



Research Report

EXECUTIVE SUMMARY:

Green Building Certification Programs

Global Certification Programs for New and Existing Buildings in the Commercial and Residential Sectors: Market Analysis and Forecasts

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Section 1

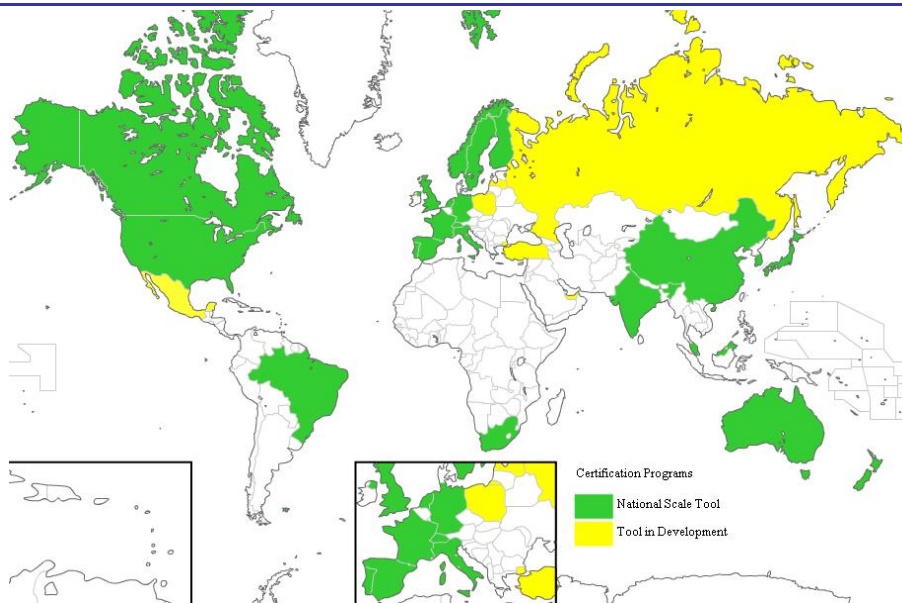
EXECUTIVE SUMMARY

In today’s commercial and residential real estate industries, green building certification programs are increasingly being applied to new and existing buildings as a means of verifying that a building meets a set of “green” criteria. Such criteria may include energy efficiency, sustainable materials selection, site location, and indoor environmental quality. Although many building industry professionals may be familiar with programs such as the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards, there are dozens of green building certification programs in operation around the world for a wide range of building types and sizes.

Certified green buildings purport to deliver a series of benefits to property owners, managers, and occupants. For example, energy efficiency, a central tenet of many green building certification programs, can decrease operational expenses and reduce the carbon emissions associated with a particular building – a growing concern in many regions around the world. Sustainable materials selection can improve the quality of the indoor environment by eliminating materials with toxic substances. Moreover, certified green buildings can sometimes command higher property values and rents, and green building certification can distinguish certain properties in highly competitive real estate markets.

Since the establishment of the U.K.-based Building Research Establishment (BRE) in 1990 and the U.S. Green Building Council (USGBC) in 1993, many organizations have been formed to promote green building around the world. The Toronto-based World Green Building Council (World GBC) currently recognizes 20 established green building councils around the world, with more than 40 other national-scale groups seeking similar status in the next few years.

Figure 1.1 Countries with Green Building Certification Programs



(Source: Pike Research)

Although awareness of green building has risen dramatically in the last three years, particularly in North America, Western Europe, and highly developed parts of the Asia Pacific region, green building is still in its nascent stages in many markets. The construction industry in developing countries may not yet be ready to provide the products and services required in green building certification programs, though builders and designers in the majority of developing countries are adapting quickly to green building due to growing demand.

There are three major drivers behind green building certifications:

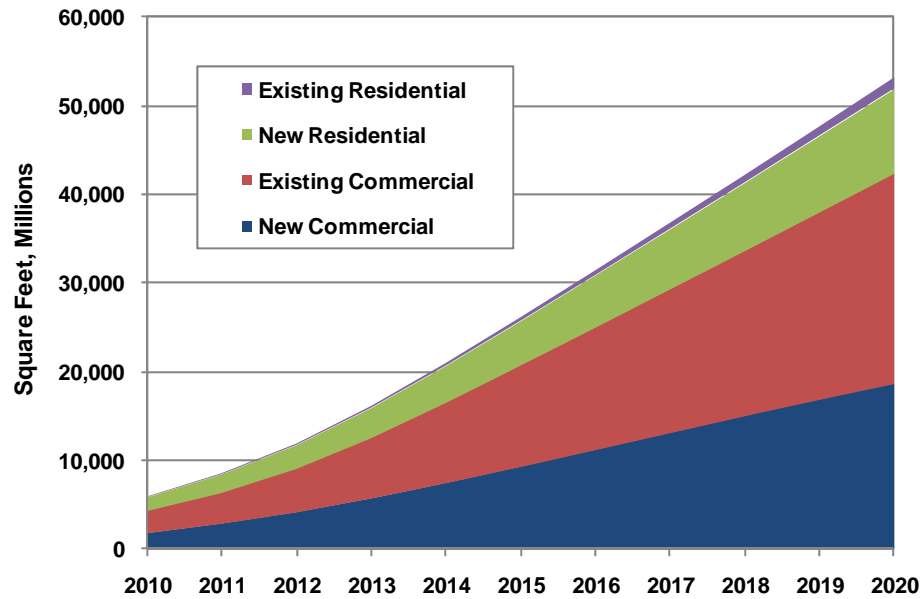
- In some markets, green building has become synonymous with environmental responsibility. Many companies seek out certified space because it carries brand value, and green building is increasingly becoming an important component of corporate social responsibility (CSR) plans.
- Second, many see green building certification programs as an opportunity to reduce operational expenses through energy efficiency. In fact, reducing operational costs has been a significant driver of green building certification within the existing building stock.
- The third driver – and perhaps the most important to consider in the long term – is a growing number of regulatory requirements that require green building certifications for certain types of buildings. Thus far, such requirements have applied primarily to public buildings. To a growing extent, however, governments at the city, state/province, and national scales are establishing laws requiring other building types, including commercial office buildings, to achieve a certain rating under a green building certification program.

To date, most green-certified space has been in the commercial building sector. In many markets, such as Class A office space, green building certification is the standard rather than the exception. Demand is growing, particularly in cities looking to attract multinational corporations. On the demand side, many corporations and government agencies are beginning to establish policies that they will only own and occupy spaces that have received green building certification.

Within commercial building green building certifications, existing buildings are the greatest portion of the market. Approximately 60% of total net green building space is in existing buildings. However, the majority of commercial buildings certified under the two major international programs, LEED and the U.K.-based Building Research Establishment Environmental Assessment Method (BREEAM), are new buildings. In general, certifications for new buildings have received the most attention in the market.

In contrast, within the residential market, most of the focus has been on certifying new properties. Certification programs in Europe cover a wide range of residential buildings, from single-family homes to multi-unit residential buildings and apartment complexes. In the next decade, a great deal of major construction of large-scale residential buildings in Asia Pacific, such as China and India, will receive green building certification. So far, certification of existing residential buildings has proven more difficult for homeowners and property managers. Consequently, this segment is likely to represent a small portion of the overall market in the next 10 years.

Chart 1.1 Certified Green Building Space by Segment, World Markets: 2010-2020



(Source: Pike Research)

Pike Research forecasts that cumulative green building certified space will grow from about 6 billion sf in 2010 to about 53 billion sf worldwide in 2020. Taking market conditions and regulatory changes into account, commercial buildings will likely represent about 80% of space certified under green building programs in 2020. While LEED and BREEAM will continue to dominate the North American and European green building markets, respectively, newly developed programs in China and India are likely to represent about 30% of all certified green new construction by 2020.

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Section 10

SCOPE OF STUDY

This Pike Research study addresses green building certification programs such as LEED, BREEAM, and other programs that provide third-party assessment of green building measures, including energy efficiency, sustainable materials, site selection, and indoor environmental quality. The aim of the report is to provide supply- and demand-side companies (e.g., real estate service providers, international real estate investors, multinational AEC firms, and vendors of building equipment and supplies) and other industry stakeholders with information on the current market and regulatory conditions relating to green building certification programs.

In addition, Pike Research presents a forecast of the probable future growth of this industry. The report includes an in-depth consideration of green building drivers, barriers, and likely shifts in the underlying construction market. It also provides up-to-date information on major industry players (e.g., commercial real estate companies, trade associations, and green building councils) and detailed information on dozens of green building certification programs in operation around the world.

The purpose of the report is not to provide information on green building design and techniques, but to present an outlook on business and regulatory issues that will determine the number of buildings receiving green building certification in the coming years. This report considers all areas of green building activity spanning North America, Europe, Asia Pacific, Latin America, the Middle East, and Africa. The forecast model, which includes figures for commercial and residential construction, as well as both new and existing buildings, extends to the year 2020.

SOURCES AND METHODOLOGY

Pike Research's industry analysts utilize a variety of research sources in preparing Research Reports. The key component of Pike Research's analysis is primary research gained from phone and in-person interviews with industry leaders, including executives, engineers, and marketing professionals. Analysts are diligent in ensuring that they speak with representatives from every part of the value chain, including but not limited to technology companies, utilities and other service providers, industry associations, government agencies, and the investment community.

Additional analysis includes secondary research conducted by Pike Research's analysts and the firm's staff of research assistants. Where applicable, all secondary research sources are appropriately cited within this report.

These primary and secondary research sources, combined with the analyst's industry expertise, are synthesized into the qualitative and quantitative analysis presented in Pike Research's reports. Great care is taken in making sure that all analysis is well supported by facts, but where the facts are unknown and assumptions must be made, analysts document their assumptions and are prepared to explain their methodology, both within the body of a report and in direct conversations with clients.

Pike Research is an independent market research firm whose goal is to present an objective, unbiased view of market opportunities within its coverage areas. The firm is not beholden to any special interests and is thus able to offer clear, actionable advice to help clients succeed in the industry, unfettered by technology hype, political agendas, or emotional factors that are inherent in cleantech markets.

NOTES

CAGR refers to compound average annual growth rate, using the formula:

$$\text{CAGR} = (\text{End Year Value} \div \text{Start Year Value})^{(1/\text{steps})} - 1.$$

CAGRs presented in the tables are for the entire timeframe in the title. Where data for fewer years are given, the CAGR is for the range presented. Where relevant, CAGRs for shorter timeframes may be given as well.

Figures are based on the best estimates available at the time of calculation. Annual revenues, shipments, and sales are based on end-of-year figures unless otherwise noted. All values are expressed in year 2010 U.S. dollars unless otherwise noted. Percentages may not add up to 100 due to rounding.

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