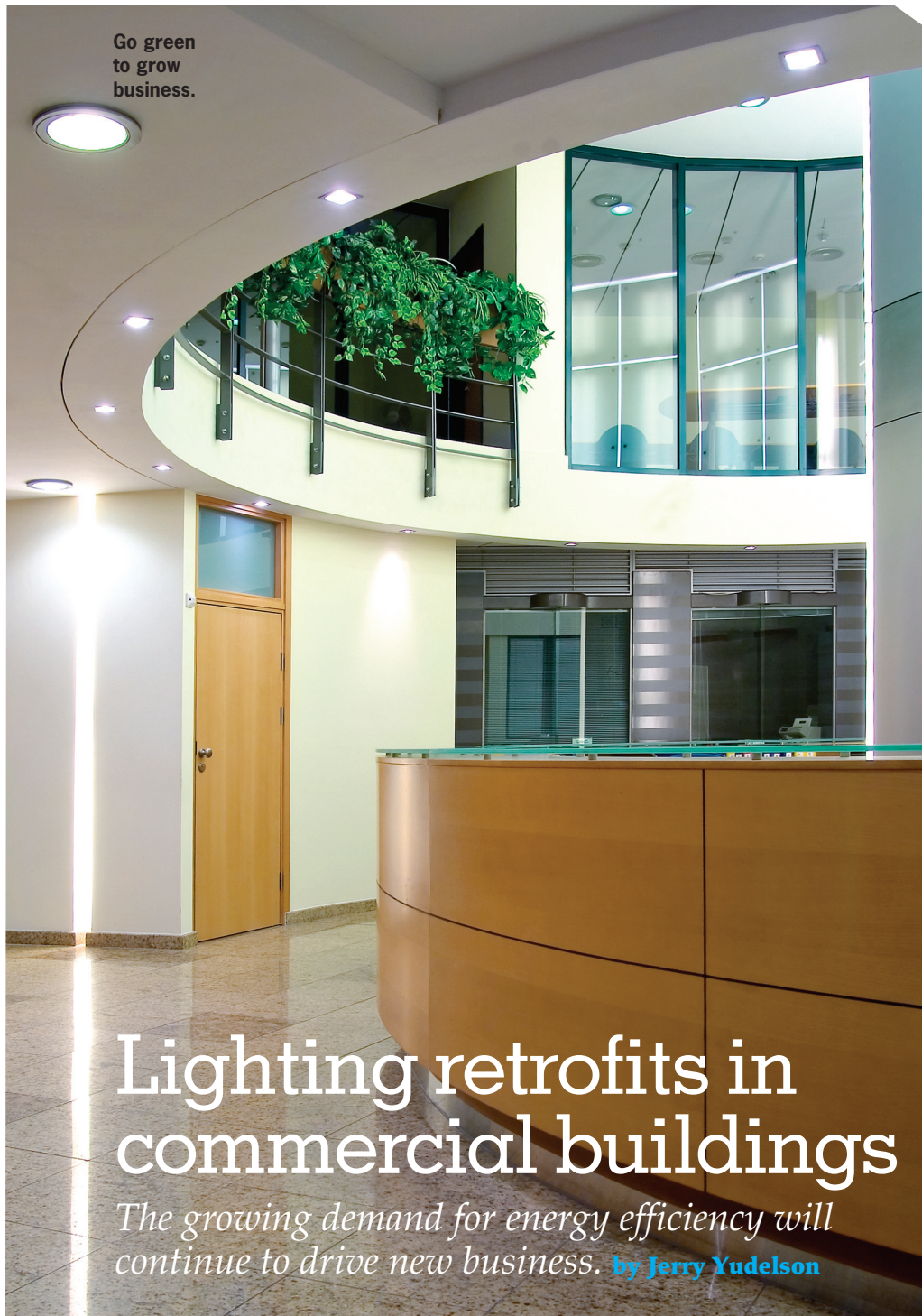


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Lighting retrofits in commercial buildings

The growing demand for energy efficiency will continue to drive new business. by Jerry Yudelson

NAED's Education & Research Foundation's Channel Advantage Partnership (CAP) commissioned and funded a series of columns researching opportunities in green building and energy conservation markets. This article is the second in a 12-part series that will include specific technologies in the renewable energy and energy-efficiency field, new developments in lighting and onsite power generation, and how daylighting and other building control systems are gaining ground.

The federal *Energy Policy Act of 2005 (EPAct)* provides a federal tax deduction of \$.30 to \$.60 per square foot for lighting retrofits in commercial buildings that result in a 50% reduction in energy use, as measured by the *ASHRAE 90.1-2001* standard. According to the Database of State Incentives for Renewable Energy and Energy Efficiency, the law also provides up to \$.60 per square foot each for HVAC upgrades and building envelope upgrades (such as replacing windows).

The current *EPAct* law expires at the end of 2008. (As part of a comprehensive energy bill this year, a one-year *EPAct* extension passed the House of Representatives, but the bill is caught in partisan in-fighting between the president and the Senate over how to pay for the extension. As of June 2008, this matter was not settled.)

Still, regardless of federal tax benefits, the economics of energy-efficiency upgrades are compelling in most areas of the United States, with paybacks of as few as three years common for lighting efficiency upgrades. Part of this is due to the fact that many electric utilities (most investor owned and some municipals) offer significant financial incentives for energy-efficiency upgrades; some also offer technical assistance to large customers.

APPROACHING THE MARKET

By one estimate, T12s still account for 60% of the total number of fluorescent lamps that are in use today. According to one study, the total number of fluorescent lamps installed in the commercial sector is roughly 1.5 billion. In fact, nearly 30% of total U.S. lighting energy is consumed in commercial fluorescent fixtures.

Of lighting consumed by fluorescent fixtures, T12s consumed about 70% of the total of nearly 50 million kWh per year. Converting all T12s to high-performance T8s could save about one-third of this energy use. (This report speaks only to lamps, without further considering how dimmable ballasts, occupancy sensors, and other means

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could add to the total savings from lighting energy retrofits.)

At the present time, the economic value of converting from T12s to high-efficiency T8 lamps is compelling, especially considering energy costs can make up to one-third of building operating costs and are the largest uncontrollable costs for most building owners and facility managers.

In many retrofit situations, reduced-wattage systems might be better suited where fixture placements won't change. High-performance T8 lighting systems are generally superior, but reduced wattage systems still offer considerable potential for energy savings, in situations where facility managers are unlikely to use high-performance systems.

Here are commercial lighting retrofit market opportunities for distributors:

- Build on existing demand pull programs from local utilities. Don't know the utility reps? Become a trade ally for their programs. These reps make money promoting energy conservation and they need distributor contacts and expertise to make their job easier. (For a list of such programs, see the Consortium for Energy Efficiency website at cee1.org/com/2007-ps/.)

- Follow the money. Know all about incentives programs, tax deductions and other forms of free money available for energy retrofits. When a distributor is a resource for information about sources of money, people will go to it first for information, and later to buy product.

- Focus attention on schools, universities, and government buildings, which can often access financing for energy retrofits programs.

- Practice market differentiation—Distributors should use their knowledge of all alternatives and ability to help

contractors sell into the retrofit market, as well as to help them with design and installation details, to differentiate their services from competitors'.

- Understand the business case for energy retrofits, particularly in the local market, and learn how to sell total cost of ownership to building owners and

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facility managers. It's important to do this because of the higher original cost of more efficient lamps and fixtures.

LIGHTING VS. THE ENTIRE BUILDING

Lighting represents roughly 25% to 40% of the total commercial building energy consumption in the United States (vs. 10% to 15% in residential), so it's a natural place to look for significant efficiency gains. However, a focus on lighting energy retrofits alone might not yield as many benefits as a more comprehensive look at the entire building or facility.

For example, according to *Comprehensive Commercial Retrofit Programs: A Review Of Activity And Opportunities* by Jennifer Thorne Amann and Eric Mendelsohn, evaluations of first-generation comprehensive retrofit programs report whole-building energy savings of 11% to 26% of preretrofit consumption compared to 8% to 13% savings for comprehensive lighting retrofits that did not include other end-uses. ■

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NEXT MONTH'S COLUMN WILL FOCUS ON FINANCING AND GOVERNMENT INCENTIVES. FIND OUT MORE ABOUT NAED'S CAP AT NAED.ORG.

COMPANY NEWS



► Hesco honored

In June, HESCO, Hartford, Conn., joined its MetroHartford Alliance peers during the 5th Annual Business Champions breakfast honoring some of Connecticut's fastest growing companies. Slated as the official kickoff to the 2008 Connecticut Business Expo, the event recognized businesses showing significant year over year revenue and employee growth in 2007 over 2006. Forty companies of all sizes were nominated; HESCO, at No. 18, was the only electrical distributor so recognized.

► Gexpro's Fyfe wins big

Kevin Fyfe, who works in inside sales at Gexpro in Norfolk, Va., was the winner of the top prize in the company's internal contest, the GE Gold Medal Games. The prize: A trip for two to the Beijing Olympic Games and \$10,000 cash.

► Border Stats awarded

Border States, Fargo, N.D., won the 2008 Impact Award in the large enterprise category from the Americas' SAP Users Group.

► Grand opening

Distributor Wire & Cable recently celebrated its grand opening—as “the first specialty wire and cable company based in the Rocky Mountain region that exclusively sells through electrical wholesale distribution,” according to the company.

► Becker Electric honored

Becker Electric, Dayton, Ohio, was one of eight suppliers honored as 2008 Supplier of the Year by Honda. What separates Becker from other suppliers? Among other things, Dennis Shireman of Becker helped the company resolve a control system problem at its East Liberty plant in Dayton.