

***Construction is going green, with buildings that are designed to use less energy, conserve water and lower carbon emissions. While the environmental benefits are clear, there may be some unforeseen risk when the roof of the building is a lawn.***

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The surge in demand for green buildings is creating a new field of opportunities for companies in the real estate and construction sectors, but at the same time it raises the stakes for them.

Just as with any traditional construction project, things can sometimes go wrong on a green project.

In the case of green projects, buildings may fail to achieve the desired LEED certification or could develop other problems, such as leaks associated with green roofing or mold associated with cork flooring, says Catha Pavloff, who leads the Green Building Team at insurance broker Marsh Inc..

***These problems could open the door to litigation risk. In fact, professional liability insurers already have received claims brought against architects and engineers involved in green building for problems such as these, according to Marsh Inc.***

But those in the industry say the bigger risk is in failing to move forward and respond to the growing demand for green buildings. The demand is reaching a level that companies that are unable or unwilling to build green projects run the risk of being left behind, they say.

## **THE WAVE OF THE FUTURE**

In just the last few years, interest in green buildings has skyrocketed. The move to build green has become mainstream and the demand for these buildings is only expected to grow in the coming years.

"Green building has certainly reached a tipping point," Pavloff says. "There are many who predict if you don't build green, your building will be functionally obsolete."

***A recent survey conducted by McGraw-Hill Construction, a provider of construction project information, showed that green building is growing rapidly around the world. The survey of 45 early adopters, found that by 2013, 53 percent of responding firms expect to be largely dedicated to green building (on over 60 percent of projects), up from 30 percent today.***

The survey also found that 86 percent of firms expect rapid or steady growth in sales and profit levels associated with green building.

These energy efficient, sustainable buildings are increasingly seen as the wave of the future because they can help to reduce energy costs, reduce carbon emissions and improve water management.

In addition to the potential for reducing operating costs, companies are finding that green buildings also can improve employee productivity, reduce worker injuries and illnesses, and can

help companies attract employees to their organizations by creating a more pleasant work environment.

To make these buildings more sustainable and environmentally-friendly, developers and builders are making use of natural lighting and solar power as well as incorporating other state-of-the-art designs that can reduce the use of energy and water.

As a result, owners and tenants are finding that productivity is higher, people feel better and enjoy being in buildings that are built to meet the green building standards.

Demand for green commercial buildings is likely to stay strong in spite of the recent problems in the credit markets as well, Pogue says.

"A lot of what we're doing is about conservation," he says. These buildings are being designed to conserve energy and water and to use recycled materials. In a difficult economy, the opportunity to save money while conserving energy and other materials becomes even more compelling.

**But green construction is not without its risks.**

**Failure to achieve a desired LEED certification, for instance, could lead to lawsuits.** Companies that do not obtain the expected LEED certification also could lose certain tax credits or other favorable development advantages.

"There's a lot of room for people to say 'I don't think I got what I paid for,' " Taylor says.

**Other construction defects are also a possibility with green building.** For instance, green or vegetative roofs can help to keep buildings cooler and reduce energy costs and carbon dioxide emissions, but they also may pose water damage and structural challenges, according to a report by Marsh called "The Green Built Environment in the United States."

At the moment, however, most of the insurance marketplace is in a "wait-and-see" mode, Pavloff says.

In its report, Marsh notes that **much of any risk associated with green buildings emanates from design and related services.**

**Design firm professional liability markets acknowledged in May that it was premature to determine the exact impact of green design or to know whether the risks are materially different from those emanating from traditional design, according to the report.**

None of these markets, however, had developed new policies or coverage enhancements, but instead were providing their clients with risk management advice.

But claims have already begun to emerge, according to the Marsh report.

Examples include:

--A claim by a developer against an architect because the building did not achieve LEED gold certification.

--A claim against an architect and structural engineer due to water infiltration from a green roof.

--A claim against a design team because the cork flooring they specified resulted in water retention and mold.

--A claim against an architect because a lack of green product availability caused project delays.

--A claim against an architect because the health problems of tenant's employees increased despite warranties that the indoor air quality would improve.

In its report, Marsh says that most markets believe that traditional design professional liability policies provide a significant amount of coverage for the negligent performance of professional design services.

However, the consensus, according to the Marsh report, is that a key difference between traditional design and green design involves enhanced performance expectations and an evolving standard of care, which may not be covered by traditional architects and engineers professional liability insurance policies.

Other commercial insurance markets--such as the environmental, builders' risk, property, casualty, and surety markets--are also examining the risks and considering whether to offer policy enhancements or new products.

"From a risk management standpoint, the movement has gotten a little ahead of where we are in terms of the insurance industry's response to it," Taylor says.

"The biggest problem I see is that there aren't people in the insurance industry willing to step up and guarantee somebody's promise to deliver a certified building or a certain level of certification," Taylor says.

## **THE RISK OF NOT GOING GREEN**

Although the insurance marketplace is still lagging when it comes to green construction, those in commercial real estate say they are more concerned about the risk of falling behind and becoming obsolete.

"If you are a Class-A, Class B-type office building and you don't consider certification of some type with regard to sustainability, you are really in jeopardy of losing the competitive nature of your properties," says John Schinter, president of the Energy and Sustainability Services unit for real estate services firm Jones Lang LaSalle.

"Almost all the buildings that are of that type are pursuing some level of sustainability within the construction itself," he says.

Pogue agrees. "You will be at a competitive disadvantage if you don't make your buildings green," he says. "Tenants will be demanding and seeking that. Shareholders and employees are demanding it as well."

There are other risks involved with not going green. Some owners and developers see a time in the not-too-distant future, for instance, when there could be some kind of carbon tax imposed on buildings that use too much energy or have high carbon emissions.

Because there is not much coverage available in the insurance marketplace, companies in this industry have to pay close attention to risk management to reduce the potential for losses.

While one of the key risks for companies in this industry is failure to achieve a desired LEED certification, those very standards can actually help to reduce the risk of other types of construction defects.

In the effort to get the LEED certification, companies have to meet very high standards, which reduces the risk of a problem later on.

"I would say that the LEED construction standards themselves typically force you to have a pretty serious commissioning process when it's finished," Schinter says. "So you really don't see the defects that you normally would see in a building that doesn't have that level of commitment to commissioning."

Pavloff agrees noting that "in many ways, the LEED certification process mitigates traditional risk because there are many, many checks and balances.

"It could be that, ultimately, these buildings are less risky and the underwriting community eventually acknowledges that," Pavloff says.

But there are things companies can do to try to control their risk. It is important, for instance, for developers and construction firms to start by hiring people who have experience and have successfully completed green buildings, Taylor says.

After hiring an experienced team of architects and designers, the developers should sit down with the owners and discuss the objectives and agree on which elements of the project are most important.

Having someone on staff to oversee construction management also can help to make sure that everything goes according to plan.

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