

SKANSKA

Green Building



Skanska's Green Approach

At Skanska, we are committed to being more than the leading green builder. We strive to be at the leading edge of sustainable building methods and technology and foster a business culture that is committed to environmental stewardship. Skanska works as a member of the project team from the earliest phases of pre-construction to explore energy-efficient options and environmentally responsible solutions that provide the best initial and lifecycle values. On the construction site, safety, recycling and procurement initiatives reflect our commitment to the triple bottom line of sustainability. For our clients, this commitment translates to the delivery of customized, innovative and affordable green building solutions that meet their functionality and business goals. We know that building today really means building to support tomorrow.



A Comprehensive Commitment

From our offices to our job sites, Skanska is a consistent leader in green practices. Consider:

- **Our Experience.** Skanska has been building green for nearly two decades and has constructed some of the landmark LEED® (Leadership in Energy and Environmental Design) projects in the U.S. Backing up our extensive project portfolio are more than 425 LEED Accredited Professionals representing nearly every corner of our workforce. In fact, nearly half of our progressive pre-construction department is composed of LEED AP's. Well-versed in high-performance, energy-efficient solutions, we are dedicated to reducing energy and environmental impacts in support of our clients' bottom lines.
- **Our Environmental Management System (EMS).** Skanska was the first U.S. construction firm to have

all of its operations certified to the ISO 14001 EMS standard for environmentally sound business practices. And we work to keep it that way. Skanska submits to independent, third-party certification under this registration. Never complacent, we are committed to constant and continuing improvement of our EMS program. After all, shouldn't we uphold the same environmental standards as our clients?

- **Our Green Consulting Services.** To better support our clients' needs, we offer green consulting services. From running LEED checklists to performing sophisticated energy audits, we provide services designed to anticipate and exceed our clients' needs. Skanska's Green Council networks local green expertise across the country, and all we do is supported by our Green Construction Global Support Unit (GSU). With local experts backed by worldwide resources and knowledge, Skanska has an unparalleled ability to share the most efficient, most innovative and cost-effective green strategies with our clients.
- **Our Key Performance Indicators.** What gets measured, gets done. Environmental stewardship is a core value at Skanska and we have developed several Key Performance Indicators that guide our daily activities. We promote and measure energy efficiency, actively seek vendors that work with a sustainable mindset, and promote a zero-waste strategy that encourages waste reduction, reuse and recycling.



Green and Skanska

- Consistently named one of the largest contractors and green builders in the U.S. (ENR)
- Builder of the first LEED Certified airport terminal in the U.S. — Delta Air Lines Terminal A, Logan International Airport, Boston, MA
- Builder of the first LEED Gold certified hospital in the world, Providence Newberg Medical Center, Newberg, OR
- One of the highest employee ratios of LEED Accredited Professionals in the industry
- A leader in cutting-edge green practices, such as participation with SERA Architects' team for the Cascadia Region Green Building Council's landmark Living Building Financial Study
- Corporate member of the United States Green Building Council (USGBC)
- The first construction management firm to have all of its environmental management systems registered to the ISO 14001 standard



Addressing the Triple Bottom Line

We know our clients build green for more than just the environmental benefits. From the start, Skanska works with every client to focus on the triple bottom line of sustainability, striving to meet the needs of the world today without jeopardizing the needs of society tomorrow.

- **Economic Responsibility.** Skanska is dedicated to supporting client success—and it starts by working on-time and on-budget. We balance initial green costs with the overall lifecycle value, helping our clients make informed decisions based on tangible factors.
- **Environmental Responsibility.** We excel in project execution and serve as strategic partners to our clients, delivering environmentally responsible solutions throughout the project lifecycle.
- **Social Equity.** We operate our business in accordance with the highest ethical and diversity standards—it's in our code of conduct. Additionally, safety is an integral part of our culture. Our Injury-Free Environment (IFE) program and Choose to Save a Life initiative underscore our commitment to making sure our employees and our subcontractors go home safely every day.



Making Data Centers Energy Savers

With energy costs soaring and the immediate demands to reduce carbon emissions, data centers are receiving a special “green” focus. Led by its Mission Critical Center of Excellence, Skanska has developed a unique low-cost solution to optimize data center energy efficiency.

Conventional data centers are designed to cool entire rooms without targeting the equipment heat sources. Cool air becomes hot only to be cooled again while constantly humidifying and de-humidifying. The results are increased cost, reduced efficiency, unbalanced Computer Room Air Conditioning (CRAC) workload, and predictable mechanical failures.



By routing cool air from the raised floor directly through the servers, equipment racks and cabinets, Skanska targets only the areas that require cooling. Our technique also minimizes unused white space that wastes cool air and forces the CRAC units to work harder without benefiting the temperature of the data center. A variety of other steps help enhance energy efficiency.

How much? In many cases, Skanska can reduce a data center's cooling footprint by 40-50 percent. CRACs can operate at higher temperatures and, by eliminating repeated dehumidifying-humidifying cycles, cabinet fan run time can be reduced by 85%. All this increases the life span of cooling devices and reduces maintenance costs.

The costs associated with going green this way are usually offset within a calendar year, all from significant energy savings. That's good for the environment... and the bottom line.

Building a Healing Environment the Green Way

Skanska has been one of the pioneers in green healthcare construction. After all, we built the first LEED Gold hospital in the U.S. – Providence Newberg Hospital in Oregon – and we've built many of the first LEED healthcare facilities throughout the U.S.

While the buildings themselves achieve a high level of efficiency, green hospitals have shown, in some research, to help with patient healing. Now, Skanska, working with one of its architectural partners, has developed a mock-up green patient room. With input from environmental psychologists, the room has been designed to help patients feel more comfortable and in control – in a situation where they traditionally do not.

The room incorporates many traditional LEED elements – including materials low in volatile organic compounds to enhance indoor environmental quality – as well as a heavy emphasis on natural light. What's more, the room demonstrates that green materials and technologies can be incorporated into hospital patient rooms at a nominal cost.



Not Just Green Today – Innovating for Tomorrow

Since the Living Building Challenge – the beyond LEED Platinum metric for zero net energy/zero net water/zero net waste buildings – was announced, there has been phenomenal interest from clients and design firms attracted by the simplicity of the concept. After clients begin to comprehend the magnitude of building a Living Building many asked “what is the cost premium and the payback?” The Living Building Challenge Financial Study, commissioned by the Cascadia Chapter of the U.S. Green Building Council, provides some answers.

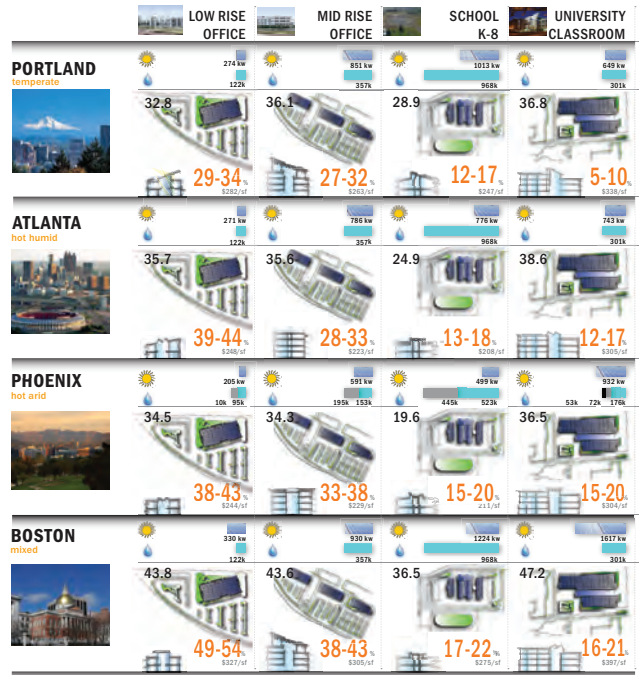
A team led by SERA Architects, joined by Skanska USA Building, Gerding/Edlen Development, New Buildings Institute and Interface Engineering conceptually transformed, on paper, existing LEED Gold buildings into Living Buildings – using real construction data and documents. Nine building types, ranging from residential to commercial and institutional were evaluated in four different climate zone cities: mixed, temperate, hot humid and hot arid.

Cascadia has heralded this work as a landmark study. More important than the absolute numbers derived for the sample of specific projects analyzed in this study are the tremendous insights gained regarding what influences the cost of any leading edge green building.

Skanska continues to pioneer innovative green practices, for even as today's green standards are leading us in the right direction, we need to be ready for tomorrow's needs.



LIVING BUILDING FINANCIAL STUDY



International landmark Looking Good in Green

New York City Pre-WWII construction doesn't lend itself to modern green building standards. As the move of Skanska's New York office into the 32nd floor of the Empire State Building shows, though, even these challenging spaces can be renovated to LEED® Platinum standards for no additional cost over the life of the lease.

By reducing water use by 40%, reducing plug load, maximizing daylighting and many other green strategies, Skanska provided a project that demonstrates to the New York real estate, construction, and design communities that a venerable building can achieve LEED Platinum.

And while they're not building any more Manhattan, Skanska showed that Manhattan can build itself to be sustainable for years to come.





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