



“There isn’t a business we talk to that doesn’t want to reduce their energy use, improve employee health and raise their bottom line.”

PAUL OSWALD, PRESIDENT, ENVIRONMENTAL SYSTEMS INC.

# LEADING THE **THIRD COAST**

**Wisconsin is a leader in green building**

BY AMANDA N. WEGNER



Photos courtesy of Hoffman LLC.

## Wisconsin, says d'Andre Willis, is the leader of the “Third Coast.”

Willis, board president of the Wisconsin Green Building Alliance and principal at HGA Architects and Engineers of Milwaukee, is referring to Wisconsin's high number of sustainable and energy-efficient buildings, a niche dominated by the East and West coasts.

“Our state is in a position of leadership. We have a good cluster of LEED Platinum-certified buildings; it's pretty striking,” he says. “When you look at the coasts, we pop up as providing leadership on the Third Coast ... but we can always get better.”

In 2009, 38 buildings in Wisconsin received LEED certification, the preeminent certification for green building; through mid-2010, the state was on track to beat the prior year.

“This is virtually an open market,” says Paul Oswald, president of Environmental Systems Inc. (ESI) in Brookfield. “There isn't a business we talk to that doesn't want to reduce their energy use, improve employee health and raise their bottom line.”

### A PALETTE OF REASONS

What drives a facility owner to build or remodel green? The reasons are as varied as the owners, says Theresa Lehman, director of sustainable services for Miron Construction Co. Inc.: “The answer, as in everything in life, is that it depends.”

For many companies, bottom-line savings are of the utmost importance with today's volatile energy

prices. But occupant health and satisfaction are paramount as well and nowhere is that more apparent than in schools.

At Hillcrest Primary School in Shawano, which is seeking LEED Gold certification, three-fourths of people in the school who were on allergy or asthma medication aren't any more, reports Lehman, whose company worked on the school. Additionally, “they're seeing an increase in students' ability to pay attention and in test scores. They're seeing cases of behavioral problems or emotional disturbances decrease. Now, we don't know if that was specifically caused [by the old building], but we can attribute those gains, in large part, to better acoustics, daylighting and improved indoor air quality.”

In the Lake Mills Area School District, the school board initially embarked on green-building projects for the health and safety of students and staff, but the district ultimately found it was saving more than \$80,000 per year.

“In today's day and age, with energy prices fluctuating, sustainability and energy efficiency not only cut costs, but they make a manageable difference in the health and well-being of the people in the building,” says Lehman.

When it comes to energy savings, McKinsey & Company found that the United States could reduce energy costs by \$1.2 trillion by 2020 by investing \$50 billion per year in energy efficiency. That means

## Saving green

- The cost per square foot for buildings seeking LEED certification falls into the existing range of costs for buildings not seeking LEED certification.
- An upfront investment of 2 percent in green building design, on average, results in lifecycle savings of 20 percent of the total construction costs.
- Building sale prices for energy-efficient buildings are as much as 10 percent higher per square foot than conventional buildings.
- Real estate and construction professionals overestimate the costs of green building by 300 percent.

— Source: U.S. Green Building Council



building owners must be willing to invest money to save money.

### SUSTAINABLE, NOT EXPENSIVE

Willis and Lehman both say one of the biggest misconceptions about green building is that it's expensive and cost-prohibitive.

"So often, owners focus on initial costs; they're not looking at the whole building or the lifecycle," says Lehman.

"When you say you want to have a sustainable building, that isn't saying you want to spend more," says Willis. "It says you value certain outcomes. Yes, you should be fully informed of all costs at every step, but intelligent design doesn't have to cost more."

While his firm focuses on energy management solutions for businesses, Oswald's three-step approach applies to green building as a whole. Any project should start with an assessment: what you currently have, what you want to achieve and how to achieve those goals. After implementing plans, measure and manage.

"A lot of people forget the last step," says Oswald. "You have to measure to manage on an ongoing basis."

### TO LEED OR NOT TO LEED

Measuring and managing is a point of differentiation between LEED-certified buildings and many other green buildings.

LEED certification requires that a building be "commissioned;" that is, an independent third party checks the integration of the entire system, from the mechanicals to the building envelope to occupancy load and schedules and more in the real world.

"Buildings are initially designed based on theories and assumptions, but in reality that changes. A commissioning agent makes sure the building is operating as optimally as possible in the real world," says Lehman.

Take the case of Miron's own building; the commissioning agent fine-tuned the system, saving the company \$3,000 to \$4,000 on its monthly energy bill.

Commissioning a building costs roughly a dollar per square foot, notes Lehman. That upfront cost can be daunting, but when the monthly savings are plugged in, "the cost to ensure you have the best building possible pays itself back in short order."

While LEED is the primary certification body for green building, a facility can be energy efficient and sustainably built without obtaining this certification, and professionals here are divided on the importance of this designation.

Hoffman LLC, which built Middleton's Holy Wisdom Monastery, the highest-rated LEED building in the country, considers sustainability practices in every point of its design process, bringing buildings to the equivalent of the LEED Silver level.

"Our program does not take the place of LEED certification," says Terry Ellenbecker, manager of field operations, Hoffman LLC of Appleton, "but when you work with Hoffman, you get sustainability as a base process."

Included in that is energy modeling to see which systems will best serve the facility, says Ellenbecker, and help determine the payback of the selected system.

In addition to commissioning costs, there is a registration fee for LEED certification, as well as a cost of 5.5 cents per square foot to review building plans. "It can cost a few thousand dollars for that plaque," says Lehman.



Photos courtesy of Hoffman LLC.

Aside from the inherent benefits of a healthier, more efficient building, for many, the plaque offers brand power.

“Yes, some people want the plaque on the wall,” says Ellenbecker. “Others want the benefits of actual certification, the knowledge that their project meets higher standards. For others, it’s a sheer marketing tool; it increases exposure in the marketplace, to future employees, the media. The company becomes accepted as a leader by going through the process.”

Willis notes that it’s also becoming a differentiator in the marketplace, particularly in the commercial rental property market; her firm just placed a client in a building who wanted the LEED certification.

### GREEN TO GOLD

Wisconsin is a leader in green building and a hub for energy-efficiency and sustainability innovation, says Oswald, “but we can do better.”

The state currently spends about \$17 million annually importing fossil fuels to power its buildings; energy efficiency incentives, says Willis, “is low-hanging fruit.” She cites the successful Conserve Wisconsin program, created by former

Gov. Jim Doyle, which mandated that all new state buildings in the state perform better than the current energy code by 30 percent.

“That’s a big deal and a great move for the state, but we know how to get to 30 percent. I’d love to see the state go even further ... We can achieve more aggressive goals.”

(By comparison, ESI’s new building is 41 percent more efficient than existing code.)

A hand up would be beneficial as well, says Oswald. “Programs, not handouts, that make access to capital easier would be great, creating the kinds of financial incentives we need, which are far more effective than mandating and regulating.”

Once such program is Focus on Energy. The Public Service Commission approved increased funding for the state’s Focus on Energy program, which provides rebates and incentives to customers for energy-efficiency projects. A boon for kick-starting commercial and industrial projects, some legislators in the Assembly have indicated they want to roll back the increased funding.

But in all, the state is off to a strong start with its leadership position on the “Third Coast.”

### LEED-ing the Pack

Some notable LEED projects across the state.

- The Aldo Leopold Foundation headquarters in Baraboo was the first LEED Platinum-certified, carbon-neutral building in the world.
- Holy Wisdom Monastery of Middleton achieved LEED Platinum, the highest-rated new construction LEED building in United States, earning 63 out of a possible 69 points.
- PepsiCo’s Frito-Lay facility in Beloit is the state’s first food manufacturing site to be awarded LEED Gold certification for existing buildings.
- Madison’s Fire Station #12 was the second fire station in the world to achieve LEED Platinum.

“We are a progressive state, but we can still move ahead,” says Lehman. “And sustainability will be leading the way.” [crw](#)

*Amanda N. Wegner, [amandawegner.com](http://amandawegner.com), is a freelance writer and editor in Madison and the former editor of Dane County’s BusinessWatch.*