

Sharing the Facilities Management Burden

by William Holland AIA, LEED AP | November 1, 2008

Just as it takes a village to raise a child, it takes more than a facility manager to operate and maintain a green building, and the newest Leadership in Energy and Environmental Design (LEED) program sees to that. The LEED for Existing Buildings: Operations & Maintenance (LEED-EB O&M) program for the first time addresses the ongoing and sustainable operations and maintenance of existing buildings.

What's unique is that the LEED-EB O&M rating system is designed to capture both a building's physical systems (equipment, design, land use, etc.) and the way the building is occupied and operated by its managers (waste management, temperature, monitoring, commuting programs, etc.). The intent is to promote high-performance, healthy, durable, affordable, and environmentally-sound practices in existing buildings.

With this new focus on a sustainable building with green practices and policies, various corporate departments need to

work together to accomplish the shared goal. With LEED-EB O&M, the facility manager has the good fortune of sharing the burden with other departments.

Hobbs Brook Management, LLC, a commercial real estate management firm in the suburban Boston area, has embraced green maintenance and operations for all of its properties in an effort to improve the health and safety of the office park, staff and tenants. >> Photo courtesy of Margulies Perruzzi Architects.

Setting Green Goals

From the outset, LEED-EB O&M certification is most successful when a green operating mandate comes from the executive suite and creates a corporate vision for operating the business, and the office environment, in a sustainable way. Execution of this vision then trickles down through the departments, with sustainability remaining the common goal.

For example, Hobbs Brook Management, LLC, a commercial real estate management firm in the suburban Boston area, made the decision in 1989 to embrace green maintenance and operations for all of its properties in an effort to improve the health and safety of the office park, staff and tenants. Ronald Shaw, facilities manager at Hobbs Brook Management, says that the company implemented specific measures such as thermal water storage, green housekeeping, and office park-wide recycling policies to make its facilities more cost- and energy-efficient. Hobbs Brook Management's corporate vision provides a great example of a facility manager working with colleagues in the purchasing, human resources, and even legal and real estate departments, to operate and maintain green buildings.



The Facility Manager is Still King

Under LEED-EB O&M, the facilities manager will continue to own the custodial and engineering aspects of building maintenance, but the outcomes now have a broader effect on employee health, energy consumption and the company's bottom line.

By reducing water and energy usage as well as solid waste disposal and increasing recycling efforts, companies can realize significant financial savings. LEED-EB O&M also calls for reducing volatile organic compounds (VOCs) in carpeting and promoting more local control of heat and ventilation, through windows that open for ventilation, natural light, and views. Collectively, these measures can help improve indoor air quality and employee health, and even boost productivity through reduced illness and absenteeism.

Because energy consumption and associated costs receive a lot of attention these days, facility managers are motivated to seek more efficient products and procedures. Hobbs Brook Management requires that its buildings be at least 15 percent more energy efficient than a traditional spec office building, and the company has made the appropriate upfront investments in order to realize savings and efficiency in the future. For example, Hobbs Brook Management employs thermal water storage with a turbo ice machine system in a number of its buildings in an effort to conserve energy. The systems, installed by New England-based Building Automation Sys-



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tems, provide chilled water and ice storage during off-peak energy hours for cooling the buildings the following day. (See sidebar for details.)

Purchasing Holds the (Green) Purse Strings

The purchasing department can also do its part toward LEED-EB O&M certification by buying green, durable products, such as reduced-mercury lamps, and showing a preference for products made with recycled content and salvaged materials. To minimize the environmental impact of furniture disposal, many companies have even opted to recycle excess office furniture and supplies through non-profit organizations such as The Furniture Trust (www.thefurnituretrust.org) and Building Materials Resource Center (www.bmrc.com), both based in Boston.

Green cleaning and maintenance should be a core element of any LEED-EB O&M program, as purchasing (and using) green cleaning supplies are safer and healthier for janitorial employees and the general employee environment. Working with its janitorial service provider, Janitronics, Hobbs Brook Management has used green cleaning products in its facilities for the past five years. The Green Seal-approved cleaning program currently employs four cleaning products and a cleaning management program by 3M, and in 2009, will integrate HEPA vacuum cleaners, flat mops and microfiber dust cloths. Although the initial cost of this equipment is higher, they require fewer resources to operate, provide a safer environment for the janitorial staff as well as the tenants of the buildings, and improve air quality. (See sidebar for additional details.)

Human Resources

The HR department can help a company earn credits in support of LEED-EB O&M certification by promoting alternative commuting options, such as installing bike racks for two-wheeled commuters, offering mass transit reimbursement, organizing company carpools, and showing that a percentage of staff relies upon alternative fuel vehicles.

By encouraging telecommuting and compressed workweeks where appropriate, the HR department can also contribute to a smaller carbon footprint for the company. The LEED-EB O&M program also requires enforcement of a no-smoking policy and development of a company-wide recycling program.

For Hobbs Brook Management, green practices extend to include preferred parking for hybrid vehicles and carpoolers, as well as making shower facilities available to encourage the use of bicycles as transportation.

Legal and Real Estate

The legal and real estate departments can play a role in how green buildings are acquired and maintained, and how sustainable policies are crafted, adhered to and publicized. The legal department should consider how leases are written and what role green details play in the agreement. Leases should be written so that tenants have an incentive to save energy, and should also encourage adherence to green programs in construction as well as operations. The real estate department also needs to work with the facility manager to eye potential properties and what might be involved with maintaining them in a green way.

With the new LEED-EB O&M program, facility managers have real incentives to seek the attention and cooperation of various departments within their company to effectively operate and maintain a green building. It takes a village, or just teamwork, to get the green in the details.

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Building Automation Systems' (Weymouth, Mass.) TURBO Thermal Ice Storage System

Ice storage is becoming an important energy-saving element in green design, and many energy providers and utilities offer rebates and promotions for using such a system. The main benefit of this system is that it allows for the production and storage of ice 24/7, reducing the electrical demand during standard business hours. At one of Hobbs Brook Management's larger buildings, a typical day would require 1,400 tons of ice to be produced in order to cool the building during a traditional work day. Because the turbo ice machine allows for ice storage, the system only needs to make 850 tons of ice, drawing off the reserve when necessary to make up the difference. Drawing a lower electrical demand during the day means that the air conditioning equipment uses approximately 40 percent less energy than a conventional system. The up-front costs were reduced as well due to lower equipment costs, and maintenance requirements. Because the system operates like basic refrigeration, the facility's regular HVAC technicians can work on it.

The result of using this system saved the tenants of Hobbs Brook Management a total of \$250,000 in peak energy costs in 2007. An added bonus is that Hobbs Brook Management is able to receive premium pricing from its vendors by planning its energy consumption ahead of time.

Janitronics' (Waltham, Mass.) Green Cleaning and Maintenance

Office building tenants are looking for an increased level of green cleaning service from their property manager, and the cleaning industry is responding. Hobbs Brook Management works with Janitronics, a janitorial services company, to implement its green housekeeping practices. Janitronics has comprehensively researched and developed its own green program in order to stay ahead of the curve, admitting that most janitorial firms with an office market portfolio are implementing similar green initiatives. Janitronics will be integrating these changes into its green cleaning program for the Hobbs Brook Office Park in 2009:

Traditional upright vacuum cleaners will be converted to HEPA filtration backpack units, which reduce the particle size to .03 microns. Although nearly double in price, the backpack unit is better ergonomically for the laborer, with a lighter wand that enables faster cleaning and results in better productivity.

Traditional string mops will be replaced by new flat mops that require less water to clean and provide a more sanitized environment.

Dusting will be performed with microfiber dust cloths that trap dust particles and prevent disbursement of dust into the air.