



BENEFIT FROM GREEN ELECTRICAL COST SAVINGS

BENEFIT FROM GREEN ELECTRICAL COST SAVINGS

Green Electrical Resources

In 2008, according to Paul Ehrlich, president of Building Intelligence Group, LLC, the number of buildings started in LEED® will grow by over 100%. “By some estimates within the next few years 20% to 25% of all projects will be going for a LEED rating. What is not as obvious is that energy efficiency had not been a mandatory part of LEED until the middle of 2007. Now, any project going for LEED must have at least two energy efficiency points which means it must be 7% to 14% more efficient than code—in 2009 this will ratchet up even further.”

Organizations supporting Green Commercial Construction and Remodeling:

Continental Automated Buildings Association (CABA)—non-profit association dedicated to promoting next generation technology in homes/buildings, especially integrated systems and home/building automation.

Green Building Initiative (GBI)—established Green Globes™ web-based program to streamline process of applying energy-efficient sustainable construction methods to commercial buildings.

Sustainable Buildings Industry Council (SBIC)—non-profit organization dedicated to promoting sustainable construction of homes/buildings by providing training/resources.

U.S. Green Building Council (USGBC)—non-profit organization established LEED® rating program, the oldest green building program; oversees LEED certification of green/sustainable buildings.



© 2008 National Association of Electrical Distributors
This guide was created by the National Association of Electrical Distributors (NAED) in conjunction with the NAED Manufacturers Council.

This planning tool was developed for use by qualified professional electrical engineers, contractors, builders and architects involved in commercial construction and renovation projects to help raise awareness of the many ways they can adopt electrical energy-saving solutions to help reduce electrical operating costs.

NAED member distributors can order quantities of this guide for their customers by contacting NAED Customer Service by calling 888-791-2512, or online at customerservice@naed.org.

Electrical engineers, contractors, builders, architects, etc. can obtain guides at participating NAED electrical distributors. To find an NAED-Approved electrical distributor near you, go to www.naed.org and click on “Find A Member.”



TIPS FOR THOSE INVOLVED IN GREEN ELECTRICAL COMMERCIAL CONSTRUCTION, REHAB OR RETROFIT PROJECTS.

Green Electrical Upgrades: A Powerful Opportunity for Cost Savings in Commercial Buildings

How Can Energy-efficient Electrical Products Improve the Bottom Line for Commercial Construction and Rehab Projects?

This brochure is meant to be a primer on Green Electrical Products and Solutions that have proven to reduce electrical consumption and commercial building operating costs. The National Association of Electrical Distributors (NAED) in conjunction with the NAED Manufacturers Council present several categories of energy-efficient electrical solutions to consider.

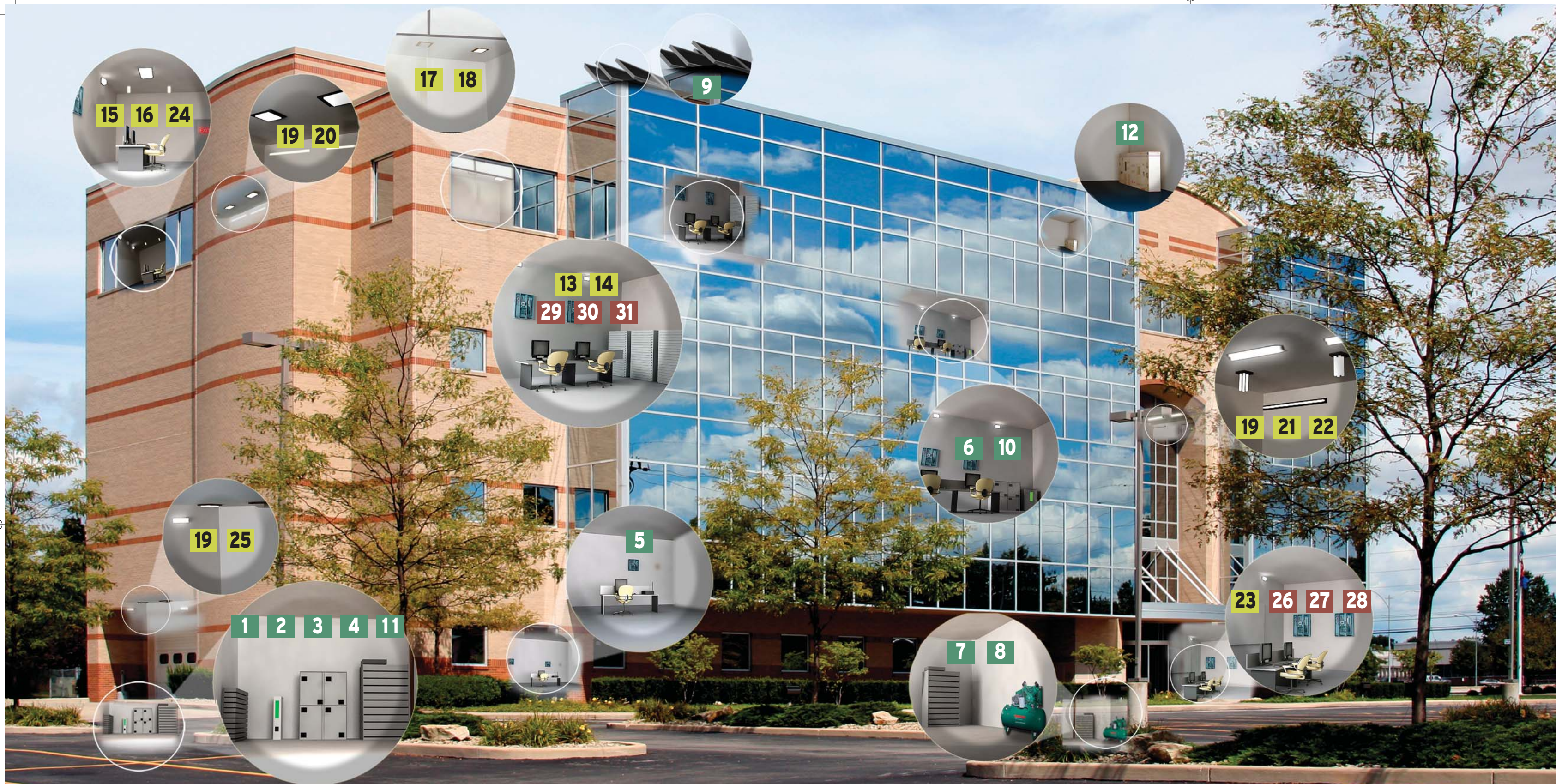
According to McGraw-Hill Construction Analytics, the annual U.S. market in green building products and services has grown from over \$7 billion in 2005 to more than \$12 billion in 2007. Sales of energy-efficient Green Electrical Products and Solutions is enjoying similar growth.

Building Design+Construction magazine offered this assessment of energy-efficiency in commercial construction: “As recently as three or four years ago, the feasibility of designing and constructing projects under the U.S. Green Building Council’s LEED rating program was in doubt. In recent years...more and more building teams...are routinely producing sustainable projects with energy savings in the 20-30% range compared to industry standards.”

- Electrical energy-efficiency has increasingly become critical to reducing escalating energy costs for most organizations.
- Buildings consume approximately 40% of all U.S. energy usage – more than transportation. Half of that energy powers commercial buildings.
- Lighting accounts for over 50% of all commercial building energy.
- Electricity represents 67% of energy consumption by the retail sector.

Cover photos courtesy of: Upper left, Big Stock Photo; Upper right, Watt Stopper/Legrand; Bottom left, Lutron; Bottom right: Big Stock Photo
Photos this page courtesy of left to right: Big Stock Photo, Big Stock Photo, and ©Eimantas Bozas/istolia





Energy-efficient Commercial Electrical Upgrades Checklist

Focus on Power Distribution

- Building power & energy management systems
- Integrated panelboards
- Paralleling switchgear
- Integrated switchboards
- Submetering equipment and software
- Uninterruptible Power Systems (UPS)
- NEMA Premium energy-efficient motors
- ASDs /VFDs motor control drives
- Electrical generation and Solar power systems
- Busway /Power bus
- Power factor correction capacitors and filters
- NEMA TP-1 transformers
- Ethernet /IP-based power monitoring

Focus on Lighting & Lighting control

- Intelligent lighting control systems
- Lighting control panels
- Dimmers
- Occupancy sensors
- Daylight harvesting systems
- Window shade systems
- Energy-efficient lamps, T8 /T5 fixtures
- Compact Fluorescent Lights (CFL) lamps
- Electronic dimming ballasts
- Photocontrols
- Timeclocks
- Light Emitting Diode (LED) lamps and exit/ Emergency lights
- Shatter-resistant lighting

Focus on Building Automation & Communications

- Building automation systems
- Integrated facilities controls
- Wireless control systems and VoIP
- Enclosures with cooling
- Fiber optic cables
- Wire and cable with flame retardant insulation

Focus on Power Distribution

- 1** Building power & energy management systems
- 2** Integrated panelboards
- 3** Paralleling switchgear
- 4** Integrated switchboards
- 5** Submetering equipment and software
- 6** Uninterruptible Power Systems (UPS)
- 7** NEMA Premium energy-efficient motors
- 8** Adjustable Speed Drives (ASDs)/Variable Frequency Drives (VFDs)

Focus on Power Distribution

- 9** Electrical generation and Solar power systems
- 10** Busway/Power bus
- 11** Power factor correction capacitors, filters & TP-1 transformers
- 12** Ethernet/IP-based power monitoring

Focus on Lighting & Lighting Control

- 13** Intelligent lighting control systems
- 14** Lighting control panels
- 15** Dimmers

Focus on Lighting & Lighting Control

- 16** Occupancy sensors
- 17** Daylight harvesting systems
- 18** Window shade systems
- 19** Energy-efficient lamps, T8/T5 fixtures
- 20** Compact Fluorescent Lights (CFL) lamps
- 21** Electronic dimming ballasts
- 22** Photocontrols
- 23** Timeclocks
- 24** Light Emitting Diode (LED) lamps and exit/ Emergency lights

Focus on Building Automation & Communications

- 25** Shatter-resistant lighting
- 26** Building automation systems
- 27** Integrated facilities controls
- 28** Wireless control systems and VoIP
- 29** Enclosures with cooling
- 30** Fiber optic cables
- 31** Wire and cable with flame retardant insulation