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THE TOP 100 Green Design Firms



PHOTO BY GUY LAWRENCE FOR ENR

No Longer a Fad, Green Hits Mainstream

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Green building for several years had been a novelty, an extra, sometimes expensive, set of bells and whistles to hang on signature buildings. But over the past two or three years, concerns about the environment and global warming have brought sustainable design to the forefront of the construction industry. And

with the proliferation of green products and materials, and sudden surge in energy prices, building green no longer is an expensive luxury, but an often cost-effective alternative to traditional design.

In its first ever Top Green Design Firms survey, ENR has attempted to measure the green design market. The resulting ranking of the Top 100 Green Designers (see p. 4) is based on firms' 2007 design revenue from projects registered with, and actively seeking certification from, third-party ratings groups under objective environmental or sustainable design standards, such as the U.S. Green Building Council's Leadership in Energy and Environmental Design standards.

The Top 100 generated design revenue of \$1.74 billion from green projects in 2007. Of this total, \$1.62 billion came from projects in the U.S., while \$121.2 million came from projects abroad. Green design accounted for 7.4% of the Top 100's total design revenue. But in the general building market, where green standards are pervasive, green projects accounted for \$1.56 billion in revenue out of a total of \$8.68 billion, or 18.0%, for the Top 100.

"No one expected green building to grow as quickly as it has," says Paula Vaughan, associate principal and co-director of sustainable design for Perkins+Will. "I'm not seeing major resistance in any of the markets sectors." She notes that owners in retail, restaurant, housing and health-care

sectors all have become interested in sustainable design.

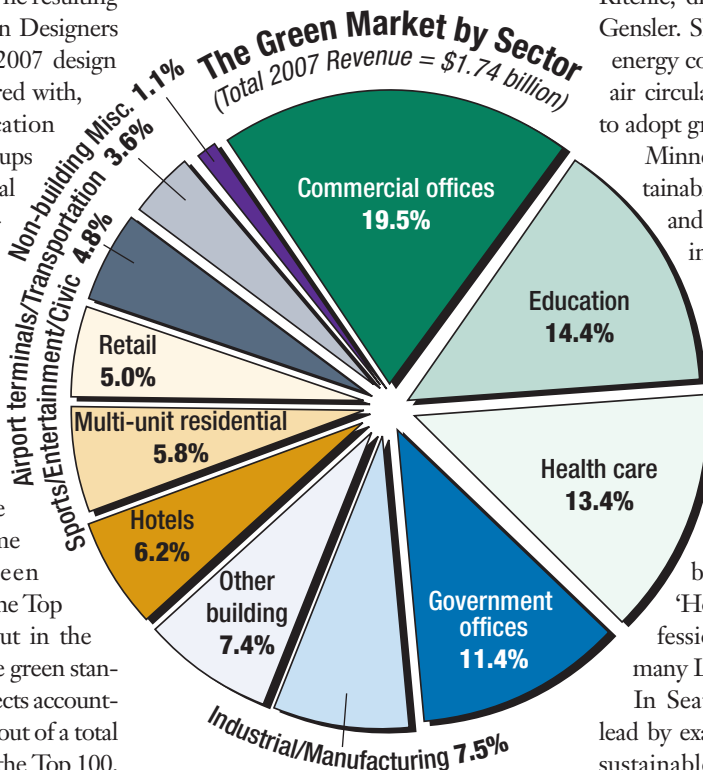
Sustainable design even has penetrated the developer market, although some need encouragement from local laws, says Eli Sherman, president of Vanderweil Engineers. For example, Boston and Washington, D.C., have local sustainability laws mandating LEED certification for new projects. "That is pushing a lot of developers that might resist LEED," says Sherman.

"We see a lot of developer work adopting sustainable design to take advantage of fast-track permitting in many local laws for high-level green building," says Kirsten Ritchie, director of sustainable design at Gensler. She says tenants are pushing for energy conservation and good water and air circulation, forcing smart developers to adopt green designs.

Minnesota has adopted its own sustainability guide to encourage owners and designers to take aspects such as insulation, air conditioning and energy use into consideration, says Patrick Thibaudeau, vice president at Hammel Green and Abrahamson. This has led to an increase in owner interest in LEED.

"HGA has always been conscious of sustainability, but more recently owners have been coming to us and asking, 'How many LEED accredited professionals do you have?' or 'How many LEED projects do you have?'"

In Seattle, local agencies decided to lead by example, says Teresa Burrelsman, sustainable design program director at



The Top 5 Commercial Offices

Revenue in \$ mil.

1 GENSLER	79.7
2 HOK	32.0
3 PERKINS+WILL	28.4
4 AECOM TECHNOLOGY CORP.	19.5
5 HKS INC.	18.1

The Top 5 Education

Revenue in \$ mil.

1 URS CORP.	32.0
2 AECOM TECHNOLOGY CORP.	16.1
3 HOK	15.2
4 CANNON DESIGN	12.4
5 TETRA TECH INC.	11.3

The Top 5 Government Offices

Revenue in \$ mil.

1 HOK	52.7
2 URS CORP.	30.8
3 AECOM TECHNOLOGY CORP.	28.3
4 KLINGSTUBBINS	13.5
5 BLACK & VEATCH	13.5

The Top 5 Health Care

Revenue in \$ mil.

1 HOK	32.6
2 URS CORP.	30.0
3 HKS INC.	29.5
4 HAMMEL GREEN AND ABRAHAMSON INC.	20.1
5 PERKINS EASTMAN	17.5

Callison. She says that this has led to a chain reaction where commercial developers came next, then corporations that wanted green headquarters, then condos, hotels and ultimately retail. "Retail has been the last to warm up to green design," she says, but lately Callison has seen a huge upsurge in retail requests.

Big Green Machine

For some designers, the size and scope of green projects are becoming larger. "We worked on the largest LEED certified building in the world, the Palazzo in Las Vegas," a 3,000-room, \$1.9-billion casino, says Sherman.

"We are doing the master plan for the New York City police academy in College Point, Queens," says Vaughan of Perkins+Will. The \$1-billion project will cover 35 acres and be designed to LEED standards, she says.

Gensler is helping design the MGM CityCenter in Las Vegas, says Ritchie. "That's an 18-million-sq-ft project where each building will be designed to LEED silver standards," she says. Flack+Kurtz is providing engineering services on that job, says David Cooper, president.

If there is a pocket of resistance to sustainability, it is in smaller projects. "When you have a small project, LEED requirements become increasingly more cumbersome, discouraging some small owners," says Don Posson, managing director of Vanderweil's Washington, D.C., office. "It is individual clients, not so much whole sectors, that are hesitant about green design," says Jonathan Weiss, project architect at KlingStubbins. He says pharmaceutical companies and developers have been conservative in embracing LEED standards but seem to be coming around.

If there is one concern at the moment,

The Top 5 Industrial & Manufacturing

Revenue in \$ mil.

1 FLUOR CORP.	92.5
2 TETRA TECH INC.	18.2
3 THE FACILITY GROUP	8.6
4 STELLAR	7.6
5 ALBERT KAHN FAMILY OF COS.	1.6

The Top 5 Retail

Revenue in \$ mil.

1 KIMLEY-HORN AND ASSOCIATES INC.	35.0
2 GENSLER	13.5
3 CALLISON	9.5
4 THE FACILITY GROUP	6.7
5 FXFOWLE ARCHITECTS PC	5.0

The Top 5 Sports, Entertainment & Civic

Revenue in \$ mil.

1 LEO A DALY	13.8
2 WSP GROUP	11.9
3 EWINGCOLE	10.2
4 GENSLER	8.7
5 CORGAN ASSOCIATES INC.	8.2

it is the tightening credit markets. "With money at a premium, there is more concern about first costs," says Sherman. Some developers are reluctant to go with sustainable designs that add cost unless you can show a quick payback, he says.

The tight financial markets mean that there are new opportunities in the tenant refit market. "The market for environmental upgrades of existing buildings is growing, particularly in Class B properties," says Ritchie.

The gradual maturing of the sustainable design movement has had an impact on owners. "The level of sophistication among owners on sustainability has risen dramatically over the last few years," says Michaela Wittmann, director of sustainable design solutions at HDR. "A few years ago, the owners' goal was the [LEED certification] plaque. Now it's the approach and results that are important, with LEED as just one measure of success."

The Top 5 Multi-Unit Residential

Revenue in \$ mil.

1 KIMLEY-HORN AND ASSOCIATES INC.	15.0
2 WALLACE ROBERTS & TODD LLC	10.2
3 ZIMMER GUNSUL FRASCA ARCHITECTS LLP	8.1
4 CALLISON	7.0
5 LOONEY RICKS KISS ARCHITECTS INC.	6.8

For others, owner reaction to sustainable design has been hard to categorize. Callison has seen an increase in clients who are interested in green design, sometimes because they've seen it in the news. "They'll come to us and ask us to help them navigate through the waters to sustainability, so to speak," Burrelsman says. Some clients truly care about LEED certification and are enthusiastic about meeting each credit, but others see it as a marketing tool, she says.

While some owners decline to pursue LEED certification even when building green, Ritchie says LEED has become an important brand name that owners and the public have come to identify with sustainable design. "Owners use LEED certification not just for public relations, but to attract sophisticated employees who want to work in an environmentally friendly facility," she says.

Changing Processes

Sustainable design also has had an impact on the design process. "We have to maintain the strength of the design yet accommodate for certification points," says Weiss. He adds that green design can be frustrating if a firm is designing according to a checklist. "We're trying very hard to make our design stand for itself and use certification as a benchmark," Weiss explains.

For some firms, sustainability is old hat. Green design does not really mean a great change for Leo A Daly, according to Brad Schaap, corporate director of sustainability. "We take the team approach to design with both architects and engineers," Schaap says. "With LEED, it's a modification to the process because we are documenting everything for it, but it's not a huge change."

Sustainable design “requires a mindset shift where all parties to the design process have to come together at the start. You have to get everyone involved early to make it work well,” says Vaughan. “With integrated project delivery and [building information modeling software], you are better able to get the mechanical, electrical and plumbing and structural engineers involved in the design process from the start where they can make a big difference.”

For engineers, early input is essential to sustainable design. “A lot of energy savings comes at the outset when working on the building envelope,” says Cooper. “It is so much more effective to work in collaboration with the architect rather than trying

to present an applied solution to an existing design.”

The growing profusion of green products and materials have given designers a freer hand in specifying. “It used to be tough to specify, and added cost to the design, but no more,” says Wittmann. “Five years ago, you couldn’t identify the amount of recycled content in a particular material,” notes Vaughan. “Now, you get full documentation.”

Many designers worry about the proliferation of green materials and products. “Manufacturers are rushing products into the market to take advantage of the surge in interest in sustainable design,” says Vaughan. “You don’t know what is good, and what is merely greenwash.”

For the future of sustainable design, many firms are looking past LEED toward the 2030 Challenge, issued by the Santa Fe, N.M.-based nonprofit group Architecture 2030. The challenge calls for the rapid reduction in the use of carbon-based energy through the year 2030, when all new buildings should be designed to be carbon-neutral.

Many designers have embraced this challenge, but some are more reserved. “Not all owners will be willing to accept the requirements, and I’m not sure that the goals are realistic,” says Wittmann. Cooper of Flack+Kurtz has a different view: “We should let the goals drive the technology and not let the technology drive the goals.” ■

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(Based on design revenue from registered sustainable projects)

RANK 2008	FIRM	2007 GREEN REVENUE			MARKETS (% OF 2007 GREEN REVENUE)								
		CERTIFIED STAFF	IN \$ MIL.	% OF TOTAL REV.*	RETAIL OFFICE	GOV'T. OFFICE	EDUC.	HEALTH CARE	HOTEL	MULTI- RESID.	ENTER/ CIVIC	OTHER BLDG.	OTHER MKTS.
1	HOK, St. Louis, Mo.	612	151.45	23	21	35	10	22	1	0	3	8	0
2	URS CORP., San Francisco, Calif.	113	150.80	3	11	20	21	20	1	1	5	21	0
3	GENSLER, San Francisco, Calif.	708	126.60	19	74	3	3	0	6	0	7	7	0
4	HKS INC., Dallas, Texas	180	115.00	30	16	0	4	26	50	4	0	0	0
5	FLUOR CORP., Irving, Texas	5	92.46	3	0	0	0	0	0	0	0	0	100
6	KIMLEY-HORN AND ASSOCIATES INC., Raleigh, N.C.	34	79.50	16	44	0	0	0	0	19	0	0	37
7	AECOM TECHNOLOGY CORP., Los Angeles, Calif.	249	73.40	2	27	39	22	5	0	0	0	2	5
8	PERKINS+WILL, Chicago, Ill.	775	59.00	18	48	2	7	27	0	9	0	7	0
9	TETRA TECH INC., Pasadena, Calif.	76	50.40	3	18	4	22	0	4	2	3	11	36
10	PERKINS EASTMAN, New York, N.Y.	80	36.00	28	11	7	24	49	2	4	0	4	0

HOW TO USE THE TABLES

► **COMPANIES** are ranked according to revenue for design services generated in 2007 from projects that have been registered with or certified by a third-party organization that sets standards for measuring a facility’s environmental impact, energy efficiency or carbon footprint. Such groups include the U.S. Green Building Council and the Green Building Initiative. Revenue is measured in \$ millions. Some markets may not add up to 100% due to rounding.

► **ACCREDITED STAFF:** This is the number of people employed by the firm that have been certified as knowledgeable in green construction by third-party accreditation organizations, including such groups as USGBC and Green Advantage.

► **% OF TOTAL REVENUE:** This shows the percentage of a firm’s total design revenue derived from green design, based on its responses to the Top 500 Design Firms survey and Top Green Design Firms survey. N/A means the firm did not differentiate its construction and design revenue in the ENR Top 400/500 survey.

- **RETAIL/OFFICE**=commercial offices and retail facilities.
- **GOVERNMENT OFFICE**=federal, state and local government office facilities.
- **EDUCATION**=public and private educational facilities, including both K-12 and higher education.
- **HEALTH CARE**=hospitals, clinics, medical assistance facilities, nursing homes and assisted-living centers.
- **HOTEL**=hotels, motels, resorts and convention centers.
- **MULTI-RESIDENTIAL**=co-ops, condominiums and apartment buildings.
- **ENTERTAINMENT/CIVIC**=sports facilities, entertainment facilities, casinos, theme parks and religious and cultural facilities.
- **OTHER BUILDINGS**=miscellaneous buildings.
- **OTHER MARKETS**=industrial process and pharmaceutical plants, food processing plants, manufacturing facilities, telecommunications facilities, and infrastructure.