

NATIONAL GREEN BUILDING ADOPTION INDEX 2015



CBRE



In partnership with
Maastricht University

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NATIONAL GREEN BUILDING ADOPTION INDEX 2015

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Executive Summary

The real estate sector represents a critical pillar of any society. Not only does it serve as an important focal point where we work, shop and live, but it also represents a significant share of institutional capital, and most of private household wealth.

The real estate sector also plays an important role in total U.S. energy consumption. In 2014, 45% of total U.S. energy consumption was in the residential (25%) and commercial (20%) real estate sectors. Notwithstanding stricter building codes and other legislation, the Energy Information Agency predicts that between the years 2012 and 2040, residential electricity consumption will further increase by 21% and commercial electricity consumption will increase by 27%.

Such increased energy consumption will have significant consequences, including greenhouse gas emissions. The EPA reports that in 2009, the nation's electric utilities produced on average 1,216 pounds of carbon dioxide per MWh of electricity generated. Based on this emission factor and a social cost of \$35 per ton of carbon dioxide, this means that the U.S. commercial building stock currently imposes an annual social cost of \$28 billion on society.¹

Office buildings in particular are at the center of many of the important environmental and social issues of our times. In addition to energy usage, the built environment also plays a significant role in water, waste, transportation and workforce discussions. As a result, many large companies today make specific, public reference to the type, quality and environmental aspects of the buildings they have chosen to occupy. It is a simple and effective way to demonstrate that they are actively engaged in good environmental practices. Further, investors are increasingly seeking these assets for their owned portfolios.

Awareness of the environmental impact of commercial real estate has been growing over the past decade, further fuelled by public debate about energy dependence, grid resilience and the many industry reports and studies showing that energy efficiency in buildings is simply “good business”. In the absence of government regulations targeting commercial buildings, EPA’s ENERGY STAR® program and the U.S. Green Building Council’s LEED® rating system have gained traction as ways to signal exemplary performance in energy efficiency and sustainability in the commercial real estate market. The rapid rise of these programs is surprising; there are now more than 26,000 ENERGY STAR-rated buildings, some 3.8 billion square feet, and nearly 23,000 LEED certifications totaling approximately 2.9 billion square feet in the U.S. market.

To better understand the supply of this new type of real estate—green buildings—in the market, we first developed and published the Green Building Adoption Index in 2014. Based on a rigorous methodology, the Index shows the growth of ENERGY STAR- and LEED-certified space for the 30 largest U.S. office markets, both in aggregate and in individual markets, over the previous nine years.

Executed in close collaboration with the USGBC and CBRE Research, this is the second release of the annual Index. The primary outcomes continue to be noteworthy:

- At the end of the fourth quarter of 2014, 13.1% of the commercial building stock now has an ENERGY STAR label, LEED certification, or both, compared to 13.8% at the end of 2013—a slight overall decrease.
- Measured by size, the amount of certified commercial space also decreased from 39.3% in 2013 to 38.7% at the end of 2014.
- This decrease in certified space is due entirely to a decrease in ENERGY STAR labels. At the end of 2014, ENERGY STAR certifications represented 9.7% of the total number of commercial office buildings across the 30 largest markets in the U.S., down from 10.8% the year before.

¹ Based on Kahn, M., Kok, N., Quigley, J. (2014) Carbon emissions from the commercial building sector: The role of climate, quality, and incentives. *Journal of Public Economics*. Vol. 113, p1–12.



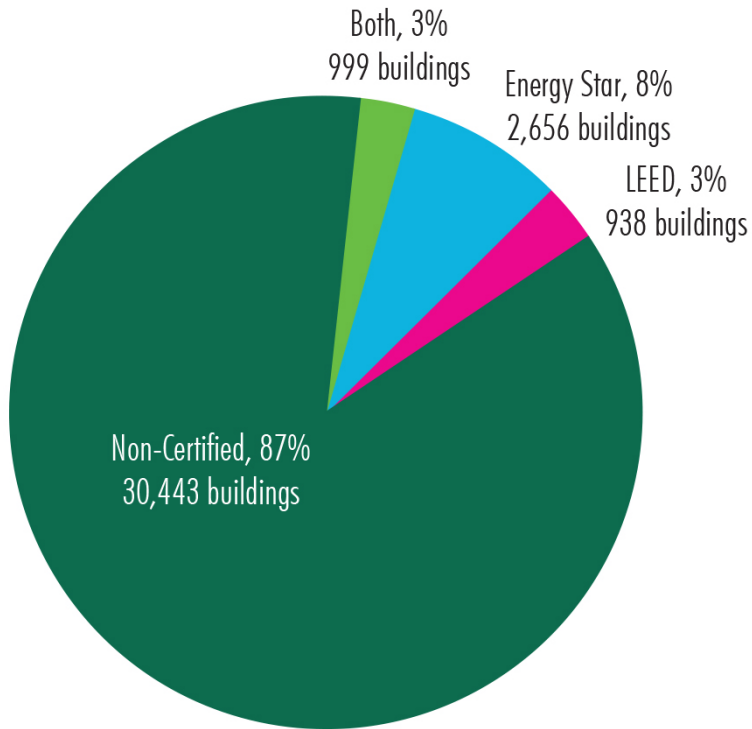
Executive Summary

- By square footage, the total floor space certified by the EPA decreased from 31.7% to 27.8%. This reduction is likely the result of our decision to apply a two-year label window to all ENERGY STAR certifications in the 2013 study.
- It appears many of the buildings that were previously certified did not renew their certification in 2014. This does not necessarily mean that the energy use of these buildings has changed, but that some owners and managers choose not to spend the time or expense to reapply for certification every year.
- The LEED program continued to expand in 2014, with 5.3% of all commercial office buildings in the largest markets now certified, up from 5.1%. This represents 20.3% of total commercial office space, up from 19.4%, and includes newly constructed buildings (“LEED NC” or “LEED C&S”), as well as buildings certified under the “Existing Buildings” (“LEED EB”) program.
- Large geographic variation in the adoption of LEED and ENERGY STAR certification remains. For both certifications, the top-3 markets in terms of green building adoption by percentage of square footage remained Minneapolis, San Francisco and Chicago, although San Francisco added more green space, challenging Minneapolis for top honors.
- This year’s study also looks at several submarkets in the reviewed cities as we attempt to further understand where the green building phenomenon is strongest.
- To further define the market, we have also looked at various building size tranches to gain greater insight into the locations and buildings that have pursued and achieved sustainability recognition.
 - Only 4.5% of all buildings under 100,000 square feet are currently certified, representing 7% of all square footage in those buildings
 - 24.5% of all buildings 100,000-250,000 square feet are certified, representing 26.4% of all square footage in those buildings
 - 54.6% of all buildings over 250,000 square feet are certified, representing 67% of all square footage in those buildings
 - 62.3% of buildings over 500,000 square feet are certified, representing 76% of all square footage in those buildings

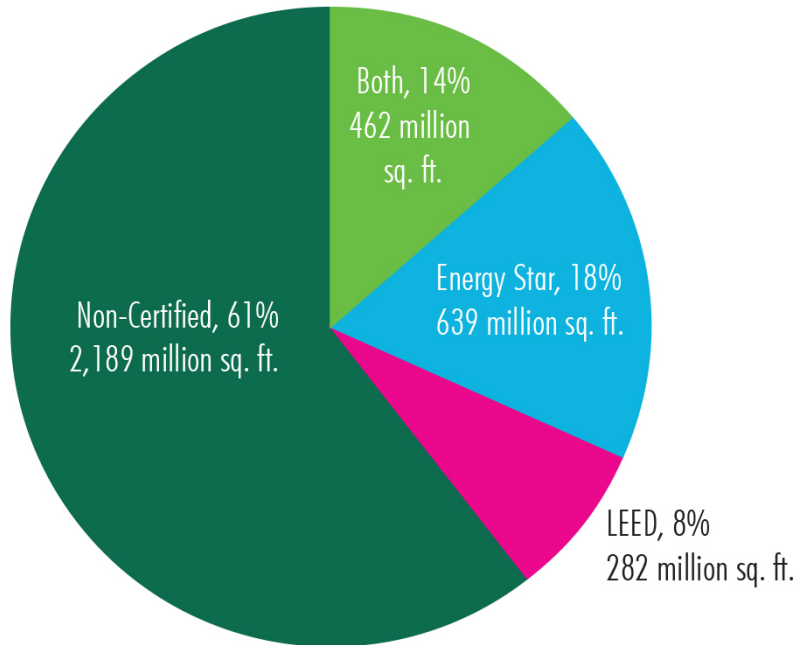
The overall results show that the uptake of green building practices in the 30 largest U.S. cities continues to be significant, but the growth shows abatement. This does not imply that buildings are starting to perform worse than before. Rather, it reflects the fact that only a certain fraction of the building stock can obtain a sustainability or energy-efficiency certification. And perhaps it also indicates that the fraction that can seek certification has now done so. The most sophisticated owners with the most high-profile buildings in Tier 1 markets have pursued and achieved certification. Several trends we will be following closely in future studies will include the pattern of re-certification for ENERGY STAR-labeled buildings; the impact of various benchmarking and disclosure regulations on certification levels; the impact of new LEED certification products and standards; the impact of the new EPA CBECS data on scores of historically certified properties; and the growth of green buildings in those cities currently lagging in our rankings.



Adoption - number of buildings



Adoption - square footage of buildings



Green Building Adoption Index Rankings

Green Building Adoption Index								
Rank	(2013) Rank	Market	% of Buildings Total Green	% of sq. ft. of Buildings Total Green	% of Buildings Energy Star	% of sq. ft. of Buildings Energy Star	% of Buildings LEED	% of sq. ft. of Buildings LEED
1	1	Minneapolis/St. Paul	28.05	70.41	22.36	55.39	9.45	36.66
2	2	San Francisco	19.40	70.02	15.75	53.11	8.21	40.02
3	3	Chicago	19.73	63.41	15.46	46.02	8.59	38.48
4	5	Atlanta	29.03	57.85	24.64	44.96	8.69	24.92
5	4	Houston	21.65	52.83	17.05	41.46	9.38	32.08
6	7	Denver	15.27	48.66	12.32	38.93	6.49	26.03
7	6	Los Angeles	18.97	47.14	14.55	34.86	7.15	25.74
8	10	Washington, D.C.	16.14	42.31	11.53	30.38	7.66	22.32
9	9	Miami	17.54	41.59	13.21	31.27	6.86	21.84
10	8	Seattle	9.95	40.13	6.36	23.43	4.90	24.96
11	12	Walnut Creek	9.92	37.92	6.05	22.54	4.22	18.29
12	14	Manhattan	24.20	34.65	16.31	18.61	11.21	21.12
13	15	Orange County	10.43	34.27	9.62	32.20	2.28	9.46
14	11	Philadelphia	18.30	34.05	14.23	27.95	4.62	9.64
15	20	Portland	11.39	33.92	6.81	24.61	5.45	15.61
16	17	Dallas/Ft. Worth	12.95	31.72	10.05	24.24	4.72	14.24
17	22	Tampa	7.48	31.55	5.87	24.83	2.07	11.13
18	21	Phoenix	9.37	31.39	6.60	21.84	3.82	14.39
19	13	San Diego	8.62	31.02	6.18	23.51	3.03	11.28
20	19	Sacramento	11.81	30.79	8.55	22.96	4.94	17.55
21	16	Boston	9.61	30.73	7.06	22.24	3.48	14.69
22	18	San Jose	9.69	28.57	5.47	12.22	4.82	17.04
23	23	St. Louis	6.24	21.51	3.20	10.81	3.56	11.73
24	26	Baltimore	8.15	17.15	1.51	4.50	6.88	13.76
25	27	Detroit	5.54	16.07	4.73	14.49	1.21	2.42
26	25	New Jersey	12.80	15.74	10.00	11.43	4.00	6.31
27	24	Milwaukee	5.08	14.42	2.80	10.24	2.60	6.65
28	30	Pittsburgh	2.28	13.34	1.06	9.10	1.46	8.73
29	28	Stamford	6.02	12.88	3.61	7.77	2.66	6.29
30	29	Kansas City	3.38	10.91	1.80	6.70	1.81	5.81

National Summary

In an effort to again measure the importance of green buildings in the 30 largest US office markets, CBRE engaged a research team from Maastricht University – Dr. Nils Kok and Rogier Holtermans. Coordinating historical EPA and USGBC data with CBRE's proprietary market data, the team has calculated a unique, accurate measure of green building adoption. For the purpose of this study, a green building is defined as one that has earned either an EPA ENERGY STAR label or a full building USGBC LEED certification.

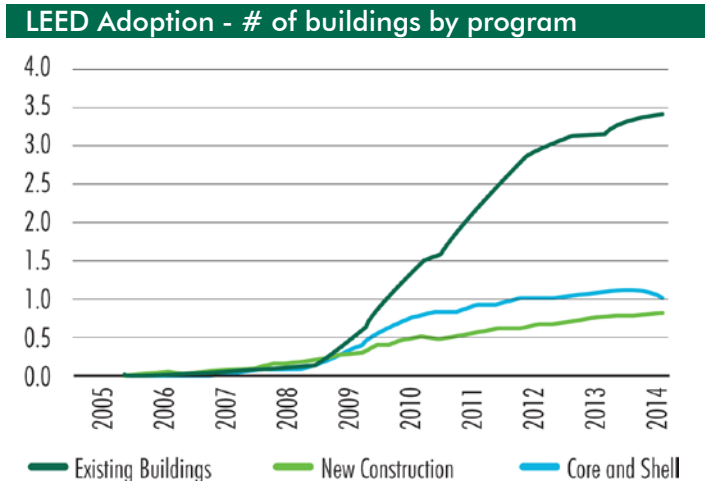
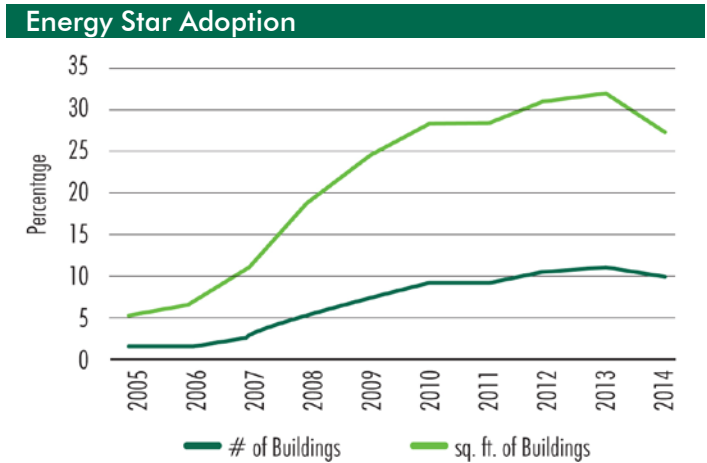
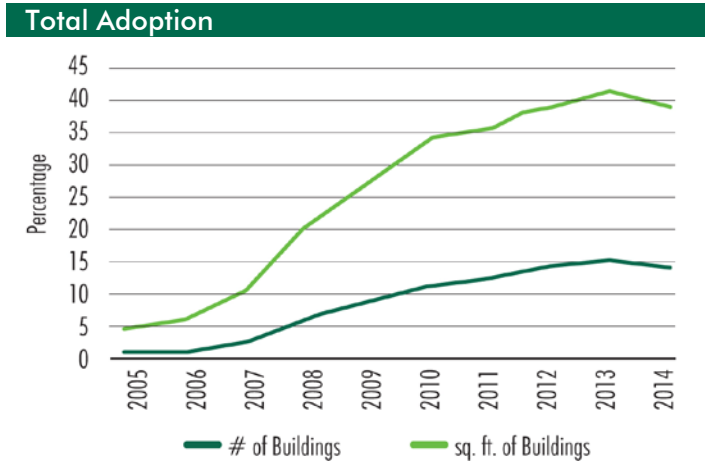
The outcomes of the study show that at the end of 2014, 13.1% of all buildings in the 30 largest markets carried one or both of these distinctions, slightly down from the 13.2% recorded last year. Furthermore, these buildings represent 38.7% of all space in those 30 markets, down by 0.6% from 2013.

These slight decreases may mask the underlying dynamics of the recent rapid growth in the achievement of both ENERGY STAR and LEED certification. While the current results show that the number of ENERGY STAR labels decreased from 10.2% to 9.7% year over year, this is still significantly higher than the 1.3% adoption rate in 2005. This year's measured square footage adoption also decreased from 30.3% to 27.7%. However, this is again dramatically higher than the 5.2% of building square footage similarly labeled in 2005. The decreases in Energy Star labels may be reflective of our decision to give only a two year life to these labels and many owners choose to recertify assets on a longer cycle. Future year surveys may better reflect this fact.

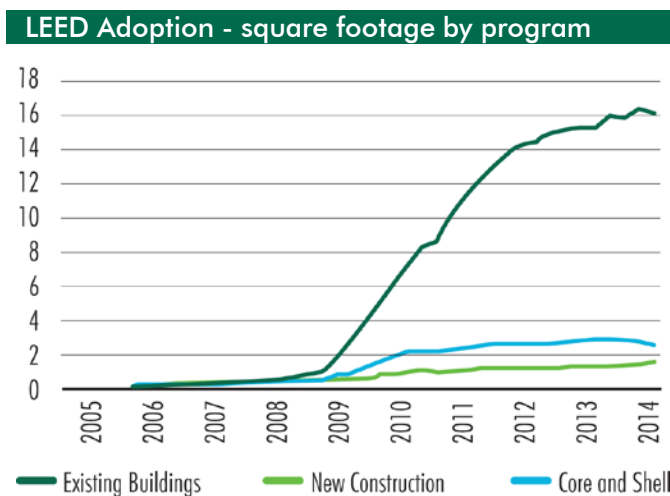
For LEED, the upward adoption trend continued, up to 5.3% from 5.1% the year before, measured by number of buildings, and from 19.4% to 20.3% measured by square footage. The rate of increase is slowing, perhaps indicating that going forward it will be new construction and redevelopment of existing assets driving the adoption of green-certified space, rather than certification of existing assets. Indeed, a breakdown of LEED adoption into the specific certification schemes reveals that LEED for New Construction now accounts for 7.7% of all LEED certifications as compared to 6.9% last year.

In an effort to gain a more specific understanding of the dynamics of green building certification, this year we reviewed a number of sub-markets in the major cities as well as segregating the overall market into multiple tranches of building size. Details of the submarket findings are covered in the individual market narratives. Of even greater interest are the findings about adoption rates by building size. For the 10 largest markets we examined four size categories. The smaller 20 markets are divided into three size groups. In general, we document that larger buildings are more likely to be certified, confirming our belief from the previous study.

National Q4 2014	% of Buildings	% sq. ft of Buildings
Total	13.11	38.70
Energy Star	9.69	27.77
LEED	5.32	20.29
Existing Buildings	3.36	16.20
New Construction	0.90	1.56
Core and Shell	1.06	2.53



In the 10 largest markets, 62.3% of the buildings larger than 500,000 square feet, encompassing 76% of all space, are certified. The adoption numbers within the largest size bracket for the 20 smaller markets is even slightly higher. More than two thirds, 66.2%, of the buildings over 250,000 square feet in those markets are certified, representing 76.6% of total space. By comparison, only 4.4% of buildings, representing 7% of the total space, in buildings under 100,000 square feet are green certified. It is clear that most big buildings are pursuing and achieving certification and that in many markets failure to do so may place a building at a competitive disadvantage. Conversely, there would appear to still be an opportunity for many smaller buildings to differentiate themselves by pursuing some type of green recognition.



10 Largest Markets*

Description	# of Buildings Total Green	Sq. ft. of Buildings Total Green	# of Buildings Energy Star	Sq. ft. of Buildings Energy Star	# of Buildings LEED	Sq. ft. of Buildings LEED
Under 100,000 sq. ft.	4.63	6.35	3.36	4.84	1.47	1.82
100,000 to 249,999 sq. ft.	23.51	25.72	19.38	21.18	6.81	7.75
250,000 to 499,999 sq. ft.	44.41	47.94	33.35	35.95	20.94	23.17
over 500,000 sq. ft.	62.34	76.03	43.46	50.32	38.79	50.74

* Based on the square footage of each individual market. This selection includes: Atlanta, Boston, Chicago, Dallas/Ft. Worth, Houston, Los Angeles, Manhattan, New Jersey, San Francisco, and Washington, D.C..

20 Smallest Markets*

Description	# of Buildings Total Green	Sq. ft. of Buildings Total Green	# of Buildings Energy Star	Sq. ft. of Buildings Energy Star	# of Buildings LEED	Sq. ft. of Buildings LEED
Under 100,000 sq. ft.	4.41	7.46	2.97	5.33	1.53	2.31
100,000 to 249,999 sq. ft.	25.90	27.42	18.79	19.86	9.65	10.35
over 250,000 sq. ft.	66.24	76.59	47.81	55.52	34.02	42.05

* Based on the square footage of each individual market. This selection includes: Baltimore, Denver, Detroit, Kansas City, Miami, Milwaukee, Minneapolis/St. Paul, Orange County, Philadelphia, Phoenix, Pittsburgh, Portland, Sacramento, San Diego, San Jose, Seattle, St. Louis, Stamford, Tampa, and Walnut Creek.

Atlanta

GREEN BUILDING TRENDS

The Atlanta market continued to demonstrate strong adoption of green building practices during 2014 and now boasts 264 qualified buildings, a net gain of 20 buildings over the prior year. With 57.9% of all space qualifying, an increase of 3.8 points, Atlanta now stands in fourth place nationally after a fifth place finish last year. Additionally, with 29.0% of all buildings now qualified, Atlanta moves past Minneapolis as the market with the highest percentage of green buildings. Atlanta also leads in the number of ENERGY STAR-labeled buildings at 24.6%, joining Minneapolis as the only two markets to break the 20% barrier. Finally, Atlanta is third in the number of LEED-certified buildings at 8.7%.

Atlanta's submarkets demonstrate an even stronger adoption in terms of the number of buildings certified under ENERGY STAR, LEED or both. Atlanta Midtown displays one of the strongest green building adoption rates with 27 buildings, or 51.9% of the total, certified. Buckhead follows at 45.3% and Atlanta's Central Perimeter submarket comes in at 32.5% of office buildings certified.

GREEN MARKET NEWS

In 2014, Atlanta remained third nationally in the number of Fortune 500 firms headquartered in the metro area. Pulte Group's headquarters became the sixteenth of those company headquarters in 2014, taking 101,000 square feet of space in Buckhead's ENERGY STAR-labeled Capital City Plaza. Mercedes-Benz and Porsche also recently announced new North American headquarters in Atlanta, and the new Porsche facility that is currently under construction will be built to a LEED Silver or higher certification. Mercedes-Benz is expected to construct an office tower in the Central Perimeter submarket that will be ENERGY STAR and LEED certified.

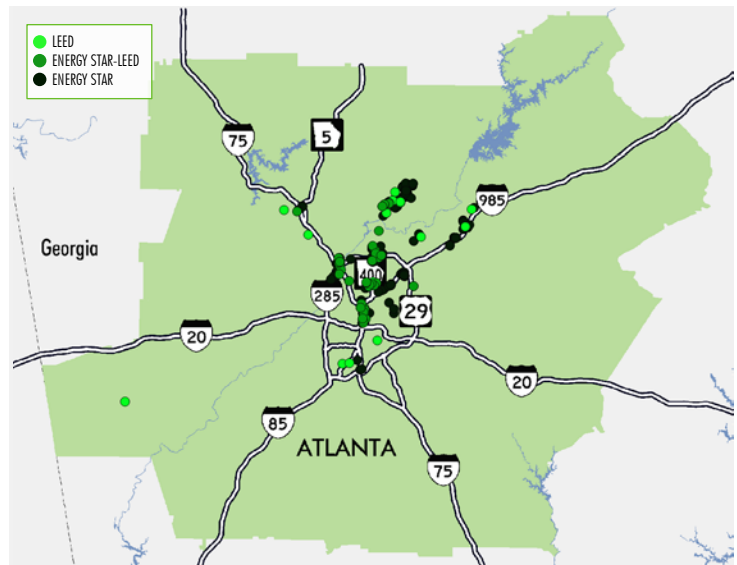
Ponce City Market is a 1920s-era building that is being renovated to achieve a LEED Core and Shell Silver certification. Alliance Three, the next high-rise office tower to be completed in the Buckhead submarket, will be delivered in 2016 and is expected to achieve a LEED Gold or Platinum certification.

Atlanta has also continued to establish itself as a vibrant technology hub, attracting environmentally conscious tenants in the process. Avalon, a mixed-use development in North Fulton, planted more than 2,500 trees during development, while the Atlanta Tech Village achieved a LEED certification after extensive renovation in 2014 and has attracted many technology start-ups.

LEEDing by example

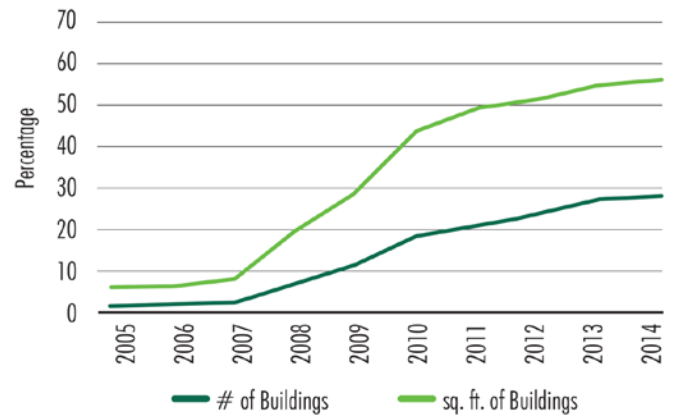
[55 Allen Plaza](#)

4x Energy Star, LEED Gold EB and CI x2

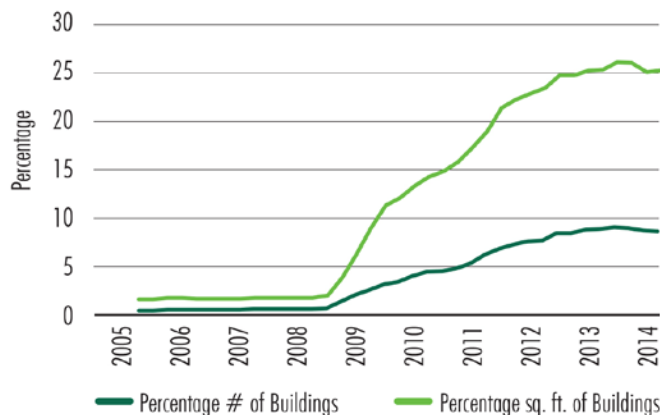


Atlanta Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	29.03	57.85
Energy Star	24.64	44.96
LEED	8.69	24.92
Existing Buildings	6.82	21.39
New Construction	0.99	1.19
Core and Shell	0.88	2.34

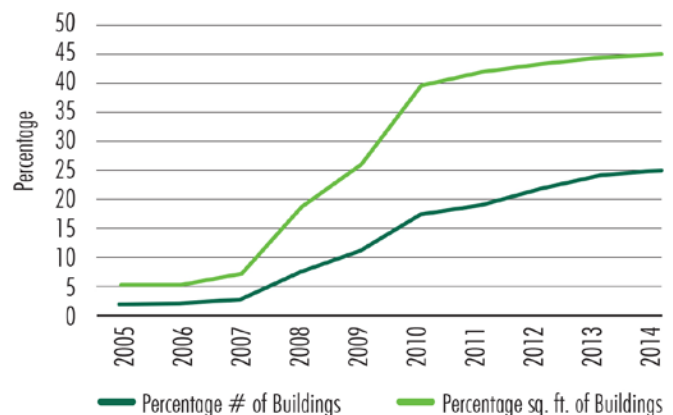
Total Adoption



LEED Adoption



Energy Star Adoption



Baltimore

GREEN BUILDING TRENDS

The Baltimore office market continues to sit in the bottom third of green buildings, ranking twenty-fourth this year, a modest improvement from twenty-sixth. In all, 70 buildings have some level of green certification. The statistics also show an interesting bias towards LEED certification and away from ENERGY STAR labels. Only 1.5% of Baltimore buildings studied have earned an ENERGY STAR label, making the market twenty-ninth in our survey; however, 6.9% have achieved LEED certification, placing Baltimore in eleventh place in that category. Moreover, this more than 4 to 1 ratio of LEED to ENERGY STAR is the highest in the nation by a significant margin. Only four other markets have higher LEED to ENERGY STAR numbers, and in each of those other markets the ratios are nearly equal.

Many of the top lease transactions in 2014 were executed in green buildings, including T. Rowe Price's 424,877-square-foot renewal at 100 E Pratt Street (CBD); OneMain Financial's 159,950-square-foot lease at 100 International Drive (Baltimore City East); Cisco's 97,000-square-foot lease at 8135 Maple Lawn Blvd. (Columbia); and Pandora Jewelry's 88,000-square-foot lease at 250 W Pratt Street (CBD).

Significantly, more than 60% of all executed leases in 2014 were renewals, a trend expected to continue throughout 2015 due to the lack of new product in the Baltimore metro area. Sensitive to occupancy costs, many users lease space in buildings that are not LEED certified or ENERGY STAR rated and customize their space with energy-conserving technologies, such as programmable thermostats, CFL lighting and automatic shutoff power strips.

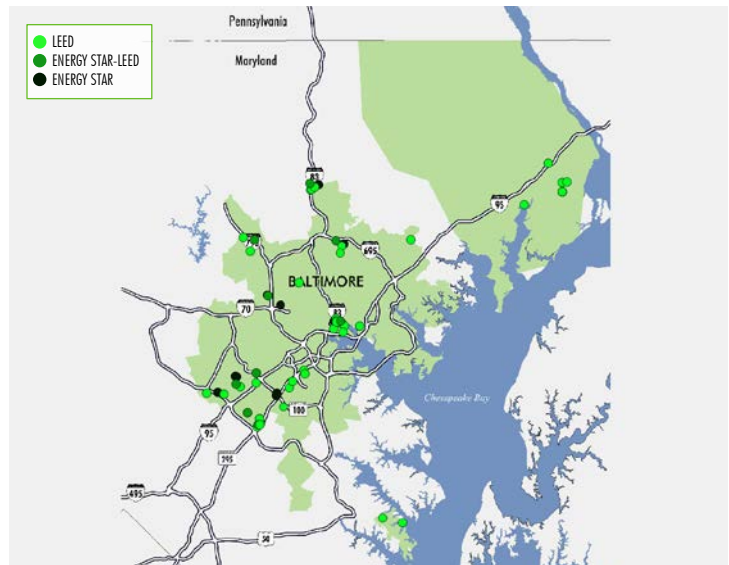
GREEN MARKET NEWS

2014 investment sales volume increased over the previous year, with investors showing more interest in the Baltimore metro than before the recession. Institutional investors and REITs are pursuing these opportunities, especially for Class A, green buildings. Thames Street Wharf at Harbor Point, located at 1300 Thames Street in the Baltimore City East submarket, was the most significant transaction of the year. The property was built in 2010 and is LEED Gold certified.

LEEDing by example

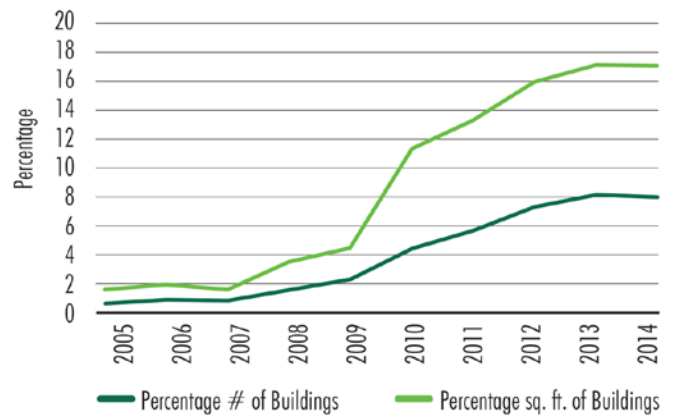
750 East Pratt

5x Energy Star, LEED EB Gold, LEED EB Platinum

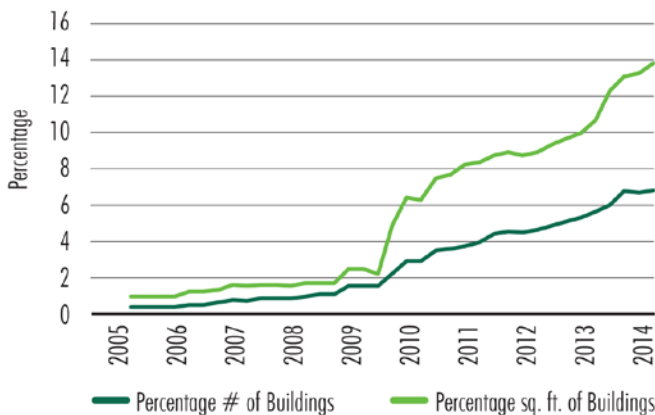


Baltimore Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	8.15	17.15
Energy Star	1.51	4.50
LEED	6.88	13.76
Existing Buildings	1.86	5.50
New Construction	0.82	1.06
Core and Shell	4.20	7.21

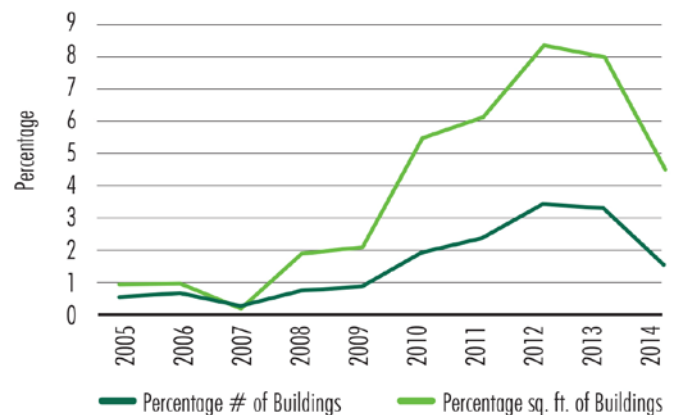
Total Adoption



LEED Adoption



Energy Star Adoption



Boston

GREEN BUILDING TRENDS

The Boston market fell from the sixteenth to the twenty-first position, with nearly all of the change occurring in ENERGY STAR labels. While there was only a slight decrease in the number of buildings labeled, the square footage of labeled buildings fell by nearly 2.5%, indicating several large buildings did not recertify during 2014. LEED numbers remained relatively consistent, with the percentage of LEED square footage in the market placing Boston fifteenth in that category. Overall Boston has 181 certified buildings, down from 195 a year ago.

Boston's submarkets display a mixed picture in the percentage of buildings certified under ENERGY STAR or LEED. Boston's CBD, with 31.5% of buildings certified, performed considerably stronger than the 9.6% adoption rate for the overall market. Route 3 North, however, did only slightly better at 12.6% and Route 128 West, at 8.8%, had a lower adoption rate compared with the overall Boston market.

GREEN MARKET NEWS

2015 also marks an important milestone in the city of Boston's efforts to reduce GHG emissions and prepare for the impacts of climate change. On May 15, the Boston Building Energy Reporting Disclosure Ordinance (BERDO), which requires buildings to annually report and make public their energy and water use, went into effect. The ordinance initially affects all buildings greater than 50,000 square feet or 50 units, and any set of buildings on one tax lot totaling 100,000 square feet or 100 units. In time, the ordinance will be applied to smaller buildings. Additionally, every five years buildings will be required to complete an energy assessment or energy action, and exemptions will be granted to buildings that demonstrate energy efficiency or significant progress on energy efficiency.

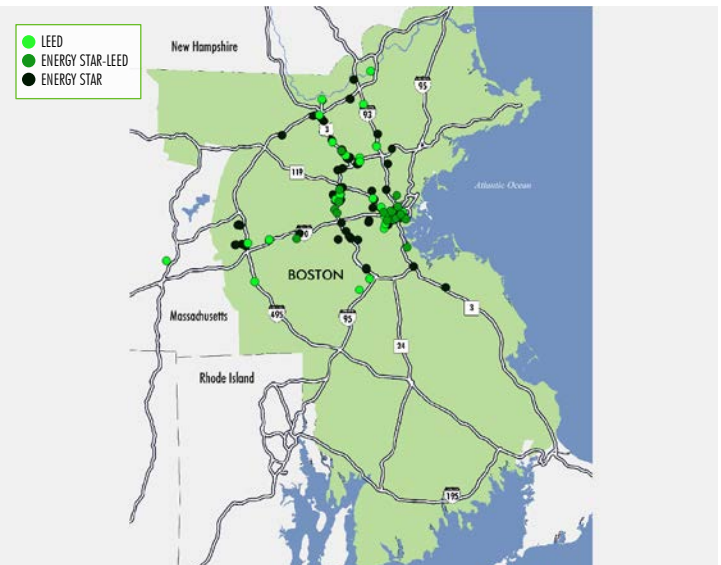
In July 2014, the Cambridge City Council also passed an ordinance (BEUDO) that requires annual benchmarking and disclosure of energy and water use. By May 2015 and annually thereafter, reporting is required for parcels with one or more buildings that singly or together have more than 50,000 square feet, or more than 50 housing units. By May 2016 and annually thereafter, reporting is required for parcels with one or more buildings that singly or together have more than 25,000 square feet.

LEED certifications continue to grow as new development meets Boston's green building standards and owners of existing buildings strive to lower operating expenses and highlight their buildings in the market. In Boston, CBRE New England has certified 13 commercial properties, totaling approximately 9 million square feet, in the LEED rating system. Additionally, CBRE manages the oldest Class A office tower that has achieved a LEED for Existing Buildings Platinum certification.

LEEDing by example

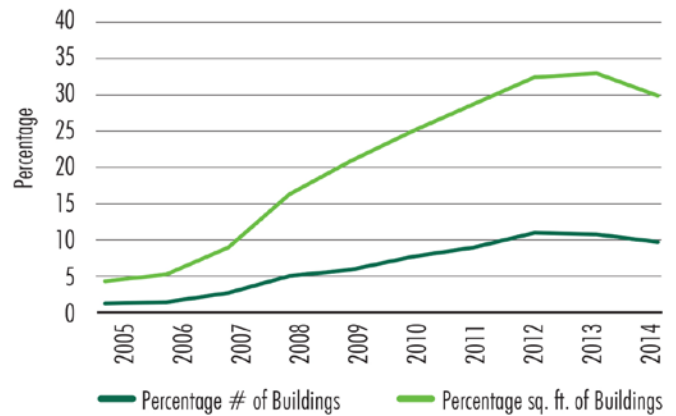
[601 Congress St](#)

8x Energy Star labeled. Score of 96 in 2014. LEED EB Platinum, LEED NC Certified

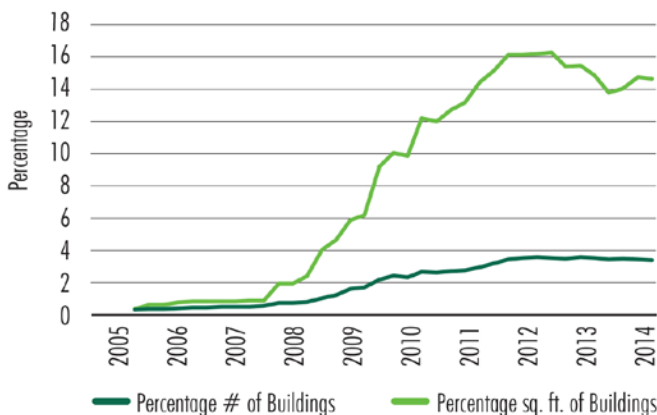


Boston Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	9.61	30.73
Energy Star	7.06	22.24
LEED	3.48	14.69
Existing Buildings	2.21	12.19
New Construction	0.47	0.34
Core and Shell	0.79	2.16

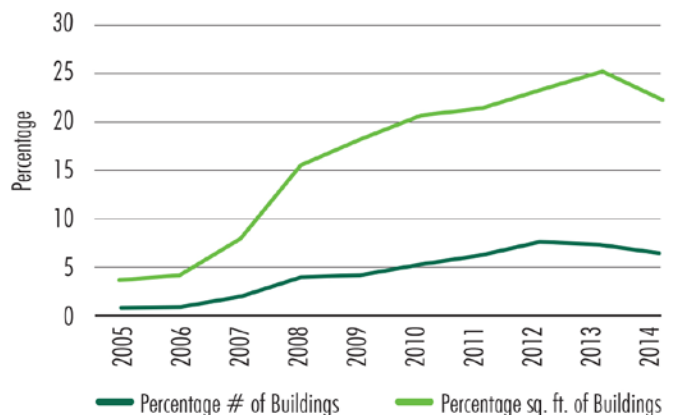
Total Adoption



LEED Adoption



Energy Star Adoption



Chicago

GREEN BUILDING TRENDS

Once again, Chicago claimed one of the top spots in our annual survey. Although there was a minor reduction in the number of total certified buildings—287, down from 294 previously—the percentage of all square footage in those buildings increased to 63.4%, placing Chicago third behind Minneapolis and San Francisco. With a total market size nearly 50% larger than these two other cities combined, the Chicago market has clearly embraced green real estate practices like no other metropolis. Also notable was the significant increase in the percentage of square footage in LEED buildings to 38.5%, up nearly 7% in a single year. Since the overall figures did not reflect such a large increase, this certainly means that a number of ENERGY STAR-labeled buildings have continued to increase their standing by also now achieving LEED certification.

Chicago’s overall strong performance in the adoption of green building certification resonates even more profoundly in the West Loop. In total, 64.0% of West Loop buildings hold an ENERGY STAR or LEED certification. More specifically, 48.0% of the buildings have an ENERGY STAR label and 41.3% are certified under the LEED program.

GREEN MARKET NEWS

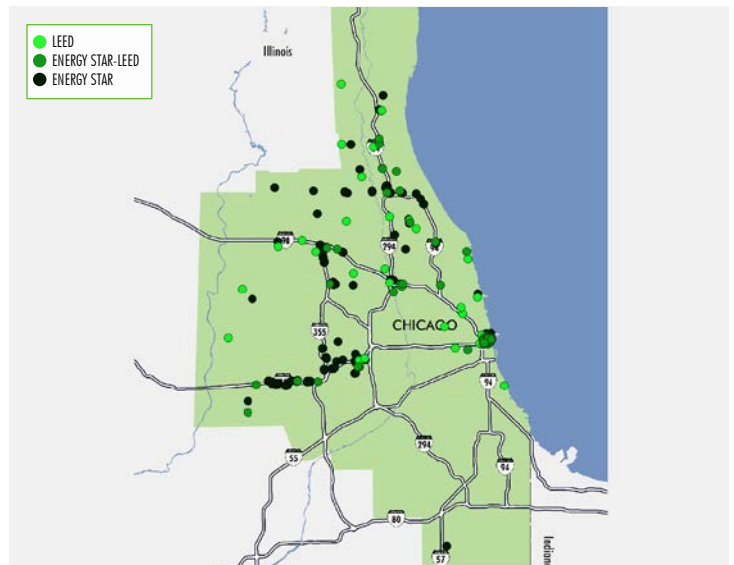
Many of the most notable deals in the Chicago market took place at new construction locations in the central business district. Both of the new construction properties, River Point and 150 N Riverside, are pre-certified LEED Gold, an attractive feature to tenants like Hyatt, William Blair, DLA Piper and Polsinelli. Sales activity has been robust, especially in the central business district. With approximately \$4.5 billion in transaction volume during 2014, the central business district experienced investment activity well over historical averages.

Institutional investors continue to view the Chicago central business district as an attractive alternative to coastal gateway markets, where cap rates and going-in yields continue to compress to new lows. The suburban market is also gaining sales momentum as investors are recognizing the price differences between the downtown and suburban markets, and are moving to capitalize on the historically wide spread in yields between the markets. The suburban market finished 2014 with 36 sales and a transaction volume of \$1 billion.

LEEDing by example

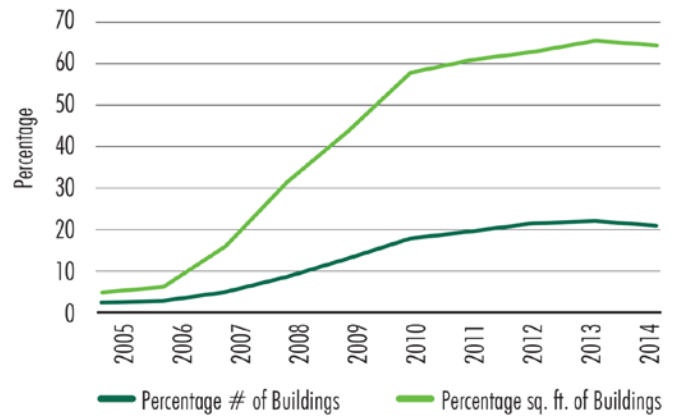
353 N Clark St

5x Energy Star, LEED CS Gold, 2x LEED CI, vegetated green roof Chicago

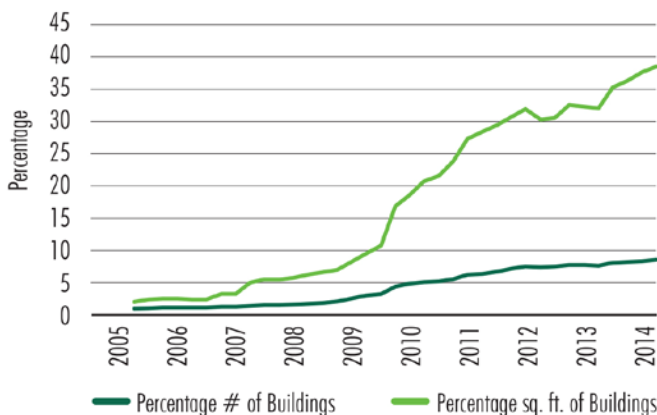


Chicago Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	19.73	63.41
Energy Star	15.46	46.02
LEED	8.59	38.48
Existing Buildings	6.60	35.18
New Construction	1.17	1.23
Core and Shell	0.82	2.07

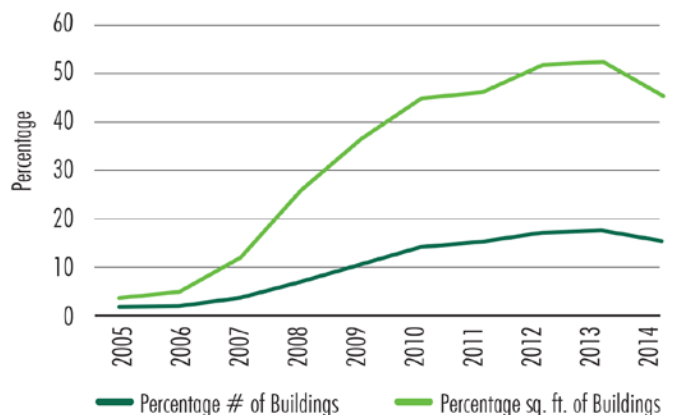
Total Adoption



LEED Adoption



Energy Star Adoption



Dallas/Fort Worth

GREEN BUILDING TRENDS

The Dallas market maintained its midlevel position in our green building survey, again placing sixteenth overall. The market's 13.0% of buildings certified is generally in line with the national average of 13.1% and places Dallas twelfth. However, the 31.7% rate of market penetration trails the average of 38.7%. This ratio of buildings to building square footage is one of the lowest in the study, indicating that smaller buildings are more active in this market. In all, there are 210 certified buildings in the market, down slightly from the 218 cited last year.

A closer inspection of the adoption rates for Dallas' submarkets displays an interesting divergence between the two submarkets. Whereas Uptown/Turtle Creek shows a strong adoption of green building certification at 32.3%, the Far North Dallas adoption rate of 15.9% is closer to the overall market average of 13.0%.

GREEN MARKET NEWS

Dallas/Fort Worth is the sixth largest economy in the country and accounts for one-third of the state's gross domestic product. It is consistently a top market for job and population growth and has the largest civilian labor force in the state. The Metroplex houses more than 1,500 regional and corporate headquarters—one of the largest concentrations in the U.S.—including 18 Fortune 500 headquarters and four Global 500 headquarters. Examples include Irving-based ExxonMobil, which ranked second both nationally and globally, and AT&T, which ranked eleventh on the 2014 list.

2014 leasing activity was strong, closing out the year with more than 11.17 million square feet of signed lease space. Notable transactions throughout the year include State Farm's lease for 500,000 square feet and Raytheon's lease for 489,000 square feet, both build-to-suit spaces in the Richardson/Plano submarket north of Dallas proper. These companies are also on the Fortune 500 list. Other significant transactions include Omnitacs' new lease for 325,000 square feet in the Dallas central business district and 7-Eleven's new space in Las Colinas for 300,000 square feet.

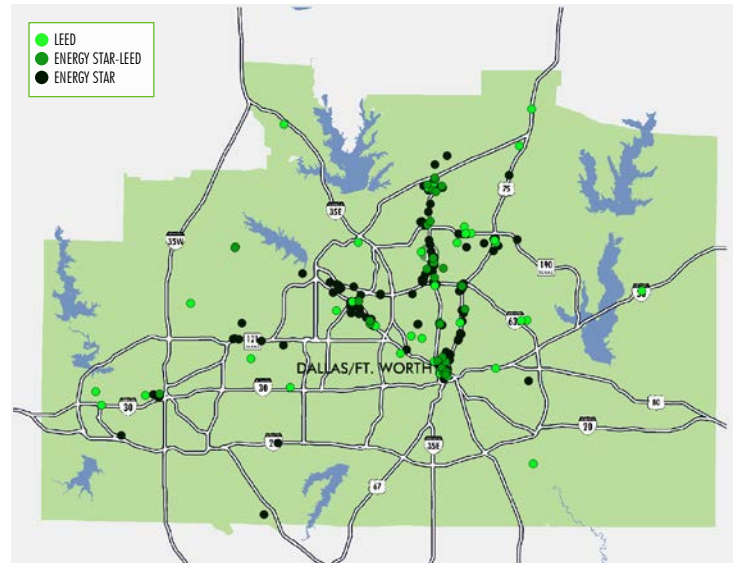
2014 investment activity in Dallas/Fort Worth was exceptionally strong across primary submarkets. However, it did not match the levels recorded in 2006. Activity remained fairly balanced much of the year between core and value-add opportunities, but deal activity heavily favored value-add opportunities in the latter part of the year. Ownership in the market is mostly defined as institutional or foreign.

Dallas/Fort Worth occupancy is diverse. Financial services companies maintain a large presence as well as insurance, legal and technology.

LEEDing by example

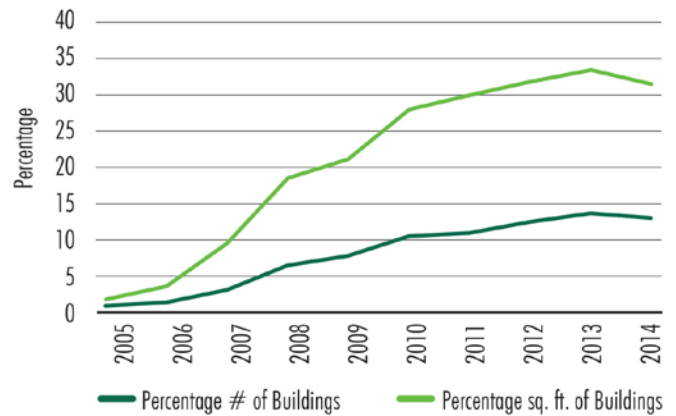
1601 Bryan St/Energy Plaza

7x Energy Star labeled. LEED EB Gold, LEED CI Certified, LEED CI Silver

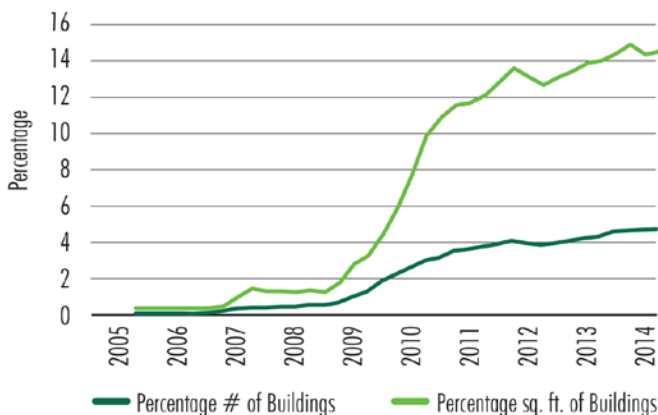


Dallas/Fort Worth Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	12.95	31.72
Energy Star	10.05	24.24
LEED	4.72	14.24
Existing Buildings	2.61	10.51
New Construction	1.49	2.52
Core and Shell	0.62	1.21

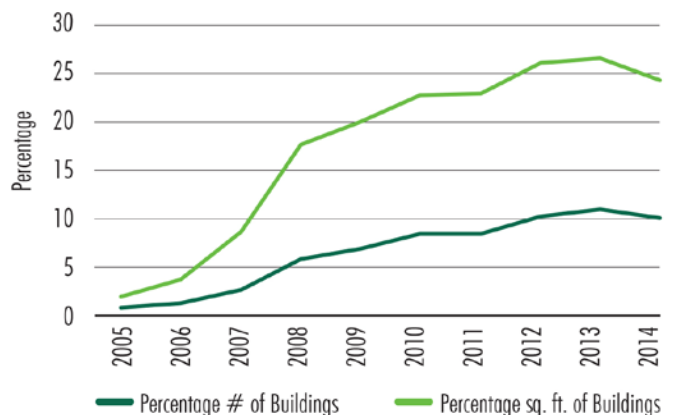
Total Adoption



LEED Adoption



Energy Star Adoption



Denver

GREEN BUILDING TRENDS

With 48.7% of all space either ENERGY STAR labeled or LEED certified, Denver moved up a spot to claim the number six position in our 2014 survey results. Denver again placed in the top 10 in a number of major green building categories, including percentage of square footage that is LEED certified (fifth) and percentage of square footage that is ENERGY STAR labeled (sixth). Denver also finished in seventh place for percentage of buildings with LEED for Existing Buildings certification at 4.8%. In all, 202 buildings qualified this year, down slightly from the 215 documented last year.

Denver's submarkets are quite diverse in terms of green building adoption. Downtown Denver displays one of the strongest adoption rates of any national submarket, with 45.4% of all buildings certified. The adoption rates for ENERGY STAR labels and LEED certification for Northwest and Southeast Denver are substantially lower at 19.7% and 21.5% respectively.

GREEN MARKET NEWS

While Denver has traditionally been considered a regional city, there are several major headquarters in the metro area, including Dish Network, Arrow Electronics and DaVita Healthcare Partners. Although the market is not a gateway market, it is experiencing significant sales activity driven by national institutional and REIT capital sources. Denver is a primary beneficiary of capital's recent search outside of gateway markets. The investor interest in many of the quality assets in Denver is in no small part due to the green investments made in both existing and new construction properties. With a high rate of both LEED- and ENERGY STAR-certified buildings, Denver's assets have stronger balance sheets and an enhanced appeal to tenants and investors alike.

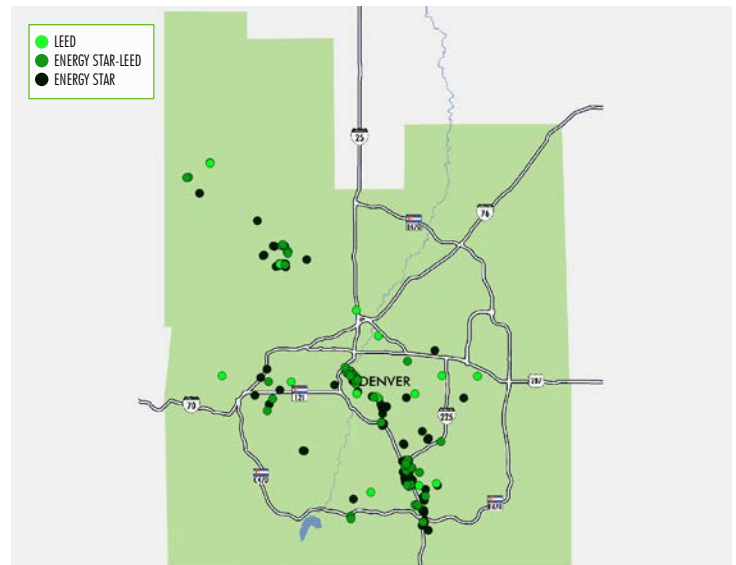
While 2014 leasing activity was led by the financial, creative and technology industries, the overall makeup of tenants in the market is different. The largest occupiers are telecommunications, energy (both natural resources and alternative energy), business services, and financial services and institutions. The most common type of ownership in Denver is still local or regional private capital. However, there is a significant presence of institutional and REIT ownership, especially in the larger suburban office parks and in the downtown core.

Denver's culture has been strongly green for years, with both a high number and percentage of LEED- and ENERGY STAR-certified buildings. While Denver was historically an oil and gas hub, a renewed focus on 'Building healthy places' and renewable energy has allowed for significant advancements in green building compared to other cities.

LEEDing by example

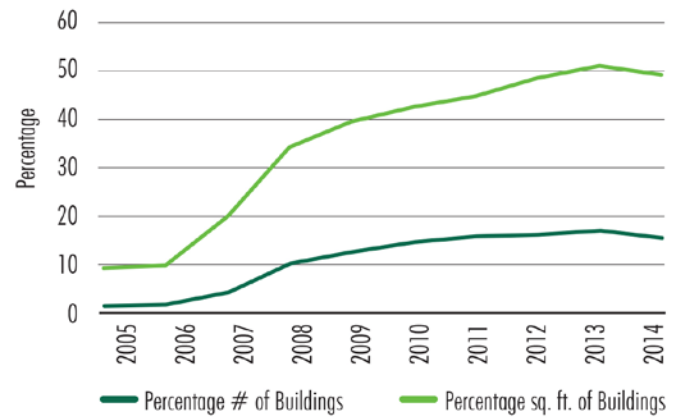
1900 16th St

2x Energy Star, 15x LEED CI, [LEED EB Platinum](#)

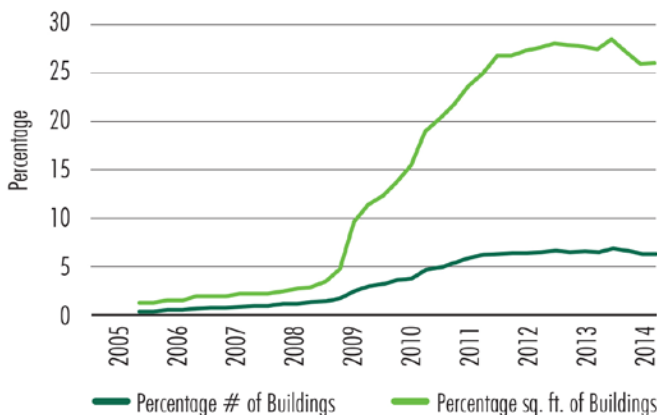


Denver Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	15.27	48.66
Energy Star	12.32	38.93
LEED	6.49	26.03
Existing Buildings	4.83	22.38
New Construction	0.83	0.78
Core and Shell	0.83	2.87

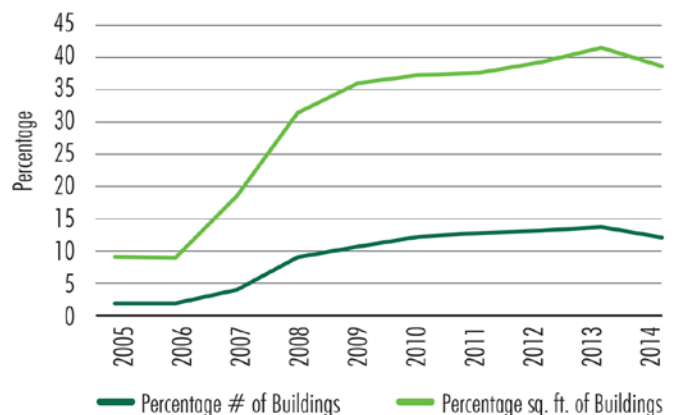
Total Adoption



LEED Adoption



Energy Star Adoption



Detroit

GREEN BUILDING TRENDS

Detroit modestly improved to twenty-fifth position, up from twenty-seventh over the past year. Most of the improvement is relative, however, as the market's performance declined in most categories over the year. The total percentage of green buildings slipped to 5.5% while the total percentage of space fell to 16.1%, both less than half of the 13.1% and 38.7% national averages. The market has essentially ignored LEED certification, as only 1.2% of buildings representing 2.4% of the space are certified. Each of those numbers represents the absolute bottom among the top 30 U.S. cities by significant margins.

GREEN MARKET NEWS

CoStar identifies 45 office buildings in the Detroit office market that are either LEED or ENERGY STAR certified. These buildings recorded 239,842 square feet of leasing activity in 2014. Two of the more notable deals are Fifth Third Bank with 62,408 square feet at 500 Woodward Ave and CW Professional Services (formerly Compuware) with 49,000 square feet at 150 W Jefferson.

The ENERGY STAR-certified, 1.1-million-square-foot Compuware Building sold in 2014 for \$142 million. It was jointly purchased in a 50/50 venture by Bedrock Real Estate Services and Meridian Health. It will serve as Meridian Health's new headquarters, and Quicken Loans will also expand in the building.

The Detroit market is dominated by the automotive industry (manufacturing/transportation). It is home to the headquarters of GM, Ford and Chrysler Group (now FCA US LLC). Many automotive suppliers are also headquartered in Detroit. Professional services are another one of the leading industries in Detroit, though the market has a rather diverse tenant base.

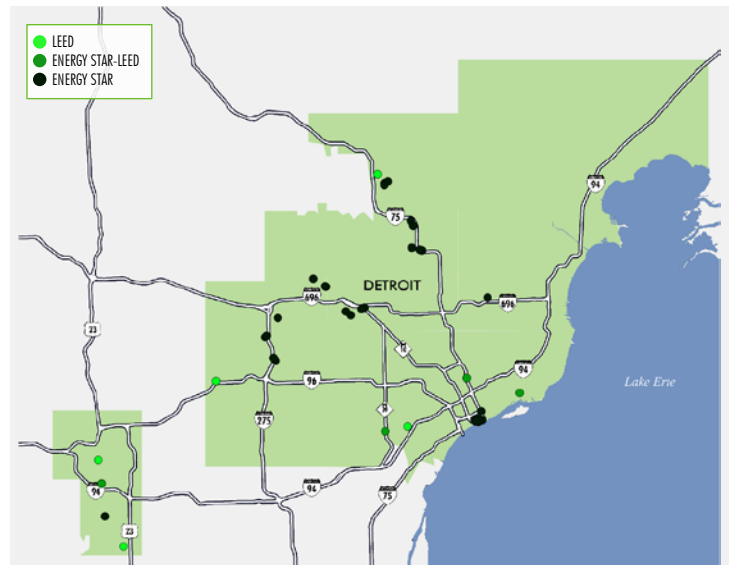
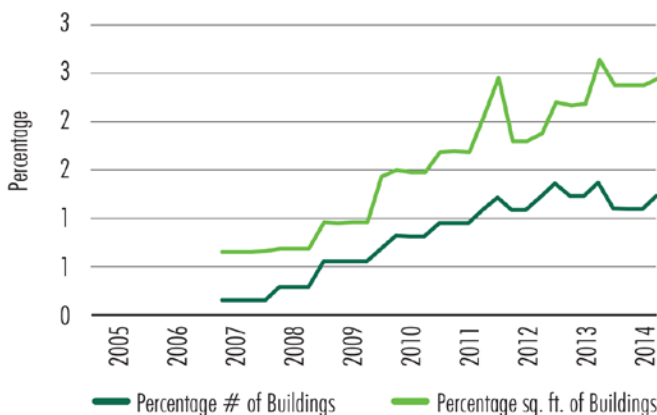
There is currently no apparent tenant demand for LEED- or ENERGY STAR-certified buildings in Detroit. If it is a tenant concern, it is usually not a primary concern. As a result, owners are not incentivized to retrofit their buildings to meet LEED or ENERGY STAR guidelines. The lack of certified buildings is further impacted by the lack of new construction for the past decade. There is only a single new building of 85,000 square feet under construction at this time.

LEEDing by example

[One Detroit Center](#)

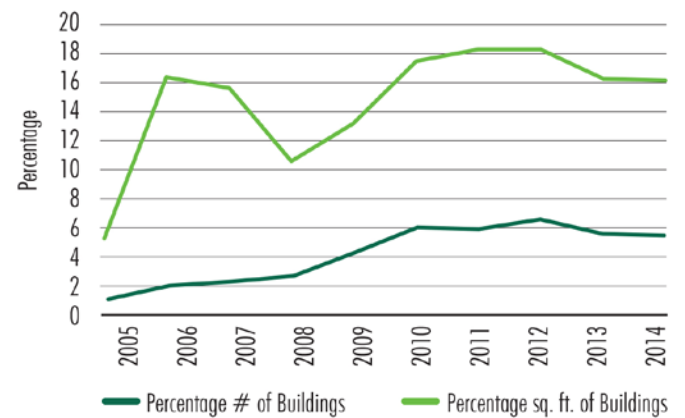
8x Energy Star

LEED Adoption

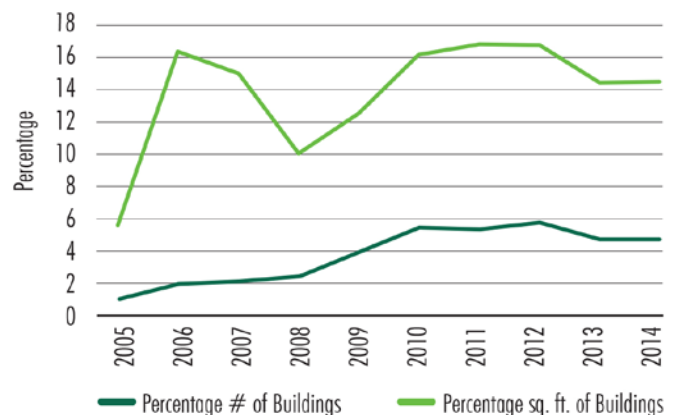


Detroit Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	5.54	16.07
Energy Star	4.73	14.49
LEED	1.21	2.42
Existing Buildings	0.54	1.53
New Construction	0.54	0.68
Core and Shell	0.13	0.21

Total Adoption



Energy Star Adoption



Houston

GREEN BUILDING TRENDS

Although it slipped from fourth to fifth place this year, the Houston commercial real estate market continues to perform as one of the greenest in our survey. With 52.8% of all space qualified, Houston trails only Minneapolis, San Francisco, Chicago and Atlanta in this green building standard. The area of greatest strength remains in LEED certification where, in both percentage of buildings (9.4%) and percentage of LEED for Existing Buildings (6.2%) the market trails only Minneapolis and boasts numbers that are significantly higher than national norms. The percentage of total LEED square footage at 32.1% also places this market behind only Minneapolis, San Francisco and Chicago and well above the national average of 20.3%. In total, there are now 268 certified buildings in this market, down only one from last year.

The performance of Houston's submarkets is quite diverse. 49.3% of the buildings in the central business district are ENERGY STAR or LEED certified, the Energy Corridor trails this number at 38.3% and only 22.8% and 25.2% of the buildings in West Loop/Galleria and Westchase are certified, respectively. Location in Houston matters greatly.

GREEN MARKET NEWS

Houston recently launched the Green Office Challenge to encourage better environmental performance in Class B and C buildings, which have been less likely to pursue certification than their Class A peers in recent years. Although it is more common for new Class A buildings to be LEED certified, due in large part to the energy sector, expectations for more energy-efficient and green space have become the norm. As the workforce shifts to a younger population, employers realize the important role social responsibility plays in recruiting and retaining employees.

In 2014, leasing activity in the Houston market continued to be dominated by energy tenants who accounted for 42% of all leases signed. Large leases included Energy XXI, renewing 171,000 square feet at One City Centre. Additionally, Air Liquide signed leases totaling 353,000 square feet, kicking off construction in two buildings, both with LEED status.

Energy dominates the Houston occupancy market, as it has in the past. Medical remains strong, accounting for one in 10 jobs in the region.

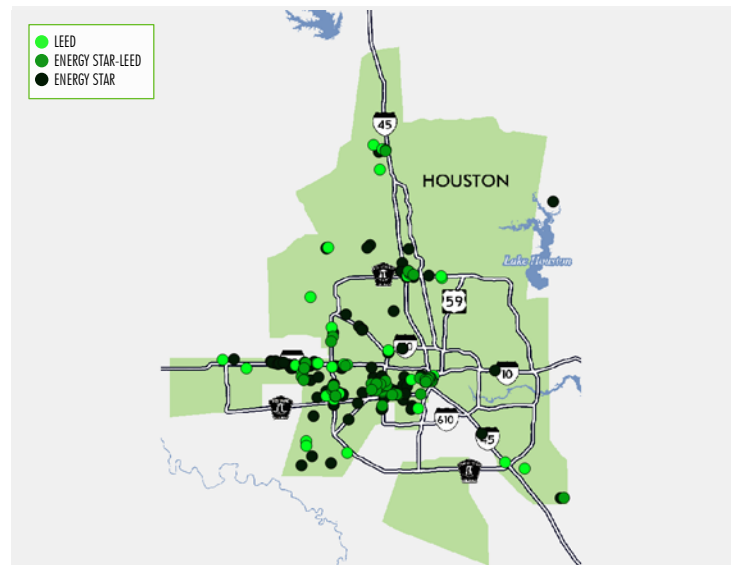
Although green status is not always a major consideration from a buyer's perspective, developers believe that LEED certified buildings can be sold at a lower cap rate. Of the buildings that sold in 2014, nine had LEED status or registration, totaling 4.2 million square feet. Most notable was 3009 Post Oak, which sold for \$112 million. It was pre-certified LEED Platinum, the only certification of this level in the market.

On the construction front, Exxon's new campus under development has 86% green space and 85% reduced water usage. In the central business district, the proposed Capitol Tower has received LEED v4 Platinum pre-certification and requires pre-leasing to begin construction.

LEEDing by example

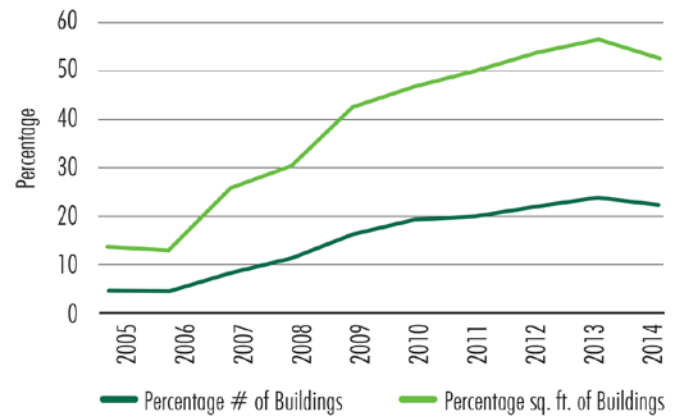
Williams Tower

11x Energy Star, LEED EB Gold, LEED EB Recertification Gold, LEED CI Platinum

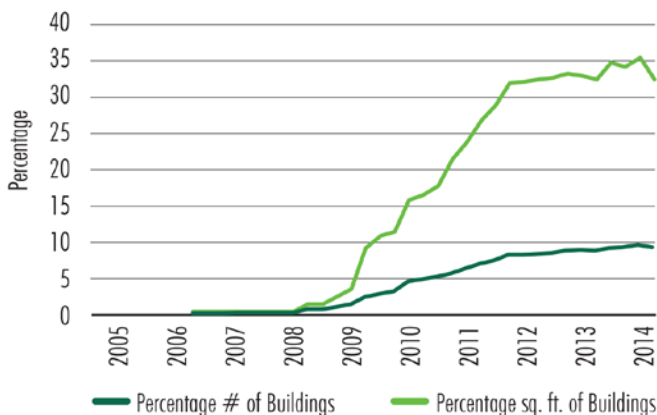


Houston Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	21.65	52.83
Energy Star	17.05	41.46
LEED	9.38	32.08
Existing Buildings	6.17	27.03
New Construction	1.20	1.44
Core and Shell	2.00	3.61

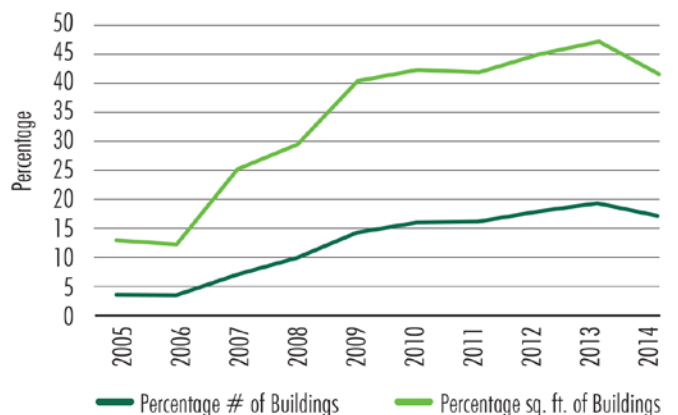
Total Adoption



LEED Adoption



Energy Star Adoption



Kansas City

GREEN BUILDING TRENDS

This year, Kansas City ranked thirtieth in overall green building adoption. Although the total percentage of green buildings, 3.4%, is ahead of Pittsburgh, the percentage of space in those buildings is only 10.9%, last in our surveyed markets and considerably below the national averages of 13.1% and 38.7% respectively. The market remains at or near the bottom in most of the rated green building categories in our survey. One bright spot continues to be the stronger adoption of LEED certification for new construction. Totals of 0.9% of all buildings and 2.0% of all square footage are at or above national averages.

Only 30 total buildings in this market hold some type of green certification, besting only Pittsburgh and Stamford in this category.

GREEN MARKET NEWS

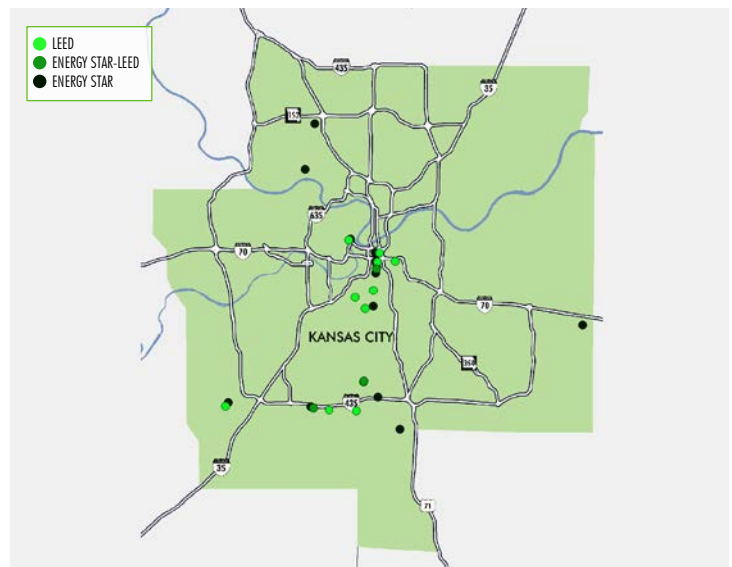
Much of the standing stock in the market is older product that is not cost effective for owners to bring up to green building standards. New construction has lagged behind other top 30 markets, with only 505,096 square feet of office space under construction as of January 2015. Taken together, these factors make it more difficult to improve the overall market share of green-qualified space. Though not the norm, a number of larger, Class A buildings have either LEED or ENERGY STAR certification, and new tenants are more frequently looking to build out their space with green building standards.

This market may be poised to change however as in early June of this year the Kansas City City Council voted 12-1 to pass the Energy Empowerment Ordinance. This ordinance requires buildings of 50,000 square feet or more to benchmark their energy and water use and report the data to the City. The City will then share that data with the public online, empowering building owners, tenants, investors, and the business community with the information they need to make better choices when it comes to building energy and water use.

LEEDing by example

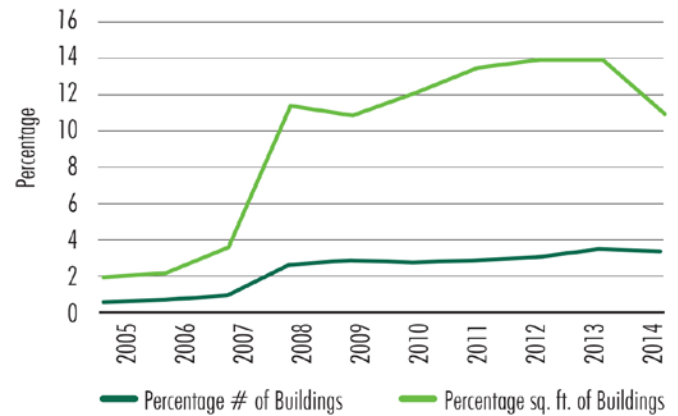
[2323 Grand Blvd](#)

4x Energy Star all 90+

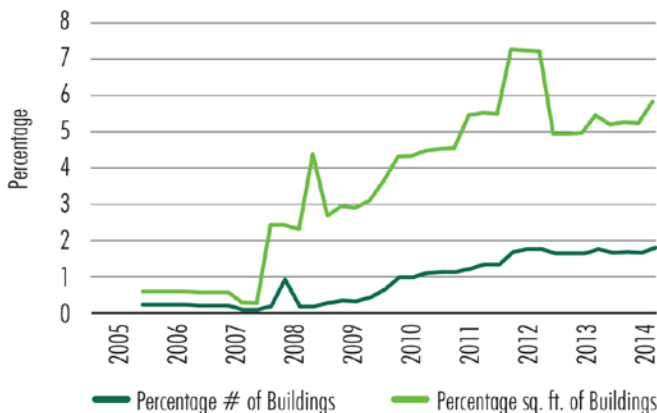


Kansas City Q4 2014	% of Buildings	% sq. ft of Buildings
Total	3.38	10.91
Energy Star	1.80	6.70
LEED	1.81	5.81
Existing Buildings	0.57	3.19
New Construction	0.90	1.98
Core and Shell	0.34	0.64

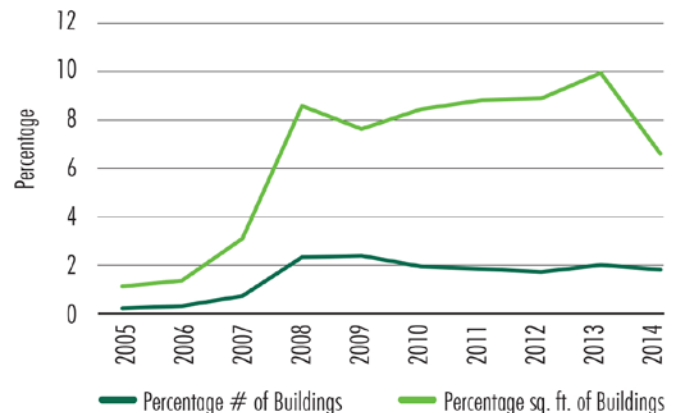
Total Adoption



LEED Adoption



Energy Star Adoption



Los Angeles

GREEN BUILDING TRENDS

Although slipping a spot to number seven, Los Angeles still demonstrates a strong commitment to green building practices as 47.1% of all space in the market is green, significantly above the national average of 38.7%. Los Angeles is a consistent strong performer in nearly every category measured, with particularly strong showings in LEED certification, with 25.7%, and LEED for Existing Buildings at 22.2%. Both numbers are again significantly above national norms. In total, 292 buildings now have a green certification, down from 320 the prior year.

The Los Angeles market is large and diverse and its commitment to green building practices follows suit. While 51.7% of the buildings in Downtown Los Angeles are certified under ENERGY STAR or LEED—the fifth highest adoption rate of all national submarkets—West Los Angeles and Tri-Cities only slightly outperform the market average in the percentage of certified buildings at 20.4% and 20.7% respectively, compared to the market average of 19.0%.

GREEN MARKET NEWS

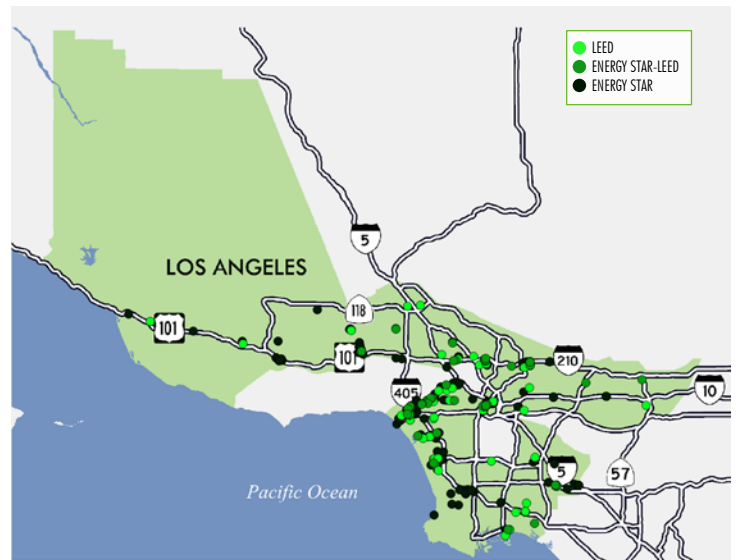
Greater Los Angeles is expansive with vastly different submarkets. West Los Angeles is the most popular submarket, and home to the best traditional-office market in Century City, as well as the exploding Los Angeles technology scene. Santa Monica, Venice, Playa Vista and Culver City attract tenants like Yahoo!, Google and Beats Music, and hip co-working spaces like WeWork and Neuhouse. Media is spread across the region and had a banner year in Hollywood, with Viacom signing a 180,000-square-foot pre-lease in one of the city's multiple new developments. Technology and media users have been traditionally perceived as being more environmentally conscious, but sustainability is a consideration for many users in various sectors today. Nevertheless, the willingness to pay for green buildings varies and green features are not often at the top of tenants' wish lists yet. At this time, green buildings have become an expectation rather than a differentiator.

Sales activity has been strong. Investors are looking for core opportunities in prime markets that are seeing the most leasing activity, including Westwood, Santa Monica, Playa Vista, Culver City and Glendale. Investors include primarily institutional players, but REITs and local buyers are also active in the market. Core deals, at least in the traditional sense, are becoming more difficult to purchase due to land appreciation and increased competition.

LEEDing by example

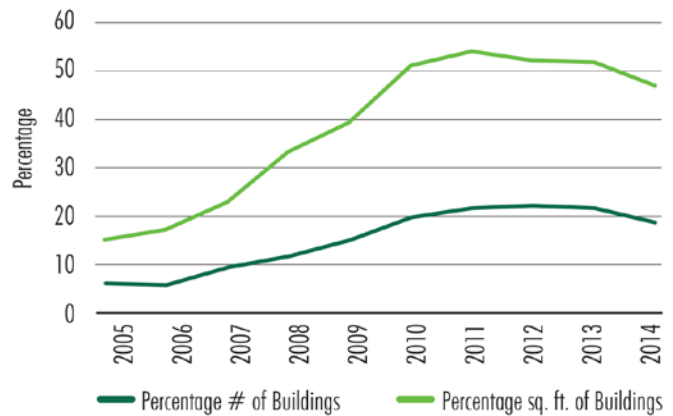
[400 South Hope Street](#)

12x Energy Star, LEED EB Platinum, LEED CI Gold

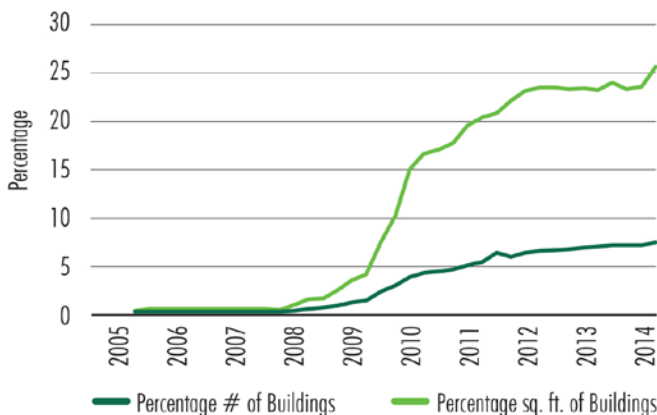


Los Angeles Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	18.97	47.14
Energy Star	14.55	34.86
LEED	7.15	25.74
Existing Buildings	4.75	22.17
New Construction	1.50	1.60
Core and Shell	0.91	1.97

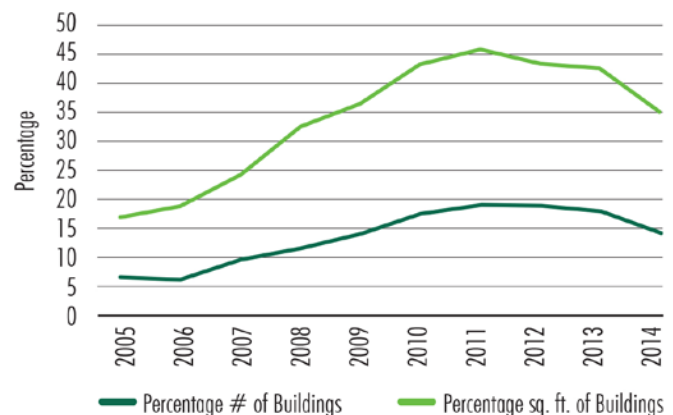
Total Adoption



LEED Adoption



Energy Star Adoption



Manhattan

GREEN BUILDING TRENDS

Manhattan jumps two spots to twelfth place overall in this year's survey, while scoring in the top 10 in several individual categories. With 24.2% of the building stock holding either an ENERGY STAR or LEED certification, Manhattan ranks an impressive third behind only Minneapolis and Atlanta. The market also placed fourth in percentage of buildings with an ENERGY STAR label. Since our top survey mark is determined by percentage of green space in a market, New York's high percentage of similar, large buildings may be unfairly penalized. In total, 190 buildings qualified this year, an increase of six from the prior year.

The adoption of green building certification across Manhattan's submarkets is fairly homogenous compared to the market average of 24.2%. The percentage of buildings with an ENERGY STAR or LEED certification varies from 19.0% for Downtown Manhattan to 28.3% for Manhattan Midtown.

GREEN MARKET NEWS

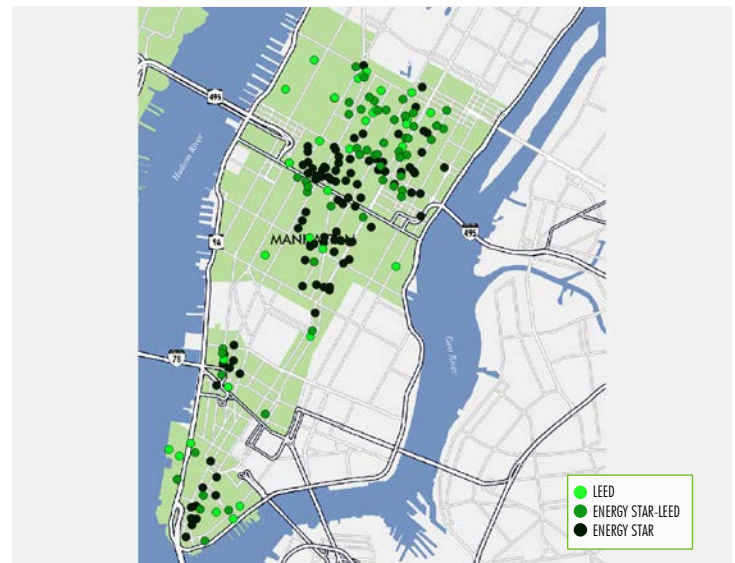
Midtown leasing activity totaled 4.15 million square feet during Q4 2014, 7% higher than the five-year quarterly average of 3.89 million square feet and 3% higher than the 4.01 million square feet of activity recorded during Q3 2014. The full-year leasing total was 16.80 million square feet, 12% higher than the 15.05 million square feet of leasing during full-year 2013. Midtown South saw a total of 1.05 million square feet of leasing during Q4 2014, 15% lower than the five-year quarterly average of 1.25 million square feet and 40% lower than the recorded leasing activity in Q3 2014. The full-year leasing total reached 6.22 million square feet, 48% higher than the 2013 full-year date total of 4.19 million square feet.

Leasing activity in Downtown Manhattan during Q4 2014 was healthy, at 1.69 million square feet, up 32% over the five-year quarterly average of 1.28 million square feet. Full-year leasing totaled 6.84 million square feet, 20% higher than the 5.70 million square feet total at the same point in 2013. From a tenant make-up standpoint, New York City is well diversified in terms of industries represented, with financial services and technology being the most prominent. However, Q4 2014 saw only one deal in the top 25 tracked in an ENERGY STAR/LEED building, a renewal at 599 Lexington Avenue for law firm K&L Gates.

LEEDing by example

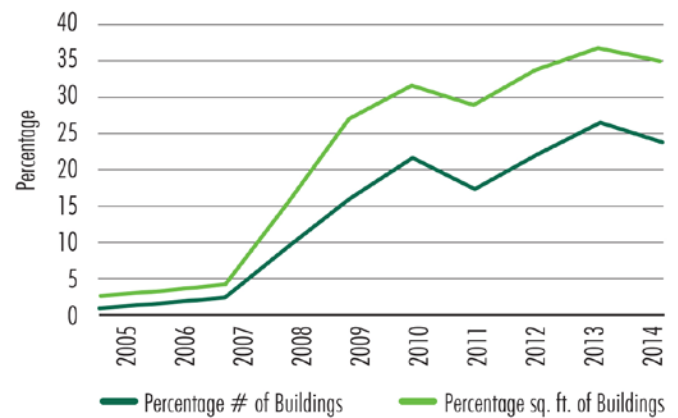
[230 Park](#)

6x Energy Star, LEED EB Gold, LEED EB Gold Recertification

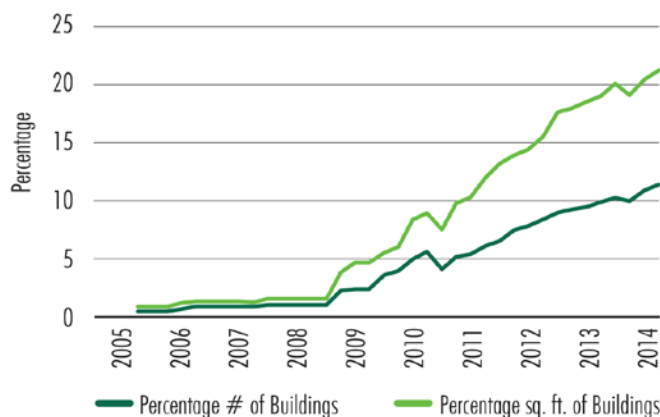


Manhattan Q4 2014	% of Buildings	% sq. ft of Buildings
Total	24.20	34.65
Energy Star	16.31	18.61
LEED	11.21	21.12
Existing Buildings	9.17	18.06
New Construction	0.38	1.21
Core and Shell	1.66	1.85

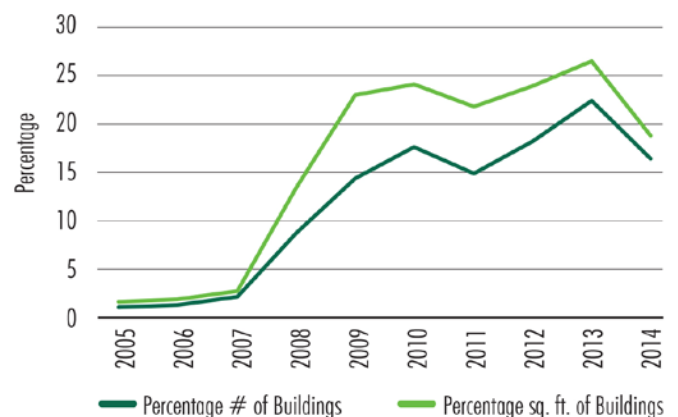
Total Adoption



LEED Adoption



Energy Star Adoption



Miami

GREEN BUILDING TRENDS

One of last year's green surprises, Miami, maintained their top 10 spot this year, again finishing at number nine. The market consistently produced upper-division numbers in most major categories. Most significantly, 17.5% of the market is identified as green, the eighth best. These buildings represent 41.6% of all space, comfortably ahead of the 38.7% national average.

GREEN MARKET NEWS

There were several leases of note in 2014 across Miami LEED-certified office buildings. The largest transaction in a LEED-certified building, and the fifth largest for the Miami market, was the 60,514-square-foot renewal signed by Merrill Lynch at 355 Alhambra Circle in Coral Gables. The parent company of Merrill Lynch, Bank of America, announced a 10-year plan in 2012 to advance the cause of lower carbon emissions. Another transaction of note was the 43,278-square-foot deal signed by PwC at Wells Fargo Center in Downtown Miami. According to PwC, a companywide goal was established to reduce their carbon footprint by 30% by fiscal year 2016.

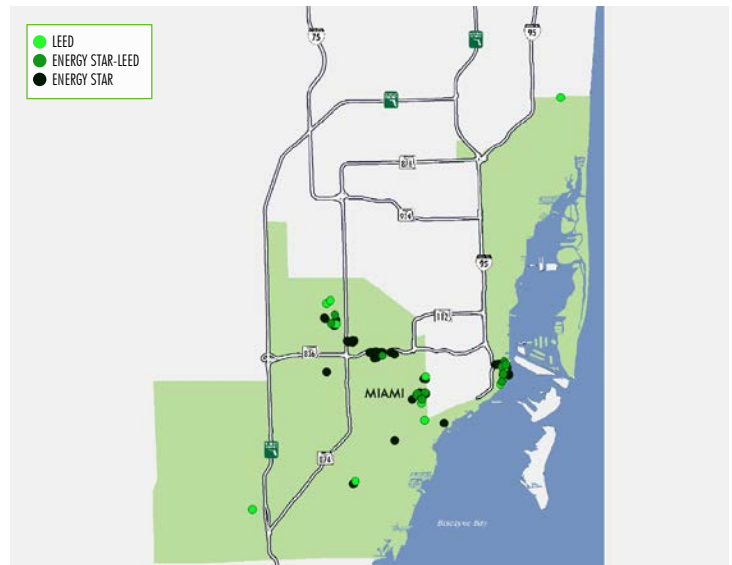
In terms of sales activity, the Building on Ponce Circle in Coral Gables was the only LEED-certified building traded in 2014. The six-story, 58,000-square-foot building traded for \$25.5 million or approximately \$440 per square foot. The property was purchased by TA Associates Realty, an investment manager out of Boston, Massachusetts.

According to Real Capital Analytics, capital flows in 2014 were dominated by private funds (42%) and institutional investment (30%). A comparison to 2013 numbers shows a 90-basis-point (bp) gain in private investment but a 50-bp drop in institutional investment. Despite this drop, institutional owners still maintain four of the top five ownership spots by total RBA.

LEEDing by example

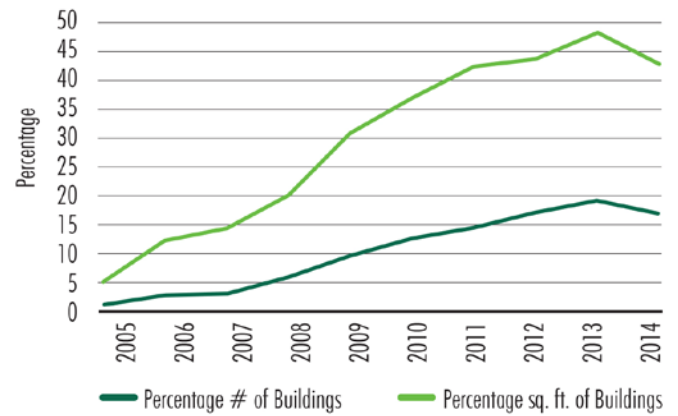
701 Brickell

7x Energy Star, LEED EB Certified, LEED EB Recertification Gold, USGBC Best of Building Awards: Best LEED O+M Project

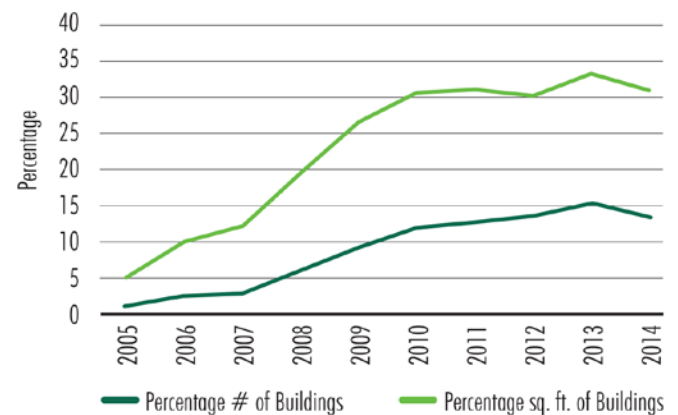


Miami Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	17.54	41.59
Energy Star	13.21	31.27
LEED	6.86	21.84
Existing Buildings	4.26	13.79
New Construction	0.47	0.23
Core and Shell	2.13	7.83

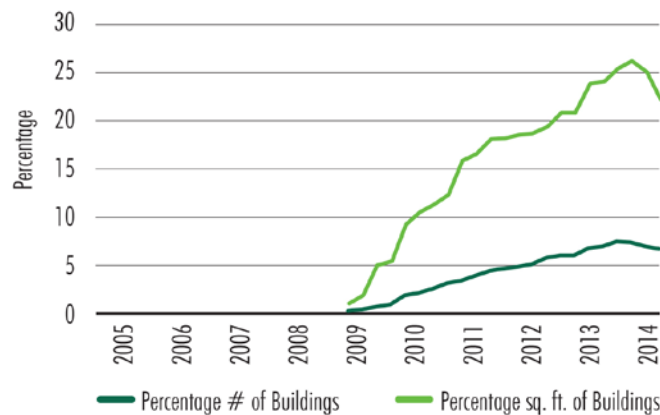
Total Adoption



Energy Star Adoption



LEED Adoption



Milwaukee

GREEN BUILDING TRENDS

Milwaukee continued to fall further behind in national averages, and now occupies the twenty-seventh place in our survey. The market featured bottom-five outcomes in every major category and declined year over year in each category as well. The 5.1% of buildings holding either green building certification is less than half of the national average of 13.1% and bested only Pittsburgh and Kansas City. The total percentage of green square footage, 14.4% is barely a third of the national average of 38.7% and bested only Pittsburgh, Stamford and Kansas City.

GREEN MARKET NEWS

As economic conditions slowly improve, overall leasing activity in the Milwaukee market has been on the rise, pushing redevelopment and renovations of existing buildings as well as spurring construction of new office space.

Schlitz Park, once a thriving brewery in downtown Milwaukee, has been transformed into an 850,000-square-foot business park, with a tenant list including the Milwaukee Bucks, Reader's Digest and UMB Funds. After investing more than \$60 million in renovations, the developer, Gary Grunau, expects to apply for LEED certification, which would make it one of the largest complexes in the market with an environmental certification.

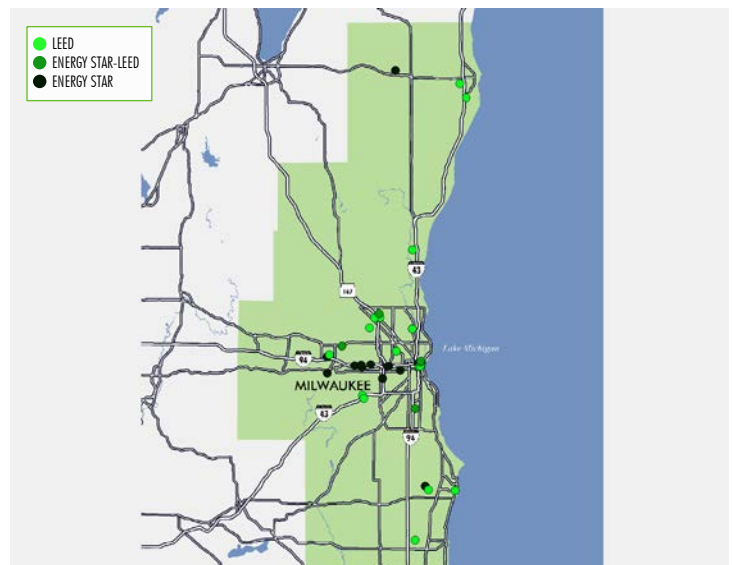
One notable development is 833 East Michigan Street in downtown Milwaukee, a 358,000-square-foot, Class A office building. Milwaukee-based Irgens Development Partners expects to complete the 17-story, multi-tenant building during the first half of 2016, with the goal of achieving a LEED Silver certification for the property. Another local developer, Peter Moede, along with General Capital Group LLP, have proposed a 17-acre development at the site in the Menomonee River Valley known as the Reed Street Yards, creating a business park focused on water technology firms. The first office building, a four-story, 79,800-square-foot building, is expected to break ground in Q2 2015, with hopes of obtaining a LEED Platinum certification.

Despite a rise in new construction, the Milwaukee market overall has been slow in migrating to a green building philosophy. Most owners tend to shy away from obtaining environmental certifications on existing buildings due to the perceived large capital improvements costs associated. A majority of LEED-certified and ENERGY STAR-rated buildings in the market are either newer construction, or existing buildings, driven by end-users, mainly in the financial and technology sectors.

LEEDing by example

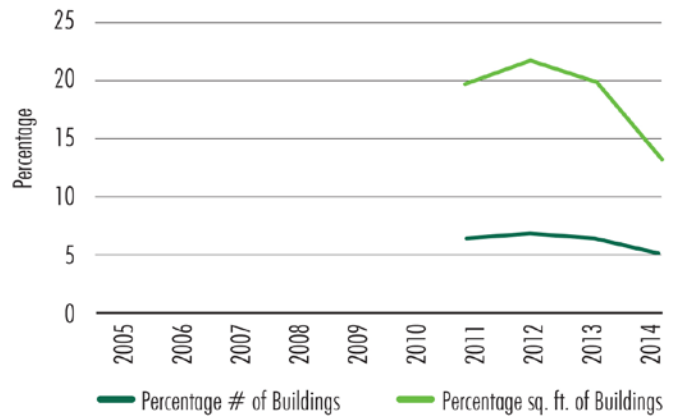
[735 N Water St](#)

6x Energy Star, LEED EB Silver, BOMA International TOBY Award Winner for Historical Buildings

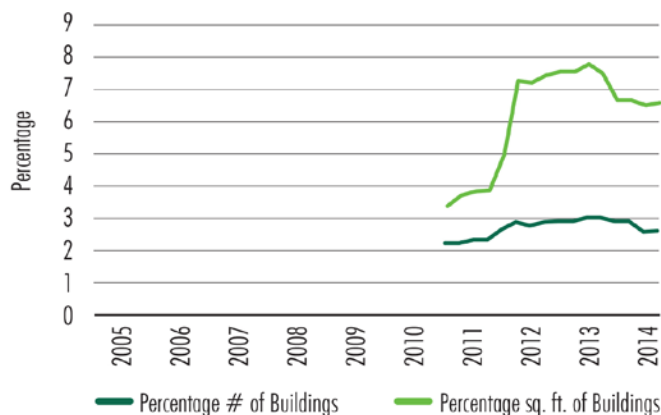


Milwaukee Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	5.08	14.42
Energy Star	2.80	10.24
LEED	2.60	6.65
Existing Buildings	0.63	3.83
New Construction	1.56	2.21
Core and Shell	0.42	0.61

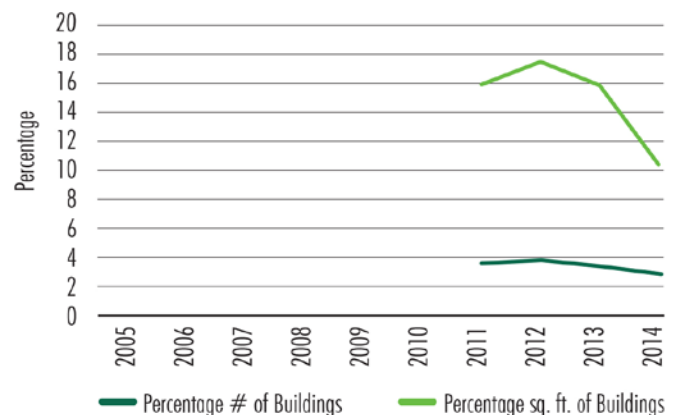
Total Adoption



LEED Adoption



Energy Star Adoption



Minneapolis/St. Paul

GREEN BUILDING TRENDS

For the second year in a row, the Minneapolis market is the leader in most green building categories. Although the total ratio of green-certified space slightly declined, the total of 70.4% topped a rising San Francisco market to remain number one in our survey. National leading marks were also posted in the square footage with ENERGY STAR at 55.4% and the number of LEED buildings with 9.5%. The market trailed only Atlanta in the total number of green buildings with 28.1% and the number of ENERGY STAR labeled buildings at 22.4%. These totals in every category are more than twice the national averages.

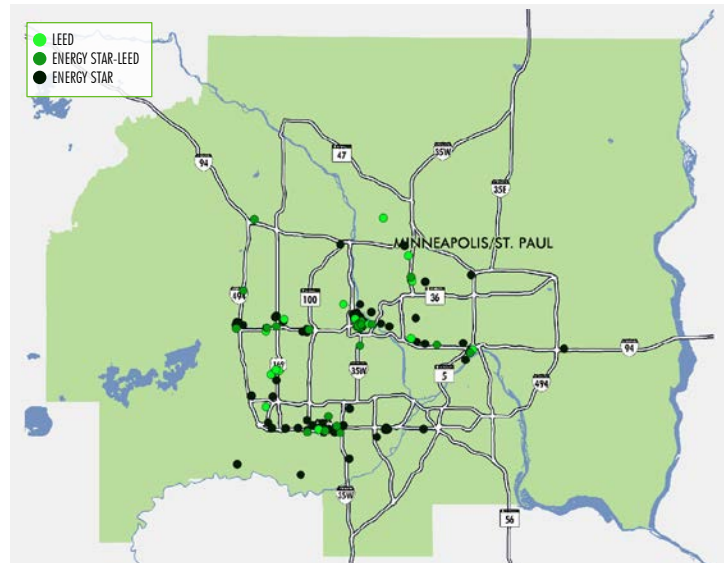
GREEN MARKET NEWS

With 18 Fortune 500 companies located in the Twin Cities, competition is fierce to attract and retain the best young talent. Knowing that this young talent is passionate about the environment, many of these companies strive to occupy green buildings. Examples of such companies include Best Buy, Target, Cargill, Lockheed Martin, and Boston Scientific. Additionally, many of the largest and most iconic multi-tenant buildings in Minneapolis are green, including Capella Tower, Wells Fargo Center, 33 S 6th Street Building, and the Campbell Mithun Tower. Butler Square—the first multi-tenant, century-old commercial building in the nation to achieve LEED certification—was able to attract a large international tenant, in part due to the LEED certification. Finally, the first speculative office project planned for Minneapolis in several years, known as T3, located in the red-hot Warehouse District of Minneapolis will be LEED certified. It will ultimately be one of the most environmentally friendly and sustainable office projects in the metro by using engineered timber as the main structural and floor elements.

LEEDing by example

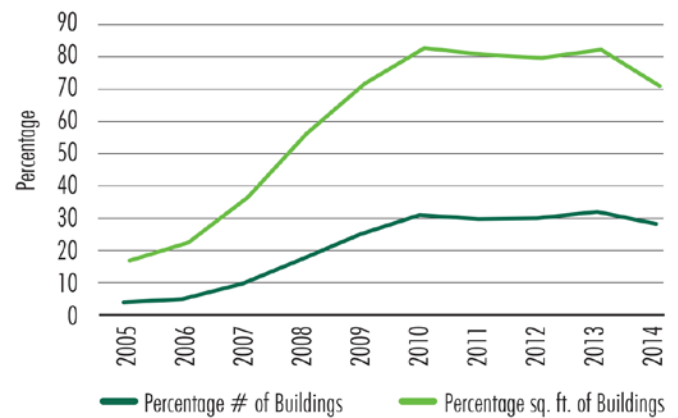
Campbell Mithun Tower

10x Energy Star, LEED EB Gold, Finalist-Livable Buildings Awards

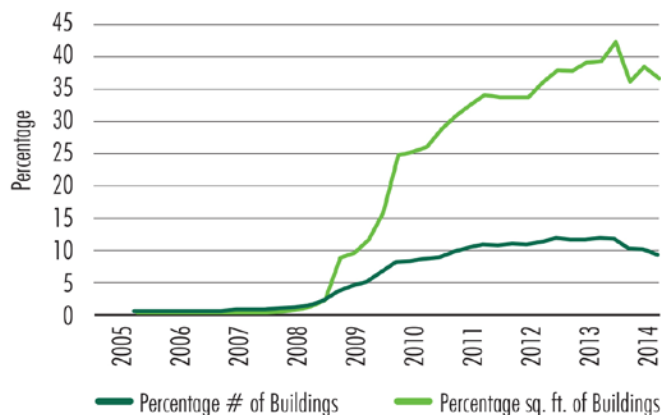


Minneapolis/St. Paul Q4 2014	% of Buildings	% sq. ft of Buildings
Total	28.05	70.41
Energy Star	22.36	55.39
LEED	9.45	36.66
Existing Buildings	7.25	32.98
New Construction	1.76	2.84
Core and Shell	0.44	0.85

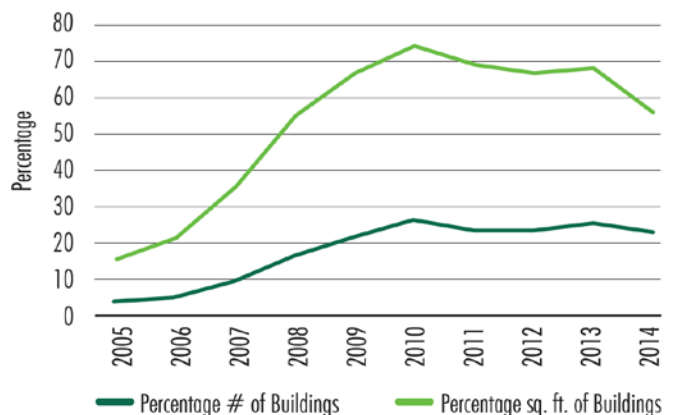
Total Adoption



LEED Adoption



Energy Star Adoption



New Jersey

GREEN BUILDING TRENDS

The performance of the New Jersey market remains a bit of a statistical paradox. While finishing in twenty-sixth position with a total of 15.7% of market space designated green, 12.8% of the buildings in the market are actually designated so. This total would place the market in thirteenth place and nearly reaches the national average of 13.1%. For both ENERGY STAR and LEED certifications, the total of buildings is almost equal to the percentage of square footage they represent. The overall national average ratio of square feet to building number is nearly 3 to 1—demonstrating the fact this is essentially a big building phenomenon—except in New Jersey, where the ratio is marginally greater than 1 to 1, the smallest of any market in the survey. This characteristic is most similar to the Manhattan market, which scored the second smallest ratio at approximately 1.5 to 1.

The New Jersey office market began and ended 2014 with a consistent positive trajectory. The 521,755 square feet of net absorption in the fourth quarter pulled 2014’s annual absorption to 937,052 square feet. As a result, year-end availability hit its lowest point since 2008 at 20.9%.

GREEN MARKET NEWS

The fourth quarter saw new blocks of space hitting the market. Barclays’ 438,000-square-foot space at 70 Hudson Street in Jersey City and AT&T’s 374,000-square-foot space at 340 Mount Kemble Avenue in Morristown were the largest new availabilities.

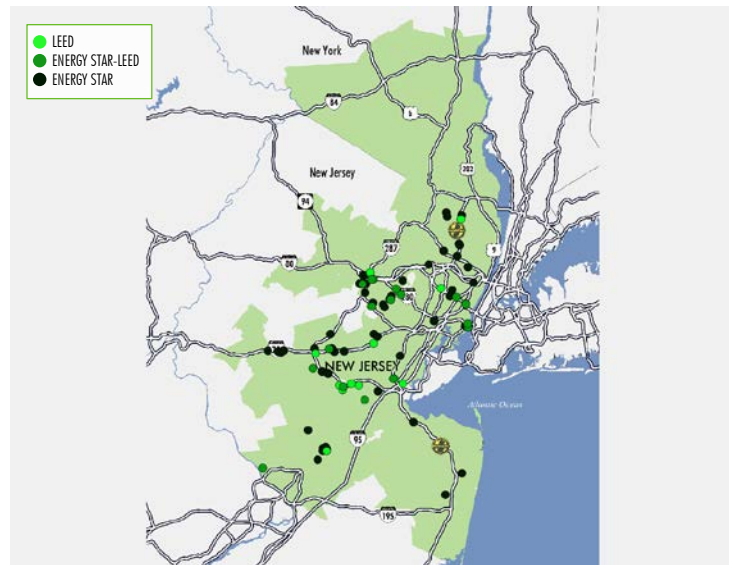
The Waterfront captured demand from organizations expanding their footprint, like New Jersey City University and Regus Group Companies, as well as some companies new to the New Jersey market, like Komar, Inc. and Jet.com, Inc.

Other notable fourth quarter activity included Rutgers University’s purchase of 33 Knightsbridge Road in Route 287/Piscataway/Brunswicks, BlackRock’s 220,906-square-foot renewal and expansion in Princeton, Prudential Insurance Company of America’s 333,545-square-foot renewal and expansion in Newark, Novartis’ 159,041-square-foot renewal at 200 Kimball Drive in Parsippany (an ENERGY STAR-labeled building) and PwC, LLPs’ 159,963-square-foot renewal at 400 Campus Drive in Morristown.

LEEDing by example

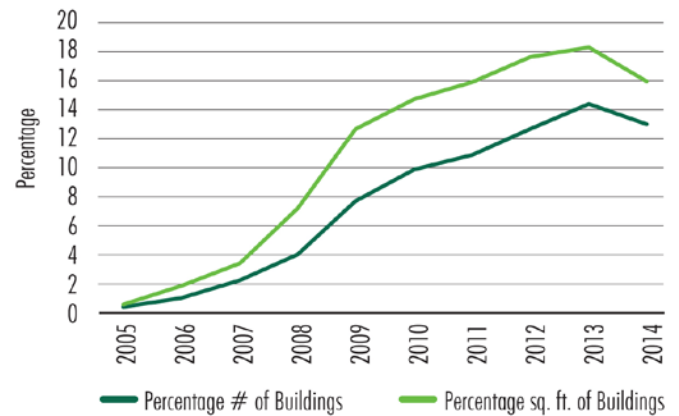
[Waterfront Technology Center](#)

LEED CS Gold, 5x LEED CI

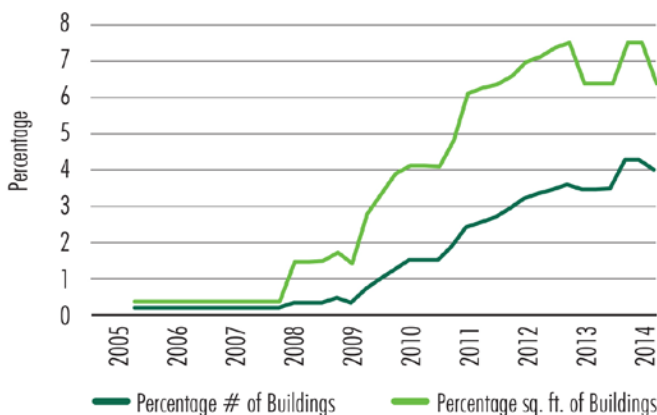


New Jersey Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	12.80	15.74
Energy Star	10.00	11.43
LEED	4.00	6.31
Existing Buildings	3.07	5.15
New Construction	0.53	0.76
Core and Shell	0.40	0.39

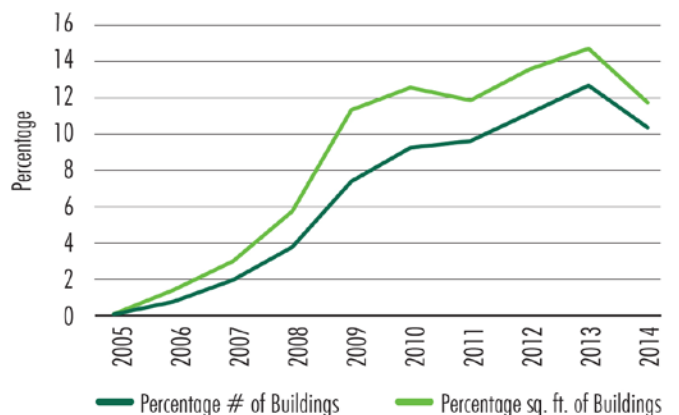
Total Adoption



LEED Adoption



Energy Star Adoption



Orange County

GREEN BUILDING TRENDS

Orange County moved to the thirteenth position, up two spots from 2013 and the third largest improvement of the year. In a year when the share of ENERGY STAR-labeled buildings fell, Orange County saw an increase. In fact, the market's 32.2% of ENERGY STAR-labeled square footage is seventh best in the survey. This offsets a continuing lower adoption rate for LEED overall where only 9.5% of the square footage is certified, a number that places Orange County in the twenty-fifth position. Overall, the market gained a total of 12 new green buildings during the year, one of the highest net increases for any market.

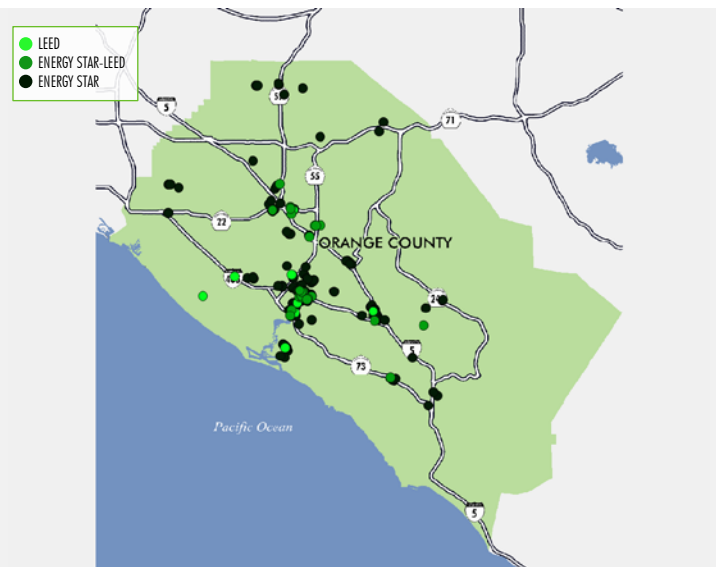
GREEN MARKET NEWS

Since the beginning of the market recovery phase in Orange County, the majority of LEED-certified new construction has been build-to-suit product for large corporations, government or medical/healthcare facilities. The largest LEED building is the new Hyundai Motor America headquarters in Fountain Valley totaling 469,000 square feet. The property was completed in early 2014 and awarded a LEED Gold certification. It serves as a major marketing presence for Hyundai. In July 2014, Google completed construction on its 108,696-square-foot facility in Irvine, which was awarded LEED Platinum certification. Of the projects currently in the construction phase, the Irvine Company's development at 200 Spectrum Center is slated to be LEED Gold, but may surpass this level of certification because of its design. In fact, the majority of all high-rise assets owned by the Irvine Company in Orange County are LEED Gold certified.

LEEDing by example

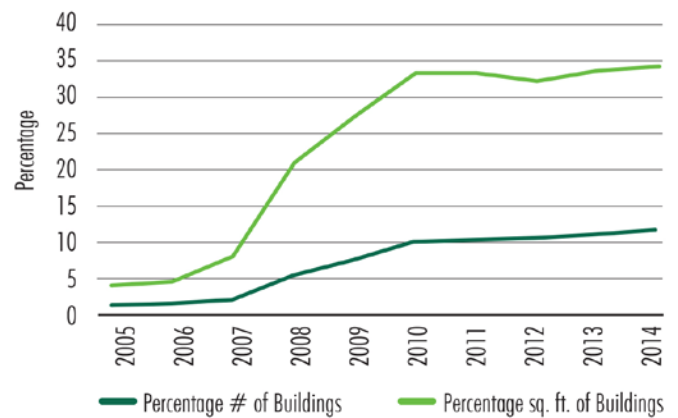
[3161 Michelson](#)

5x Energy Star, LEED EB Gold, 2x LEED CI

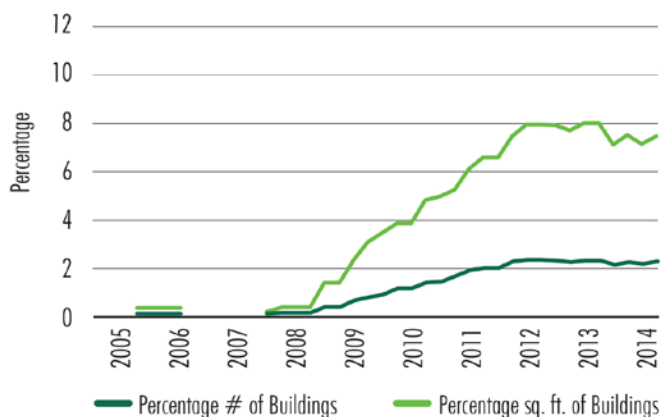


Orange County Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	10.43	34.27
Energy Star	9.62	32.20
LEED	2.28	9.46
Existing Buildings	2.01	8.40
New Construction	0.05	0.44
Core and Shell	0.22	0.62

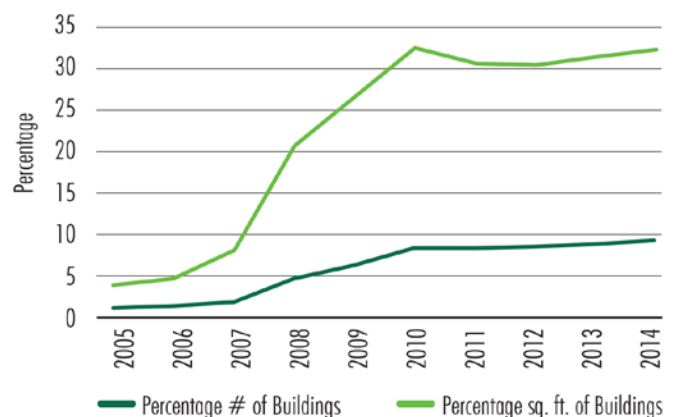
Total Adoption



LEED Adoption



Energy Star Adoption



Philadelphia

GREEN BUILDING TRENDS

Philadelphia slipped three places to finish fourteenth in the 2014 survey, although its overall 18.3% of green buildings is significantly above the national average of 13.1%. This data point alone scored the city an eighth-place standing, ahead of such highly regarded cities as Denver and Washington, D.C. The 14.2% of buildings holding an ENERGY STAR label is the ninth best. The ratio of square footage to buildings is one of the lowest in the nation, trailing only Manhattan and New Jersey. This suggests that a larger share of smaller or average-sized buildings in Philadelphia are also engaged in the green building movement. In terms of total buildings certified, this market had one of the largest increases during the year, adding 12 buildings for a total of 198.

The adoption of green building certification across Philadelphia's submarkets is much dispersed. Whereas 27.3% of the buildings in Downtown Philadelphia hold an ENERGY STAR or LEED certification, Bala Cynwyd is the only submarket in the study that did not have any green certified buildings at the end of 2014. Conshohocken's adoption rate of 4.0% is also substantially below Philadelphia's market average of 18.3%. The adoption rate of Main Line at 14.0% is somewhat closer to this average.

GREEN MARKET NEWS

According to the U.S. Green Building Council, Philadelphia is ranked number five in its top 10 list of the most populous cities with LEED-certified projects. A zoning code set in August 2012 continues to encourage green building and, according to data from the Pew Charitable Trusts, the number of green buildings in the area has steadily increased since 2005. Local institutions leading the way include the Lincoln Financial Field with energy-efficient technologies and the new Comcast Center—expected to be the tallest LEED-certified building in the country—with a vegetative roof, erosion control and a storm-water management system.

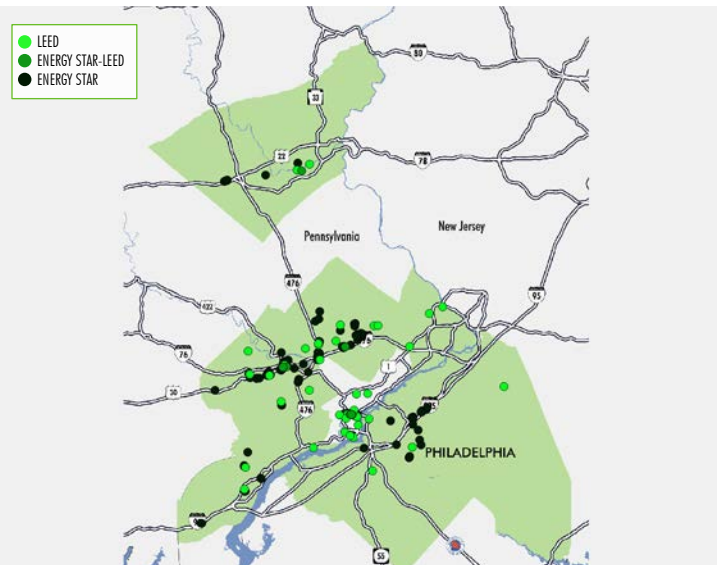
The Navy Yard is also at the forefront of Philadelphia's green initiatives. The shipyard was reborn as a prime corporate campus and many of the restored historic buildings feature state-of-the-art clean energy technologies and green spaces throughout the development. It is the largest collection of LEED-certified buildings in the area with its own electric grid and an innovation hub funded by the Department of Energy.

This shift to green adoption is advancing into the suburban market as well. Areas like the Main Line, Bala Cynwyd and Conshohocken are seeing future building plans focused on sustainability and a commitment to smart energy innovation. Recently, environmental law firm Manko, Gold, Katcher & Fox transformed their new offices in Bala Cynwyd and achieved LEED Gold certification, demonstrating that the sustainability trend is growing as corporations place a stronger focus on sustainable occupancies.

LEEDing by example

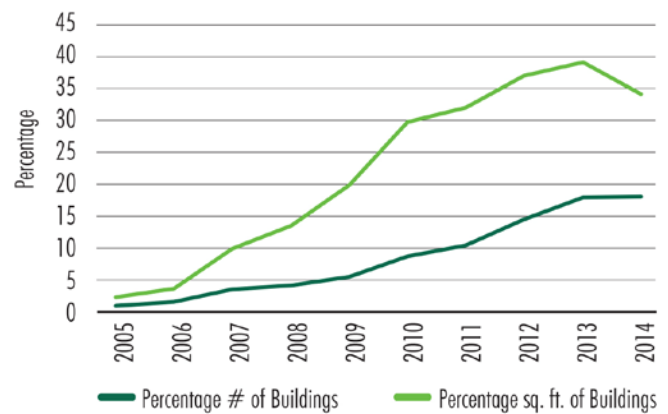
1835 Market Street

10x Energy Star, LEED EB Silver

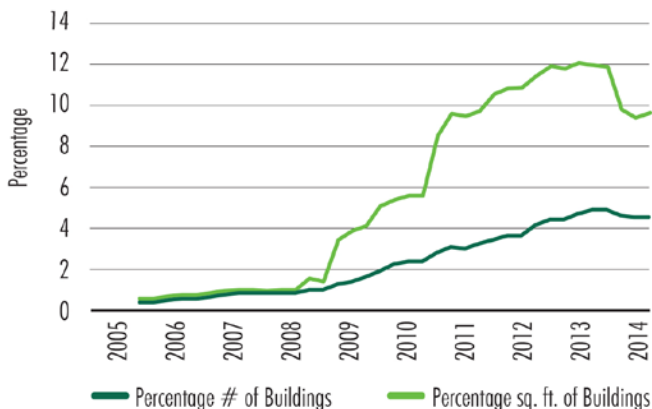


Philadelphia Q4 2014	% of Buildings	% sq. ft of Buildings
Total	18.30	34.05
Energy Star	14.23	27.95
LEED	4.62	9.64
Existing Buildings	1.39	5.61
New Construction	1.57	1.97
Core and Shell	1.66	2.06

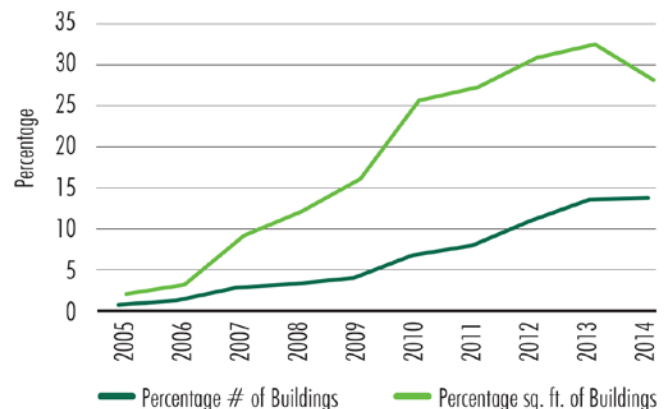
Total Adoption



LEED Adoption



Energy Star Adoption



Phoenix

GREEN BUILDING TRENDS

Although Phoenix continued to score in the bottom half of most green building categories, the market showed improvement in several areas and moved up three positions to eighteenth overall. The overall percentage of green square footage increased to 31.4%, a significant gain from last year's 28.0%. The market increased in both ENERGY STAR labels and the percentage of square footage holding a LEED certification, which increased to 14.4%, up from 12.1%.

GREEN MARKET NEWS

Phoenix is a location known for regional offices, operation centers, and satellite or sales offices. The insurance, healthcare, financial/mortgage, and technology industries play a major role in the Phoenix office market. According to local experts, it is too early to tell if green buildings are becoming increasingly popular. Many of the newly constructed office buildings in Phoenix are LEED certified, but this is not necessarily a major factor for tenants when considering leasing office space in metro Phoenix. The cost savings tenants achieve by occupying a LEED-certified building are still too insignificant for tenants to consider this a deciding factor. Certain tenants actively looking for space in metro Phoenix, such as government tenants, are beginning to prefer to occupy LEED-certified buildings, mainly due to perceived improvements to their image.

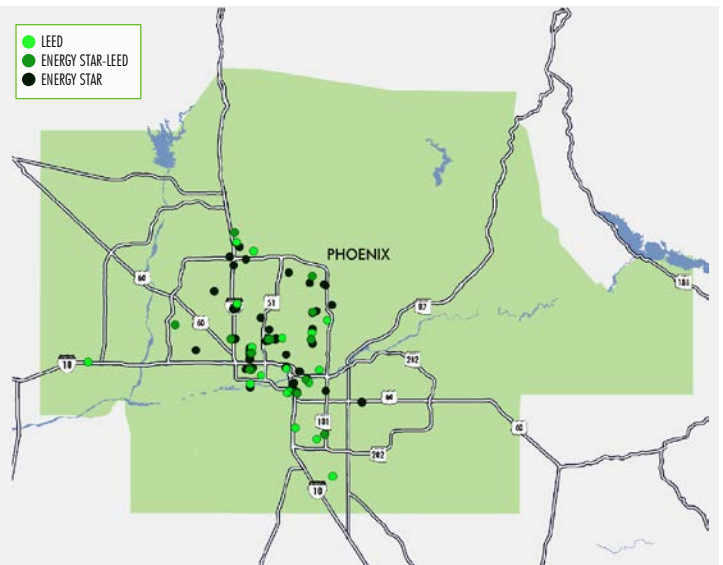
In 2014, only 6.2% of the top 100 office lease transactions by square footage throughout metro Phoenix occurred in green buildings. Most notably, Arizona State University and Webfilings each leased 54,030 and 36,015 square feet, respectively, in the newly constructed SkySong III.

In 2014, 17 of the 103 green buildings in Metro Phoenix changed hands. The most notable sale was the 470,172-square-foot purchase of five office buildings at Fountainhead Corporate Center in Tempe by Cypress Office Properties for \$71.5 million. Cypress is a real estate investment and advisory firm that focuses on value-add opportunities. Several of the other green buildings sold during the year were also purchased by real estate investment companies specializing in distressed and opportunistic properties.

LEEDing by example

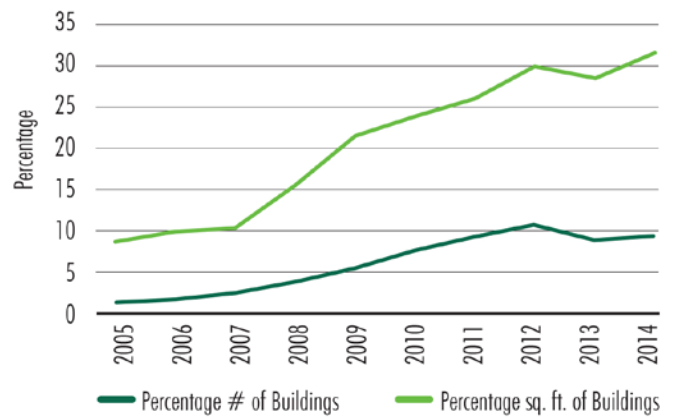
Collier Center Tower

7x Energy Star, LEED EB Silver, LEED EB recertification Gold

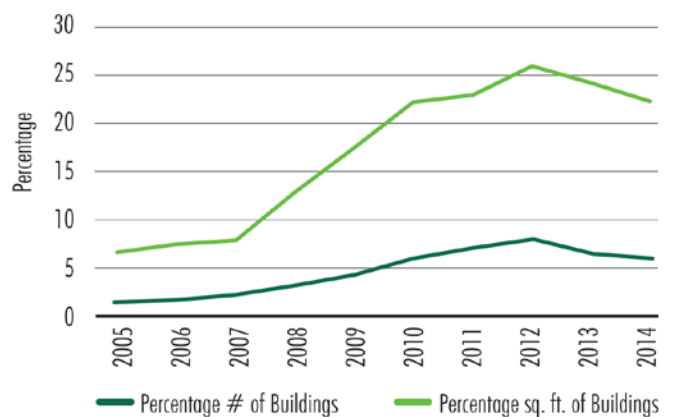


Phoenix Q4 2014	% of Buildings	% sq. ft of Buildings
Total	9.37	31.39
Energy Star	6.60	21.84
LEED	3.82	14.39
Existing Buildings	2.11	8.68
New Construction	1.14	4.16
Core and Shell	0.57	1.55

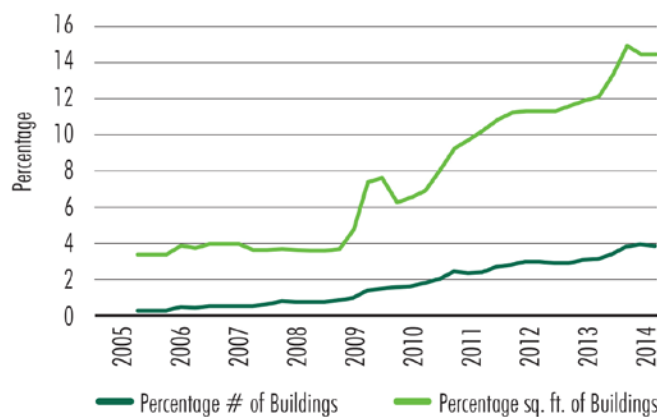
Total Adoption



Energy Star Adoption



LEED Adoption



Pittsburgh

GREEN BUILDING TRENDS

Pittsburgh moved up two places from the cellar and now stands at twenty-eighth place in terms of percentage of green space in the market. The Pittsburgh community broadly supports sustainable practices in many municipal, civic and corporate structures. As an example, PNC Bank is currently building their new headquarters, declared to be the greenest building in the world, in the heart of downtown Pittsburgh. This and other high-profile projects have raised awareness for green initiatives across the region.

Notwithstanding these efforts, the standing stock in Pittsburgh has been less successful in pursuing green certification, particularly among older, smaller buildings. One area where this is particularly prevalent is in ENERGY STAR labels. Only 1.1% of Pittsburgh buildings hold a label, by far the lowest in the top 30 markets, and considerably trailing the 9.7% average. It is interesting, however, that 9.1% of all space is in those buildings, a ratio that is the highest in the study. Clearly the green revolution in Pittsburgh is being won by bigger buildings.

GREEN MARKET NEWS

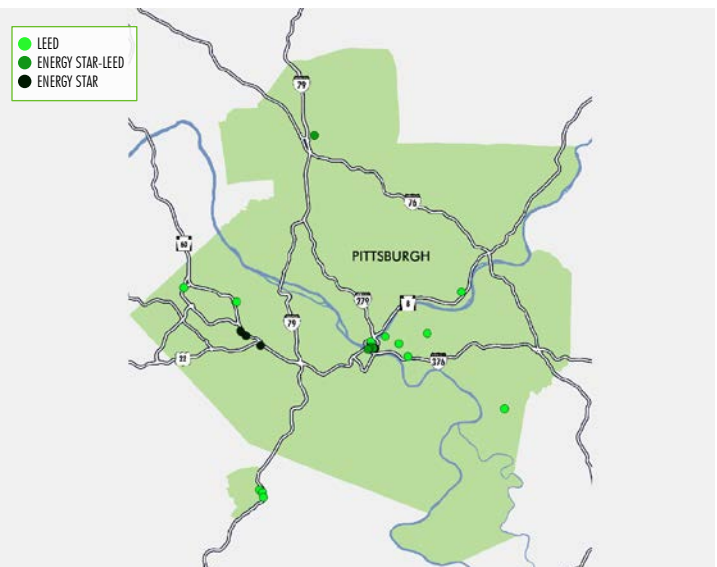
While Pittsburgh continues to trail behind national averages in green building adoption, there has been a gradual increase in activity and interest both on the tenant and landlord side. Some large occupiers, particularly energy and technology tenants, are interested in green standards and want to be associated with the movement from a public relations and corporate responsibility standpoint. The healthcare organizations that make up a large portion of Pittsburgh's economy are beginning to demand green standards in their buildings. A major benefit is the superior work environments that energy-efficient, certified buildings offer, since they tend to have cleaner air, more natural light and open layouts. However, for the most part, Pittsburgh office tenants are unwilling to pay higher rental rates and put themselves at a competitive economic disadvantage to lease green space. Tenants that have taken large blocks of ENERGY STAR-certified space in Pittsburgh in 2014 include Google, ANSYS, Towers Watson and EQT.

Landlords in Pittsburgh are beginning to take note of this steady shift. The trophy buildings are beginning to roll into LEED standards in the effort to land the large credit tenants that are attracted by such credentials. The most tangible benefit for landlords is that energy-efficient buildings have lower operating expenses, and it can be argued that initial upgrade costs pay for themselves in time. Due to lack of recent sales activity across the market, there have not been any recent sales of green buildings. REITs and institutional investors that have purchased office buildings in Pittsburgh in recent years have upgraded these buildings to green standards. Many local developers are adopting green standards for new office buildings in the pipeline.

LEEDing by example

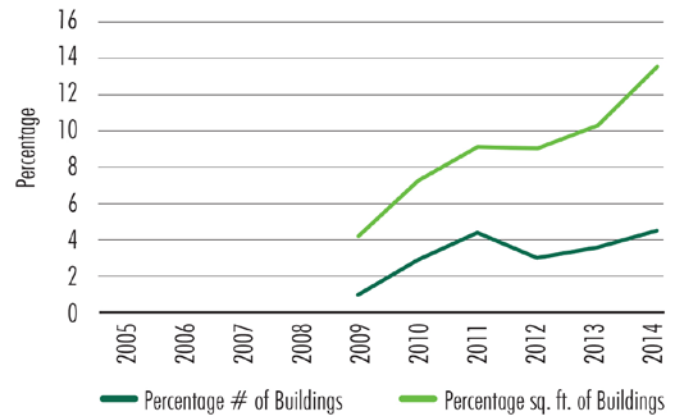
[525 William Penn Place](#)

6x energy Star, LEED EB Gold, 3x LEED CI

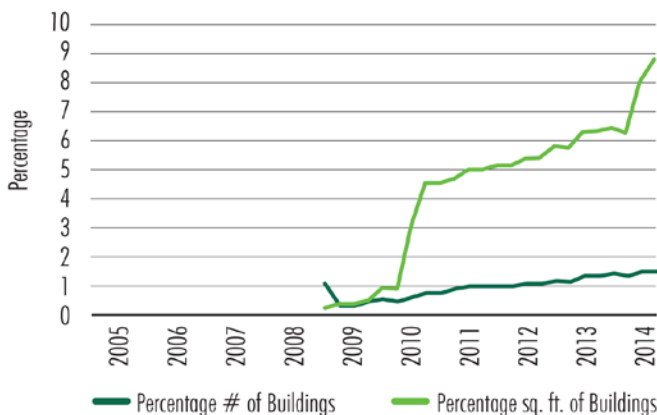


Pittsburgh Q4 2014	% of Buildings	% sq. ft of Buildings
Total	2.28	13.34
Energy Star	1.06	9.10
LEED	1.46	8.73
Existing Buildings	0.49	4.37
New Construction	0.73	3.50
Core and Shell	0.24	0.85

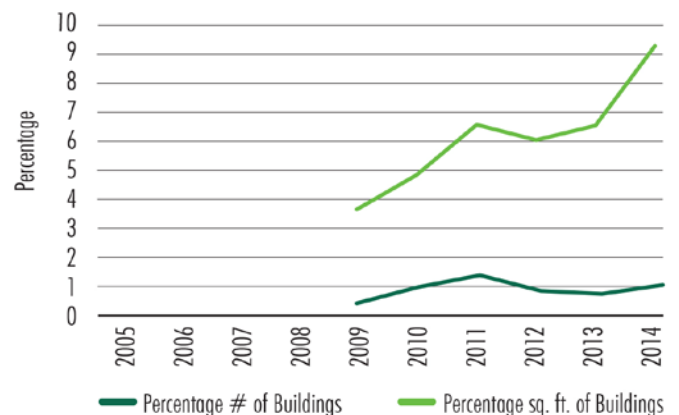
Total Adoption



LEED Adoption



Energy Star Adoption



Portland

GREEN BUILDING TRENDS

Portland stands exactly in the middle of the pack in our 2014 survey, moving up three slots and claiming fifteenth place with a total of 33.9% of their space certified as green. Although in the middle of the pack, Portland's green-certified space trails the national average of 38.7%. At 6.8%, the total of ENERGY STAR-labeled buildings also significantly trails the national average of 9.7%.

GREEN MARKET NEWS

Oregon's state incentives for the clean technology industry are among the strongest in the nation. Oregon offers the Business Energy Tax Credit (BETC) and the State Energy Loan Program (SELP) in addition to designating Rural Renewable Energy Development Zones. In 2009, Oregon also enacted the first Feed-in Tariff in the United States for photovoltaic panels.

In 2001, the City of Portland adopted a Green Building Policy requiring new construction and major renovations of all city facilities to meet the Certified level of LEED. This policy was amended on April 27, 2005, and was changed to require new buildings to meet the LEED Gold standard.

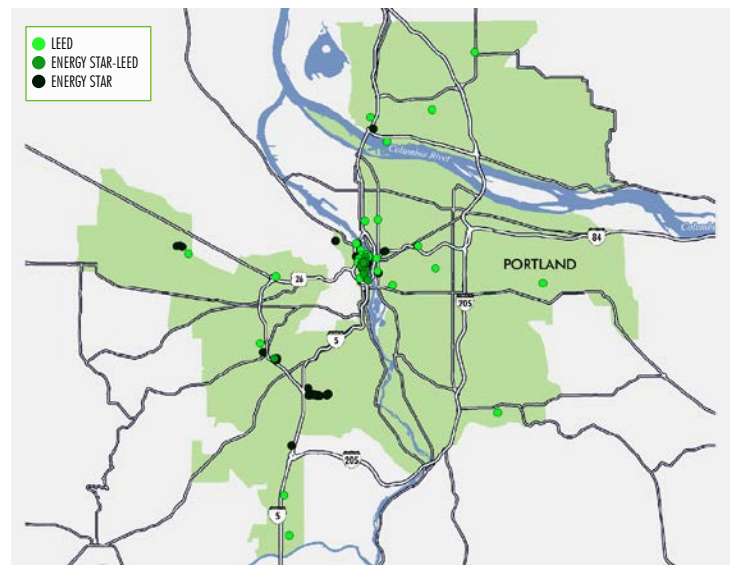
The U.S. Green Building Council said Oregon had the seventh-most square footage certified per capita among U.S. states in 2013. The LEED system recognizes energy- and water-saving features in design, construction and operation.

Oregon didn't crack the top 10 in 2014, but nearly 7 million square feet, or 1.83 feet per resident, were LEED certified in 47 Oregon properties in 2013. The largest is the 716,000-square-foot Lincoln Center in Tigard acquired by Shorenstein Properties of San Francisco in 2007. The building was certified LEED Silver in November. Additionally, the 18-story, 450,000-square-foot Edith Green-Wendell Wyatt federal building in Portland was stripped to its frame in a \$139-million renovation and earned LEED Platinum in December.

LEEDing by example

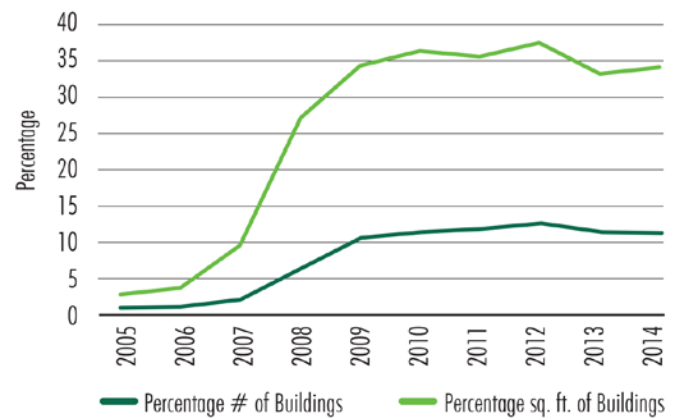
[The Morgan Building](#)

3x Energy Star, LEED EB Silver, LEED CI Platinum, Historic Building

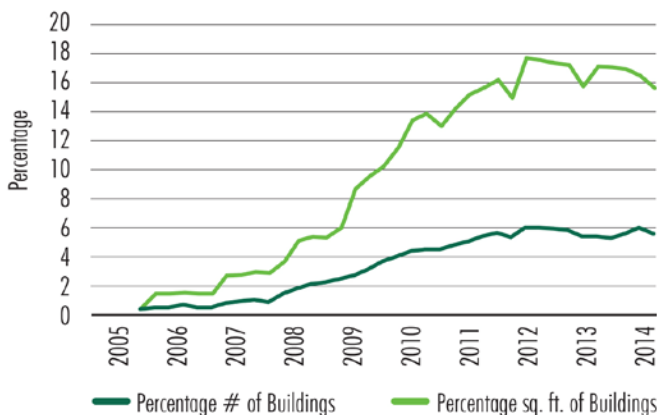


Portland Q4 2014	% of Buildings	% sq. ft of Buildings
Total	11.39	33.92
Energy Star	6.81	24.61
LEED	5.45	15.61
Existing Buildings	2.23	10.62
New Construction	1.98	2.88
Core and Shell	1.24	2.10

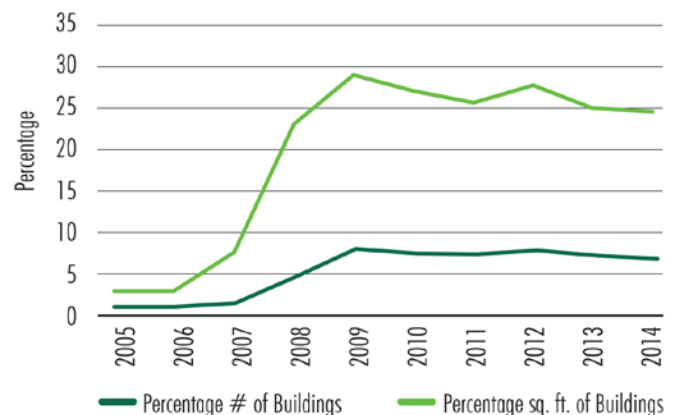
Total Adoption



LEED Adoption



Energy Star Adoption



Sacramento

GREEN BUILDING TRENDS

Sacramento finished in twentieth place in percentage of green space in the market with a 30.8% score, trailing the national average of 38.7%. Sacramento outperformed their standing in a number of specific categories, including the number of green buildings where the market's 11.8% mark stands in fourteenth place and comes closer to the national average of 13.1%. The market also placed thirteenth in the square footage of LEED buildings with a 17.6% achievement. By way of comparison, San Francisco leads the nation in this category at 40.0%.

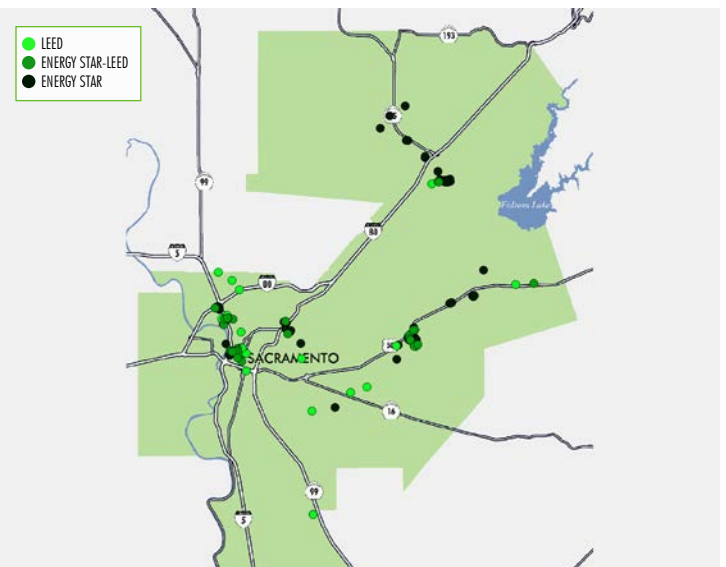
GREEN MARKET NEWS

Leasing activity of Sacramento's green buildings in 2014 largely mirrored that of the overall market, finishing in positive figures but at a diminished pace from the previous year. The region's most recent LEED certification was 500 Capitol Mall, which also had the greatest amount of positive net absorption of all green buildings in the market—over 30,000 square feet—due to a handful of deals, including three law firms and the relocation of CBRE. The Downtown submarket, which is home to 18 green buildings, saw the majority of leasing activity and the Natomas submarket saw the bulk of sales activity. Out-of-town investors were responsible for the purchase of over 150,000 square feet of green office buildings in the latter submarket. As California's capital city, Sacramento's green market is largely tied to the public sector with state and city agencies owning more than 30% of the region's green office buildings.

LEEDing by example

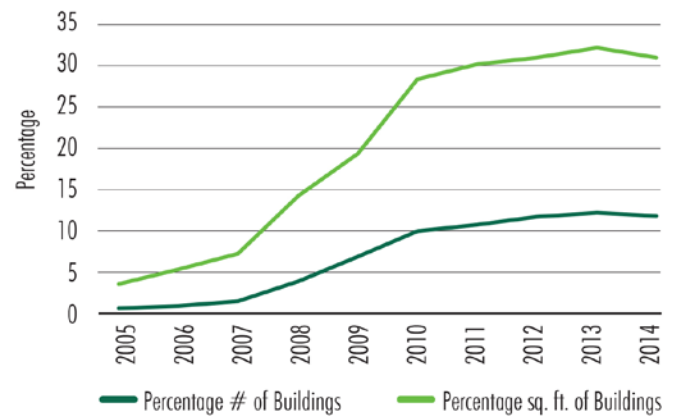
[980 9th Street](#)

9x Energy Star, LEED EB Gold, LEED CI Gold

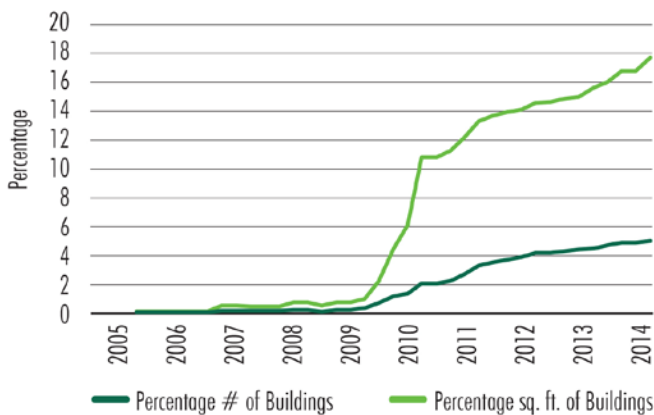


Sacramento Q4 2014	% of Buildings	% sq. ft of Buildings
Total	11.81	30.79
Energy Star	8.55	22.96
LEED	4.94	17.55
Existing Buildings	3.68	14.04
New Construction	0.87	2.44
Core and Shell	0.39	1.07

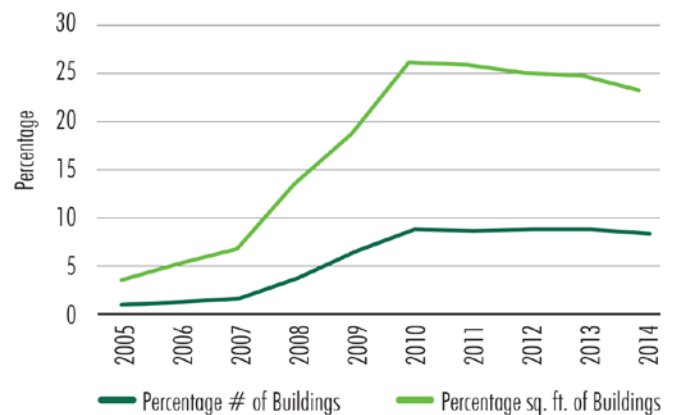
Total Adoption



LEED Adoption



Energy Star Adoption



San Diego

GREEN BUILDING TRENDS

The San Diego market fell to nineteenth position, a six-spot decline and the largest negative move in our survey this year. Both the overall building adoption rate of 8.6% and the overall LEED adoption rate of 3.0% are each exceeded by all but eight markets. These numbers are somewhat offset by the size of the buildings achieving designations. One continuing bright spot is in LEED for New Construction where the square footage total of 3.0% is nearly double the national average and third best overall. The market ended the year with the same number of certified buildings—145 in total—as the year before.

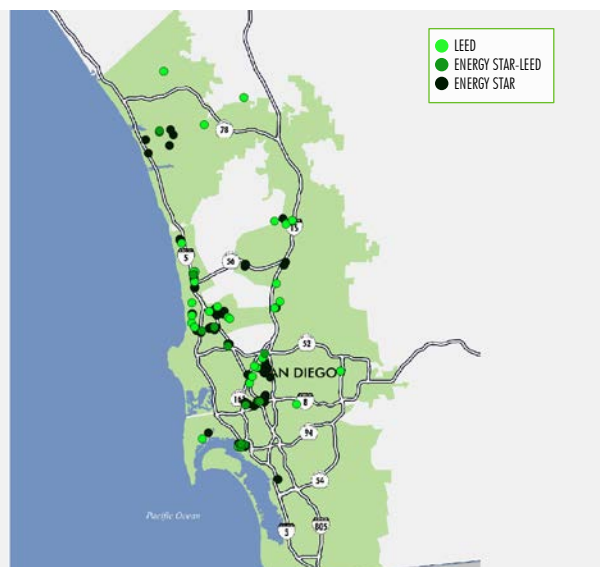
GREEN MARKET NEWS

In San Diego, the importance of green buildings is primarily evident in new construction. In 2014, three office buildings over 100,000 square feet—all of which are being marketed as revolutionary green buildings—either broke ground or were delivered to the market. The 415,000-square-foot LPL headquarters building was delivered in Q1 2014 and is believed to be the country's largest net-zero office building. Another major build-to-suit that will serve as Sempra Energy's headquarters broke ground downtown. This 306,000-square-foot tower will be designed to LEED Gold certification standards. A key factor in both companies choosing energy-efficient buildings is the fact that cost savings offset other existing occupancy costs over the course of their long-term leases. Both companies are also passionate about sustainability, social responsibility and using technology to create efficiencies. Taking a cue from build-to-suit tenants, the Irvine Company has marketed their newest construction project, the 306,000-square-foot One La Jolla tower, as a leading green building. This LEED Silver, speculative project is adjacent to the new LPL headquarters building and looks to attract similar socially conscious companies. Generally, companies who seek energy-efficient buildings have long-term corporate culture in mind and use green buildings to demonstrate their corporate values.

LEEDing by example

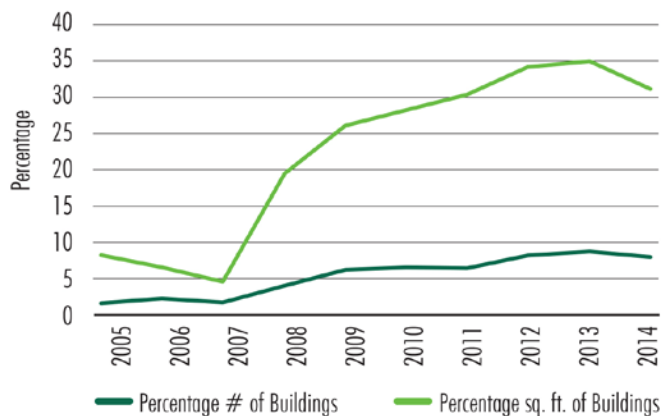
[101 W Broadway](#)

10x Energy Star (all 90+), BOMA International TOBY Award winner.

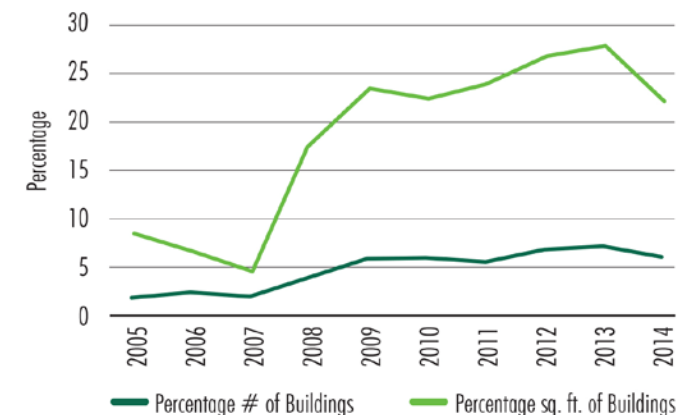
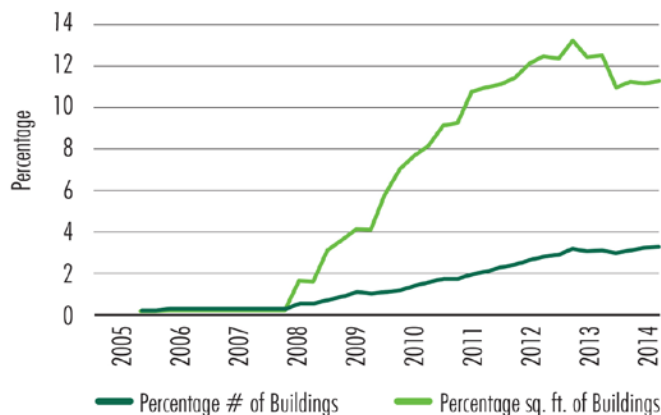


San Diego Q4 2014	% of Buildings	% sq. ft of Buildings
Total	8.62	31.02
Energy Star	6.18	23.51
LEED	3.03	11.28
Existing Buildings	1.25	6.82
New Construction	1.01	2.97
Core and Shell	0.77	1.49

Total Adoption



LEED Adoption



San Francisco

GREEN BUILDING TRENDS

San Francisco continued to add to its dominance in green buildings in 2014, registering increases in all major categories. Most significant is its total green square footage, now at 70.0%, less than half a percentage point behind Minneapolis for the top spot. San Francisco also boasts the highest square footage with LEED certification, 40.0%, more than three times the national average. LEED for Existing Buildings certifications account for 36.5% of all space, second by a small fraction to Minneapolis and more than double the national average. Square footage of buildings that are ENERGY STAR labeled stood at 50.1%, second again only to Minneapolis, and nearly double the national average for this category. With significant new construction activity underway, it is possible that San Francisco will soon be at the top of these metrics.

The adoption of green building certification is particularly strong in certain San Francisco submarkets. In South of Market, 84.6% of buildings hold an ENERGY STAR or LEED certification. The South and North Financial Districts follow at 54.1% and 47.8% respectively. Mission Bay's adoption rate of 44.4% completes the picture. Overall, the adoption rates for these submarkets are all well above the market average of 19.4%.

GREEN MARKET NEWS

Technology companies dominate the San Francisco market, with the majority of 2014 leasing activity coming from the technology sector. These technology tenants, who tend to seek creative, open-plan space and new construction, have embraced the green building trend. Two of the largest deals in the market in 2014 were Salesforce, which pre-leased 714,000 square feet of the new Salesforce Tower building (pre-certified LEED Core and Shell Platinum), and LinkedIn, which pre-leased a new 450,000-square-foot campus at 222 2nd St (expected to receive a LEED Gold certification). Sales volume was nearly \$6.0 billion in 2014 and was largely dominated by institutional investors and REITs.

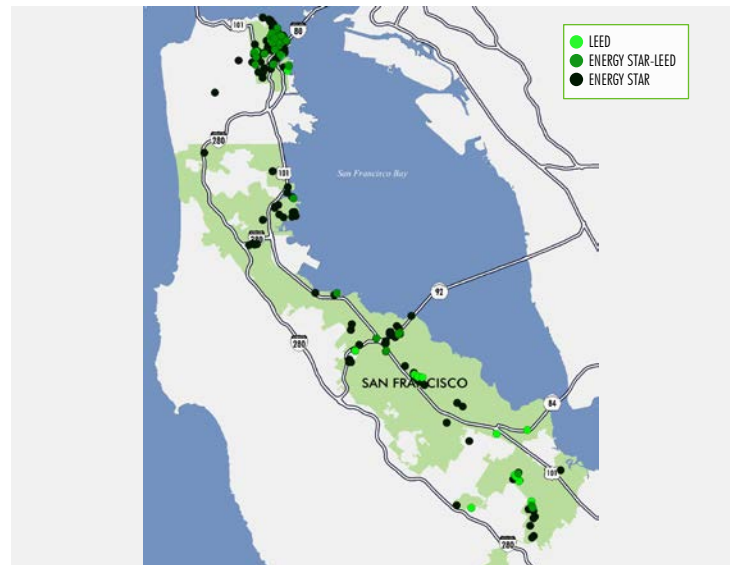
San Francisco has historically been an early adopter of environmental legislation. It features a number of city departments dedicated to the environment, green building and sustainability. As a result, the city of San Francisco has some of the most stringent green building codes in the region. New buildings must achieve LEED Gold certification and must meet other specific requirements per the San Francisco building code.

More than 5.8 million square feet was leased in the San Francisco Peninsula market in 2014 by tenants that include a number of Fortune 500 companies and several technology, clean technology and life sciences companies. Owner-user activity has been expanding in the Peninsula, but sales were still dominated by institutional and REIT buyers. This area is dominated by the life sciences, technology and legal industries. Many large companies are headquartered here, and a large number of smaller companies and startups fuel the region's innovation. Several cities within the market, as well as San Mateo County, have specified more stringent standards than the state-wide CalGreen building code. A number of counties, including San Mateo, require large office buildings to be built to LEED Silver or better standards, demonstrating the region's widespread adoption of green real estate and building practices.

LEEDing by example

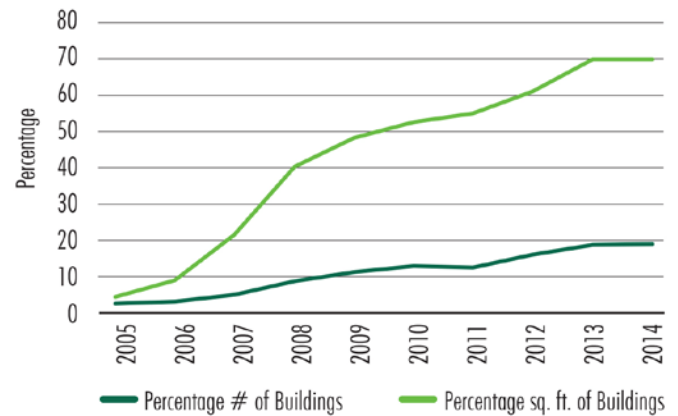
[560 Mission St.](#)

10x Energy Star, LEED EB Platinum, LEED CI Silver, EBie Award Winner

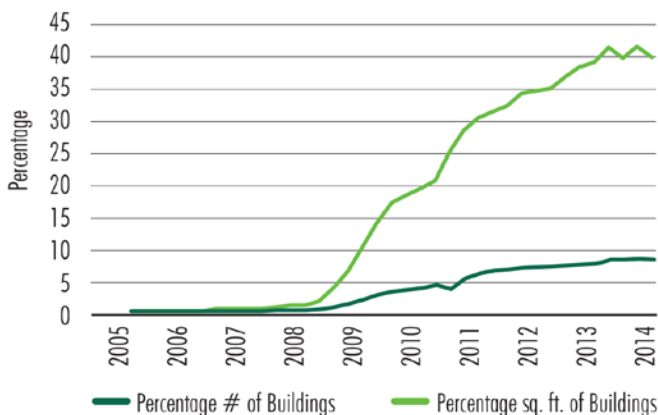


San Francisco Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	19.40	70.02
Energy Star	15.75	53.11
LEED	8.21	40.02
Existing Buildings	6.61	36.53
New Construction	0.44	0.54
Core and Shell	1.16	2.94

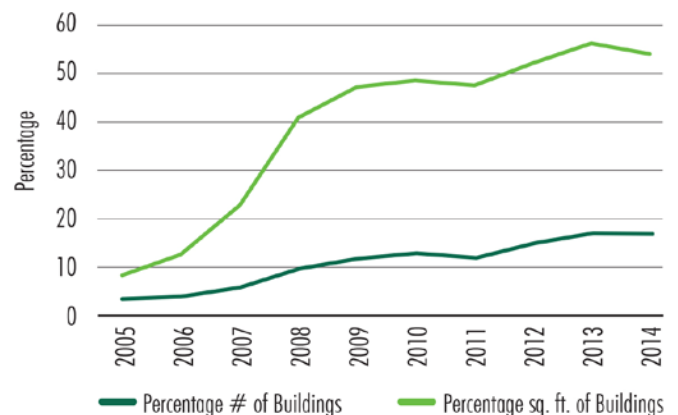
Total Adoption



LEED Adoption



Energy Star Adoption



San Jose

GREEN BUILDING TRENDS

The San Jose market dropped four positions to twenty-second in this year's survey. The decline was most prevalent in the number of ENERGY STAR-labeled buildings, now at only 5.5% of the market, a number scarcely half of the national average. The percentage of LEED buildings did increase, up to 4.8%, a number that placed the market in fourteenth position nationally. The total percentage of square feet certified, now at 17.0% is also close to the national average and individually placed San Jose in fourteenth place as well.

GREEN MARKET NEWS

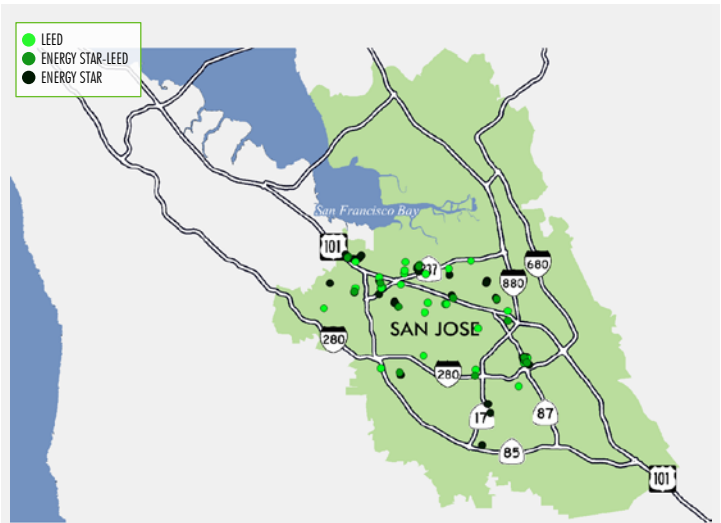
2014 was another significant year for the Silicon Valley market. Leasing activity remained strong as the market experienced more than 10 million square feet of leasing, including nearly 2.5 million square feet in buildings that are not yet complete. Sales in 2014 topped 2.5 million square feet and was dominated by institutional and REIT buyers. Silicon Valley is dominated by the technology industry, with various high-tech, software and internet companies headquartered there.

While there are a number of owner-users, ownerships are generally institutional and REIT investors. Green building and building efficiency has become an important consideration for Silicon Valley owners and tenants to maximize efficiency and reduce operating costs and emissions as much as possible. With rising energy costs, a growing drought and a population that has historically had consideration for the environment, this area has embraced green real estate. Many cities have introduced standards that go beyond the California state standards and require additional levels of certification, including Cupertino, Milpitas, Mountain View, San Jose and Sunnyvale. All of which require larger buildings, typically those with more than 25,000 square feet, to meet LEED Certified, Silver or Gold standards.

LEEDing by example

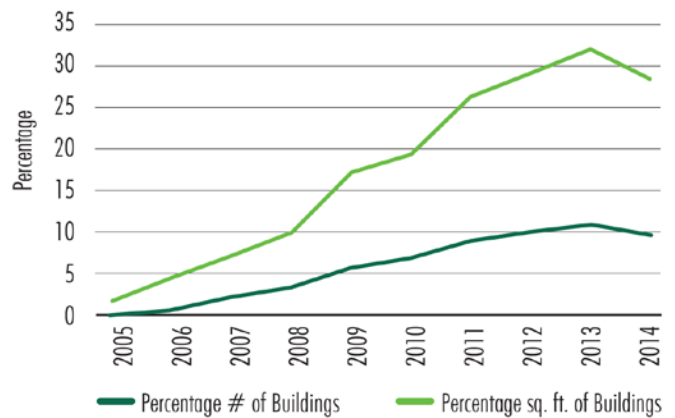
[225 W Santa Clara](#)

2x Energy Star, LEED EB Gold, LEED CI

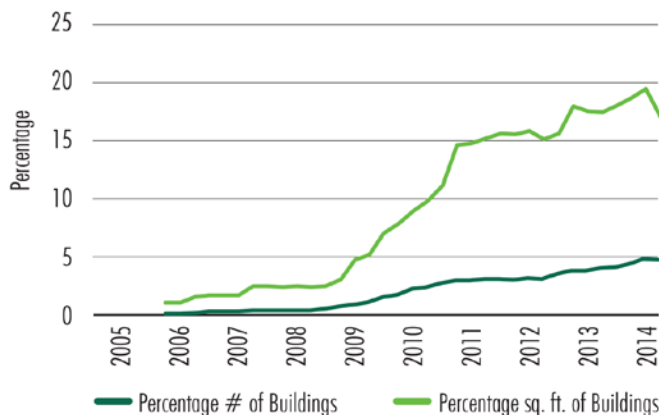


San Jose Q4 2014	% of Buildings	% sq. ft of Buildings
Total	9.69	28.57
Energy Star	5.47	12.22
LEED	4.82	17.04
Existing Buildings	1.74	6.91
New Construction	1.03	2.69
Core and Shell	2.05	7.44

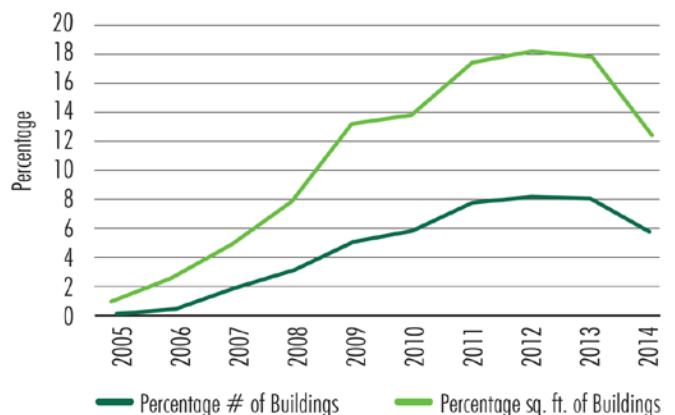
Total Adoption



LEED Adoption



Energy Star Adoption



Seattle

GREEN BUILDING TRENDS

Slipping two spots, Seattle still remains in the top 10 at number 10. Although the market boasts a relatively small percentage of green buildings—its 10.0% tally places the market in seventeenth position—those green buildings represent 40.1% of the market, the tenth highest total in that category. This is particularly apparent in LEED buildings, where they represent 25.0% of the market square footage with only 4.9% of the stock certified. This more than 5 to 1 ratio trails only Tampa and Pittsburgh, two significantly smaller markets. The green building phenomenon is usually dominated by larger buildings in every market, but in Seattle even more so.

The adoption of green building certification in the Downtown Seattle submarket is significantly higher with 16.4% of the buildings ENERGY STAR or LEED certified as compared to 10.0% for the total market.

GREEN MARKET NEWS

The Seattle region is home to many companies with an environmental focus, such as Weyerhaeuser which recently decided to move its suburban work force to a 200,000-square-foot, build-to-suit in downtown Seattle with a modern, deep green interpretation of its materials and location. One of Seattle's fastest growing large companies, Amazon.com, promotes that six of its headquarters buildings built between 2010 and 2014 were awarded LEED Gold certification for sustainable design and construction methods. Efficient building design, natural light, recycling and composting stations, and bike lockers are expected by most tenants and lack of them is detrimental to the appeal of a building.

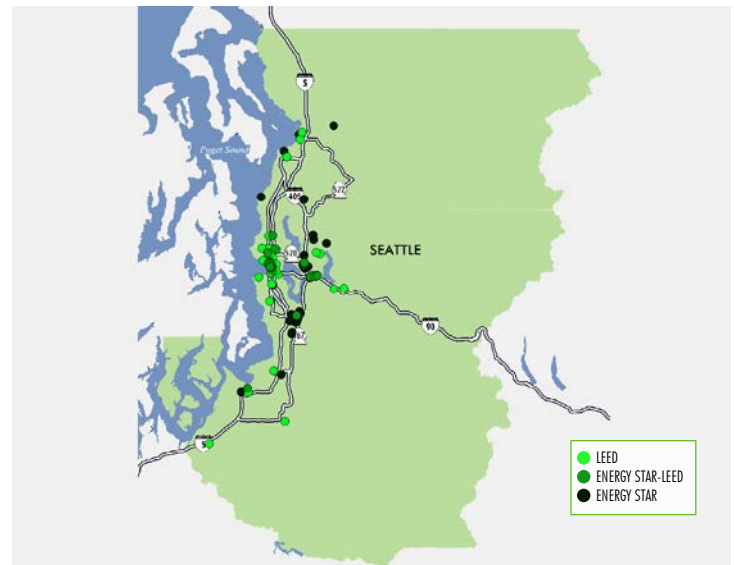
While Seattle is not a significant headquarters location, it does attract a young workforce with high educational attainment. These employees come to Seattle to work at startups and technology companies such as Amazon.com, Google and Microsoft. It is believed that the newest generation of workers desires an environmental-focused workplace.

Natural advantages also give the Seattle area good choices for sustainable power generation. Seattle City Light reports 89.8% of its supplied electricity comes from hydroelectric and another 3.9% comes from wind. Seattle also takes waste reduction seriously. Effective January 1, 2015, compostable food waste was prohibited in residential (both single family and multifamily) garbage. Plastic grocery bags and non-recyclable/compostable food service containers are not allowed at businesses in the Seattle city limits.

LEEDing by example

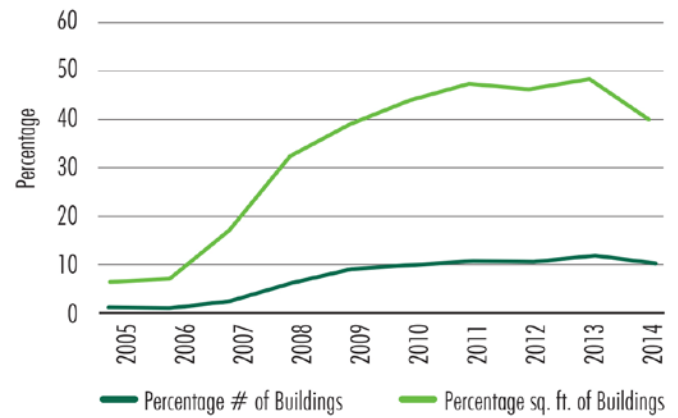
[Russell Investments Center](#)

5x Energy Star, LEED EB Platinum, 2x LEED CI, BOMA TOBY Award Winner

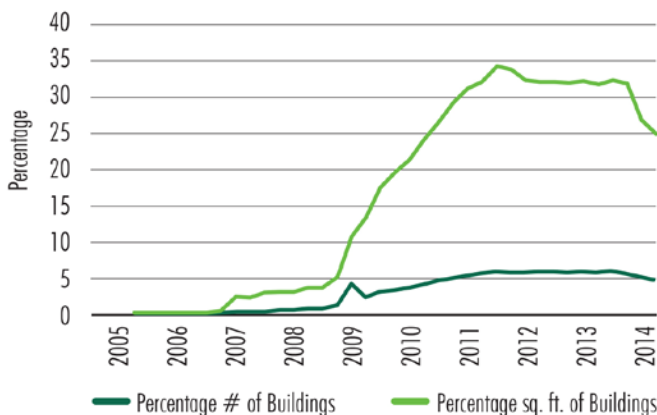


Seattle Q4 2014	% of Buildings	% sq. ft of Buildings
Total	9.95	40.13
Energy Star	6.36	23.43
LEED	4.90	24.96
Existing Buildings	2.39	16.13
New Construction	1.07	2.13
Core and Shell	1.44	6.70

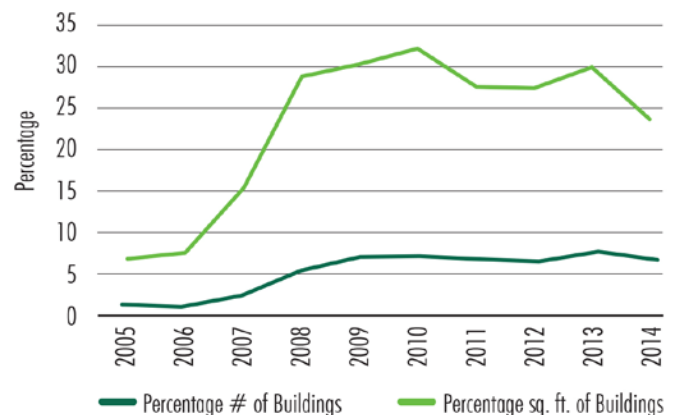
Total Adoption



LEED Adoption



Energy Star Adoption



Stamford

GREEN BUILDING TRENDS

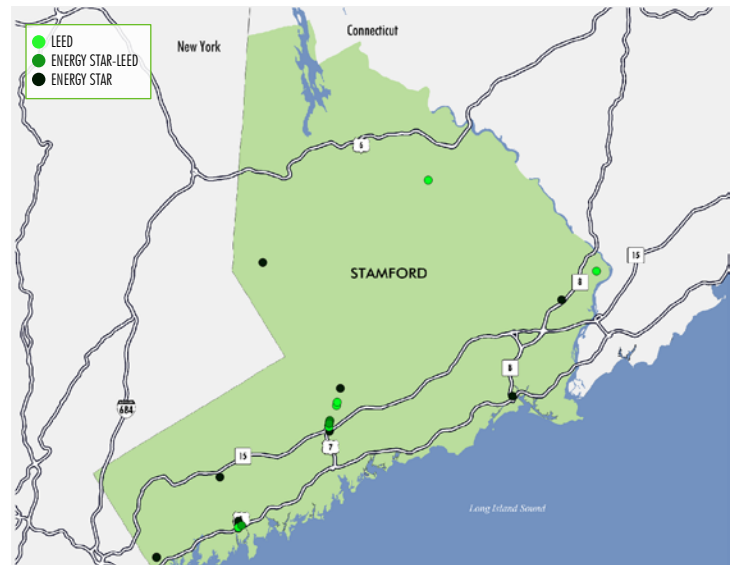
Stamford slipped another position to now rest in twenty-ninth place in our annual survey. Only 6.0% of all buildings and 12.9% of all space is green certified, significantly trailing national averages of 13.1% and 38.7% respectively. The market is consistently in the bottom five in nearly all reviewed categories with a modest improvement in the percentage of LEED-certified square footage being the only positive movement during the year.

GREEN MARKET NEWS

Most of Fairfield County LEED buildings are privately owned. The majority of LEED buildings are used as headquarters for financial service firms, hospitality, consumer products and reinsurance companies. During 2014, the entire market saw a total of 2.9 million square feet leased. Of that total, 33.5% occurred in LEED buildings.

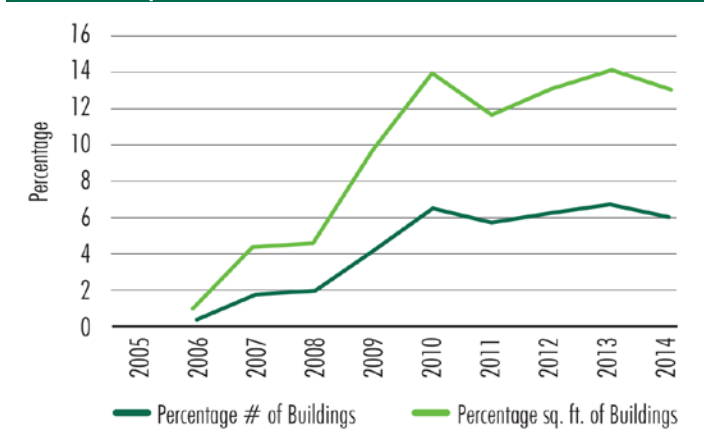
Local government officers are committed to make sustainability a focus for every new construction and renovation project. This requires attention in the design state to achieve reductions in greenhouse gas emissions, water use and discharge, and construction and demolition debris. Energy conservation measures, sustainable land use and many other efforts are also being taken into consideration.

LEEDing by example
[750 Washington Blvd](#)
 5x Energy Star

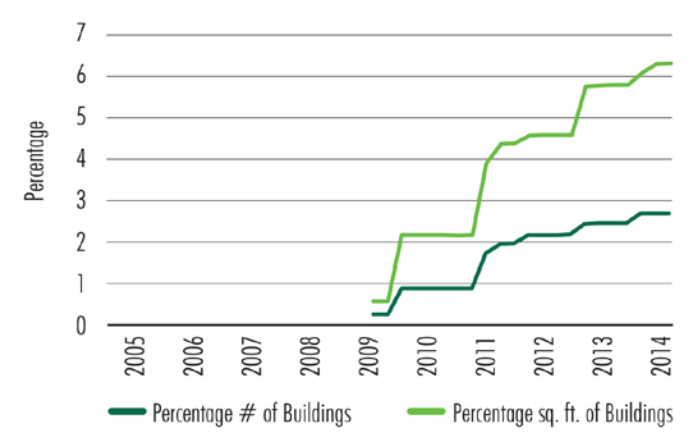


Stamford Q4 2014	% of Buildings	% sq. ft of Buildings
Total	6.02	12.88
Energy Star	3.61	7.77
LEED	2.66	6.29
Existing Buildings	1.45	4.02
New Construction	0.72	1.74
Core and Shell	0.48	0.53

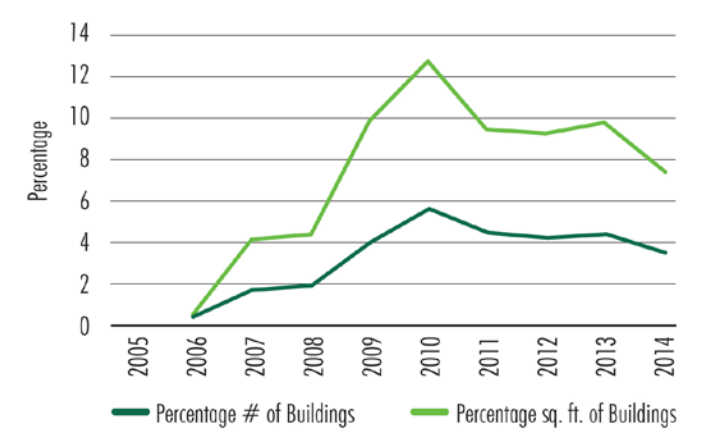
Total Adoption



LEED Adoption



Energy Star Adoption



St. Louis

GREEN BUILDING TRENDS

St. Louis maintained its overall position at twenty-third for the year, with 21.5% of all space holding a green designation. However, the market consistently fell into the bottom 10 in nearly every specific green building category. The percentage of ENERGY STAR-labeled buildings fell to 3.2%, a number that surpassed only four other cities, and the percentage of square footage, 4.5%, is at the very bottom of the list. This is particularly interesting given the historical fact that the first-ever ENERGY STAR label was awarded to a St. Louis building in 1999. Both the number and square footage percentage of LEED buildings increased over the year.

GREEN MARKET NEWS

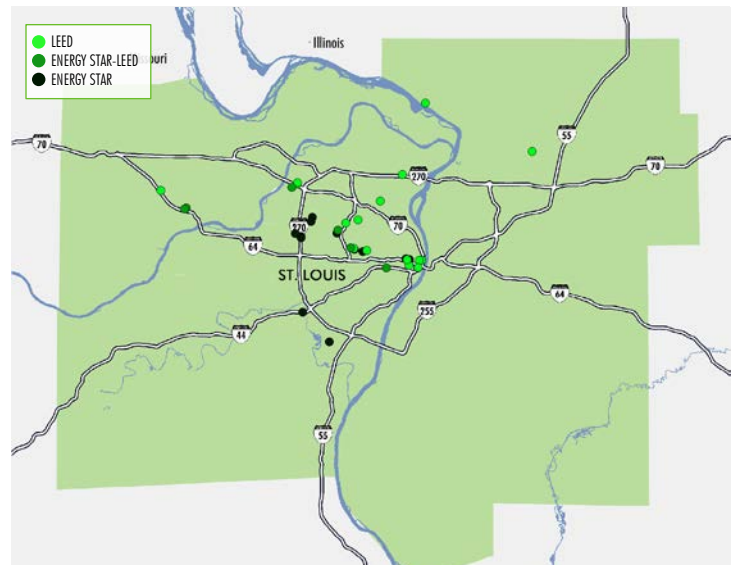
The Wexford Science and Technology's @4240 building, home to Washington University's Office of Technology Management, was awarded a LEED Platinum certification. Later this year, the building will house the Cambridge Innovation Center, Boeing's Ventures discovery unit, Husch Blackwell's intellectual property and corporate fund formation units, creative agency Manifest Digital, Washington University School of Medicine, and yeast producer AB Mauri. The 183,000-square-foot @4240 was a former industrial building that was refurbished to include office, lab and collaborative spaces and is now part of the CORTEX District. CORTEX is a 200-acre innovation hub and technology district integrated into St. Louis' historic Central West End and Forest Park Southeast residential neighborhoods.

RGA, a Fortune 500 company, completed construction this year on their new two-tower, 405,000-square-foot headquarters in Chesterfield, Missouri. The owner-occupied building is designed with LEED Silver certification standards. The LEED for Core and Shell Gold-certified, 220,000-square-foot Building II was completed in 2014 for tenant Express Scripts. The \$56-million project is located at the company's current campus in North St. Louis County at Northpark.

LEEDing by example

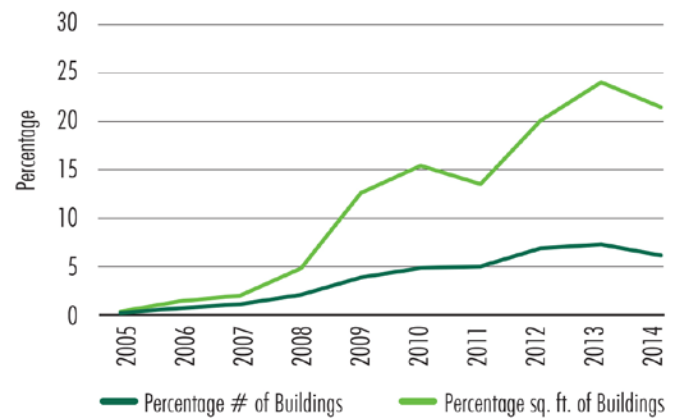
[13045 Tesson Ferry Rd](#)

4x Energy Star

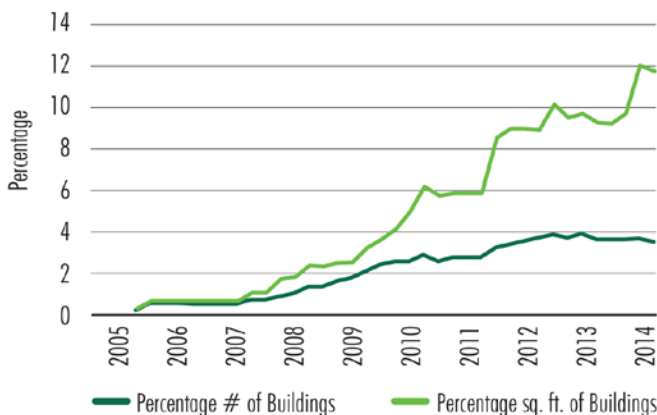


St. Louis Q4 2014	% of Buildings	% sq. ft of Buildings
Total	6.24	21.51
Energy Star	3.20	10.81
LEED	3.56	11.73
Existing Buildings	1.36	5.88
New Construction	1.53	3.32
Core and Shell	0.68	2.53

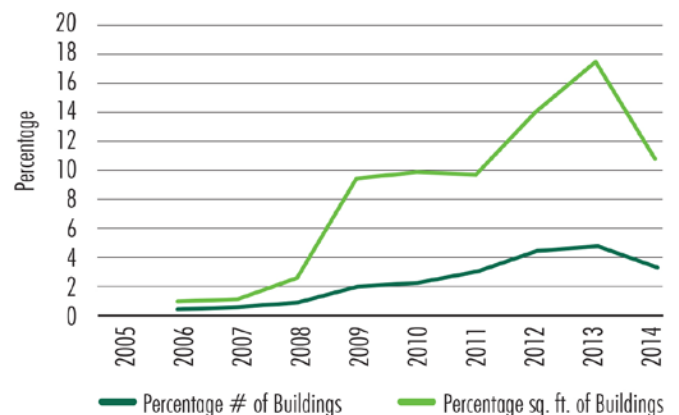
Total Adoption



LEED Adoption



Energy Star Adoption



Tampa

GREEN BUILDING TRENDS

The Tampa Bay market made the largest leap in the survey this year, moving into seventeenth position, up from twenty-second. Green-certified space is at 31.6%, up from only 27% a year before. This 4.6% increase is also the highest improvement year over year. Another interesting and significant observation is the very high ratio of buildings holding LEED designation and the square footage those buildings represent. While only 2.1% of the building stock has the designation, these buildings contain 11.1% of the total market square footage. This better than 5 to 1 ratio is the highest in our study and demonstrates that the green building market is a big building market in Tampa.

GREEN MARKET NEWS

Tampa's LEED-certified buildings were active in 2014 with 64 transactions totaling more than 1.4 million square feet. Of the top 25 leases signed this year, five occurred in LEED buildings. The largest of the five deals was the second largest for the city and third largest across all of Tampa Bay. The 114,831-square-foot renewal executed at Bank of America Plaza was signed by the building's namesake, Bank of America.

Alongside the financial industry, the distribution of jobs by sector across the Tampa Bay market is somewhat varied. Trade, transportation and utilities take the top spot at 19%, professional and business services is at 17%, education and health services is at 16%, and government jobs is at 13%.

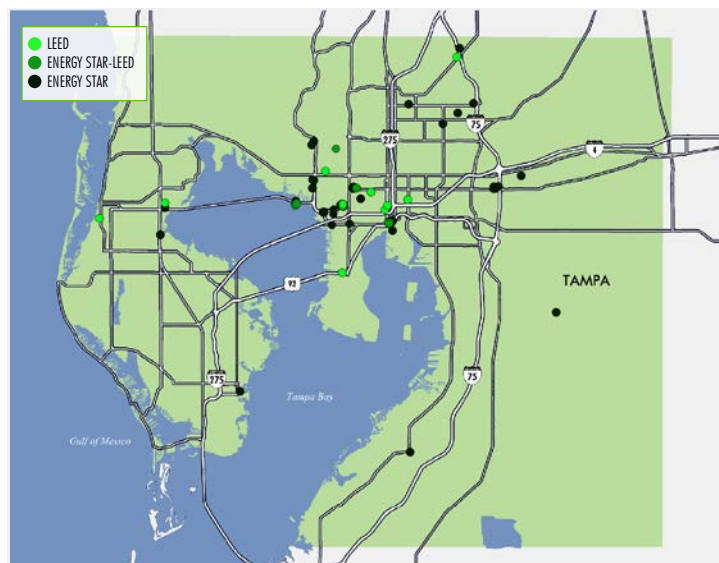
In terms of sales activity, only one LEED-certified building, the Tampa City Center, traded in 2014. The 38-story, 743,000-square-foot building in Tampa CBD sold for more than \$120 million or approximately \$162 per square foot. The property is purchased by Alliance Partners, a national investment manager, which also purchased a 359,000-square-foot office building in Chicago in 2014, which was awarded the ENERGY STAR label in 2013. In addition to these recent acquisitions, Alliance also prides itself on their experience with adaptive reuse projects.

According to Real Capital Analytics, capital flows in 2014 were dominated by REITs (35%) and institutional investment (35%). A comparison to 2013 numbers shows a 250-basis-point (bp) gain in institutional investment but a 140-bp drop in REIT investment. Despite this recent drop, in terms of existing ownership, REITs still maintain three of the top five ownership spots by total RBA.

LEEDing by example

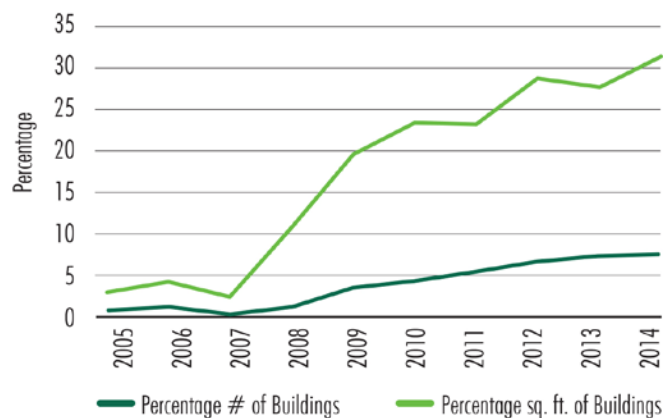
17200 Commerce Park Blvd

11x Energy Star, LEED EB Gold, LEED EB Recertification Platinum

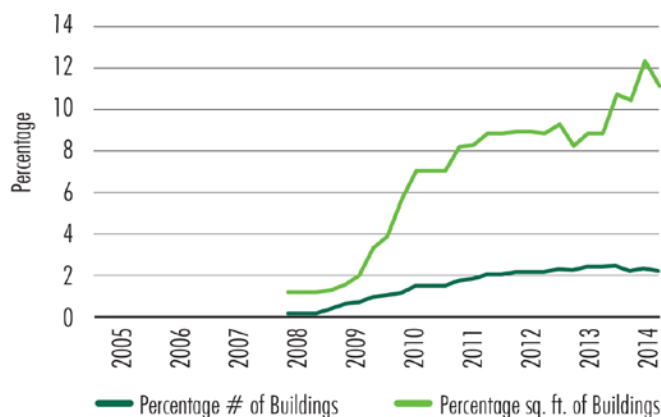


Tampa Q4 2014	% of Buildings	% sq. ft of Buildings
Total	7.48	31.55
Energy Star	5.87	24.83
LEED	2.07	11.13
Existing Buildings	1.03	9.12
New Construction	0.46	0.51
Core and Shell	0.57	1.50

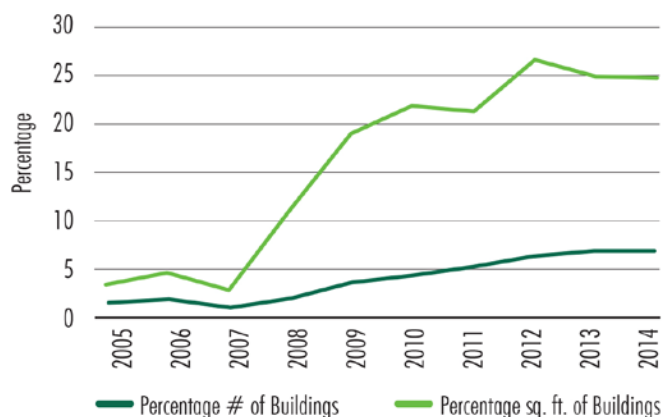
Total Adoption



LEED Adoption



Energy Star Adoption



Walnut Creek

GREEN BUILDING TRENDS

Walnut Creek moves up a place and now scores a respectable eleventh position in overall percentage of certified buildings with 37.9%, minimally below the national average of 38.7%. This record is achieved primarily through LEED activity where 18.3% of all space is certified. Buildings with a green certification account for 9.9% of buildings in the market, which placed the market in only eighteenth position against a national average of 13.1%. This high ratio of square footage to buildings demonstrates an even higher adoption of green certification by bigger buildings in this market.

GREEN MARKET NEWS

2014 was a slow, steady year for the I-680 Corridor market. Leasing activity finished 2014 with more than 1.8 million square feet of leases. AT&T's contraction out of 500,000 square feet in Bishop Ranch in Q3 2014 not only created the largest block of vacant space in the market, but also the largest single tenant occupancy loss on record. User demand remained high in the second half of 2014, with tenants seeking more than 3 million square feet within the I-680 Corridor. The financial, technology and retail industries made up close to 75% of prospective tenant demand.

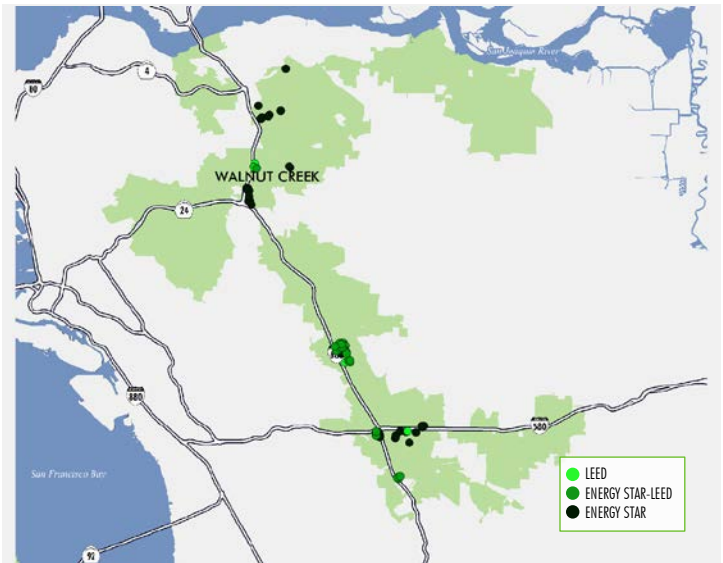
Workday, the top tenant in the market at more than 400,000 square feet, has been recognized by the EPA in the Green Partnership program with a "100% Green Power Purchaser" status. One of the major sales in 2014 was the 1-million-square-foot deal of California Center by Swift Real Estate Partners.

With rising energy costs, a growing drought and a population that has historically had consideration for the environment, this area has embraced green real estate. Because many surrounding cities and counties have enacted model Climate Action Plans in conjunction with the state, cities within the Walnut Creek market are likely to improve building performance standards in 2015.

LEEDing by example

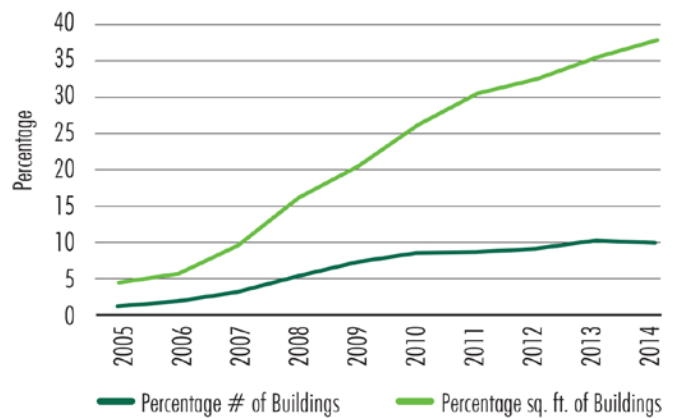
[Mt. Diablo Plaza](#)

7x Energy Star, LEED EB Silver

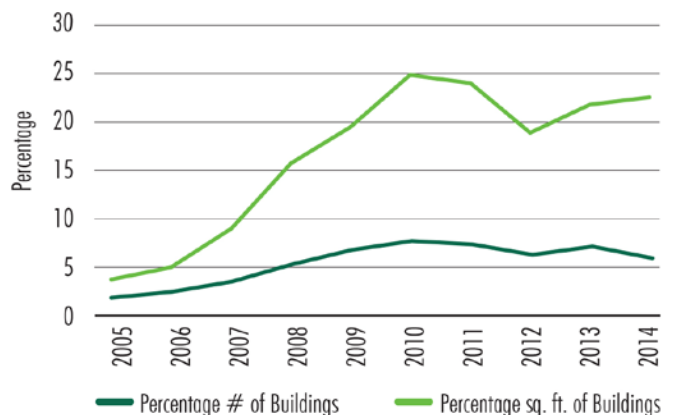


Walnut Creek Q4 2014	% of Buildings	% sq. ft of Buildings
Total	9.92	37.92
Energy Star	6.05	22.54
LEED	4.22	18.29
Existing Buildings	3.98	17.33
New Construction	0.24	0.96
Core and Shell		

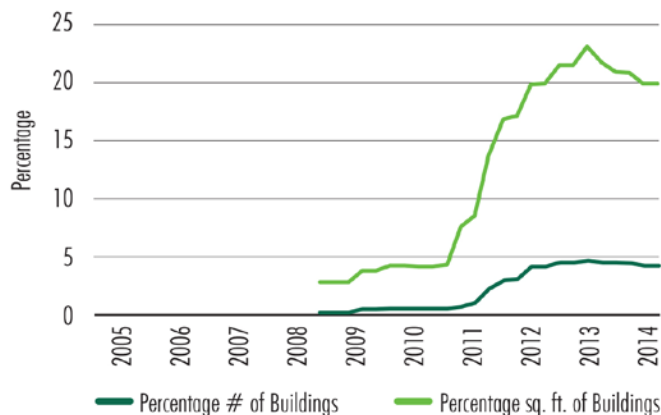
Total Adoption



Energy Star Adoption



LEED Adoption



Washington, D.C.

GREEN BUILDING TRENDS

Washington, D.C. comprises the second largest commercial office market in the U.S. in absolute terms. It trails only Manhattan in total square footage and its 3,671 buildings included in the study tops all markets by a significant margin. In total, 592 buildings, or 16.1% of all buildings and a survey-leading 164 million square feet, hold some level of certification. Furthermore, 42.1% of all space is certified, putting the market in eighth place overall this year, an improvement of two positions. Washington, D.C. placed in the top 10 in all major categories measured over the year.

The statistics for the specific submarkets in Washington, D.C. illustrate an even greater commitment to green building. Substantially above the market average, 44.5% and 48.0% of the buildings in the CBD and East End hold an ENERGY STAR or LEED certification. RB Corridor trails these two submarkets with 28.8%, still above Washington, D.C.'s average. The percentage of green-certified buildings in Bethesda/Chevy Chase and Tysons Corner are fairly similar at 19.4% and 18.2% respectively.

GREEN MARKET NEWS

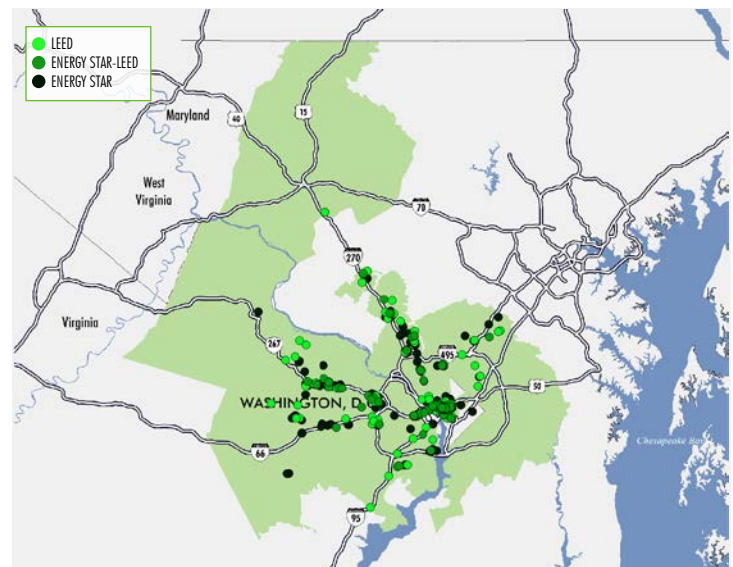
The region's office markets experienced tepid net demand throughout 2014, as federal agencies, law firms and government contractors—the region's largest occupiers—continued consolidation and rightsizing efforts. Nonetheless, certain pockets of the market, particularly Trophy and Class A assets with a rich amenity base, began to see increased momentum in both leasing and touring activity as tenants place a growing emphasis on modern, efficient workspace as well as "live, work, play" environments.

Driven by the aging office inventory and the heightened focus on space efficiency and densification, landlords continue to invest in building upgrades and renovations, as well as in higher grade spec suites. In the meantime, the new construction pipeline has started to tighten. The metro region saw 3.9 million square feet of new office deliveries in 2014, a decrease from the 4.5 million square feet completed in 2013. Only 2.1 million square feet are scheduled to deliver in 2015. CityCenterDC, a new \$1-billion, 10-acre, mixed-use development that includes 515,000 square feet of Class A office space, was delivered in 2014 and received a LEED Neighborhood Development Gold certification. Other new office developments, including 799 9th Street, NW and 1200 17th Street, NW in the District, Tysons Tower in Northern Virginia, and 4500 East West Highway in Bethesda, Maryland, have all received or are targeting LEED certifications at various levels.

LEEDing by example

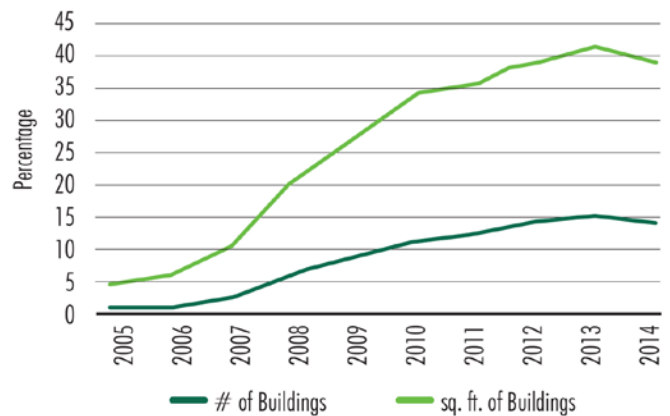
[One Potomac Yard](#)

8x Energy Star, LEED EB Gold, LEED NC Gold

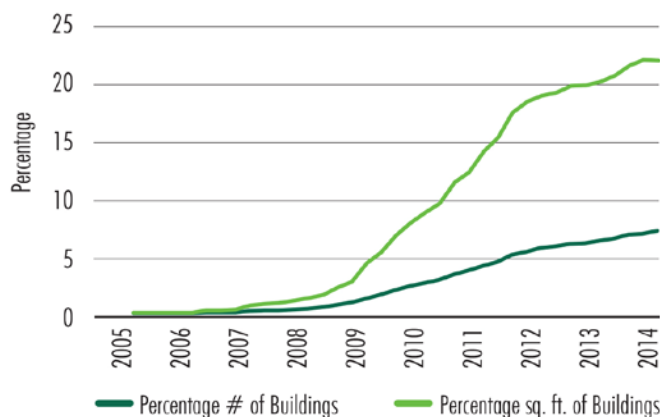


Washington, D.C. Q4 2014	% of Buildings	% sq. ft. of Buildings
Total	16.14	42.31
Energy Star	11.53	30.38
LEED	7.66	22.32
Existing Buildings	4.96	15.73
New Construction	0.65	1.61
Core and Shell	2.05	4.99

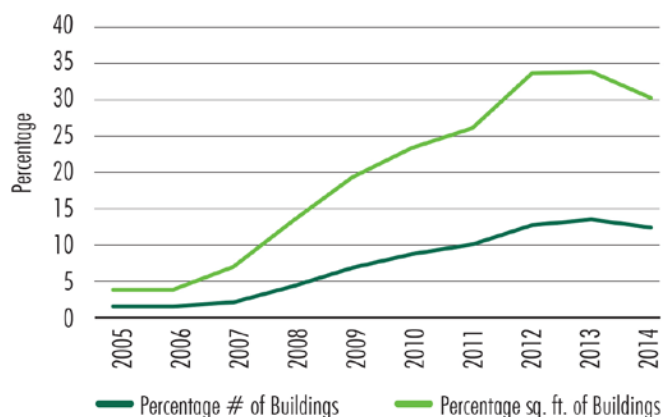
Total Adoption



LEED Adoption



Energy Star Adoption





Methodology

For purposes of this study, green buildings were limited by definition to those buildings currently designated as ENERGY STAR labeled or holding a LEED certification. The ENERGY STAR program, introduced by the U.S. Environmental Protection Agency (EPA), focuses specifically on energy efficiency. To qualify for an ENERGY STAR label, a building's energy efficiency must be in the top 25% of all buildings in the peer set. The LEED program, developed by the U.S. Green Building Council (USGBC), considers the broader concept of sustainability. Certifications are available in a number of classifications and categories, including for New Construction (NC), Core and Shell (C&S) and for Existing Buildings (EB). The USGBC maintains an up-to-date and extensive archive on both ENERGY STAR and LEED certified buildings through their Green Building Information Gateway (GBIG).¹ This database includes address details and underlying characteristics of the certifications.²

The relative measure of green office space in the various commercial real estate markets is estimated using information on the 30 largest U.S. office metro markets from CBRE Research. This information includes quarterly time series measures of the stock of space, measured both by the number of buildings and the total square footage of the market. The inception date of the index is Q4 2005.

CBRE Research defines competitive properties as those buildings meeting or exceeding a minimum size requirement (determined per local market) and that offer a viable alternative to a business entity seeking to occupy space in the short term. Not included as 'competitive' are buildings that are of such vintage or location as to be undesirable, or functionally obsolete. For example, only Class A, B or C properties are considered "competitive". No Class D properties are included in the inventory. Additionally, for office properties, the following are not included:

- Single-tenant owner-occupied buildings (both criteria simultaneously);
- Government owned and occupied buildings;
- Medical buildings.

Matching Procedures:

- CBRE Research employs specific geographic boundaries for each office metro market, defined by a set of longitudes and latitudes;
- Using GIS tools, these geographic boundaries are utilized to identify green office buildings located within the boundaries of the 30 largest markets;
- The office buildings included in CBRE's measure of the overall stock of space are subject to a minimum-tracking threshold in terms of the square footage of a building. This threshold differs by market and is incorporated in the matching of the green office buildings (i.e., certified buildings smaller than the threshold are not incorporated in the adoption index);
- Regarding LEED certification, three different schemes are included: LEED for Existing Buildings, New Construction, and Core and Shell. The adoption index excludes LEED for Commercial Interiors, since this is generally a tenant and not a building owner initiative.
- In order to account for the expiration of certification, a 2-year label window is applied to ENERGY STAR and a 5-year window is applied to LEED certification. Hence, a green office building is only included in the adoption index if the moment of certification is not more than respectively 2 or 5 years ago;

It is important to take notice of the following issues when evaluating the Green Building Adoption Index:

- The adoption figures in this index concentrate on office space and are not directly applicable to other building types;
- The observed downward trend in terms of ENERGY STAR certified office space can to some extent be explained by the application of the 2-year label window. In case buildings do not recertify they are no longer incorporated in the index;

¹ The online portal can be accessed through: <http://www.gbig.org>

² The dataset retrieved from GBIG contains, in addition to the certification characteristics, the longitudes and latitudes of each building, which is vital in linking the amount of green office space to the total supply of office space in each CBRE market.



- The stock of space for each of the 30 largest office metro markets does not include illiquid, owner-occupied office buildings, which might possibly cause an overestimation of the adoption figures;
- From the information provided by the EPA and USGBC it is not possible to deduce single-tenant and owner occupied buildings for both the ENERGY STAR and LEED program, this might cause slight mismeasurement of green certified space;
- The EPA does not include an identification for government owned and occupied office buildings in their database, which possibly leads to overestimation of ENERGY STAR certified office buildings;
- The USGBC provides certification of office space for LEED on a project level, which does not necessarily include the entire building. A thorough analysis of the data has been carried out to ensure the reliability of the presented figures, excluding buildings that have been partially certified.

About the Real Green Research Challenge

In today's academic climate, researchers examining the specific outcomes of sustainability in the built environment are often faced with obstacles to financing their innovative research ideas, or lack broader corporate support where hypotheses can be tested. CBRE created the Real Green Research Challenge to meet this need, providing qualified applicants with the financial and resource support their project requires, from concept development to real-world implementation. In addition to providing \$1,000,000 in total funding, it was our goal to establish a collaborative partnership with researchers to explore new and exciting ways that empirical evidence can advance the green building movement. The entire commercial real estate industry stands to gain from results of this research and its potentially broader, global application. For more information, visit www.cbre.com/rgrc.

About CBRE Group, Inc.

CBRE Group, Inc. (NYSE:CBG), a Fortune 500 and S&P 500 company headquartered in Los Angeles, is the world's largest real estate services and investment firm (in terms of 2013 revenue). The Company has approximately 44,000 employees (excluding affiliates) and serves real estate owners, investors, and occupiers through approximately 350 offices (excluding affiliates) worldwide. CBRE offers strategic advice and execution for property sales and leasing; corporate services, property, facilities and project management; mortgage banking; appraisal and valuation; development services; investment management; and research and consulting. Please visit our website at www.cbre.com.

About Maastricht University, Netherlands

Maastricht University is a public university in Maastricht, the Netherlands. Founded in 1976, the university is the second youngest of the 13 Dutch Universities. The Department of Finance at Maastricht University performs research in all fields of finance, with particular interest for: Financial Economics, Econometrical Finance, Real Estate, ESG, and Marketing-Finance. The real estate group of the Finance department is the catalyst for research efforts in three main areas: real estate investment performance, the economics of energy efficient and "green" building, and the effects of demography on real estate markets.

Maastricht University has built a strong reputation in real estate research and education, both for its academic rigor and for its practical relevance. The department brings together the real estate knowledge of Maastricht University and its academic and industry partners in Europe and beyond.

About the Authors

Dr. Nils Kok holds a position as an Associate Professor in Finance and Real Estate at Maastricht University, the Netherlands. He is the recipient of a prestigious five-year VIDI grant from the Dutch National Science Foundation for his work on the intersection of energy efficiency and finance in the real estate sector, and spent four years as a visiting scholar at UC Berkeley. Nils is also the CEO of GRESB; an industry-driven organization committed to assessing the sustainability performance of real estate portfolios (public, private and direct) around the globe. More than 150 members, of which close to 50 are pension funds and their fiduciaries, jointly representing USD 11.2 trillion in assets under management, use the GRESB benchmark results throughout the investment management and engagement process, with a clear goal to optimize the risk/return profile of their real estate investments. GRESB has covered more than 1000 property companies and funds globally since its launch in 2009. More information and blog at www.nilskok.com.

Rogier Holtermans, MSc is a PhD candidate in Real Estate Finance and Economics at Maastricht University. His work is primarily focused on the value of energy-efficiency and sustainability in the commercial and residential real estate market. Another research interest is the relationship between owner proximity and asset value in the commercial property market.

He is also actively involved in policy research for the European Union, providing an analysis of the valuation and uptake of energy efficiency in the European Union housing market. This four-year project with 28 EU-wide partners in construction, innovation and academia will result in a value analysis of "energy efficient" housing, including a scalable diffusion strategy for Europe, and a large number retrofitted homes.

Rogier teaches Master level courses in Real Estate Finance and Investments, and Corporate and Venture Finance. Moreover, he coordinates a Real Estate Investment skill course at the Bachelor level. He obtained an MSc degree in Finance from Maastricht University's School of Business and Economics.

CONTACTS

For more information regarding this report, please contact:

Nils Kok, PhD

Project Lead
Department of Finance
Maastricht University
t: +31 43 388 38 38
e: N.Kok@maastrichtuniversity.nl

Rogier Holtermans, MSc

Researcher
Department of Finance
Maastricht University
t: +31 43 388 38 38
e: R.Holtermans@maastrichtuniversity.nl

David Pogue

Global Director of Corporate Responsibility
CBRE
t: +1 408 453 7444
e: dave.pogue@cbre.com

www.cbre.com/rgrc

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