

Resource Review: *Green Guide for Health Care*™

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SUMMARY

The *Green Guide for Health Care*™ is a voluntary, self-certifying tool that health care facilities can use to evaluate the impact of their built environments on human health. An overview on the scope and usefulness of the *Green Guide* is offered below.

OVERVIEW

The *Green Guide for Health Care*™ is the health care sector's first quantifiable toolkit for sustainable design, construction, and operations. Modeled, with permission, on the U.S. Green Building Council's Leadership in Energy and Environmental Design Rating System (LEED®), the *Green Guide* is tailored to work within the framework of specific health care regulatory requirements, such as ICRA (Infection Control Risk Assessment), that control many aspects of acute care hospitals' physical environment and facility operations. Acknowledging the health care sector's fundamental mission to "first, do no harm," the *Green Guide* emphasizes the intrinsic relationship between the built environment and human health through health-based credits and a Health Issues statement associated with each credit in the document.

Two innovations encourage facilities to use the *Green Guide* as a continuous improvement framework that bridges the construction/operations divide:

- a prerequisite for an integrated design process
- cross-referencing between the Construction and Operations sections

The roll out of the *Green Guide for Health Care* Version 2.2 in January 2007 marks the end of the pilot program and the next step in the *Green Guide*'s evolution. The pilot program, launched in 2005, hosted 115 projects representing more than 30 million square feet in the United States and abroad. Projects enrolled in the pilot have been automatically re-registered as *Green Guide* Version 2.2 projects. Registration for new *Green Guide* Version 2.2 projects will open to the general public in March 2007. All projects using the *Green Guide* are

welcome to register and to participate in building a body of knowledge on current best practices in green health care design, construction and operations.

The *Green Guide* pilot program provided insight into groundbreaking strategies underway at health care facilities across the country. As an example, The Christ Hospital, a pilot project in Cincinnati, Ohio, is applying the *Green Guide* to several upgrade and renovation projects, with a vision to implement their green design and construction practices on a facility-wide level, building on environmental strategies they had previously employed for the facility's operations. By so doing, they are using the same incremental approach that led to their successful achievement of a U.S. EPA ENERGY STAR® rating and Hospitals for a Healthy Environment's (H2E) prestigious Making Medicine Mercury Free award. The Christ Hospital also plans to certify every building on campus with the LEED® for Existing Buildings green rating tool. By combining green construction and operations into a single continuous improvement program with clear, measurable goals, the hospital has successfully implemented projects that reap multiple benefits, such as reducing both energy and water consumption (and costs) by installing a dynamic control for the chilled water plant. This project catalyzed the pursuit of other water and energy projects, such as a recommissioning program for major air handling systems and an investigation into possible use of rainwater for landscape irrigation.

USING THE GREEN GUIDE FOR HEALTH CARE

The *Green Guide* is structured as a voluntary, self-certifying tool, and has been successfully applied to a variety of building types and sizes. Roughly 70 percent of the *Green Guide* pilots are either acute care or specialty hospitals, with the remainder spread across medical office buildings, clinics, and retirement communities.

Registering a project with the *Green Guide* is free. Participating registered projects are provided with access for up to nine project team members to online project management tools as well as the

online forum, a peer-to-peer list-serve designed to allow participants to share implementation strategies, ask questions, and build knowledge about each credit. The *Green Guide* Steering Committee members participate in the forum, and help to clarify technical issues, credit language, requirements, and intent. The *Green Guide* project contact also has access to online project management tools, such as electronic credit checklists for both the construction and operations sections.

THE GREEN GUIDE: TOWARD A NEW PARADIGM IN HEALTHCARE

Health care providers inadvertently contribute to the proliferation of some diseases they work diligently to cure by neglecting to operate their facilities with an awareness of the connection between an individual's environment and his or her health.

GREEN GUIDE FOR HEALTH CARE STRUCTURE

The organization of the *Green Guide* is modeled, with permission, on the LEED® rating system. Unlike the LEED family of products, the *Greens Guide* is not a rating system and is run as a no cost, voluntary program. The *Green Guide* does not provide achievement level threshold rankings such as the Certified, Silver, Gold, and Platinum levels found in LEED.

Although many of its mandatory prerequisites and voluntary credits are in direct alignment with LEED, the *Green Guide* differs from LEED counterparts, LEED for New Construction and LEED for Existing Buildings, in three important ways.

1. Integrated Design and Operations

The *Green Guide* has incorporated two prerequisites that require the adoption of an integrated design approach to the development of the project: starting with the design of the building and continuing through construction and on to facility operations.

The intent of Integrated Design Prerequisite 1 is to “[e]stablish and implement a multi-stakeholder collaborative goal setting and design process.” The intent of Integrated Design Prerequisite 2 has a more health care focus in calling for the team to “[e]stablish human health as a fundamental evaluative criterion for building design, construction, and operational strategies.”

2. Construction Versus Operations

The *Green Guide* combines the design and construction issues of LEED for New Construction with the operational issues of LEED for Existing

Buildings. Within the introduction to the *Green Guide*, each credit's relationship with LEED is identified as identical to LEED (NC2.2 or EB), a modified version of a LEED credit, or new and unique to the *Green Guide*.

The Construction Section of the *Green Guide* focuses on the design and construction of new and renovated facilities and borrows heavily from the LEED for New Construction 2.2 Rating System. A new section, Integrated Design (IN) introduces the Construction section. However, the remaining six Construction categories align with LEED for New Construction: Sustainable Sites (SS), Water Efficiency (WE), Energy & Atmosphere (EA), Materials & Resources (MR), Environmental Quality (EQ), and Innovation & Design Process (ID).

The Operations Section of the *Green Guide* focuses on facility operations and borrows from LEED for New Construction, LEED for Existing Buildings and Hospitals for a Health Environment, a non-profit that helps health care facilities reduce their ecological footprint and the Operations section is organized as follows: Transportation Operations (TO), Energy Efficiency (EE), Water Conservation (WC), Chemical Management (CM), Waste Management (WM), Environmental Services (ES), Environmentally Preferable Purchasing (EP), and Innovation in Operations (IO).

3. Health Intent

The unique feature of the *Green Guide*, which is clearly geared toward the education of health care providers on the positive effects of building green facilities, is the addition of the Health Issues statement, which describes the impacts of each credit topic on human and environmental health. For example, the Health Issues statement associated with GGHC Sustainable Sites Credit 4.2, Alternative Transportation: Bicycle Storage and Changing Rooms states the following:

“Encouraging bicycling to work contributes to a healthy lifestyle, while offsetting reliance on motorized transport, and the associated chemical and particulate emissions, and land use dedicated for parking and other vehicular infrastructure. According to the World Health Organization, cycling may be an important contributor to delayed mortality.”

LEED OR THE GREEN GUIDE: MAKING THE CHOICE

The choice between using the LEED Rating System and the *Green Guide* relies primarily on the goals of the owner of the health care facility.

Competition among health care providers is requiring owners to differentiate themselves among their peers. Owners focusing primarily on the public relations benefits of incorporating sustainability into the design, construction, and operations of their facilities will be interested in the name brand recognition behind the LEED Rating System.

In situations where the driving force behind a health care project's focus on sustainability extends beyond its public relations value, the *Green Guide* offers the owner both the familiar structure of LEED and a toolkit that is customized to the challenges of health care facilities.

Owners interested in both the public relations value of LEED and a system customized to advance sustainability in health care may be interested in using the appropriate LEED product in conjunction with the *Green Guide* to customize the design process for health care. The USGBC is currently working on such a product through the development of a LEED for Healthcare tool, due for release in 2007.

ABOUT THE CONTRIBUTORS

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RESOURCES

More Best Practices

The following AIA Best Practices provide additional information related to this topic:

- 16.02.08 Steps Towards LEED Certification
- 16.02.06 Differences in Environmentally Preferable Products
- 116.01.02 Green Roof Design

For More Information on This Topic

To learn more about the *Green Guide for Health Care*™, see www.gghc.org

See also "Selecting Environmentally Preferable Products" by Nadav Malin, LEED AP, in *The Architect's Handbook of Professional Practice 2005 Update*.

See also the 14th edition of the *Handbook*, which can be ordered from the AIA Bookstore by calling 800-242-3837 (option 4) or by email at bookstore@aia.org.



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Key Terms

- Building performance
- Sustainability
- Sustainable design knowledge
- Energy efficient buildings