

'PRIVATE INDUSTRY ALL WANTS TO BE SUSTAINABLE'
Becoming greener, Environmental concerns, lower costs push drive for energy-efficient buildings
Participants Definitions Features at National Park Service building

Rainwater flows from the parking lot into a cattail-lined holding pond so it drains into the Missouri River at the same rate as if grass, not concrete, were covering the land.

A gridwork attached to the building's south side blocks the sun's direct rays during the summer but lets in the sunshine during the winter.

A wall of limestone blocks, quarried in nearby Kansas, on the warmest side of the building helps to block heat from employees' work areas, reducing the need for air conditioning.

Yet for all its recycled-plastic carpets, unpainted structural beams, natural lighting, nonirrigated landscaping and light fixtures with automatic dimmers, the National Park Service's regional headquarters on Omaha's riverfront could lose its title as the city's "greenest" office building.

By the end of the year, that title may shift to a small engineering company's new headquarters at 80th and Chicago Streets.

That new building will have environmentally sustainable and healthy-to-people features because that's what the owner wants, not because of the federal mandates that governed the Park Service building's design and construction.

Thus "green" concepts are moving into the mainstream of the commercial building industry, partly because of rising concern over global warming and other environmental issues and partly because it's becoming cheaper.

"Private industry all wants to be sustainable," said Ravi Maniktala, whose M.E. Group is building the new headquarters. "That's the buzzword all over. How green are you? What kind of carbon footprint do you have?"

"It's not going to go away. There's a constant green conversation going on all over in the business world."

It remains to be seen whether the trend is happening fast enough to meet the green-building advocates' goals: cutting energy consumption in buildings in half by 2010 and making all buildings "carbon-neutral" by 2030.

If that happens, it will be because of buildings like Maniktala's.

The small building, with 6,000 square feet on two levels, would be the first to earn the top rating, platinum, from the U.S. Green Building Council of Washington, D.C. The nonprofit group has 10,000 member organizations, including 32 in Nebraska and 50 in Iowa, and 91,000 individual members, including contractors, developers, building owners, universities, suppliers and others.

The council has certified 889 buildings in the United States and has nearly 8,000 under consideration, representing \$12 billion in construction costs this year.

"I think we'll start to see an even bigger jump," said Ashley Katz, a spokeswoman for the council. "It's just a matter of time."

Buildings certified by the council emit 38 percent less carbon dioxide and cut energy use by 30 to 50 percent, she said.

That kind of savings reduces long-term costs for building owners, said Brad Schaap, director of sustainability for Leo A. Daly Co. The Omaha architecture firm, which designed the Park Service building, works with building owners to adopt the Green Building Council's principles.

But barriers remain, Schaap said.

One is the cost of certifying a building, which can range up to \$30,000. Another barrier, he said, is a weak set of tax credits and other incentives that help building owners afford more environmentally sound materials or utilities.

Even the expense of having a building certified can pay off, Schaap said, because experts can "tweak" a design and find ways that will save money over the years. "There's actually a great payback for starting that process. It may take four years to pay it back, but beyond that it's saving money every year."

Once owners understand the true, long-term savings that environmentally sensitive buildings can bring, he said, many become strong devotees.

"You have to be able to prove that there are returns on investment. We have the clients look at the life cycle costs."

One sign of the spreading appeal is that the council's national Greenbuild Conference in Chicago this November, which is expected to attract 18,000 developers, architects, contractors, suppliers and others. The 2002 conference in Austin, Texas, attracted 4,200.

The Park Service signed a 20-year lease on the riverfront building, which was developed by Noddle Development Co., with assistance by Grubb & Ellis Pacific Realty, and received the environmental council's gold rating. (SEE CORRECTION)

Brinker Harding, a Pacific Realty associate, said "green" materials and equipment are becoming cheaper because there's more competition among suppliers. "A lot of developers and owners are going to at least incorporate some of the components into their buildings."

Katz, from the Green Building Council, said the group's environmental standards are becoming a "best practice" for cities and states, showing up in legislation, ordinances and other policies in 55 cities and 22 states.

Maniktala said he can afford to invest extra money on the M.E. Group headquarters because he can use the building as a "show and tell" for clients. Part of his business is to consult with developers and owners on meeting the council's environmental standards.

That means he can justify buying solar cells that generate electricity or installing a system to "harvest" rainfall to use for flushing toilets, even though those features might not make economic sense for the average business.

He hopes the building will become a teaching laboratory for other professionals.

In Maniktala's view, the "green" building methods come in four levels:

The first level brings immediate financial paybacks, such as reducing electricity and water use.

The second enhances worker productivity and health, which is harder to measure but still significant.

The third is the benefit of being a good community leader.

The fourth is embracing the urgency of global warming and environmental damage that can be avoided or reversed through good practices -- a tougher sell to a cost-conscious building owner, he said, but important in the long run.

Participants

More than 1 billion square feet of building space in 30 countries has become part of the Leadership in Energy and Environmental Design program over the past five years. "Green" building products and services are a \$12 billion-a-year market. LEED registered projects, including those in planning, construction and review stages: homes, 5,931; new construction, 5,061; commercial interiors, 664; core and shell, 619; existing buildings, 463. LEED projects completed and certified: total commercial, 884; new construction, 679; commercial interiors, 119; existing buildings, 49; core and shell, 37; homes, 201.

Definitions

"Green" building

Design, construction and occupancy are aimed at the most efficient mechanical, electrical, civil and structural systems to minimize the use of energy, water and other natural resources.

Sustainable building

Along with "green" features, a sustainable building assesses its economic and social impact, maximizes the health and productivity of its occupants, uses its land and orients the building efficiently, and reduces waste during construction and operation.

LEED "green building" ratings

For new construction:

Leadership in Energy and Environmental Design awards points for site development, efficient use of water and energy, building materials and indoor environmental quality, plus points for design innovation.

For existing buildings:

LEED rewards conservation of energy, water and natural resources, improving the indoor environment and uncovering operating inefficiencies.

For homes:

LEED rewards design and construction of resource-efficient homes that are healthy for occupants.

For neighborhoods:

LEED encourages projects that enhance the health, natural environment and quality of life of communities. An example is a design that conserves energy and water or that reduces vehicle mileage by locating homes near jobs and services.

Ratings also apply to retail, multiple buildings/campuses, schools, health care facilities, laboratories and lodging.

The system also includes education and training, workshops, an annual international conference, professional accreditation, recommended legislation and public policies, project certification and international outreach programs.

Rating levels:

Certified

Silver

Gold

Platinum

Source: U.S. Green Building Council, a Washington, D.C., nonprofit group founded in 1993 with 75

chapters and more than 10,000 member organizations, including 32 in Nebraska and 50 in Iowa, and 91,000 individuals

Features at National Park Service building

THE INTERIOR allows maximum light penetration in order to decrease dependence on electricity.

PONDS COLLECT rainwater from the building and decrease runoff.

SPECIALLY DESIGNED OVERHANGS allow the sun's warmth into the building during the winter and reflect the rays during the summer.

LIMESTONE BLOCKS on the warmest side of the building help to block heat from employees' work areas.

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