

Allen Matkins / CTG / Green Building Insider

# 4th Annual Green Building Survey



Allen Matkins®



 Green Building Insider



# Support for green construction remains high—saving energy is top priority

## EXECUTIVE SUMMARY

The Allen Matkins/CTG/Green Building Insider Green Building Survey completes its fourth year with over 1,600 construction and design professionals from across the U.S. responding. This largest survey of green building professionals, examines the fastest growing sector of the construction industry – green and sustainable construction.

Support for building green remained nearly unanimous at 92%. At the same time, support for LEED\* certification slipped 4.7% in 2009 to 62%. Cost is a major driver for green building in this economic downturn, with the gap between support for green construction and LEED certification growing over the past two years.

Saving energy and other operating expenses was the number one reason for building green projects.

Green building is perceived to have greater construction risks than non-green construction. The top strategies to reduce the risks of green building are 1) retaining green consultants (such as LEED-AP consultants), 2) measurement and re-commissioning, 3) periodic testing, and 4) contractual risk shifting.

*In 2009, the global green building industry totaled over \$553 billion in 2009. It is the fastest growing sector of the building industry with an estimated CAGR of 108% through 2015*

Over half of all respondents indicated that a LEED Gold rating increased project costs by 4% or more, while nearly 30% of respondents reported the costs of LEED Gold rating at significantly lower than 4%. Possible explanations for the difference in reported cost premiums include a) the variety of local codes and professional experience in certain regions that raise the minimum standards close to LEED Gold standards, and b) the varying degree of difficulty in achieving a LEED Gold rating on different building types, such as hotels vs. office buildings.

The purchase of carbon offsets, which is largely voluntary today, hovered near 7.5%. We do not expect a significant change in carbon offsets unless a national carbon offset program is adopted.

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\*The U.S. Green Building Counsel's Leadership in Energy and Environmental Design certification programs for green and sustainable construction.

# Overwhelming support for green building and a slowing decline for LEED certification

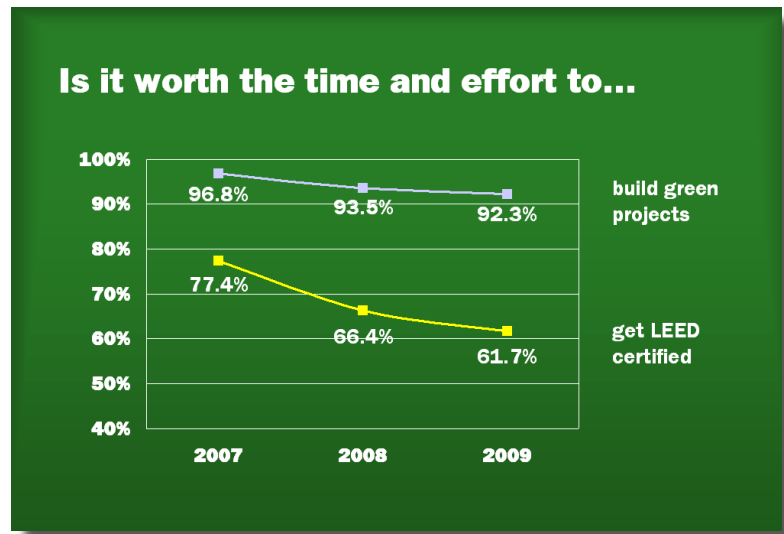
Design and construction professionals from across the nation continued to overwhelmingly support green construction (96.8% in 2007, 93.5% in 2008 and 92.3% in 2009).

However, the support for obtaining LEED certification continued to decline, though slower than previously (77.4% in 2007, 66.4% in 2008 and 61.7% in 2009). Accordingly, our Green Survey found an 11% LEED slip in 2008 and a smaller 4.7% LEED slip in 2009 for a cumulative slip of close to 16% in two years. Nevertheless, support for the time and effort to obtain LEED certification remains near 62%.

While the gap between the support for green construction and LEED certification has grown, the level of support for LEED certification remains high, compared to the US Green Building Council's original mission statement: LEED was launched as a market transformation tool, with a goal of representing the top 25% of all construction projects.

Several factors may explain the growing gap in support for green construction and LEED certification:

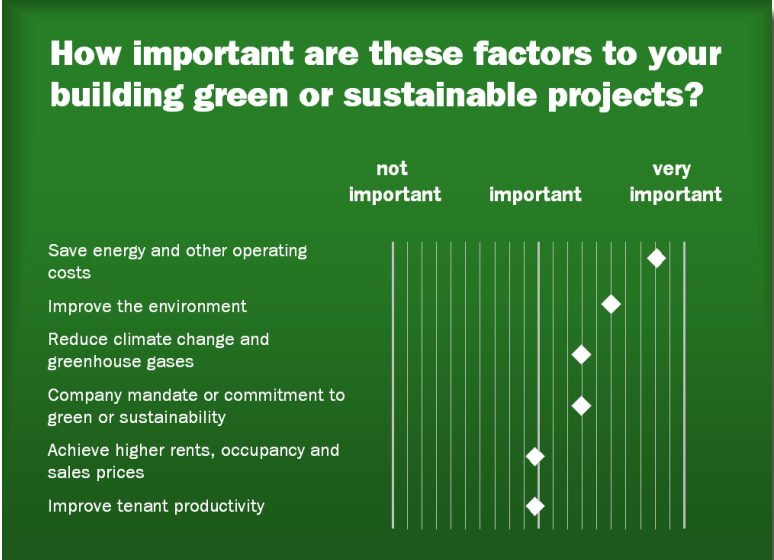
(1) LEED is not intended as a minimum code system. While LEED Silver certification is required for all California State and Federal GSA building projects, new standards have emerged to function as minimum green building codes. For example, on January 1, 2011 the State of California will convert its voluntary Green Building Standards into a mandatory green building code along with a two tier voluntary CALGreen rating system, ASHRAE recently released its Standard 189.1 and on October 5, 2009, and President Obama issued Executive Order



13154 with its emphasis on High Performance Building Standards;

- (2) In the current economic conditions, third-party certification fees, such as the fees utilized for LEED certification, are under additional scrutiny;
- (3) Other green building certification programs have emerged to fill gaps not effectively addressed by LEED; for example, the Green Point Rated program from Build It Green is designed specifically for residential projects and is being used actively by multi-family housing developers; and
- (4) Finally, the overwhelming support for green construction should dispel arguments that LEED's slip is due to ongoing controversies in the global warming science arena. Many professionals believe the new 2009 version of LEED creates greener and more sustainable projects with a stronger emphasis on reducing emissions, increasing commissioning, and conducting ongoing measurement and verification.

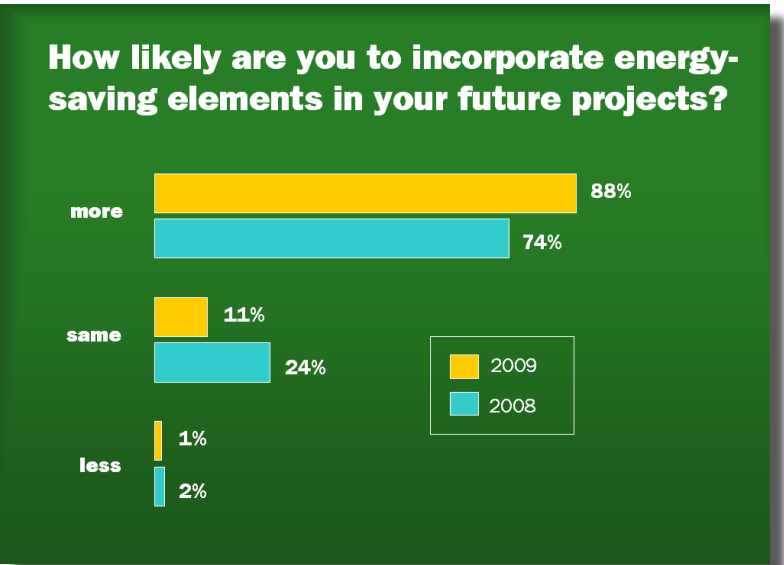
# Saving energy and operating costs tops reasons for green building



The Green Building Survey asked respondents to choose their most important reasons for building LEED, green or sustainable projects. The top reason cited was to “save energy and other operating costs.”

Perhaps “saving energy and other operating costs” topped the reasons for building green is because 97.5% of all respondents believe that energy costs will continue to increase in the future.

88% of respondents indicated that they are more likely to include energy saving or sustainable elements in their future construction projects – a 14% increase from the previous year.



# Green development risks perceived to be slightly higher than those for traditional development

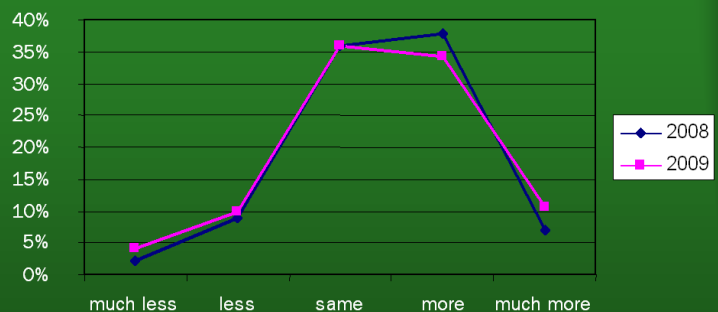
The respondents indicated that the perceived risks of building green projects are higher than the risks of building traditional non-green projects.

The top strategies for reducing the risks of green building are:

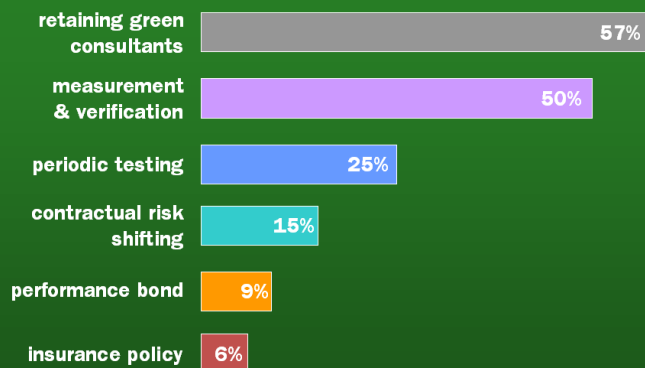
- 1) retaining green consultants (such as LEED-AP consultants),
- 2) measurement and re-commissioning,
- 3) periodic testing, and
- 4) contractual risk shifting.

While green construction has not created many reported lawsuits to date, we anticipate that as green construction continues to increase in market share, claims related to green construction will likewise increase. Accordingly, smart construction professionals will utilize all these strategies to minimize green construction risks.

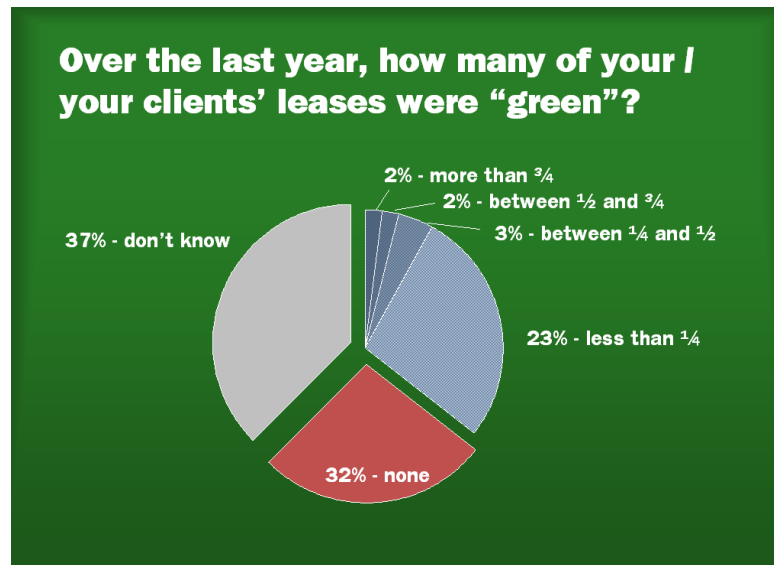
## How do the risks of green building development compare to the risks of traditional development?



## What special measures are you/your clients taking to reduce risk on green projects? (Select all that apply)



# Green leases on the rise— 30% report green lease use



Green leasing is becoming a new green growth area. Although lease revisions phase in slowly over time, 30% of respondents have seen activity in the green leasing arena.

We believe the number of green leases will continue to grow substantially over the next few years, especially as more green and sustainable construction projects are brought to market.

A "Green Lease" is a lease for a green building space that promotes construction and operational strategies that ensure money saving energy efficiency and conservation.

For example, green leases may promote energy efficient HVAC, water heating, and lighting; the use of low flow fixtures and other water-saving devices; the use of low Volatile Organic Compound (VOC) paints, adhesives, and cleaning supplies to promote better indoor air quality; the use of waste recycling; and the use of periodic monitoring and commissioning of such systems encourage adjustments and repairs in order to achieve the specified levels of energy efficiency and sustainability.

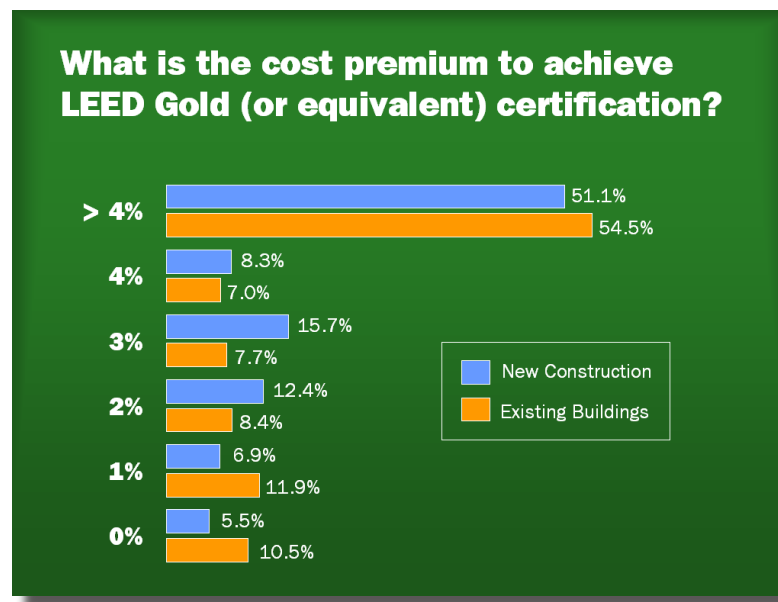
# Added costs for green building may vary based on experience, local green codes and building types

Regarding cost, we asked respondents if they had actually helped build and certify a LEED-New Construction (LEED-NC) project to the Gold level.

From that experienced group, we asked what the added cost, if any, was to build and certify their green projects. There was a wide range of responses, with 51% reporting a cost premium of 4% or higher and 30% reporting a premium of less than 3%.

Potential explanations for the wide range in reported cost premiums include:

- 1) the impact of project team experience (experienced teams are often able to use integrated design to achieve higher levels of building performance within the baseline budget and to hold materials prices down due to their familiarity with green products),
- 2) the impact of building type such as hospitals and hotels on one hand and office buildings and residential projects on the other, and
- 3) the variability in local codes, where some jurisdictions require LEED Silver or higher performance levels as the baseline.



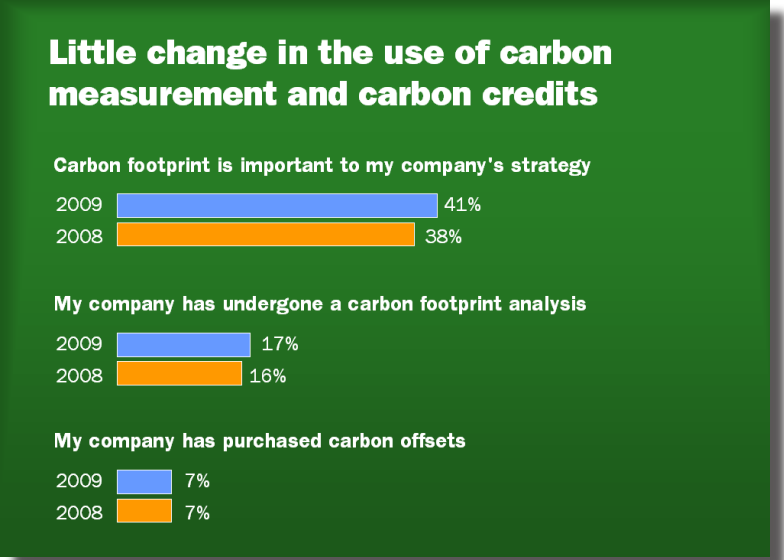


# Carbon credits and offsets continue to show low market penetration

We see very little change in focus on carbon footprint analysis and the use of carbon credits over last year.

Nearly 17% of respondents have gone through a carbon footprint analysis for their companies. This number is only up slightly from the previous year. Also, 41% of respondents feel that carbon footprint analysis is an important element of their firm's strategy, which was up 3% from the previous year.

The purchase of carbon offsets, which is largely voluntary at this point in time, has stayed the same at about 7%. We do not expect a significant change in carbon offsets unless a national carbon offset program is adopted.



# Green futures

## CONCLUSIONS

As the economy recovers from its deepest recession since the Great Depression, the construction industry with 92% support for green and sustainable construction, has the potential to create a boom in green construction jobs, materials, products and buildings.

Further, with energy savings as the first priority of most building professionals, green construction will help the nation become more energy independent and allow landlords to increase the value of their buildings through reduced operating costs.

Also, as green professional experience broadens, and as green building codes continue to be adopted, the additional cost of building green projects will continue to decrease.

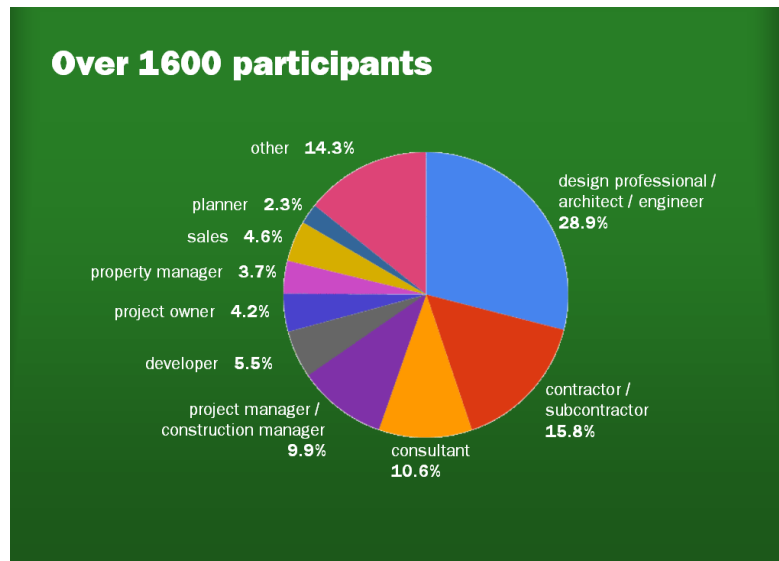
Finally, as green and sustainable construction increases its market share, savvy building professionals will manage the risks of building green by 1) retaining qualified green consultants, 2) emphasizing measurement and re-commissioning, and 3) retaining counsel to negotiate well reasoned contractual allocations of green building risks.



# Acknowledgments

## PARTICIPANTS

Over 1,600 construction and design professionals from across the U.S. responded to the 4th Annual Green Building Survey. The survey was conducted in February 2010. The Survey examines attitudes and activities in the fastest growing sector of the construction industry – green and sustainable construction.



## AUTHORS



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**Dr. Malcolm Lewis, P.E.**, is a consulting engineer who pioneered energy efficiency and sustainable design in the built environment for more than 30 years. He is founder and CEO of CTG Energetics, Inc. and in that role has been involved in the design and construction of hundreds of green buildings over the past 13 years. Also, he leads CTG Forensics, Inc. and provides expert investigation, consulting and testimony on building-related construction claims.



**Adam L. Stock** is the Director of Marketing and Business Development for Allen Matkins and is the publisher of Allen Matkins Market Intelligence publications including *Green Building Update*, *Renewable Energy Update*, and *Allen Matkins/UCLA Anderson Forecast California Commercial Real Estate Survey*.

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