

Commercial Real Estate: An Overview of Energy Use and Energy Efficiency Opportunities



Energy Use in Commercial Real Estate

Commercial real estate is any multi-family residential, office, industrial, or retail property that can be bought or sold in a real estate market. Energy use is the single largest operating expense in commercial office buildings, representing approximately one-third of typical operating budgets and accounting for almost 20 percent of the nation's annual greenhouse gas emissions.

By becoming more energy efficient, commercial real estate (CRE) organizations can reduce operating expenses, increase property asset value, and enhance the comfort of their tenants. They can also demonstrate their commitment to the environment by reducing pollution and the harmful greenhouse gas emissions that contribute to global warming.

Energy Efficiency Opportunities

Office buildings waste up to one-third of the energy they consume.

Low-Cost Measures

- > Measure and track energy performance.
- > Turn off lights when not in use or when natural daylight can be used.
- > Set back the thermostat in the evenings and other times when a building is unoccupied.
- > Educate tenants and employees about how their behaviors affect energy use.
- > Improve operations and maintenance practices by regularly checking and maintaining equipment to ensure it is functioning efficiently.
- > Optimize start-up time, power-down time, and equipment sequencing.
- > Revise janitorial practices to reduce the hours that lights are turned on each day.
- > Use ENERGY STAR Target Finder to integrate efficiency goals into the design of new properties.

Cost-Effective Investments

- > Engage in energy audits and retrocommissioning to identify areas of inefficiency.
- > Install energy-efficient lighting systems, ENERGY STAR qualified compact fluorescent lights (CFLs), light-emitting diode (LED) exit signs, and occupancy sensors where feasible.
- > Install window films and add insulation or reflective roof coating to reduce energy consumption.
- > Purchase energy-efficient products like ENERGY STAR qualified office and commercial food service equipment.
- > Retrofit, upgrade, or install new heating and cooling equipment to meet reduced loads and take advantage of efficient technologies.
- > Use a performance contract to guarantee energy savings from upgrades made.
- > Work with an energy services provider to manage and improve performance.

How to Talk to Commercial Real Estate About Energy Efficiency

Speak to CRE practitioners in their own language. If you can explain that energy-efficiency improvements increase net operating income and asset value, this gives office building owners and managers a financial incentive to better manage energy consumption.

ENERGY STAR calculates that a 10 percent decrease in energy use could lead to a 1.5 percent increase in net operating income (NOI) — with even more impressive figures as the energy savings grow. In light of the current compression of capitalization (“cap”) rates (net operating income divided by the sales price or value of a property expressed as a percentage), it is possible to turn pennies into millions.

Commercial Real Estate Organizations Making a Difference:

Transwestern Commercial Services, a national full-service real estate firm, has generated impressive returns through sound energy management. In 2006, Transwestern invested over \$12 million in efficiency upgrades, for an average of 25 percent energy savings. The company estimates that dedication to energy management has increased the portfolio's value by at least \$344 million. Transwestern also promotes awareness to its investors, employees, and tenants.

USAA Real Estate Company has made a long-term commitment to continuous improvement in energy performance. The company estimates that it has increased its portfolio's asset value by more than \$30 million and prevented 89 million pounds of carbon dioxide from entering the atmosphere. USAA has been awarded ENERGY STAR Partner of the Year recognition for the past five years.

ENERGY STAR Offers:

- Guides and manuals
- Facility benchmarking
- Training
- Institutional purchasing
- Technical support
- Financing resources
- Emissions reporting
- Third-party recognition
- Motivational campaigns

ENERGY STAR® is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency.



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How to Talk to Commercial Real Estate About Energy Efficiency (cont.)

For example, in a 200,000-square foot office building that pays \$2 per square foot in energy costs, a 10 percent reduction in energy consumption can translate into an additional \$120,000 of NOI. At a cap rate of 8 percent, this could mean a potential asset value boost of \$500,000!

In addition, studies have found that superior energy performance contributes to increased employee productivity and health. A commitment to energy efficiency helps companies achieve their corporate responsibility and sustainability goals.

Talk to CRE CEOs, chief financial officers, energy directors, chief engineers, or senior property management executives. Top-down commitment from all levels of the organization is necessary for an effective energy management program.

ENERGY STAR Resources

Use the Guidelines for Energy Management: Based on ENERGY STAR partners' successful practices, these strategic guidelines assist CRE practitioners in improving energy and financial performance while positioning their firms as environmental leaders.

www.energystar.gov/guidelines

Track Energy Performance with Portfolio Manager: By setting goals, measuring performance, and tracking improvements, office buildings can gain control of energy expenses. Portfolio Manager helps by rating buildings' energy performance relative to similar buildings nationwide. To date, more than 30,000 buildings have been benchmarked in Portfolio Manager. Free online trainings are available to teach practitioners how to use the system for office buildings.

www.energystar.gov/benchmark

Learn About Low-Cost Best Practices: CRE practitioners can take a free online training on no- and low-cost best practices to improve buildings' energy performance.

energystar.webex.com

Promote Energy Efficiency: The ENERGY STAR Challenge Toolkit has templates and language CRE practitioners can use to promote energy efficiency to employees, executives, and tenants.

www.energystar.gov/challengekit

Perform Cost-Effective Building Upgrades: Plan systematic building upgrades using EPA's 5-stage approach. The Building Upgrade Manual offers guidance for each stage, from commissioning to upgrades.

www.energystar.gov/bldgmanual

Other Resources for Commercial Real Estate:

BOMA Energy Efficiency Program (www.boma.org): BEEP teaches commercial real estate professionals how to reduce energy consumption with proven strategies for optimizing equipment, people, and practices.

Northwest Energy Efficiency Alliance — BetterBricks (www.betterbricks.com): BetterBricks provides information and services to build awareness and knowledge about the benefits of energy efficiency in buildings.

Portland Energy Conservation, Inc. (www.peci.org): PECE is helping transform markets through education and incentive programs that build demand for energy efficiency. The PECE online resource library provides commissioning and O&M resources, case studies, and guidelines.

Recognition for Achievements

Earn the ENERGY STAR: The top 25 percent of energy-efficient buildings in the nation may qualify for the prestigious ENERGY STAR label. www.energystar.gov/eslabel

Become an ENERGY STAR Leader: ENERGY STAR partners who demonstrate continuous, portfolio-wide improvements qualify for recognition as ENERGY STAR Leaders. www.energystar.gov/leaders

For more information on ENERGY STAR resources and recognition, visit www.energystar.gov/CRE

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