

# The Benefits of Building Green

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Source: Automated Self Storage Systems, LLC

# Sustainability in Self Storage

*Building green is good for the environment—and can even save you money!*

By Mark Wright

Have you ever wished for a crystal ball that would show you what self storage facilities of the future might look like? Well, forget the crystal ball. You won't need it.

Simply walk into a garden filled with water-conserving succulents, wild grasses, maybe some small shrubs and perennial ground cover. Look around. Now, imagine that the garden in which you're standing is actually covering the entire roof of a building.

Yes, the roof. (So, watch your step along the edges.) It's called a green roof, and it's one of the many features design professionals can use to help a structure achieve "green building" status.

Not sure about having a garden on your roof? Fine. Picture instead an array of photovoltaic panels up there capturing solar energy and converting it to electricity. Your local utility might send you a check instead of a bill each month if you generate enough power this way.

Either way, green building is no longer "someday in the future" for the self storage industry. It's here today.

## Pioneering Efforts

Two new facilities are sporting cutting-edge *greenness*. One is still on the drawing board in California pending refinancing, while the other just opened in Florida. Both hope for certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System™. (See more about the Council and its LEED system in the sidebar.)

The California facility is being planned for a site in Paso Robles, a little city rich in history (as well as wineries) near the state's central coast. Design is being handled by architect Ken Carrell of Lake Forest, California-based ARE Associates (areassociates.com).

Climate has a strong bearing on green-building design choices. "The area tends to get really hot in the day during the summer, but you can have a 50-degree temperature change at night," Carrell says.

Lots of sunshine suggests potential for solar energy, which is exactly what Carrell is planning. The facility will actually combine two green-building features topside: a green roof (that garden-planted effect mentioned earlier) and photovoltaic panels. As water evaporates off the planted roof, it will naturally cool the solar panels, Carrell explains.

Water's an especially sensitive resource in "The Golden State," which has long struggled with dry spells. "We're minimizing our footprint as much as we can with green practices," notes Carrell. "The facility backs up to a river, so we can't use more than 50 percent of the site anyway (due to LEED criteria). The green roof can count toward the not-covered portion. A green roof includes barriers and water retention systems, and you (use plants that) hold water and have a low water requirement. Once it's established, the roof will hold enough water to water the plants."

"By getting LEED certified, you're designing everything as a whole," he says. "The architect, engineers and owner have to work together to take a unified planning approach. You

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actually get cost savings, because everybody is on the same page. It requires a great deal of coordination, however, so one person has to be in charge to make sure all the parties are talking with each other.”

Out on the east coast, Art Kamm echoes that reality, saying more work is involved on the design side to make a building green. Founder and managing principal of Deerfield Beach, Florida-based Kamm Consulting ([kammconsulting.com](http://kammconsulting.com)), he was the consulting engineer for Safe & Secure Automated Self Storage, a new green development in Coconut Creek, Florida.

Billed by owner Automated Self Storage Systems, LLC, a subsidiary of real estate developer The Pugliese Company, as “the first patent-pending, fully-automated self-storage facility,” the 145,654 square-foot structure was unveiled April 23, 2009. It employs Westfalia Technologies’ Automated Storage and Retrieval Systems technology to manage about 1,000 indoor, climate-controlled units using storage pallets stacked six-deep. (More details: [www.automatedselfstorage.com](http://www.automatedselfstorage.com).)

Paul Talley, vice president of Automated Self Storage Systems, LLC, says the company views this facility as a prototype—one which they hope will qualify for Silver



*Safe & Secure Automated Self Storage’s pallet management system.*



*An example of how green roofs are used at a Ford plant.*

LEED certification—and sees it as the “next generation of storage...and a platform for other facilities in the future. It’s easy to incorporate LEED into storage by using this system.”

Talley notes that the facility is equipped with all-electronic water fixtures in its restrooms, which prevent wasted water. Double-flush toilets regulate the volume of water required per flush depending on the, uh, nature of the patron’s business.

This water-thriftiness earns points toward the facility’s LEED certification. “It’s something everybody in self storage should use,” says Talley. “Water’s our most precious commodity.”

### What about Costs?

Some would say saving the planet is all well and good—but not good enough to warrant any extra time, trouble or expense in developing a self storage facility. For other industry veterans, though, saving time, trouble and expense is the whole point of green building.

“My motivation is to go as energy efficient as we possibly can in order to increase cash flow and lower expenses,” says Brad Koach, managing member of Fresno, California-based JB Development, LLC. For his storage development, Koach uses solar energy, compact fluorescent lighting, higher than normal insulation, timed switches, and subsurface drip irrigation in planted areas to minimize evaporation.

“It’s a win-win situation,” he concludes, “by reducing consumable commodities required to run a commercial operation in a more restricted manner with a view toward savings on operational expenses.”

Both Carrell and Kamm note that green building usually means slightly higher initial costs that are recouped over time through operational savings. Kamm says building green “costs 2 to 10 percent more on average,” although it could be up to 20 percent more depending on your design

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and construction choices. He says the bigger the building, the less money going green usually costs.

Forethought and thorough planning help minimize up-front costs. Crucial green-design decisions, says Kamm, “start with issues as simple as how a building will be oriented on a site.” All of that up-front preparation, however, pays off with a facility that is much more resource efficient—and cost-effective—than an ordinary structure.

Moreover, Kamm strongly recommends that developers consult with their architect or engineer long before any actual design work is started. “With a lot of jobs, people decide later on that they want to go green, but then you have to back-track,” he observes.

## Green Building Increasing

Green building, at least measured by the number of projects seeking and achieving LEED certification, is on the rise. “Ever since we started in 2000, we’ve noted tremendous growth year after year,” says USGBC spokesperson Marie Coleman. She cites two reasons: public awareness of green issues and government incentives.

That second topic deserves an article all its own. So, the *SSA Globe* will explore the mysteries of green building finance, including government incentives and private financing, in the July issue. ❖

## More about LEED

As the U.S. Green Building Council explains on its website ([usgbc.org](http://usgbc.org)), LEED “is a voluntary certification program that can be applied to any building type and any building lifecycle phase. It promotes a whole-building approach to sustainability by recognizing performance in key areas.... (It also) encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.”

LEED uses a point system to determine a candidate building’s certification level. Five levels are available: Certified, Bronze, Silver, Gold, and Platinum. Frankly, LEED is a much more complex and detailed system than this article can cover in limited space. Therefore, finding a LEED-credentialed professional to guide you through the design and application process is highly recommended. Visit the USGBC-related Green Building Certification Institute at [gbci.org](http://gbci.org) for an online directory.