

December 2009 / January 2010

Benefits of Greening Your Facility

With mounting environmental concerns over energy use, building “green” is more important than ever. However, it’s key to keep in mind that while green building is gaining acceptance, it’s still a relatively young movement. At present, green buildings account for approximately 10 to 15 percent of the overall new construction market.

That is changing — rapidly. Judging by the explosive growth of the U.S. Green Building Council (USGBC) — which has seen its membership roster increase from 500 members three years ago to more than 12,000 today — green development is well on its way to being a mainstream business practice. The USGBC created a structured certification program called Leadership in Energy and Environmental Design (LEED), which is making the process of building green even more standardized. The mainstreaming of green development has been recognized as a smart, long-term investment by developers as well. They are responding to companies’ demand for facilities that are more energy-efficient and are building facilities with materials that are nonpolluting, recyclable, and biodegradable.

Nationally, corporations have implemented sustainability concepts into their manufacturing, packaging, and logistics processes. Sustainable buildings are a natural extension of this mindset, allowing corporations to live and work in building environments that are constructed with an eye on conserving resources and using materials that are neutral to the environment. In addition, utilizing recycled, reclaimed, or salvaged materials can lessen the burden on landfills by reducing the need for dumping. Developing a green building means exhibiting a commitment not only to the quality of the building itself and the customers’ experience upon leasing, but also to being a good environmental corporate citizen within the community. Among the corporations that have built green facilities in recent years are Toyota, Southern California Gas, Steelcase, Herman Miller, Johnson Controls, Interface, IBM, PNC Financial Services, and Ford Motor.

Tangible and Intangible Benefits

Green buildings have numerous advantages, both tangible and intangible, including a reduction in energy costs and, potentially, a healthier, more productive work force. There are often higher long-term tenant retention rates due to enhanced user satisfaction, health, comfort, and productivity. The benefits associated with a comfortable staff are significantly higher than energy and water costs, as a building will become more desirable if it can provide a higher level of environmental quality (thermal, lighting, indoor air quality, etc.) for its occupants.

Sustainable design also offers significant advantages in the areas of energy and water use reduction, air quality improvement, and increased material efficiency. Nonetheless, justifying green on a cost analysis is a complex process to be sure. Bottom line results must be carefully weighed to guard against pursuing a green program that is marketing hype or an empty fad. There are a number of clear economic advantages to sustainable building, including immediate savings in the area of utility costs.

Buildings with efficient layouts can reduce the cost of building materials and construction waste. Additionally, by utilizing efficient heating, ventilating, and air conditioning (HVAC) equipment, the building relies more on passive strategies for heating and cooling, thereby cutting the cost of equipment. Financial incentives from local utility companies are also possible for buildings that utilize sustainable design strategies.

Construction practices involving the storage and disposal of materials are being adjusted to be more environmentally sound. Modern green buildings will also have carpets produced with recycled materials, more energy-efficient mechanical systems, more natural light, and the exterior landscaping will become more drought tolerant. As the green building movement takes shape, expect to see typical grass berms at industrial sites give way to more sophisticated and complex green features. One such component has been bioswales, which have water-retaining capacities, or French drains, which reduce the amount of water discharged into sewer systems.

Pursuing LEED Certification

LEED Certification, which is currently the most accepted method of judging the sustainability of a building, requires buildings be commissioned as part of the process, which typically takes place approximately six months following completion of a building. Commissioning ensures that building systems work the way they were designed and built, and are as efficient as promised. Although the barriers to developing green buildings are becoming lower every year, there are few merchant developers, or those seeking to build, lease, and dispose of an asset, pursuing LEED certification as a strategic long-term strategy. Developers that adopt a long view may realize significant return on investment (ROI) over time simply because the customer base is increasingly demanding green space to satisfy their need and desire to be more carbon neutral. The commitment to green for a developer must be resolute because it is a costly and time-consuming process of ensuring green construction practices are utilized. Additionally, a developer must oversee a host of LEED consultants and manage the certifications to ensure a building achieves the level of certification desired.

The USGBC program provides multiple levels of LEED certification that developers can adopt for a specific building. This fact means not all green buildings are created equal and companies would be wise to examine the differences between one level or another.

The LEED for New Construction Rating System is designed to guide and distinguish high-performance commercial projects. LEED is a point-based system where projects earn LEED points for satisfying specific green building criteria. Within each of the six LEED credit categories, projects must satisfy particular prerequisites and earn points. The six categories include:

- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality
- Innovation in design (projects can earn ID points for green building innovations)

The number of points the project earns determines the level of LEED certification that the project receives. LEED certification is available in four progressive levels: Certified, Silver, Gold, and Platinum.

In Sum

As corporations seek to achieve greater levels of social responsibility and environmental sustainability, green development has truly become a mainstream business practice. Leaders in the development community certainly can expect green building to translate into an increased percentage of their portfolio holdings and should begin to drive a larger part of their profits in the coming years.

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Sidebar: How to “Green” Your Facility

Green or sustainable buildings typically utilize best practices when it comes to energy, water, construction materials, and land, and thus are more efficient than buildings simply built to local

building codes. They may also be healthier workplaces, featuring more natural light and cleaner air, and contributing to higher worker productivity. To become more “green,” the Building Owners and Managers Association (BOMA) suggests you do the following:

- Adopt preventative maintenance practices;
- Perform regular check-ups on equipment, controls, and EMS;
- Calibrate thermostats frequently;
- Adjust dampers;
- Re-think cleaning procedures, i.e., team-cleaning, occupancy sensors, day cleaning in natural light or when lights are on
- Work with tenants to reduce consumption, i.e., turn off equipment, institute energy-awareness programs, encourage the use of ENERGY STAR equipment, install/monitor power-management software, make use of natural daylight, turn off overhead/task lights during the day, clean windows/skylights, use work-station task lighting;
- Examine lighting, which can account for up to 30 percent of a building’s energy usage; consider using CFL and HID lights, convert T12 to T8 and T5, de-lamp and disconnect unused ballasts, verify performance of full floor lighting sweeps, install occupancy sensors, use high-efficiency LED exit signs, install timer controls or photocells for exterior lighting;
- Use energy-efficient controls and adjust building temperature according to the best comfort zone for all; set lowest amount of dehumidification of unoccupied space; raise indoor settings during cooling season; evaluate after-hours usage; adjust ventilation; limit access to thermostats; monitor weather reports and adjust accordingly; optimize start-up and equipment sequencing; consider early power-downs at the end of the day;
- Explore equipment upgrades, install variable frequency drives at variable air volume systems, install heat-recovery equipment, relocate thermostats to optimal locations.