

## Sustainability in healthcare

An overview of available  
rating systems

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Healthcare facilities have significant environmental footprints that impact the communities they serve. Hospitals and other health-related facilities are highly energy-intensive buildings, consuming more than eight percent of the nation's energy and contributing to issues related to water use, hazardous waste, toxic chemicals, and material consumption. A number of factors, including energy costs, financial savings, community pressure, climate change, improved operations, social responsibility, and regulations, are motivating healthcare organizations to implement more environmentally sustainable practices. Going green can involve difficult culture change, overcoming barriers to action and cutting through all the hype, spin, and misinformation. Today,

a number of tools and green rating systems target sustainable healthcare facilities and operations. The most prominent are LEED for Healthcare, Green Globes CIEB Healthcare, Green Guide for Health Care, Healthier Hospitals Initiative, Sustainability Roadmap for Hospitals, and Sustainable Design Guidelines for Hospitals and Outpatient Facilities.

### **LEED for Healthcare**

The LEED (Leadership in Energy and Environmental Design) rating systems from the U.S. Green Building Council (USGBC) are well-known third-party-certification systems. Since its start in 1998, LEED has evolved into a number of specialized areas. New versions better suit the needs of specific build-

ing types, and revisions have increased performance requirements. Released in November 2010, LEED 2009 for Healthcare is intended for new construction and major renovations at primarily inpatient or outpatient care facilities and licensed long-term care. Healthcare projects that don't meet that profile can still use the more generic LEED for New Construction or LEED for Existing Buildings: Operations & Maintenance, if appropriate.

LEED offers four levels of certification—Certified, Silver, Gold, and Platinum. There are 110 points available, divided among seven categories—Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental

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Quality, Innovation in Design, and Regional Priority. The LEED certification process is managed by the Green Building Certification Institute (GBCI).

Projects seeking certification register with the GBCI early in the design process. The project team assembles documentation to demonstrate the project's compliance with LEED standards, and submits documents online.

### Green Globes CIEB Healthcare

The Green Globes rating system was brought to the U.S. by the nonprofit Green Building Initiative (GBI) as a more flexible and user-friendly alternative to LEED. Green Globes evolved from the Building Research Establishment Environmental Assessment Method (BREEAM), which launched in the United Kingdom in 1990. In 2004 GBI brought the Green Globes online assessment tool from Canada to the U.S. The Green Globes New Construction system is generic and intended for all building types, but the healthcare-specific version of Green Globes CIEB (Continual Improvement of Existing Buildings) has been used extensively by the Veteran's Administration and other healthcare entities.

There are four levels of certification, ranging from one to four "globes," with points divided among six categories—Energy, Water, Resources, Emissions, Indoor Environment, and Environmental Management. To achieve a rating of at least 1 Green Globe a project needs to achieve at least 35 percent of applicable points. GBI has a web-based interactive assessment tool. After completing the online assessment, a third party assessment can be requested and an assessor will interface with project teams and owners to review documentation, and conduct an on-site assessment.



### Green Guide for Health Care

The Green Guide for Health Care—the first healthcare-specific sustainable rating system—was established in 2002 as a project of the nonprofit Center for Maximum Potential Building Systems and Health Care Without Harm.

Though no longer active, its valuable guides are still available online. This system borrowed its organizational structure from LEED, and the GGHC team actively collaborated with US-GBC to develop the LEED 2009 for Healthcare system. The Green Guide's construction section closely parallels LEED, while its operations section varies a great deal and is organized in accordance with commonly understood areas of responsibility in a hospital. The Green Guide was a "self-certifying" system that encouraged facilities to establish internal record keeping and tracking systems to monitor their progress, and provided suggestions for documentation.

### Healthier Hospitals Initiative

The Healthier Hospitals Initiative (HHI) was launched in 2012, sponsored by 13 of the largest U.S. health systems, and partnered with three nonprofits—Health Care Without Harm, Practice Greenhealth, and the Center for Health Design. Offering free tools

and resources, HHI's system helps hospitals incorporate environmentally friendly practices into daily operations through a roadmap of specific, measurable interventions. In exchange, participants measure results and report their progress. The data will be used by HHI to illustrate change in healthcare and build a case for greater sustainability. The initiative seeks to enroll 2,000 hospitals by April 2015, and currently has commitments from nearly 1,000. After enrolling, hospitals choose one or more "challenges" to work on—Engaged Leadership, Healthier Food, Leaner Energy, Less Waste, Safer Chemicals, and Smarter Purchasing. Participants can access tools and resources that include step-by-step implementation guides, a mentor program, case studies, webinars, peer networking, and strategy sharing. Hospitals submit data, but there is no third-party review or certification. HHI will issue a milestone report each spring.

### Sustainability Roadmap for Hospitals

The Sustainability Roadmap for Hospitals was initiated in 2010 through a collaboration of the American Society for Healthcare Engineering (ASHE),





the Association for the Healthcare Environment (AHE), and the Association for Healthcare Resource & Materials Management (AHRMM). The Roadmap isn't a formal system, but offers tools and resources to help healthcare facilities map their own journey to a more sustainable future. The Roadmap is probably the most flexible option in the industry, requiring each facility to create their own structure and accountability. The Roadmap seeks to create a community for sharing best practices and to provide tools and resources. Its website will eventually have a Consumer Guide to Green Health Care Programs to assist hospitals in evaluating rating systems and other sustainability tools.

Roadmap materials are available for download without restriction or registration. The content ranges from

general sustainability guides to specific measures for improving performance. Information is organized into seven topics—Building Design & Construction, Commissioning, Energy & Emissions, Water & Effluent, Waste, Supply Chain, and Chemicals. Each facility can use these resources to create a sustainability plan. New content is welcome from the entire healthcare community; however, all submissions are reviewed by ASHE, AHE, and AHRMM before being published.

### **Sustainable Design Guidelines for Hospitals and Outpatient Facilities**

Since 1998, the nonprofit Facilities Guidelines Institute (FGI) has overseen revisions to the *Guidelines for Design and Construction of Health Care Facilities* that have been adopted (in some form) as code by most states. In 2013 the FGI issued a draft white paper, *Sustainable Design Guidelines for Hospitals and Outpatient Facilities*. The proposed Sustainable Design Guide is a glimpse into a future where sustainable performance for hospitals will be mandated—similar to today's minimum requirements for energy performance and life safety. The FGI expects to finalize the white paper this year. The final version will be included as an appendix to the *2014 Guidelines for Design and Construction of Hospitals and Outpatient Facilities*. FGI anticipates that sustainability requirements will be integrated into the guidelines during the 2018 revision cycle.

Requirements are proposed in seven categories—Building Site; Energy Use; Indoor Environmental Quality; Water Supply; Airborne Emissions, Effluent,

and Pollutant Control; Materials and Resources; and Waste. Each category has mandatory requirements, and, in most cases, additional requirements that can be satisfied by choosing either a “performance path,” or a “prescriptive path.” The performance path is flexible, allowing compliance based on achieving a specified level of performance against a benchmark minimum. The prescriptive path is more rigid in compliance with specific requirements.

### **Finding the Right System**

Sustainability is here to stay, and there are more options than ever for integrating green practices and technologies into healthcare facilities. Energy efficiency, water conservation, safer chemicals, better waste management, and sustainable purchasing are consistent topics. In each system, metrics and goal setting are important. Benchmarking and measuring results let facilities see if significant change is really happening, and going an extra step to share data and best practices helps others see which efforts are most valuable.

As the number of green systems has grown, they have also evolved to better suit the realities of the healthcare marketplace. The Healthier Hospitals Initiative and Sustainability Roadmap for Hospitals have made a deliberate effort to simplify tools and increase flexibility to make adoption of sustainable practices easier and more widespread. Traditional third-party certification systems like LEED or Green Globes provide added credibility and recognition to projects. Ultimately, choosing a rating system should be based on how well the system aligns with an organization's objectives, needs, and resources.

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