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Learning from Our Green History

By Robert Kravitz

A father, sending his son off to a distant college, was giving him some last-minute words of advice. The talk rambled from sports, girls, and schoolwork to the importance of discipline, hard work, and persistence. As the father spoke, the son could see his father was reminiscing about his own past as much as counseling him about his future. Finally, the father said, “I wish I was your age...but knew what I know now. It would have made a world of difference in my life.”



Using this story as an analogy, in many ways China and other parts of Asia are the son and the United States the father when it comes to Green cleaning and the adoption of environmentally responsible building and operating practices. America experienced a lot of confusion when it came to the use of environmentally responsible cleaning products and the Green revolution that started here in the early 1970s. There were a number of stops and starts, ups and downs, before it became the dominant force it is today, not only in the cleaning industry, but in virtually *all* industries.

This is fortunate for China and the many other parts of Asia that are now looking into or have already begun the transfer to Green cleaning. This part of the world can learn from America's experience. For instance, two of the most fundamental concerns about Green building, Green cleaning, and the use of environmentally preferable products have already been addressed in the United States. Those concerns are whether it costs more to go Green, and whether there are real, tangible benefits in doing so.

The Cost of Building Green

In 2005, Turner Construction Company, a leading New York City-based general contractor that has been involved with major construction projects all over the world, asked 665 top executives why they were not building more Green facilities. By a Green facility, they were referring to buildings that use less energy, water, and other natural resources and use environmentally preferable construction materials, designs, and cleaning products.

The executives reported that they were reluctant to build and operate Green facilities because:

- Doing so would increase the costs to build and maintain the facility, according to 68 percent.
- More than 64 percent were unable to certify there were any real benefits in going Green.

- Similarly, 47 percent indicated it was simply not possible to measure the benefit of designing, building, and operating a Green facility.

However, since then, there have been a number of new studies especially dealing with the benefits of building and operating Green schools, which suggest the incremental costs of going Green are now small, even negligible, and the benefits—even a return on the investment—might be much greater than ever suspected. In fact, the results in some studies are so dramatic that the question Chinese and other Asian developers should be asking their clients is not “Do you want to build Green?” but “Why *aren’t* you building a Green facility?”

One of these studies, *Greening America’s Schools: Costs and Benefits*, was released in 2006. Sponsored by such respected organizations as the American Federation of Teachers, the American Lung Association, and the U.S. Green Building Council, the study analyzed 30 Green schools and found that the cost to build and operate a Green school may be more than that of building a non-Green school (1.6% more) but the differences are relatively small.

Another study, this one conducted by the California Sustainable Building Task Force, analyzed a variety of structures and not just schools. Although it was estimated at one time that going Green could add as much as 20 percent to a facility’s overall building and operating costs, this study estimated that the costs today to build and

maintain a Green development are closer to 2 percent. Other studies have indicated that there may be about a 5 percent added cost to build and operate a Green facility, while still others indicate there is little or no cost differential between a Green facility and one that is conventionally built.

“There are several reasons these costs have come down,” says Scot Case, Vice President of Canada’s TerraChoice Environmental Marketing and EcoLogo, a leading Green-certification organization that promotes the use of environmentally preferable products. “More companies are making environmentally preferable products, which are increasing competition; new technologies have helped reduce the costs to manufacture Green products; and the certification process itself has helped lower costs.”

Case explains that in order for a product to be certified environmentally preferable, it must be tested and evaluated by independent third parties. The process ensures that the product:

- Has a reduced impact on the environment when compared to conventional products used for the same or similar purpose
- Has ingredients (or a greater number of ingredients) that are biodegradable and nontoxic

- Performs as well as, if not better than, a comparable non-Green product
- Does not include (or has considerably fewer) harmful ingredients, such as volatile organic compounds (VOCs), carcinogens, and endocrine disruptors, which can harm glands, hormones, and many body functions
- Does not contain hazardous by-products
- Is packaged in recyclable materials
- Meets all safety standards for use of the product

“The certification process has helped establish parameters so manufacturers know what is necessary to make a product Green,” says Case. “Manufacturers can use the certification process just like a road map. Using the map, they know what direction they must take to make a Green product. Before certification, no one was really sure which direction was correct. This not only caused a great deal of confusion but added to the costs of developing and producing Green products.”

Green Cost Savings

Based on America’s experience, Asian building owners, managers, and developers now know that the costs today to build and operate a

Green facility can be minimal when compared to a conventional facility. However, we have one more fundamental question to answer: Are there solid advantages to going Green?

The *Greening America's Schools: Costs and Benefits* study mentioned earlier sought to answer this question as well. Again, the focus was on schools; however, many of the findings are likely applicable to other types of facilities as well.

And what they discovered was a bit surprising, even for the researchers. The study found that there were a number of financial benefits and cost savings to going Green, and in some cases, they were so significant that the savings were enough to pay for the hiring of one additional full-time teacher. Among their conclusions (all figures are in U.S. dollars):

- Energy costs were reduced by approximately \$9 per square foot in the Green schools.
- Water and wastewater costs were lowered by \$1 per square foot.
- Cost savings as a result of reduction of asthma and other respiratory illnesses amounted to \$3 per square foot.
- Teacher retention (not needing to go through the process of hiring new teachers) equaled \$4 per square foot.

One of the most startling—and controversial—financial benefits the study reported was that the improvement in lifetime student earnings was equal to \$49 per square foot. This is because with reduced illness and absenteeism in schools as the result of building and operating a Green facility, student attendance improved, and performance and test scores went up as well. “Overall, it meant the student learned more and did better in school,” says Mike Sawchuk, Vice President of Enviro-Solutions, a leading manufacturer of Green cleaning products with distributors in Asia. “Doing better in school translates to doing better in their careers later on in life.”

The Green Cleaning Connection

Because they are a construction company, it is understandable that much of the Turner survey mentioned earlier focused on the building of Green facilities and did not concentrate on such things as Green cleaning specifically. However, we have learned that Green cleaning is essential in maintaining a Green facility—so much so, that many of the desired benefits of selecting environmentally preferable products, such as floor covering, are essentially wiped out if non-Green products are used to clean them.

“This was pointed out in a study at Harvard University,” says Sawchuk. “They found that using a conventional floorcare product just once on an environmentally preferable floor could release more VOCs than the floor would release in its entire lifetime, essentially eliminating any benefits of selecting the Green floor.”

And there are other reasons we are seeing more and more facilities in the United States and all over North America adopt Green cleaning. Just as it appears that in schools there is a definite correlation between the use of environmentally preferable cleaning products and a reduction in asthma and respiratory illness and improvement in school attendance and student performance, in other types of facilities, such as office buildings, we are seeing a correlation between Green cleaning and improved worker productivity.

For instance, the Building Owners and Managers Association International (BOMA) estimates that the cost of salaries and benefits per square foot in a U.S. Class A office building is about \$150. Researchers have determined that improved indoor air quality, as a result of Green cleaning, reduces the frequency of workers blowing their nose, rubbing an eye, dealing with an allergen-induced headache, calling doctors or seeing a nurse, and discussing these maladies with coworkers.

“This translates into 3 minutes to more than 30 minutes of improved worker productivity per day per worker,” says Sawchuk. “And just a 3-minute-per-day increase in worker productivity results in a 75-cents-per-square-foot savings. Multiply this times hundreds of workers, and you see the improvement and savings become significant.”

It is actually quite amazing how the Green cleaning movement has taken hold in the United States and North America. A few years ago, only Enviro-Solutions and a few other jansan manufacturers were producing Green cleaning products. Now, most major chemical manufacturers, as well as those that produce cleaning tools and equipment, are manufacturing a line of environmentally responsible cleaning products. And scores of North American facilities are now insisting on the use of Green cleaning products.

“A similar transformation is now occurring in China and most of Asia,” adds Case. “My advice to my Asian friends is to learn from our experience over here, select only certified-Green products so that you know the product is indeed environmentally preferable, and spread the word: Green is cost effective and has far too many benefits to be overlooked.”

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