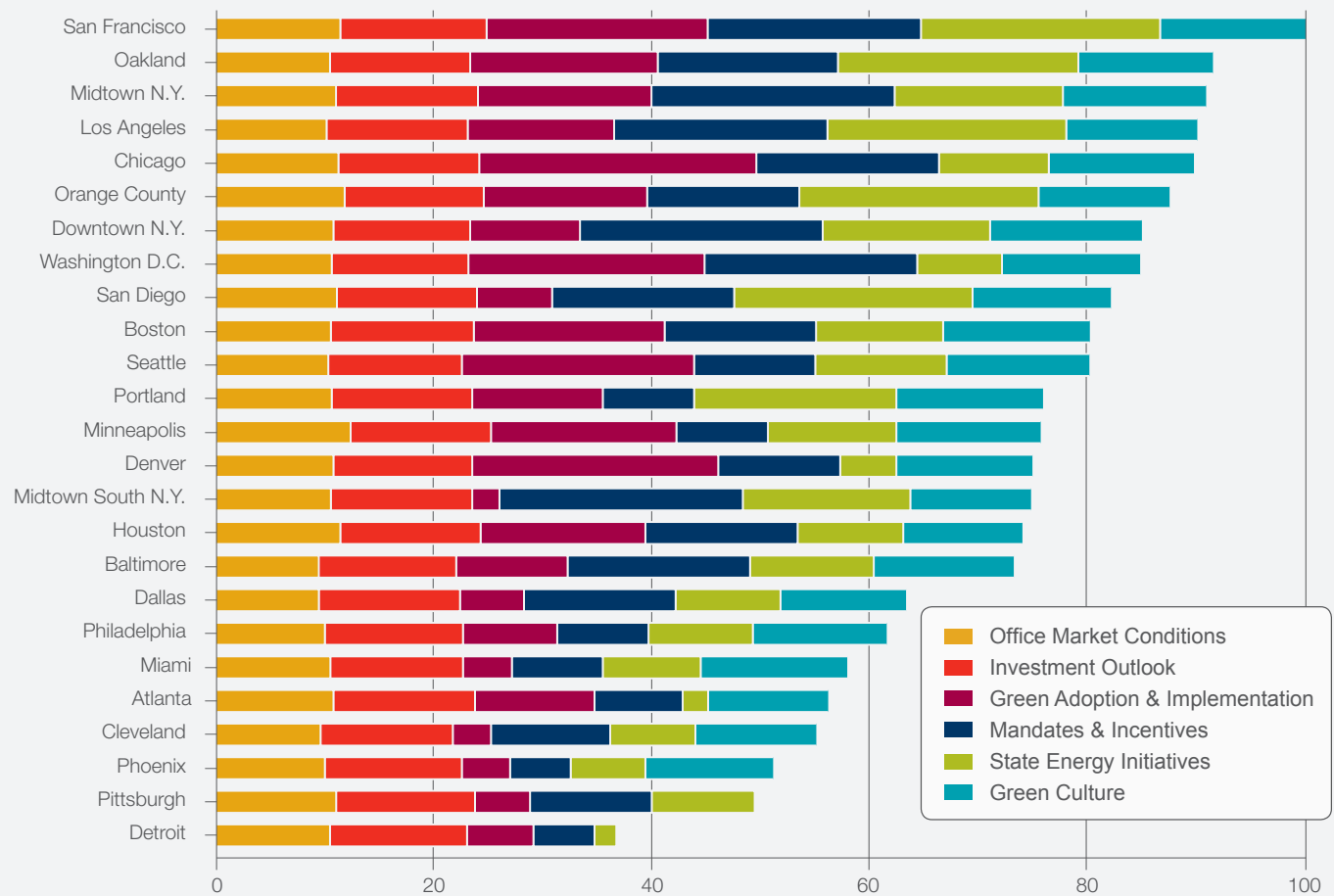


# Green Building Opportunity Index<sup>®</sup>

## NATIONAL OVERVIEW: OFFICE MARKETS

The Green Building Opportunity Index is the first office market assessment tool to provide weighted comparisons of top U.S. office markets on the basis of both real estate fundamentals and green development considerations. Focusing on the primary factors that influence successful development, retro-fitting, leasing and sales of investment grade “green” office buildings in the 25 largest U.S. Central Business Districts (CBDs), the Index compares a market’s relative position to its peers in six categories: **Office Market Conditions, Investment Outlook, Green Adoption & Implementation, Local Mandates & Incentives, State Energy Initiatives and Green Culture.**

### CENTRAL BUSINESS DISTRICTS: Green Building Opportunity Index



|                          |                           |                             |                         |                      |
|--------------------------|---------------------------|-----------------------------|-------------------------|----------------------|
| San Francisco..... 100.0 | Orange County ..... 87.6  | Seattle ..... 80.3          | Houston..... 74.2       | Atlanta ..... 56.4   |
| Oakland ..... 91.7       | Downtown N.Y..... 85.1    | Portland, Ore. .... 76.1    | Baltimore ..... 73.4    | Cleveland..... 55.2  |
| Midtown N.Y..... 91.1    | Washington D.C. .... 84.9 | Minneapolis ..... 75.9      | Dallas..... 63.5        | Phoenix..... 51.2    |
| Los Angeles..... 90.2    | San Diego ..... 82.3      | Denver ..... 75.2           | Philadelphia ..... 61.7 | Pittsburgh..... 49.3 |
| Chicago ..... 89.9       | Boston ..... 80.4         | Midtown South N.Y..... 74.9 | Miami..... 58.1         | Detroit..... 36.7    |

## What is a Green Building?

For the purposes of this research, green buildings are those which are certified through third party verified standards on the basis of their sustainability and energy efficient programs. Buildings certified through the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program and those which have earned the Environmental Protection Agency’s ENERGY STAR® label were included in the compilation of data for the Index.

### How the Points are Scored

The Index ranks each market on a scale comprised of six main categories. To determine a market’s position in a particular category, each is ranked across several variables. Then, the market with the highest score is assigned a value of 100, with the remaining markets receiving a value based on their position relative to the leader. The results for each variable are then totaled, giving a combined market score for the category. The summarized scores are then recalibrated, with the highest market total set to a value of 100. The remaining markets then receive a final ranking based on their position relative to the leader.

### For Example

To derive the rankings for the investment outlook category, the following variables were used:

- 2-year Forecasted Rent Growth as %
- 3-year Office-Using Employment Growth
- Incoming Supply (space currently under construction)

A specific market may receive a “score” of 45 on 2-year rent growth, 73 on 3-year employment growth and 87 on incoming supply. This provides a total of 205 for the category. If this is the highest score of all, then this total is indexed to 100 and the other markets adjusted accordingly. Thus, by indexing each category ranking, a general sense of scale across all scores is evidenced. A market with a score of 65 is achieving 65% of the points that the highest ranking market achieved. The summary presented beneath the Index graph on page 1 reflects the numerical rankings of the individual cities. More in-depth discussions of individual markets and their rankings are published separately as **Green Building Opportunity Index Profiles**. Contact information for ordering individual market profiles is presented on the last page of this report.

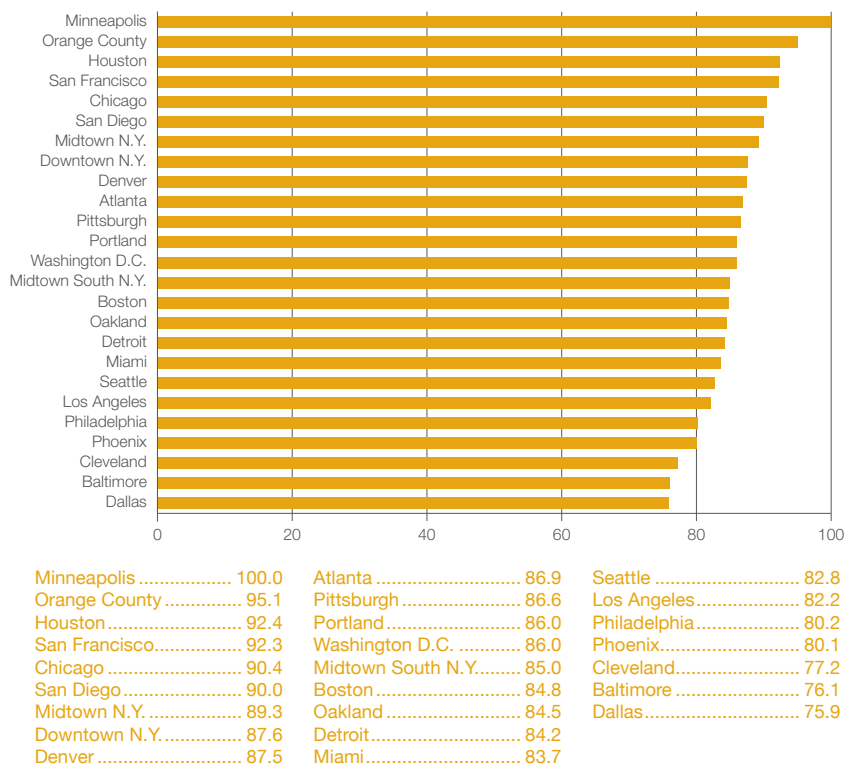
## Office Market Conditions

This criterion identifies and assesses current market fundamentals. It incorporates a combination of metrics including: rent, vacancy, leasing activity and absorption.

### Included variables:

- Class A Vacancy Rate
- Overall (all classes) Vacancy Rate
- Leasing Activity as a % Inventory
- Year-over-Year Change in Absorption as a % Inventory

CBD OFFICE MARKET CONDITION SCORES



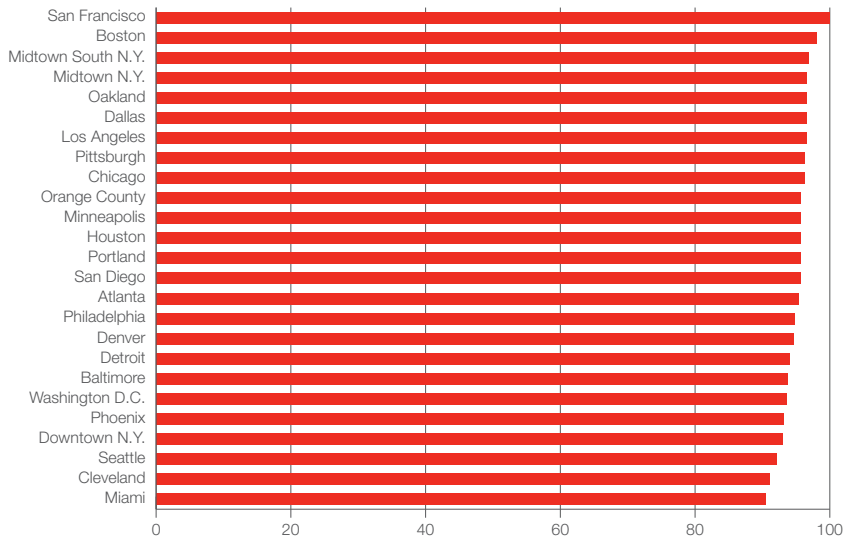
## Investment Outlook

This category displays forecasted future conditions through the application of Cushman & Wakefield’s proprietary forecasting methodology. Both demand drivers and supply-side pressures are used to rank markets on their relative position considering where they will likely be in two to three years.

### Included variables:

- 2-year Forecasted Rent Growth as %
- 3-year Office-Using Employment Growth
- Incoming Supply as a % Inventory (space currently under construction)

CBD INVESTMENT OUTLOOK SCORES



|                        |       |                    |      |                     |      |
|------------------------|-------|--------------------|------|---------------------|------|
| San Francisco.....     | 100.0 | Orange County..... | 95.7 | Baltimore.....      | 93.8 |
| Boston.....            | 98.1  | Minneapolis.....   | 95.7 | Washington D.C..... | 93.6 |
| Midtown South N.Y..... | 96.9  | Houston.....       | 95.6 | Phoenix.....        | 93.2 |
| Midtown N.Y.....       | 96.6  | Portland.....      | 95.6 | Downtown N.Y.....   | 93.0 |
| Oakland.....           | 96.5  | San Diego.....     | 95.6 | Seattle.....        | 92.1 |
| Dallas.....            | 96.5  | Atlanta.....       | 95.4 | Cleveland.....      | 91.1 |
| Los Angeles.....       | 96.5  | Philadelphia.....  | 94.8 | Miami.....          | 90.4 |
| Pittsburgh.....        | 96.3  | Denver.....        | 94.6 |                     |      |
| Chicago.....           | 96.2  | Detroit.....       | 94.4 |                     |      |

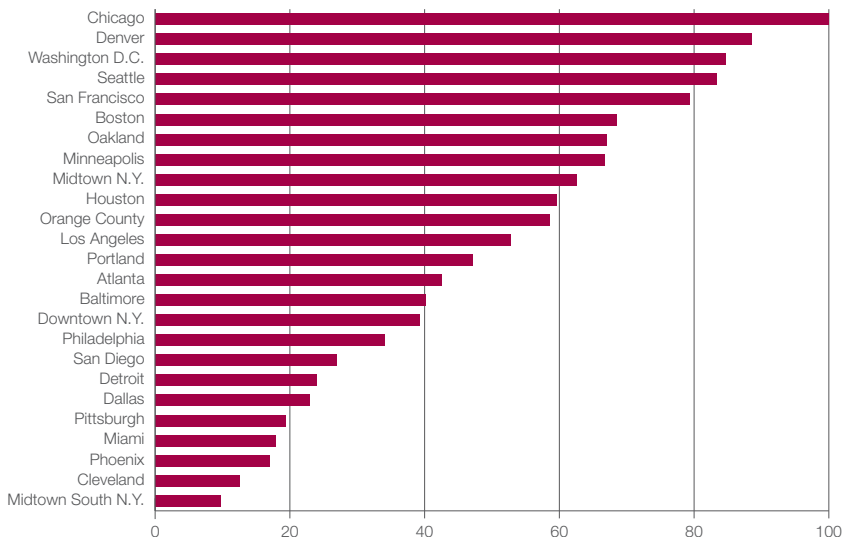
## Green Adoption & Implementation

This category addresses the potential to execute green development and/or redevelopment in the city – identifying the current level of existing and planned green projects, as well as other factors such as the number of LEED APs who are mechanical engineers (and can thereby facilitate the commissioning process). These factors, coupled with quantifying the number of buildings that have earned the ENERGY STAR label, offer insight into market “maturity” in terms of developing green inventory.

### Included variables:

- Total sf of LEED Certified CBD Office Space
- Total sf of LEED Certified as a % Inventory
- Total sf ENERGY STAR
- Total sf ENERGY STAR as a % Inventory
- # Accredited LEED Professionals per Capita
- # Accredited Mechanical Engineers with LEED AP

CBD GREEN ADOPTION & IMPLEMENTATION SCORES



|                     |       |                    |      |                        |      |
|---------------------|-------|--------------------|------|------------------------|------|
| Chicago.....        | 100.0 | Houston.....       | 59.6 | Detroit.....           | 23.9 |
| Denver.....         | 88.5  | Orange County..... | 58.6 | Dallas.....            | 23.0 |
| Washington D.C..... | 84.7  | Los Angeles.....   | 52.8 | Pittsburgh.....        | 19.3 |
| Seattle.....        | 83.3  | Portland.....      | 47.2 | Miami.....             | 17.9 |
| San Francisco.....  | 79.3  | Atlanta.....       | 42.6 | Phoenix.....           | 17.0 |
| Boston.....         | 68.5  | Baltimore.....     | 40.2 | Cleveland.....         | 12.6 |
| Oakland.....        | 67.0  | Downtown N.Y.....  | 39.3 | Midtown South N.Y..... | 9.7  |
| Minneapolis.....    | 66.7  | Philadelphia.....  | 34.0 |                        |      |
| Midtown N.Y.....    | 62.6  | San Diego.....     | 26.9 |                        |      |

# Mandates & Incentives

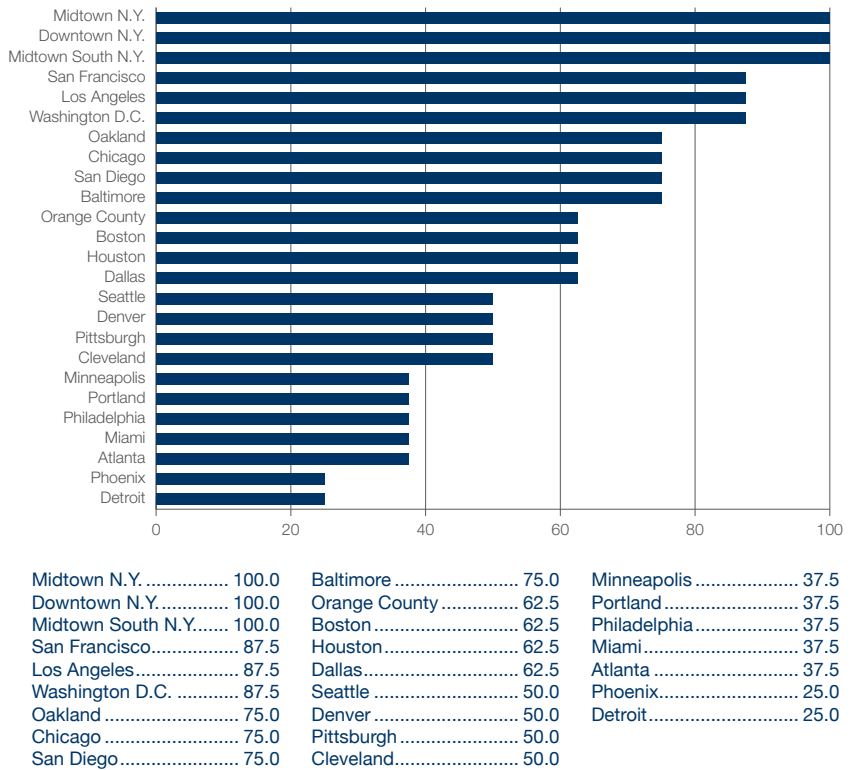
This category assesses a municipality’s commitment to sustainable building practices both through mandates and incentives to build and/or refurbish green development/investment/retrofits. It analyzes state and local incentives and is organized into two sections. Both sections focus on the impact that the incentives and mandates will have on the private sector in particular.

**Included variables:**

- State, County and City Laws and Ordinances
- Expedited Permitting
- Permit Fee Reductions/Discounts
- Density Bonuses
- Energy Incentives\*
- Availability of Direct Funding

*\* Though a few of the states represented in our study do provide energy incentives, every effort was made not to duplicate consideration of the programs included in the State Energy Incentive analysis below.*

MANDATES & INCENTIVES SCORES



**Mandates & Incentives Criteria**

The first criterion, mandates, measures on a four-point scale how aggressively a municipality is requiring green aspects in development or requiring green development in its entirety. The second criterion, incentives, also uses a four-point scale to measure the benefits that municipalities provide for developing green, including incentives related to financing, permitting and density.

The four-point scale analyzes mandates and incentives separately in each of the cities ranked and characterizes each as: Minimal, Basic, Moderate or Aggressive. The blended “score” is then utilized to rank the cities according to how aggressive (or not) each is, considering the variables.

**Incentives & Mandates: Future Studies**

In analyzing the impact of local area incentives and mandates on green buildings, the research team encountered a myriad of policy approaches. For purposes of the Index, ranking each jurisdiction’s regulatory environment became – by necessity – a subjective exercise. The four categories described above give a high-level indication of how aggressive each jurisdiction is in promoting green buildings. A more quantitative approach, tying specific policy approaches to pro forma building financials, would be a valuable next step in understanding the true impact

of green building and energy efficiency regulations on the market. Furthermore, the acceleration and rapid adoption in recent months of both more stringent code regulations and more generous incentives in cities across America (New York City, Washington D.C., Austin, Seattle and others) further supports a more in-depth examination of the efficacy of these policies. The Index research team is currently evaluating methodological approaches and resource requirements to conduct further research on this topic.

## State Energy Initiatives

This category ranks the effectiveness of state energy policies as measured by the American Council for an Energy-Efficient Economy (ACEEE).

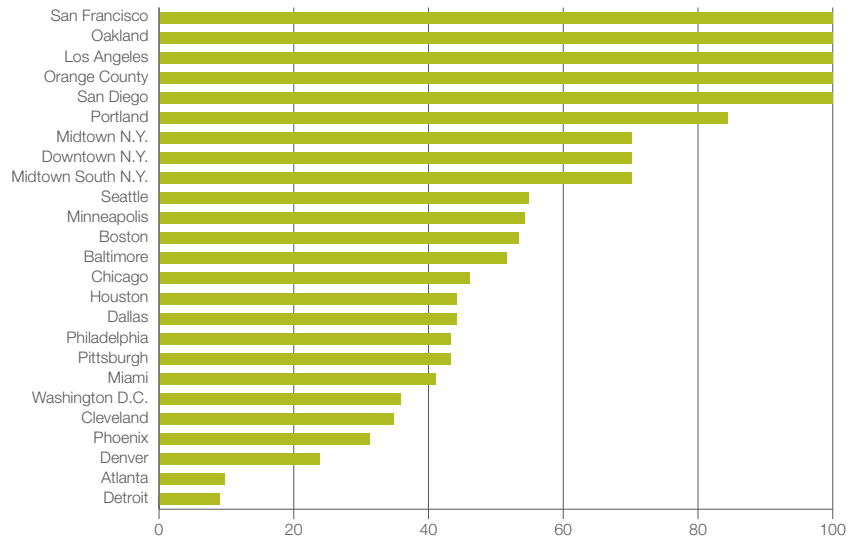
### Included variables:

- Utilities and Public Benefits Efficiency Policy
- Building Code Score
- Combined Heat and Power Score
- Appliance Standards
- State Lead by Example R&D
- Financial Information Incentive

### ONLINE SOURCE

For more information on state energy initiatives, visit the ACEEE website: [www.ACEEE.org](http://www.ACEEE.org).

STATE ENERGY INITIATIVE SCORES



|                        |       |                   |      |                      |      |
|------------------------|-------|-------------------|------|----------------------|------|
| San Francisco.....     | 100.0 | Seattle .....     | 54.9 | Miami.....           | 41.1 |
| Oakland .....          | 100.0 | Minneapolis ..... | 54.3 | Washington D.C. .... | 35.9 |
| Los Angeles.....       | 100.0 | Boston .....      | 53.4 | Cleveland.....       | 34.8 |
| Orange County .....    | 100.0 | Baltimore .....   | 51.6 | Phoenix.....         | 31.3 |
| San Diego.....         | 100.0 | Chicago .....     | 46.1 | Denver .....         | 23.8 |
| Portland .....         | 84.4  | Houston.....      | 44.2 | Atlanta .....        | 9.7  |
| Midtown N.Y. ....      | 70.2  | Dallas.....       | 44.2 | Detroit.....         | 9.0  |
| Downtown N.Y.....      | 70.2  | Philadelphia..... | 43.3 |                      |      |
| Midtown South N.Y..... | 70.2  | Pittsburgh.....   | 43.3 |                      |      |

## Green Culture

This criterion measures a region's cultural attitudes and commitment to green and sustainable practices. Data from SustainLane, "the largest online resource for going green," was analyzed and ranked relative to its influence on commercial real estate. SustainLane ranks a city's performance in 16 different areas. Cushman & Wakefield selected the four categories deemed most relevant to commercial real estate to rank the individual cities in this analysis.

### Included variables:

- Green Economy
- City Innovation
- Planning & Land Use
- Transit Ridership

### ONLINE SOURCE

For more information on green culture, visit the SustainLane website: [www.SustainLane.com](http://www.SustainLane.com).

CBD GREEN CULTURE SCORES



|                    |       |                      |      |                        |      |
|--------------------|-------|----------------------|------|------------------------|------|
| Downtown N.Y.....  | 100.0 | Baltimore .....      | 93.3 | Dallas.....            | 83.6 |
| Portland .....     | 98.0  | San Diego .....      | 91.1 | Cleveland.....         | 81.8 |
| Miami .....        | 97.5  | Washington D.C. .... | 90.9 | Atlanta .....          | 81.8 |
| Boston .....       | 97.3  | Denver .....         | 90.6 | Midtown South N.Y..... | 80.0 |
| San Francisco..... | 96.0  | Oakland .....        | 89.4 | Houston.....           | 78.9 |
| Chicago .....      | 96.0  | Philadelphia.....    | 89.2 | Pittsburgh.....        | 0.0  |
| Midtown N.Y. ....  | 95.7  | Los Angeles.....     | 86.7 | Detroit.....           | 0.0  |
| Minneapolis .....  | 95.5  | Orange County .....  | 86.7 |                        |      |
| Seattle .....      | 94.8  | Phoenix.....         | 86.1 |                        |      |

## The Compilation of Data

Over 100 variables were compiled using proprietary data and supplemented with information from leading industry sources. These variables were selected as representative of the financial, market, policy and cultural factors that affect a property's financial performance when considering investments in sustainable building design, operations and/or certifications. The data consists of traditional real estate metrics such as vacancy rates, absorption and growth forecasts, combined with other indicators—direct and indirect—of a given market's resources, incentives, and maturity in promoting and delivering an inventory of green buildings.

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### About Cushman & Wakefield

Cushman & Wakefield is the world's largest privately-held commercial real estate services firm. Founded in 1917, it has 231 offices in 58 countries and more than 13,000 employees. The firm represents a diverse customer base ranging from small businesses to Fortune 500 companies. It offers a complete range of services within five primary disciplines: Transaction Services, including tenant and landlord representation in office, industrial and retail real estate; Capital Markets, including property sales, investment management, investment banking, debt and equity financing; Client Solutions, including integrated real estate strategies for large corporations and property owners; Consulting Services, including business and real estate consulting; and Valuation & Advisory Services, including appraisals, highest and best use analysis, dispute resolution and litigation support, along with specialized expertise in various industry sectors. A recognized leader in global real estate research, the firm publishes a broad array of proprietary reports available on its online Knowledge Center at [www.cushmanwakefield.com](http://www.cushmanwakefield.com).



### About BetterBricks

BetterBricks is the commercial building initiative of the Northwest Energy Efficiency Alliance, which is supported by regional electric utilities. Through its BetterBricks initiative, NEEA advocates for changes to energy-related business practices in Northwest commercial buildings. In this effort, NEEA, headquartered in Portland, Ore. and covering the four Northwest states of Idaho, Montana, Oregon and Washington, collaborates with industry leaders to provide resources to increase office real estate value and profitability through reduced energy use and operating costs. On [www.betterbricks.com/office](http://www.betterbricks.com/office) find information, tools, training and resources to help buildings make a difference to the bottom line.

#### For More Information, Contact:

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