sustainability space," said Fred Palensky, 3M Chief Technology Officer and Executive Vice President, Research and Development.

3M DBEF, for example, improves the efficiency of [LCD TVs](#) by recycling polarized light making energy-sucking TVs more efficient -- and with the advantages of a thinner and lighter television.

### Architectural Lighting

More than that, 3M researchers are developing alternative lighting options for buildings. 3M™ Sunlight Delivery System, which tracks, captures and transports the sun's natural, full visible spectrum daylight deep into the interior spaces of buildings where natural lighting is limited. By harvesting free and abundant light from the sun, the Sunlight Delivery System provides a sustainable, energy-efficient lighting that results in reduced energy demand during high cost, on peak hours. This product incorporates artificial lighting and controls when the sky is overcast and for nighttime. Plus, use of this system contributes to LEED /sustainable building code certification.

### Energy Conservation

3M doesn't stop with products that capture and transport light. The company's Prestige Series window films use non-metalized nano-technology to create reflectivity that's actually lower than glass. Homeowners' views remain true; the films do not distort the interior or exterior aesthetics of a building. These innovative films comprise hundreds of layers, yet are as thin as a Post-it® Note. They reject up to 97% of the sun's heat-producing infrared (IR) light and 99.9% of ultraviolet (UV) rays to keep occupants cool and comfortable. 3M [Prestige Series](#) films benefit commercial and residential buildings; 3M Crystalline Film for automobile applications minimize heat build up inside vehicles.

### Fire Protection

Facility operators of commercial buildings can also reduce their environmental footprint with an entirely different technology platform. [3M™ Novac™ 1230](#) Fluids are used in facility fire suppression and have an ozone depletion potential of zero and a global warming potential of one. This enables facility managers to achieve a

99.9 reduction of greenhouse gas emissions in their critical function fire suppression systems. Conventional products in this area are based on HFC technologies, and in addition to a large global warming potential, the HFC products live in the atmosphere for 30 years when released, while the 3M Novec 1230 fluid has an atmospheric lifetime of five days. Unlike water, the fluid will not damage sensitive computer, telecommunications, data or hospital equipment

3M also provides consumers with a more sustainable line of cleaning products. [Scotch-Brite™ Greener Clean products](#) are made from plant-based fibers and recycled materials, delivering effective cleaning performance coupled with eco-advantages. The full line of products is reusable, offering a money-saving alternative that consumers can feel good about using. Scotch-Brite™ Greener Clean products demonstrate how making small changes and rethinking the everyday cleaning routine is an easy way for consumers to reduce their impact on the earth.

Visit [www.3M.com/sustainability](http://www.3M.com/sustainability) to learn more about advances to help customers reduce their environmental impact from a portfolio of sustainable choices.

#### About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$27 billion in sales, 3M employs about 80,000 people worldwide and has operations in more than 65 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow @3MNews on Twitter.

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