

# Real Estate Strategies

The Stevens Group | ITRA Boston

## Energy, Economics and Environment Drive the Move to Green Buildings

BY CRAIG MELBY, SIOR, CCIM  
ITRA PALM BEACH

**IN THE REAL ESTATE WORLD, EVERYONE UNDERSTANDS WHAT IT MEANS TO BE GREEN – BUILDINGS THAT:**

- Are designed and built to consume a minimum of resources and energy both during construction and operation.
- Do minimal harm to the environment.
- Provide the most comfortable and healthiest possible workplace in terms of indoor air quality, lighting and temperature controls.

And thanks to advances in technology and best practices, green buildings produce one more benefit that is green – they cost less to operate than buildings that have not been built or retrofitted to meet the green standard. These savings not only save the landlord money and make green buildings cost competitive in the marketplace, but ultimately help the tenant's bottom line, in terms of lower operating costs that translate into lower total rents.

*So, how do buildings get "green"?*

It begins with more intelligent design and proper materials selection.

A perfect example of a design element is the no-extra-cost orientation of the building to the sun's path to increase or reduce heat



again. With a proper north/south orientation, window shading can be designed to increase or decrease the huge amount of heat gain coming from direct sunlight. Ever been in an office building that was always too cold in one spot and too hot in another? Very likely no thought was put into the sun's path through the sky when deciding to orient the building and the building's HVAC system can't cope with huge heat gain from the sun in one part of the building, and none in the others.

Speaking of ways to use the sun, consider the green concept of "light

shelves". These are simply shelves built adjacent to a window – either inside or outside or both – that shade the window below and bounce the light back up into the ceiling of the interior space, pushing natural light further into the building.

Compare the efficiency of light shelves to the light created by an incandescent light bulb. It's a no-brainer. Incandescent light produces a massive amount of heat – only 2% of the electricity goes to light – while 98% of the electricity used is making heat. Ambient light coming thru a north-facing window brings in no heat whatsoever.

Other design options include substituting such no-extra-cost materials as lighter colored paints. Light colored roofs and paint reflect back the sun's heat. White paint doesn't cost more than any other color. In cases where a material costs more money – like high performance windows and high efficiency light bulbs (LEDs and Compact Fluorescent) – there may well be savings in another area – like smaller sized HVAC which will be less expensive to install and cost far less to operate over the life of the building.

Here are four key issues to consider when thinking about Green Buildings:

**1) LESS OVERALL COST**

– Contrary to a popular misconception, Green Buildings do not necessarily cost any more to building – but even when they do, the lower lifetime operating cost makes the extra construction cost well worthwhile. It's almost always the cheapest option when combining initial cost and operating cost. Would you invest a dollar today to save a dollar in expenses every year for the next thirty years? The answer is an obvious "yes"! It's important for tenants to remember that when analyzing a new building's design, they must keep in mind both "initial" cost and "operating" cost. Analysis shows that operating cost far overshadows initial cost every time!

**2) PRODUCTIVITY** – Want to really talk money? In virtually all businesses, salaries and benefits of employees far outweighs rent, and an analysis of the cash benefits of higher productivity will far outweigh any increased construction costs (if there are any). Purely from a dollars and cents point of view, studies indicate employees are more productive and take less sick days when housed in a Green Building. Typically the air quality is much better inside a green



*Would you invest a dollar today to save a dollar in expenses every year for the next thirty years?*

building, and so is the lighting – much of it full spectrum natural lighting. And don't forget the shoppers who spend more in natural daylight situations (like Wal-Mart has discovered with their skylights), and the students who learn more in natural daylight situations (like many school boards have discovered).

**3) IMAGE** – The "right thing to do" resonates with many employees and customers, who respond to companies that do the right thing for the environments. This is an integral part of the corporate culture many companies are trying to build, and will assist in attracting and retaining employees.

**4) GLOBAL WARMING** – Science indicates the following indisputable facts:

- a) Increased levels of CO2 are the biggest cause of the greenhouse effect.

- b) Coal-fired power plants used to generate electricity are the biggest emitters of CO2
- c) The biggest users of electricity are commercial buildings.

In fact, mitigating global warming is impossible to do without the cooperation of commercial building users throughout the world. It seems important then for buildings to start using less electricity.

Additionally, since many Green Buildings generate at least some of their own power, they are more robust with back-up power systems built in. In times of a power shortage, companies will still be able to operate their businesses – a real advantage.

But even if you don't believe in Global Warming, go back to item 1, 2 and 3. The cost benefits, workspace improvements and the good will a company can generate with its workers and clients reap tangible benefits.

There are many shades of green and tenants can judge a building's green performance by its LEED Rating, the Oscar Award of the green building world.

LEED, sponsored by the U.S. Green Building Council ([www.usgbc.org](http://www.usgbc.org)), is a nationwide building quality rating system that stands for Leadership in Energy and Environmental Design (LEED). Buildings are now rated as Silver, Gold, Platinum, etc.

Many of the nation's largest companies now build facilities according to these standards, including Wal-Mart and Ford. If your company hasn't joined the green parade, this may be a good time to get on board.