

# Green Building is Transforming the Construction Market



Rick Fedrizzi  
U.S. Green Building Council



Bob Hansen  
Dow Corning

## How do you define “green,” or sustainable, construction?

**RF:** In the United States, buildings are responsible for one-third of our total energy use, raw materials use, waste output, and greenhouse gas emissions. Energy utilization in buildings is comparable in Europe and Asia. Simply put, a green building is environmentally responsible, a healthy place to live and work, and economically profitable. We define green building through our Leadership in Energy and Environmental Design (LEED®) Green Building Rating System, which is a voluntary, consensus-based standard that provides independent, third-party certification. It provides the building industry with a common definition of “green” and emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

**BH:** Adding to Rick’s definition, sustainable construction also aims at ensuring that buildings have long-term purpose, even those that are built for one-time events, such as the Olympics. It would be highly wasteful to construct a dormitory for Olympic athletes, or a stadium for the World Cup, and then tear it down three months later. Increasing energy efficiency for the life of the structure is also key, as is minimizing waste in the construction of a building, through recycling and design.

## What factors are most important for sustainable buildings?

**RF:** A whole-building approach is critical, which means that every aspect of a building, from the site selection to the paint on the wall, is taken into consideration. LEED addresses five focused areas: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. These categories are interconnected, and each is equally important in reducing a building’s environmental impact and supporting occupants’ health.

**BH:** Most important is that the building has a long-term, useful life. Second is energy efficiency in design and materials. Third

In this dialogue Rick Fedrizzi, President, CEO and Founding Chair, U.S. Green Building Council and Bob Hansen, former Global Industry Executive Director for the Construction Industry and now Vice President and General Manager of the Core Products Business Unit, Dow Corning, discuss the importance of sustainable construction.

would be a structure’s ability to bring the outdoors inside. Designs that increase natural daylight not only reduce electrical lighting requirements but are more satisfying places to work and live. When there’s natural light, people are more motivated and happier. So there’s an emotional aspect that’s greater than just energy efficiency in the purest sense.

## How do various stakeholders benefit from green buildings?

**RF:** We like to say, “Build green. Everyone profits.” It’s true—green buildings are good for the environment, the community, and the economy. By using less energy, less water, and fewer material and natural resources, a green building greatly reduces its harmful impact on the natural environment. For the building owner, this translates into as much as 70% energy and water savings, improved building performance over time, and greatly increased property value. Improvements in indoor environmental quality, including daylight and exterior views, make for happier, healthier occupants, as Bob mentioned. Children who learn in green schools can demonstrate up to 21% better performance on tests, and patients in green hospitals are discharged earlier. In addition, the U.S. could save \$160 billion per year through reduced absenteeism and increased productivity if all buildings were LEED certified.

**BH:** Designs that increase natural daylight give occupants a sense of more space and connection with nature. If you’re in a facility without windows, it’s a totally different experience than when you can see trees, birds, and natural light through the windows. Dow Corning products make it possible to design structures that incorporate larger expanses of glass that are more eye-appealing and bring more light inside. Green construction is critical for companies and communities. The World Business Council for Sustainable Development identifies three pillars of sustainability—environment, social, and economic. Green construction benefits the environment by being energy-efficient, using recycled materials, and minimizing waste. It fulfills the social aspect by giving the community a sense of pride, especially if it’s a beautiful landmark structure. Finally,

constructing energy-efficient buildings lowers operating costs, and planning ahead to ensure multiple purposes will also save resources over the long term.

## Are there geographies that adopt green construction practices more than others?

**RF:** Although adoption of the LEED green building standards is strongest in the U.S., countries around the world are adopting green construction practices. In the last five years, more than 2,000 building projects in all 50 U.S. states and seven countries—including India, China, Brazil, Canada, Mexico, Spain, and Sri Lanka—encompassing more than 280 million square feet, have been registered to achieve LEED certification. Green building is revolutionizing the way builders and architects around the world design construction projects. The health of our planet and communities demands that we push market innovation to stimulate effective, high quality, high performance building practices.

**BH:** Some geographies are more advanced in green construction than others. For example, it’s likely you’ll find more “green” going into an apartment building in Kansas than in Brazil. However, Dow Corning is getting involved in green construction projects throughout Asia, Europe, and the Americas. We are committed to providing international expertise and the most up-to-date technology and design configurations. Where those converge, you can achieve sustainable construction anywhere in the world. In general, the green movement is further ahead in Europe than in North America or Asia. Europe is more likely to consider, or even require, this type of construction.

For more information about Dow Corning, go to [www.dowcorning.com](http://www.dowcorning.com).

To download a copy of USGBC’s article called “Green Building is Global,” go to [www.dowcorning.com/innovate](http://www.dowcorning.com/innovate). For more information on the U.S. Green Building Council or for more of their articles, go to [www.usgbc.org](http://www.usgbc.org).