

Industrial Goes Green

This sector begins to reap the benefits of sustainable design

By Lance Ryan
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In the last few years, building green has evolved from an idealistic concept shared by a niche group of developers to a mainstream phenomenon in the commercial real estate industry. Most tenants demand energy efficient, sustainable facilities while property owners are focused on improving building standards to keep up with the ever-changing environmental innovation curve. As a result, the U.S. Green Building Council's Leadership in Energy and Environmental Design designation has emerged as the benchmark for environmental development. And industrial developers now are seeking out this certification for their properties.

Including Industrial

Historically, the perception has been that only build-to-suit office projects were eligible for LEED certification because industrial projects, many of which are speculative, were unable to fit into the narrow certification criteria. However, with USGBC's multitiered approach to evaluation, industrial developers now have a valuable tool kit for obtaining this sought-after status.



The LEED program has four distinct certification levels based on a 69-point rating system. The system evaluates sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and LEED innovation credits. The certification levels for LEED construction include LEED Certified (26-32 points), LEED Certified Silver (33-38 points), LEED Certified Gold (39-51 points), and LEED Certified Platinum (52-69 points).

The rating system is significant to industrial developers because its emphasis on mechanical systems -- such as heating, ventilating, and air conditioning -- typically is confined to large indoor environments with a higher density of employees. While industrial developers initially dismissed the option of earning certification points, attaining a LEED-Certified or LEED-Certified Silver designation for a spec industrial building is possible through the introduction of other sustainable building features and construction methods.

Employing these classifications as a template for constructing a green industrial facility allows for an a la carte approach to development, based on managing the design and construction process with the ultimate goal of achieving a specific certification level. As with any development project, experience and planning are paramount to this strategy's proper implementation, as installing individual sustainable features in a cost-effective and efficient manner requires an understanding of the different product types.

For example, waterless urinals typically are not installed in spec construction, and on-site water retention often requires a higher level of advanced planning to accommodate for unique site conditions. As a result, pursuing LEED certification begins even before project plans are drawn.

Green Industrial Features

As various green projects come on line, a new generation of industrial buildings is being constructed. Standard landscaping elements such as grass berms now are giving way to sustainable features such as bioswales, which are drainage systems that retain water onsite. French drains, which reduce water discharged into sewer systems also are a new sustainable feature for buildings. Meanwhile, interior elements such as

- clerestory glass, which provides ambient lighting and requires less energy;
- daylighting, which uses strategically placed windows and skylights to provide natural light;
- recycled carpet;
- non-volatile organic chemical-emitting paints and finishes; and
- energy efficient mechanical systems can reduce operational expenses and help earn valuable points for LEED certification.

Financing the Projects

While no disputes surround the benefits of these sustainable features, the common source of contention for green facilities is the perceived prohibitive cost. However, the continued mainstreaming of green building, complemented by financial incentives offered by some local utility companies, has helped to bridge the pricing gap.

Typically, the additional cost of building green industrial properties varies depending on the features included in the speculative construction. However, unbeknownst to many developers, some buildings possess inherent sustainable features in their initial design concepts.

This was the case in the Legacy Building Series, a brand of spec industrial buildings Watson Land Co. developed in the late 1990s. These buildings incorporated design flexibility, natural light, and interior lighting systems that adjust to external conditions. While the preeminent goal of this project was not predicated upon gaining LEED certification, the company found the spec buildings already included a number of features required for certification. These features included 3 percent skylight ratio, abundant use of clerestory glass in the warehouse area, and power-saving features such as warehouse lighting connected to photocells with automatic shutdown once ambient light is achieved. The existence of these features gave Watson a head start in gaining a LEED certification based on the existing spec building requirements. These energy-saving features also helped Watson's Legacy Buildings attain a "Savings by Design" designation from Southern California Edison.

Though designing and building green facilities remains more expensive at the onset, there remains an opportunity to recover these costs once the facility is constructed. In the long run, LEED-certified products are expected to experience higher renewal rates and lower turnover and absorption time on the market. In addition to tenants making a push to become stewards of the environment, they also will benefit from a number of practical issues.

The increased energy efficiency of LEED-certified industrial facilities results in lower operating costs while also creating a healthier work environment. Once exposed to these sustainable environments, tenants may place a premium on remaining in the space for both the health of their business and their workforce.

Industrial real estate developers currently find themselves at the threshold of a new era in real estate. With LEED certification now a reachable benchmark for most new industrial facilities, both small and large businesses are making a push for green, finding that building sustainable product is finally financially justifiable.



Lance Ryan is vice president of marketing and leasing at Watson Land Co. in Carson, Calif., and a member of the U.S. Green Building Council. Contact him at (310) 952-6400 or LRyan@watsonlandcompany.com.