

LEED-like program for safety created by Oregon researchers

POSTED: Friday, July 8, 2011 at 11:58 AM PT

BY: [Angela Webber](#)

Tags: [LEED](#), [Oregon State University](#), [OSHA](#), [research](#), [safety](#)

When Oregon State University researcher **John Gambatese** looks at the [Leadership in Energy and Environmental Design](#) program, he believes something is missing.

“People need to recognize that sustainability is more than just the environment,” Gambatese said. “It includes safety and hid health as v



Sathy Rajendran is a co-developer of Sustainable Construction Safety and Health, a certification safety certification program similar to Leadership in Energy and Environmental Design. (Photo by Sam Tenney/DJC)

In 2004, Gambatese and **Sathy Rajendran**, now a Hoffman Construction safety specialist, started work on a rating system for construction site safety, modeled partially after LEED. The [Sustainable Construction Safety and Health certification program](#) was launched online recently, and its developers hope to soon leverage support from national organizations to create a full-scale program.

The project began as Rajendran’s doctoral dissertation and was built on research being performed at OSU.

“We performed a study of comparing safety performance of LEED and non-LEED buildings, and found no statistically significant difference,” Gambatese said. He noted that the \$9.2 billion CityCenter development in Las Vegas received six LEED certifications, but suffered six worker fatalities in fewer than two years.

“If we are going to identify a building of being sustainable, there needs to be a difference,” he said.

The safety rating system, like LEED, includes a number of required and optional measures that a project team can take to earn credits. As more credits are earned, the rating increases – from one to five stars.

Some of the required items are actions already being taken on many projects, such as job hazard analysis and discussions about contractors' safety records during selection. Additional credits could come from instituting hearing or respiratory protection programs or requiring Occupational Safety and Health Administration training for all workers.

“Many of the elements can be implemented without higher cost,” Rajendran said. “Cost increases as you go for higher ratings.”

Sustainable Construction Safety and Health certification is available for all kinds of construction projects, including residential and commercial projects – either new buildings or renovations. However, the program is better for design-build or construction manager/general contractor projects than those that use a standard bidding process, said Rajendran, who noted that the integration of safety into design is a major part of the credits system.

Rajendran and Gambatese tested their program on 25 recent construction projects across the country. According to their data, projects that rated higher had a lower instance of “recordable incidents” – injuries and fatalities. The system’s scoring system also was independently reviewed by researchers and industry representatives.

Bart Eberwein, vice president for business development at Hoffman Construction, said that he believes a program like SCSH could bring more attention to construction safety issues.

“What LEED has done is changed the conversation,” Eberwein said. Because LEED has become a ubiquitous program, he said, “I can’t think of a client who hasn’t wanted sustainability to be part of the conversation.”

“If (SCSH) gets elevated to the sexy deal that LEED is, I would support that,” Eberwein said.

The researchers hope their project also can benefit from LEED’s marketing advantages.

“LEED has a built-in market, and we developed a system similar to LEED,” Rajendran said. “If there is an opportunity, (SCSH) could combine with LEED. If not, it could stand alone.”

Gambatese said the next step is to encourage project owners and contractors to use the free evaluation system available [on the SCSH website](#). Researchers will use that data to tweak the system and create demonstration case studies.

Rajendran next month will present the rating system to the National Institute for Occupational Safety and Health. He said the institute has expressed some interest in adding safety provisions to LEED, and he’s hopeful that an organization such as the American Society of Safety Engineers will “put some muscle” behind the project.