Log In | Become a member today!

search BuildingGreen.com Search

Bibliography Calendar Membership Store

Web Exclusive

Search *EBN* Issues by Date

- Features
- What's Happening
- Product News & Reviews
- BackPage Primers
- Opinion

Continuing Education Credits

- Making Your Own Electricity: Onsite Photovoltaic Systems
- The Building Envelope: Primers from Environmental Building News
- Sustainable Sites: Primers from Environmental Building News
- Rethinking the All-Glass Building
- Integrated Design Meets the Real World
- Counting Carbon: Understanding Carbon Footprints of Buildings
- Cost-Effective Green Retrofits: Opportunities for Savings in Existing Buildings

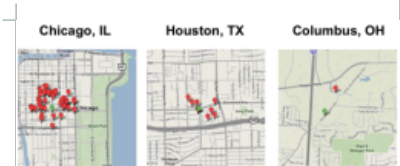
More...

PRINT EMAIL ShareThis

What's Happening from **Environmental Building News**

Non-Green Office Buildings Sacrifice 8% in Rent Revenues

Dutch economist Nils Kok has published the most comprehensive statistical analysis to date on the relative value of green and conventional buildings. The results show that U.S. buildings labeled under the LEED or Energy Star programs charge 3% higher rent, have greater occupancy rates, and sell for 13% more than comparable properties. "Labeled buildings have effective rents [rent multiplied by occupancy rate] that are almost 8% higher than those of otherwise identical nearby non-rated buildings," the study reports.



The number of control properties within the ¼ mile radius varies by location, from 50 in Chicago to 1 in Columbus.

Kok and his University of Maastricht colleague, Piet Eichholtz, with John Quigley of the University of California–Berkeley set out to learn "What do commercial investors value in real estate?" according to Kok. They obtained data on nearly 2,700 buildings that were certified or pursuing certification through LEED or Energy Star. Of those, 1,943 were rental properties and 744 buildings offered sales figures. The study matched each green property with conventional office buildings within one-quarter mile using the CoStar database of commercial real-estate information, and corrected for variables such as age, size, quality, and number of stories, date of last renovation, the presence of onsite amenities, and proximity to public transport. In total they analyzed nearly 27,000 buildings.

Noting that "Energy represents about 30% of operating expenses in the typical office building in the U.S." and is "the single largest and most manageable expense in the provision of office space," the researchers also looked at the interaction between LEED and Energy Star ratings. They found that the benefits of energy efficiency alone and LEED's broader sustainability metrics are both "fully capitalized into rents and asset values."

The Energy Star buildings in the study reported an average annual site energy use intensity (EUI) of 65 thousand Btus per square foot. They also looked into the shelf life on an Energy Star label, and found that "the premium for an Energy Star certificate decreases by about 0.4 percent per year."

The LEED premium kicks in at the Silver level (skipping the most basic, "Certified" level), according to the study, and increases until Platinum is reached. This deeper look at how LEED affects values, relies on a much smaller data set, so it isn't as reliable statistically, Kok told *EBN*, even though the authors considered it worthwhile to look at. In it the authors distinguished between registered and certified buildings, but not between rating systems—they lumped projects certified under LEED for Existing Buildings—the largest group—together with LEED for New Construction and LEED for Core and Shell projects.

The paper also revisited a set of buildings that the authors studied in 2007 to see if the economic crisis affected green premiums. Their conclusion is that neither the financial situation nor the dramatic increase in the number of green projects had a significant impact on those premiums.

Kok notes that statistically valid data on the cost of attaining LEED and Energy Star ratings is not yet available, but anecdotal studies suggest that any green cost premium is lower than the increases in value that the has found. "I would like to combine both costs and returns to be able to show the return on investment," he says.

Studies like this are useful for policy, green finance expert Scott Muldavin, told *EBN*, but, he notes, "they are not typically very useful for specific analysis or due diligence about the value and risks for specific properties." Muldavin is the author of *Value Beyond Cost Savings: How to Underwrite Sustainable Properties*, a book in which he argues that real-estate valuation is inherently qualitative, and statistical analyses can never capture all the relevant variables. He acknowledges, however, that this work is a huge improvement over previous statistical studies that reported much

DISCUSSIONS

value of daylight
Tristan Roberts
Jan 27, 2011

More comments

RELATED ARTICLES

Green Building a High Priority for Office Tenants, Says Study
EBN: Newsbrief - February 2011

RELATED GREEN DESIGN

LEED Rating Systems

More related green design

higher ("nonsensical," according to Muldavin) premiums.

Published on Kok's website under the title "The Economics of Green Building," the study has been submitted for publication in an academic journal.

– *Nadav Malin*

November 9, 2010

DISCUSSIONS

Reader-contributed comments related to *Non-Green Office Buildings Sacrifice 8% in Rent Revenues - BuildingGreen.com*. Comments are listed with newest at the top.

value of daylight *Posted by Tristan Roberts on Jan 27, 2011, 11:42 PM*
I received this comment via email for posting here:

"Hopefully, this study will help bring back a monetary value to daylight. Historic buildings were rented out on a cost for daylight basis. The more daylight the space had, the higher the rent. This study supports what builders knew prior to the invention of the fluorescent light bulb for general lighting. Historic buildings were often build in the most sustainable methods available at the time. We have much to learn from them."

Inherent Value in Green Buildings vs Non-Green *Posted by mike lackey on Nov 17, 2010, 01:00 PM*
I have often heard this stated, but had not seen any data to back it up. Hopefully this information will influence building developers.

Log in to add comments - Help with comments

[top of page]

RELATED ARTICLES

Green Building a High Priority for Office Tenants, Says Study
EBN: Newsbrief - February 2011

[top of page]

RELATED CATEGORIES

GREEN TOPICS
LEED Rating Systems
Green Building Rating Systems
Articles and Reports

[top of page]

IMAGE CREDITS:
1. Photo: William Porter