All eyes in the architectural and green communities remain on the new 52-story headquarters of The New York Times Company as its Quantum total light management system continues to outdo itself in energy efficiency, saving the company significant money.

An analysis of a full year’s worth of data shows, the Quantum system is achieving a 72 percent reduction in lighting energy claims Glenn Hughes, energy consultant and Director of Construction for The New York Times Company during the design, installation, and commissioning of The New York Times Building.

“ar the energy savings are stunning,” says Hughes. “Lutron’s Quantum™ total lighting management system has delivered an absolutely over-the-top performance. When I talk with other construction and lighting consultants, they’re astonished at the results.”

Hughes asserts that, based on an electricity rate of $0.15 per kWh, the savings from using Quantum add up to $30,000 per year per floor for the floors where it has been installed. This equates to approximately $1 per square foot per year and a prevention of over 3,300 metric tons of CO2 emissions each year. He attributes the cost savings to a significant reduction in both lighting and cooling loads. Since lights emit heat, reducing lighting power reduces cooling demand. Thus, approximately 25% of the savings stem from reduced HVAC costs.

“Hughes says total light management ‘represents the single greatest opportunity for energy savings in commercial buildings, whether retrofit or new construction projects.’”

The energy consultant stratified his data in a number of different ways, including season by season to take into account differing conditions of natural light and heat.

Last year, Hughes was widely quoted as saying “We designed our building to use 1.28 watts per square foot of lighting power. With Quantum, it’s using only 0.38—that’s 70 percent less.”

In April 2009, Hughes unveiled data showing that the building’s total light management system equaled or surpassed that figure in each of the previous four seasons:

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Hughes says that the story doesn’t end by looking at energy savings alone. Quantum dramatically improved the lighting environment inside The New York Times Building. According to Hughes, assuming a mere 1% increase in productivity (a conservative estimate), from the improved lighting environment, the Quantum system paid for itself in less than a year. He also emphasizes that this value-add goes on year after year.
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The New York Times Building uses Quantum to increase comfort and productivity while saving energy (www.lutron.com/nyt).
The New York Times Building is primarily a global media enterprise, decided to build a new headquarters in Manhattan, it eschewed the idea of maintaining a passive role in the industry. The company resolved to exercise control at every stage of the project’s design and construction processes, ensuring that the new building accurately represented its corporate culture and values, and served real business benefits for the company. “We desired an interior environment that allowed our employees to be as comfortable as possible and that would reinforce our company’s emphasis on open communication, collaboration and transparency,” said Rocco Giannetti, AIA. “In addition, we insisted that the building be as environmentally friendly as possible.”

The importance of lighting controls was recognized by the Times Company from the start. Executives extensively researched the state-of-the-art lighting control options to satisfy their twins desires for daylight harvesting and for the flexibility to reconfigure spaces easily and simply. The word extensively is not used loosely. As Thurm himself described in an interview, “Well intended guesses by others as to what you want.”

For more information, visit www.lutron.com/nyt.
First published in 1851, The New York Times has long en joyed pride of place among all news organizations in the United States, an enviable position earned over time. The Times Company, which is a time-tested institution operating in the American media capital and the most fabled city of the modern world where supremacy is the norm, is an organization that understands what it says and does reverberates across many borders.

It’s no surprise then that when the newspaper’s parent company, The New York Times Company, a global media enterprise, decided to build a new headquarters in Manhattan, it eschewed the idea of maintaining a passive role in the process. The company resolved to exercise control at every stage of the planning and construction processes, ensuring that the new building accurately represented its corporate culture and values, and reaped real business benefits for the company.

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The research eventually gravitated to the Building Technologies Department at the Lawrence Berkeley National Laboratory (LBNL). Thomas Hughes, Director of the Department of Energy’s goal of constructing near-zero energy buildings by 2025. Hughes says the data he has collected and analyzed on the lighting usage in the building.

The testing, plus Lutron's response to a competitive bid, convinced the Times Company to select Lutron's Quantum light management solution. Thurm, whose company recently bought lighting design firm SBLD Studio, says "Lutron's SkyPAC systems, Quantum employs a number of different strategies—including daylight control, occupant control, target set point control for lighting technologies and products from a variety of manufacturers—including a new technology called EcoSystem® ballasts. Hughes says this is the type of energy efficient system that supports the Federal Department of Energy’s goal of constructing net-zero energy buildings by 2025.

"What we have achieved with our building is spectacular," said Thurm. "But any office space eventually needs to move in different directions and this lighting system gives us the flexibility to do that."

With Quantum, the daylight sensors make the most of natural light pouring into a space, continually and imperceptibly adjusting the electric light levels according to the environment. As such, it affects workers' comfort, increased productivity, and floor-to-ceiling glass walls that provide building occupants wide views of the neighboring skyscrapers and, conversely, allow outsiders to look in.

"With all the daylight coming in, the avoidance of glare was a crucial issue to the client," said Delhi Uysal, Principal and Technical Director of the lighting design firm SBLD Studio. "Lutron’s involvement from the beginning was invaluable. They understood that the 'quality' of the lighting mattered as much as anything—and they were able to deliver a highly sophisticated digital lighting system with a very powerful control software tool that’s easy to use and that carried the clients' wishes to the nth degree." Everyone was impressed."

For more information, visit www.lutron.com/nyt.
To accomplish these objectives, the Times Company hired the world-renowned architect Renzo Piano, along with two major architectural firms, FXFOWLE of New York, and Gensler, headquartered in San Francisco. The Times Company also employed the lighting design services of SBD Group of Building.

The result is a dazzling 32-story tower with 1.5 million gross square feet jointly owned with Forest City Ratner Companies. The building is the Times Company’s office and retail, its chief attributes are open spaces and floor-to-ceiling glass walls that provide building occupants wide views of the neighboring skyscrapers and the city beyond.

The whole building structure is designed for maximum light,” said Thurm, whose company utilizes Quantum’s 30-day energy usage report increased employee satisfaction.

The lighting control options to satisfy their twin desires for daylight flexibility to adapt their work environments to meet changing business requirements. Quantum also features software to control, monitor, and report on the lighting usage in the building.

After the building had been occupied for a year, Glenn Hughes, now president of Glenn C. Hughes Consulting Associates, utilized Quantum’s 30-day energy usage report to see if the building’s energy efficiency was achieved by the Quantum solution. At the time, he said the following:

“We designed our building to use 1.28 watts per square foot of lighting power.”

“With Quantum, The New York Times Company is using 1.18 watts—70% below the goal.”

Hughes says the data he has collected and analyzed now indicates that the energy-savings performance has risen to 72 percent.

Hughes said the design goal of 1.28 watts per square foot of lighting power was within the local codes when the building was constructed has since tightened to 1.1 watts. Hughes said.

With guidance from the Berkeley Lab, the project team design and manufacturing, the Times Company built a replica of the southwest corner of its new building at one of its printing facilities in Queens, New York. For six months, from winter solstice to summer solstice, the mock-up tested a fleet of different lighting technologies and products from a variety of manufacturers—including new technology just emerging from Lutron Electronics Co., Inc.

The testing, plus Lutron’s response to a competitive bid, convinced the Times Company to select Quantum’s lighting management solution for the Times Building.

Quantum® employs a number of different strategies—including daylight control, occupant control, target set point control, fixed lighting and emergency lighting control—to give building occupants maximum comfort, and to give building managers the flexibility to adapt their work environments to meet changing business requirements. Quantum also features software to control, monitor, and report on the lighting usage in the building.

With Quantum, the daylight sensors make the most of natural light pouring into a space, continually and imperceptibly adjusting the electric light levels according to the sun’s movements and the overall conditions in the environment. As such, it affects workers’ comfort levels and, in turn, their productivity. However, as any building owner or tenant can attest, this function comes at a steep price: the cost of electricity.

“We designed our building to use 1.28 watts per square foot of lighting power.”

“As a company,” Thurm said, “we intuitively understood that, if we were going to work in a building with so much outer glass, we had to keep a rein on our energy consumption. That helps our bottom line but also is the environmentally responsible thing to do.”

Employee comfort, increased productivity, reduced energy usage, and ease and flexibility of use—are all big reasons why the Times Building is a favorite ‘form and function’ building.

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