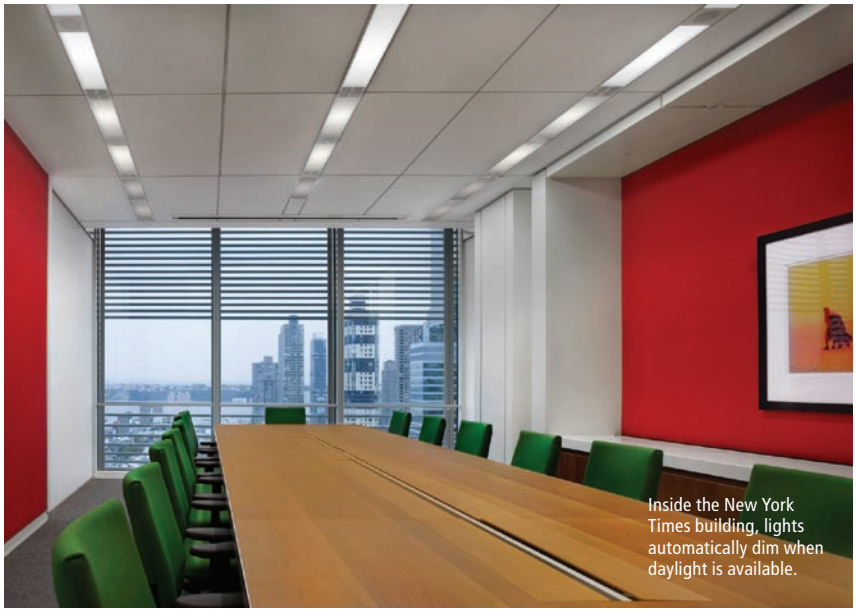

FORTUNE
AS SEEN IN FORTUNE MAGAZINE JUNE 8, 2009
Let There Be LIGHT
Lutron brings 50 years of experience to delivering just the right amount of light for any task.
Green Buildings, Green Profits
Energy-efficient buildings not only lower operating costs, but they also boost productivity.
"Light management represents the single greatest opportunity for energy savings in commercial buildings…"
GLENN HUGHES
Director of Construction
for The New York Times Building



Inside the New York Times building, lights automatically dim when daylight is available.

Green Buildings, Green Profits

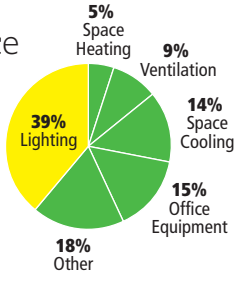
Energy-efficient buildings not only lower operating costs, but they also boost productivity.

If you want to measure the enthusiasm that green buildings are generating, just look at the latest statistics from the U.S. Green Building Council (USGBC), the advocate of energy-efficient buildings.

In 2006, builders registered 1,700 projects under the council's rigorous LEED (Leadership in Energy and Environmental Design) certification system. Two years later, in the teeth of the economic storm, the number of registered projects had exploded to nearly 9,000.

Electricity Use in Office Buildings

Data from the national Commercial Buildings Energy Consumption Survey



Source: Energy Information Administration

Although sincere concerns about the environment and climate change have soared in recent years, there's no doubt that green buildings have gained so many adherents simply because builders and developers are convinced that creating an ecologically friendly, energy-efficient building also pays off on the bottom line.

Indeed, recent studies have shown that green buildings cost about the same to make as those built with conventional methods, but they can be significantly less expensive to operate in a climate of rising energy costs and limited resources. A 2008 report by the New Buildings Institute concludes that buildings that meet the USGBC's LEED requirements report 25% to 30% lower operating costs than conventional buildings.

Many of these cost savings come from better lighting control. That's because lighting is the single largest electricity user in commercial buildings. According to the U.S. Department of Energy, lights account for 39% of the electricity used in office buildings.

"Most buildings don't deliver the right amount of light where and when it is needed," says Stephen Selkowitz of the Lawrence Berkeley National Laboratory. "Lighting is often set at a 'worst case' level, which is usually higher than desired. And buildings seldom take advantage of daylight."

The New York Times Co. avoided all these pitfalls in the design of its iconic new headquarters in New York City.

According to Glenn Hughes, who oversaw construction of the 52-story building, "Light management represents the single greatest opportunity for energy savings in commercial buildings, whether retrofit or new construction projects." The Times Co. chose a light control system from Lutron, which gave it individual control over every single light in the building.

After a year of operation, the energy savings are spectacular. Although the current New York City construction code requires a maximum 1.1 watts of lighting power per square foot, the Times building averages between 0.33 and 0.37 watts per square foot, about 70% less. Hughes estimates that, at current electricity rates, the Lutron system is saving $1 per square foot per year.

It's not just new buildings that benefit from lighting management. A renovation of Sidwell Friends Middle School in Washington, D.C., reduced power consumption for lights by 92% and overall energy use by 55%. The school has been certified LEED Platinum.

Green building advocates warn that focusing on energy savings alone can underestimate the value of human benefits. A typical office building's annual energy costs are $2.25 per square foot; the human costs are $318 per square foot, says Scot Horst, senior vice president for the USGBC's LEED program. An attractive workspace can lead to increased productivity and lower absenteeism. "If you're only talking returns," he says, "that's where the big numbers really are." ●

PHOTOS BY NIC LEHOUX

Let There Be Light

Lutron brings 50 years of experience to delivering just the right amount of light for any task.

It was an improbable search for a nuclear trigger that led Joel Spira into the lighting business.

He was working at an aerospace company in the 1950s when he was given the task of finding a reliable trigger for atomic weapons. A colleague suggested a switch based on a newly invented gizmo called a thyristor, a transistor-like device. But Spira immediately saw another potential use for the device—it was a perfect way, he thought, to control the intensity of light.

Until then, dimming lights was a complicated and expensive affair, requiring bulky rheostats the size of cantaloupes that siphoned off energy and generated a lot of heat. But Spira thought that if he could harness the tiny thyristor's switching ability, he could create a dimmer that would fit into an ordinary switch box, bringing theatrical lighting effects to the average home—and saving energy instead of wasting it.

The New York Times building uses a Lutron system to increase comfort and productivity while saving energy (lutron.com/nyt).

Spira quit his job to focus on his idea, and on July 15, 1959, he filed for a patent, the first of 2,751 that Lutron would eventually hold. Two years later, he and his wife founded Lutron Electronics, headquartered in Coopersburg, Pa., near Philadelphia.

For nearly half a century, Lutron has focused on managing lighting, introducing new technologies into the service of an ever-expanding portfolio of products. "We have a unique global capability to control every light source," says Spira, who is chairman of the company.

Indeed, Lutron has gone well beyond that early dimmer. When fluorescent lamps began to dominate office lighting, Lutron tackled and solved the problem of dimming fluorescents. The company also developed devices to dim low-voltage, compact fluorescent and, more recently, light-emitting diodes (LEDs). Lutron was also the first to develop self-contained systems to control lighting zones in conference rooms and ballrooms.

Lutron made its first acquisition in 2000 when it bought Vimco, a maker of window shades. Lutron automated the shades using microprocessor-based drives that provide ultra-quiet control. The shades save energy and improve comfort by reducing solar heat gain and glare. As technology evolved, the company created digital systems that enable regulation of each individual light fixture and window shade in a building, bringing a level of control unimaginable 50 years ago. Even today, Lutron remains the only company that can control both daylight and electric light.

"Lutron's focus has always been to help our customers save energy and create a pleasant environment to live and work in," says John F. McKiernan, Lutron's vice chairman. "In today's environment, that mission is more important than ever."

The company has certainly made significant contributions to energy conservation, especially in commercial buildings. Thirty-nine percent of an office building's electricity consumption is in lighting, and Lutron systems can reduce that consumption by 60% or more.

Spira estimates that by saving customers $1 billion in energy costs in 2008, Lutron helped reduce the U.S. lighting bill by 3%. "We can make a major contribution to the U.S. economy by saving energy in large amounts," Spira says. For Lutron, turning the lights down—just the right amount at the right time—has never been a trivial matter. ●

LUTRON®

To learn more, go to www.lutron.com/green.

save energy with Lutron™

LUTRON®

www.lutron.com

Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299

World Headquarters 1.610.282.3800

Barcelona | Beijing | Berlin | Chicago | Dubai | Hong Kong | London | Los Angeles | Madrid | Mexico City | New York | Paris | São Paulo | Shanghai | Singapore | Tokyo | Toronto

Technical Support Center 1.800.523.9466
Customer Service 1.888.LUTRON1

 | Made and printed in the U.S.A. | P/N 367-1639

U.S. GREEN BUILDING COUNCIL MEMBER