

# THE GREEN PAGES

## Stop wasting electricity without turning off all the lights



By **RUTH HEIL**  
Business Journal Columnist

Stringing up holiday lights is a festive way to decorate for the holidays, but elaborate displays can easily double a homeowner's electric bill. Still, it's a premium some are willing to pay in the name of holiday entertainment.

### THE GREEN SCENE

When I was young, houses were wrapped in two-inch light bulbs that exploded if you dropped them. Then, tiny twinkle lights replaced the old, fat bulbs. Today it's light emitting diodes (LEDs) that brighten the night. Some holiday decorators have upgraded based on an unwritten challenge to have the latest and greatest display in the neighborhood, but most have found that their investment also improved the safety of the tradition and significantly lowered the overall expense.

Meanwhile, all year long, outdated exterior and interior commercial lighting eats up electricity without spreading any cheer at all. Lighting is often the largest component of a commercial electric bill. Fortunately, the last five years have brought great advancements in lighting

systems, allowing facility managers to cut a building's lighting-related energy use in half while maintaining or improving lighting quality.

The simplest option is to replace incandescent light bulbs with Compact Fluorescents Lamps (CFLs) wherever possible. CFLs can be screwed into existing fixtures and use two-thirds less energy.

However, depending on the age and design of the lighting system in your building, switching out a few bulbs can be akin to building a hodgepodge decorating display that sours the taste of the entire neighborhood. In the commercial lighting environment, the return on investment is greatest when you take advantage of system-wide advancements.

Michael Gibson of Gray Connective, an electrical and energy solutions company located in Easton, said, "Most lighting retrofits may save as much as 70 percent on lighting electric costs and can be done for little out-of-pocket cost to the owner. Most have a quick return on investment of one year or less." He said, "any business that has not changed fixtures within the last five years should consider new fixtures."

Along with technology, industry knowledge has also improved. Experts today can measure and correct the quality, quantity, color, direction and efficiency of a system's output in order to best match lighting needs to new lighting products. For this reason professionals like Gibson become invaluable to ensuring your upgrade yields

satisfactory results. They will first evaluate your current system's energy consumption and will discuss the lighting's intent. Then, they will employ advancements in bulb

**In the commercial lighting environment, the return on investment is greatest when you take advantage of system-wide advancements.**

technology as well as ballasts and lighting controls such as occupancy sensors, dimmers and daylight sensors. You should get an overall understanding of which components will be replaced, at what cost and at what sort of payoff.

Then, the elegance of a properly designed lighting upgrade will be realized in its operation. For instance, the right places will be brightly lit while spots with plenty of daylight will use little artificial lighting until the sun begins to set. Storage areas will be dark while unoccupied without human intervention. Not only will this help the environment and save money, but properly lit areas will also be pleasant, safer and easier to work in. Don't forget parking lot and other exterior lighting. This lighting too should be properly spaced and directed in a way that lights the lot, not the night sky.

The other beautiful thing about a full upgrade is that it causes very little interruption. According to Gibson, "an aver-

age 2,000- to 3,000-square-foot space can take as little as one day to complete a lighting retrofit. An average 5,000- to 10,000-square-foot space may take two days for completion. Most are dictated by the addition of lighting controls and wiring upgrades if necessary."

A consultant whose mission is aligned with energy conservation will also understand the project's eligibility for potential conservation grant programs. "Additionally, to meet lighting lumens requirements, a professional would be able to match lighting properly," said Gibson.

Another resource for analysis is your electric company if it offers energy audits. Also, the U.S. Environmental Protection Agency's "Guidelines for Energy Management Overview" offers advice for making sure that upgrades provide the intended benefits ([www.energystar.gov](http://www.energystar.gov)), and its "Building Upgrade Manual" lists resources for proper disposal of old lamps and ballasts.

So whether it's simple or fancy, you should definitely evaluate the lighting display in your building. It could be drawing energy that is both harmful to the environment and costly. Accepting an inflated December electric bill might have become the American way, but a wasteful expense realized month after month is sure to drain a business's profit and your ecofriendly strategy.

*Ruth Heil ([ruth@thewritebeat.com](mailto:ruth@thewritebeat.com)) is a freelance writer based in Green Lane.*