GREEN CERTIFICATIONS AND RATING SYSTEMS: BUILDING, PRODUCT, AND PROFESSIONAL

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VIBE was conceived to expand upon Verdani's research, education, and collaborative engagement platforms to accelerate our collective impact for a global, resilient, and sustainable future.

VIBE Sustainable Built Environment Guidance Report Series

This publication is the third volume in VIBE's 13-part Sustainable Built Environment Guidance Report Series. This collection of resources aims to teach critical aspects of sustainability for commercial real estate and the built environment. With a focus on addressing the climate crisis, this series will serve as a go-to resource for professionals, educators, students, and all those inspired to take positive action through the practice of sustainable real estate. To learn more, check out our first two volumes in the series on an Introduction to Sustainable Real Estate and ESG Reporting Frameworks. To get notified for our upcoming reports on Corporate ESG Strategies and Global Decarbonization, see the links below.

INTRODUCTION TO SUSTAINABLE REAL ESTATE
PUBLISHED IN 2023

ESG REPORTING FRAMEWORKS
PUBLISHED IN 2022

GREEN CERTIFICATIONS AND RATING SYSTEMS: BUILDING, PRODUCT, AND PROFESSIONAL
PUBLISHED IN 2023

CORPORATE ESG STRATEGIES
COMING IN 2024

GLOBAL DECARBONIZATION
COMING IN 2024

RESILIENCE STRATEGIES FOR REAL ESTATE
COMING IN 2025

HEALTH AND WELL-BEING
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BIODIVERSITY

SUSTAINABLE REAL ESTATE BY PROPERTY TYPE

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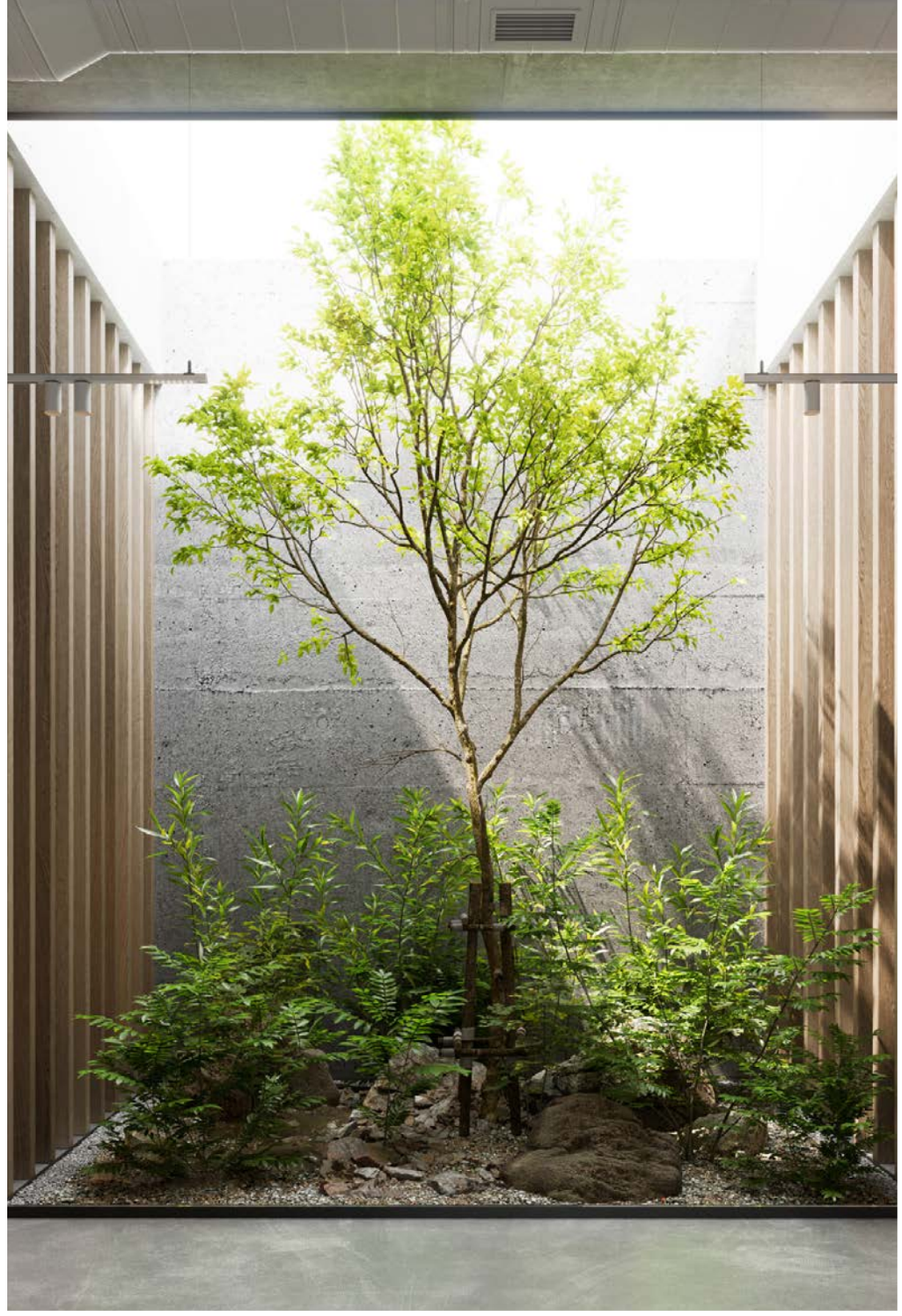
Executive Summary

Green certifications and rating systems have been instrumental in shaping the sustainable real estate sector. By providing essential frameworks, knowledge, and verification systems, these certifications enable sustainable design and performance in both buildings and products, significantly reducing environmental impacts and improving the well-being of building occupants and communities. The growing focus on sustainable real estate has led to the emergence of green professional certifications, which not only demonstrate a deep understanding of green building standards but also equip professionals with the ability to certify buildings in accordance with these standards. Green certifications have been key in promoting transparency and enhancing the sustainability performance of the built environment, benefiting a wide range of stakeholders including governments, companies, and consumers.

This report offers a thorough overview of the most significant and widely adopted green building, product, and professional certifications and rating systems. While it focuses primarily on those relevant to the U.S. commercial real estate sector, it also includes certifications with notable global influence. With most certification information verified by their respective managing organizations and current as of December 2023, this report is designed to be a valuable resource for companies, institutions, and individuals evaluating various green certifications pertinent to the built environment. Whether the objective is to substantiate environmental claims, improve performance, increase transparency, or secure a competitive advantage, this guide delivers crucial insights and guidance for navigating the landscape of green certifications.



Introduction

The Evolution of Green Certifications and Rating Systems

Over the past few decades, concerns about climate change, sustainability, and Environmental, Social, Governance (ESG) have gained prominence among the public, corporations, and investors. In the buildings and construction industries, this shift has given rise to green certifications and rating systems, particularly within the realm of commercial real estate. Using green certifications and ratings not only signals a building's or product's adherence to specific sustainability standards but also attests to the expertise of professionals in sustainability topics.

HOW DID WE GET HERE? A SHORT HISTORY OF GREEN CERTIFICATIONS AND SUSTAINABILITY IN THE BUILT ENVIRONMENT

In the commercial real estate industry, green certifications and ratings trace back to the energy crisis of the 1970s, which brought to light the need for energy conservation in buildings. The U.S. responded by establishing ASHRAE 90-75 in 1975, setting energy conservation standards for new buildings; just one year prior, the California Energy Commission was established, which for decades has set standards in the seventh largest economy in the world, many of which exceed ASHRAE.[1][2] The creation of ASHRAE influenced other building codes and policies focused on energy efficiency, such as Japan's 1980 Building Energy Efficiency Act, the first Model Energy Code in 1983, and the 1988 Building Code of Australia.[3][4][5]

Building:

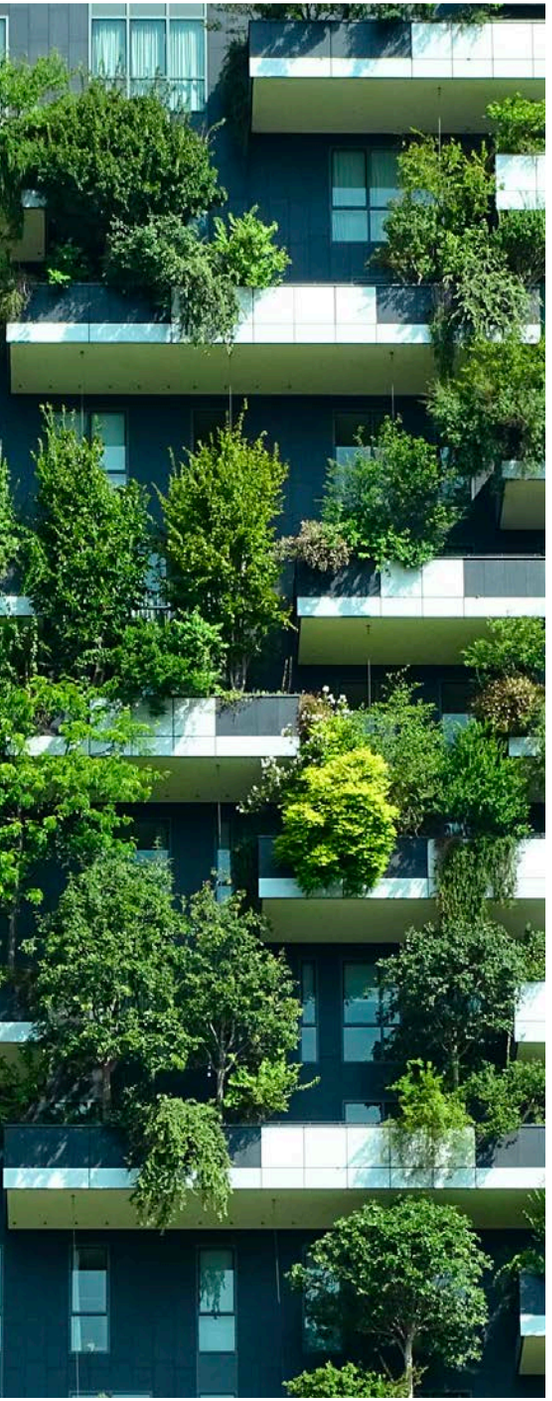
Green building certifications offer standards, knowledge, and guidance on how to build and/or operate a building sustainably, looking at a wide range of considerations around environmental impact and the health and well-being of building occupants. Tiers are often used to demonstrate a building's sustainability achievement in comparison to its peers (e.g., LEED's Certified, Silver, Gold, Platinum).

Product:

Green product certifications help building material manufacturers align with sustainability standards and the ethical values of their consumers. Green product declarations provide verified and transparent information about the environmental impact and benefit of a product, helping consumers make more informed purchasing decisions.

Professional:

Some building certifications require an assessment from a licensed/accredited professional or assessor (BREEAM, Green Globes, etc.). Beyond being required for certain green building certifications, green professional certifications and credentials help demonstrate knowledge and skill around sustainable building and operating practices.



To support these new standards, the industry saw the birth of professional accreditations like the Certified Energy Manager (CEM) in 1981, equipping professionals with the skills to assess and improve building energy performance.[6]

The 1980s were a transformative period for environmental awareness and action. The 1987 Brundtland Report from the United Nations (U.N.), "Our Common Future," redefined aspirations for progress by introducing 'sustainable development' as an ideal that harmonizes ecological, social, and economic objectives.[7] This era also saw significant international cooperation on environmental issues, such as the 1987 Montreal Protocol's unified stand against ozone layer depletion and the formation in 1988 of the United Nations Intergovernmental Panel on Climate Change.[8] [9] The aftermath of the Exxon Valdez oil spill in 1989 further underscored the urgent need for responsible environmental practices, catalyzing public and regulatory demands for greater corporate accountability.[10]

Driven by these pivotal events, the 1990s saw a significant shift toward corporate environmental responsibility. Some companies began to voluntarily exceed environmental regulatory minimums, engaging in sustainability reporting and pursuing conservation initiatives. This change was fueled by a growing consumer preference for environmentally friendly products and the increasing value placed on sustainability as a component of corporate identity and brand reputation. In tandem, the corporate world began to recognize that green practices could lead to cost savings, innovation, and a competitive edge.[11]

One of the defining characteristics of this era was the emergence of green certifications. Green Seal set a precedent in 1989 by introducing a certification that mandated third-party verification of environmental and health standards for a variety of building products.[12] The ENERGY STAR program, launched by the U.S. Environmental Protection Agency (EPA) in 1992, further defined energy efficiency standards for appliances and equipment.[13] Addressing the urgent matter of deforestation, the Forest Stewardship Council, founded in 1993, implemented a worldwide benchmark for responsible forestry and timber procurement, a significant concern that had not been adequately covered at the 1992 U.N. Earth Summit in Rio de Janeiro.[14]

At the same time, the United Kingdom (U.K.) was pioneering green building certifications with the introduction of the Building Research Establishment Environmental Assessment Method (BREEAM) in 1990, the first comprehensive assessment for sustainable construction.[15] This approach was later echoed and expanded upon in the U.S. with the 1998 launch of Leadership in Energy and Environmental Design (LEED) by the U.S. Green Building Council (USGBC). LEED took a holistic view of building sustainability, emphasizing not just energy efficiency but also factors like indoor environmental quality and innovative design.[16] We also saw more specialized certifications emerge during this period, such as Green Key in 1994, a significant ecolabel in the hospitality industry.[17]

At the turn of the 21st century, there was a notable surge in the development and refinement of green building standards and certifications. These advancements were driven by various top-down initiatives and a growing interest in sustainability among real estate owners, investors, and the general public.

One pivotal development was the establishment of the International Energy Conservation Code (IECC) in 1998, setting a new global benchmark for energy efficiency in building design.[18] Building on this, the International Green Construction Code (IgCC) and ASHRAE's 189.1 standard emerged in 2009, providing guidance for the design and construction of high-performance green buildings.[19][20]

Real estate owners also began showing a heightened interest in sustainability, partially spurred by the expansion of the ENERGY STAR program to include commercial buildings in 2002. ENERGY STAR and its associated software, ENERGY STAR Portfolio Manager, gained popularity both in the U.S. and internationally. These tools facilitated energy performance tracking, helping property owners reduce operating costs, enhance competitiveness, and comply with emerging energy benchmarking laws.[21]

The success of ENERGY STAR increased demand for green building certifications that addressed a broader range of sustainability issues, property types, and performance objectives. Notably, the Living Building Challenge, introduced in 2006, set a first-of-its-kind standard for regenerative design and net-positive performance in energy, water, and waste management.

Following the 2007-08 economic recession, which saw a downturn in the construction industry, there was a notable shift in certifications toward the sustainability of existing buildings, evidenced by the increased popularity of programs such as LEED for Existing Buildings: Operations and Maintenance (created in 2004, now known as LEED Operations and Maintenance) and BREEAM In-Use. This period marked a transition to a preference for certifications that include assessment of operational performance over design criteria alone.[22] Initiatives like NABERS, BOMA 360, and later LEED v4.1 were developed to provide frameworks for evaluating and certifying the real environmental impact of buildings in operation, often incorporating regular renewals or performance evaluations.

The launch of the Global Real Estate Sustainability Benchmark (now known as GRESB) real estate benchmark in 2009 complemented this shift, offering a comprehensive tool for measuring and reporting sustainability performance metrics within real estate portfolios. Since 2009, the emphasis on monitoring and optimizing building performance has continued to grow.[23]

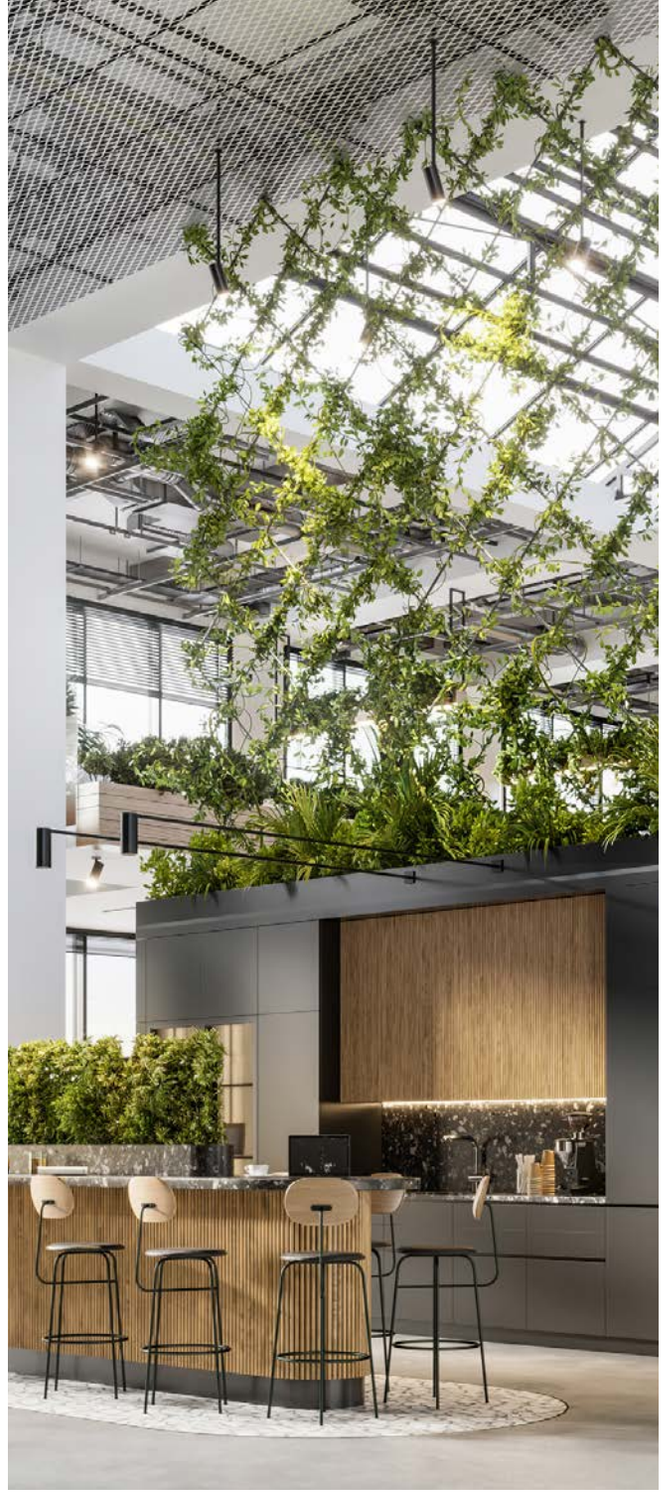
As corporations increasingly sought to report on sustainability using frameworks like GRESB and the Global Reporting Initiative (GRI), demands for transparency extended to the green product sector. Consumers and building professionals called for clear disclosure of product performance and potential environmental or health hazards.[24] This led to the creation of the Environmental Product Declaration in 1998, Health Product Declaration in 2012, Declare label in 2012, and Just label in 2014, empowering stakeholders to make informed choices aligned with sustainability and health considerations.

In response to evolving stakeholder demands, the 2010s witnessed the emergence of specialized certifications focusing on specific aspects of sustainability in the built environment. In 2014, the WELL Building Standard launched, placing a strong emphasis on occupant health and well-being, while Fitwel was introduced to the private sector in 2016, striving to create spaces that enhance physical and mental wellness.[25][26] SITES, launched in 2015, specifically addressed wildlife habitat preservation and sustainable land development practices while another Green Business Certification Inc. (GBCI) standard, TRUE, was introduced in 2017, highlighting the critical importance of effective waste management and resource efficiency.[27][28]

This expansion and sophistication of the certification landscape coincided with a global push throughout the 2010s for policies and regulations addressing climate change and sustainability. Key international agreements, such as the 2015 Paris Climate Agreement and the U.N. Sustainable Development Goals (specifically Goal 11 for Sustainable Cities and Communities), placed significant pressure on the building industry to align standards with global emissions reduction targets and sustainability objectives.[29][30] Europe proactively responded with measures like the 2018 revision of the Energy Performance of Buildings Directive (originally created in 2003), the 2019 European Climate Law, and the 2020 EU Taxonomy, all aimed at enhancing building efficiency and promoting decarbonization.[31][32]

Signaling alignment with the EU, in 2021, the U.S. government made a historic commitment to combat climate change by pledging to achieve net-zero emissions by 2050.[33] This commitment also included a goal to achieve carbon neutrality in federal buildings by 2045, demonstrating growing political momentum for decarbonizing the real estate industry.[34] The federal government has further underscored this importance through various initiatives, such as establishing a federal zero emissions buildings (ZEB) definition, introducing the EPA's new NextGen certification for low-carbon buildings, and implementing the first-ever U.S. Federal Building Performance Standard.[35][36][37][38]

The recent changes at the federal level are consistent with earlier changes at the state and city levels. Many local municipalities (e.g., San Diego, California and Stamford, Connecticut) have already required government buildings to achieve a particular LEED rating upon construction, and local benchmarking laws and building performance standards have gained momentum after the 2015 Paris Agreement.[40][41] Benchmarking laws mandate that buildings monitor and report their energy consumption. Building performance standards go even further by demanding that buildings meet certain energy efficiency or carbon emissions targets. With these standards being implemented nationwide, we may see green building certifications emerge as a compliance solution, particularly for older, less efficient buildings needing extensive retrofits.[39]



Green Certifications: Environmental, Social, and Governance Benefits

ENVIRONMENTAL

- Reduced energy consumption
- Lower carbon footprint
- Water conservation
- Waste reduction
- Minimized impact to local ecosystems and ecosystem restoration
- Improved resilience to climate hazards

SOCIAL

- Improved air and water quality
- Access to daylight and nature
- Promotion of physical activity
- Comfortable indoor environment
- Sustainability education and awareness

GOVERNANCE

- Encourages transparency and accountability in sustainability practices
- Enhances resilience to environmental and social risks
- Supports compliance with sustainability-related regulations (e.g., SFDR)
- Demonstrates alignment with stakeholder values and expectations

In the wake of the COVID-19 pandemic, the commercial real estate sector has also shown significant movement toward enhancing health and safety measures in the workplace. This is marked by a notable increase in the uptake of health and well-being certifications such as WELL and Fitwel, and the creation of certifications specifically designed to curtail the spread of illnesses in buildings (e.g., Fitwel's Viral Response Module and WELL Health-Safety Rating).[42] Even as the pandemic's immediate threat diminishes, these health and wellness certifications have become integral to the appeal of office spaces, catering to a workforce now accustomed to the benefits of remote and hybrid work models. The increased emphasis on improved ventilation, natural lighting, human resource health benefits, and other health-centric metrics is proving essential in attracting employees back to the office, reflecting a likely permanent change in tenant demands and the overall landscape of commercial real estate.[43][44]

This array of certifications underscores that achieving sustainability within the built environment is a complex and multifaceted undertaking. It encompasses a broad spectrum of considerations, ranging from energy efficiency and water conservation to the well-being of occupants, the preservation of natural habitats, and the reduction of waste. These needs are being met through both single- and multi-attribute certifications and their number is expanding to meet increasingly specific needs to reduce the built environment's impact on climate change.

THE SIGNIFICANCE OF GREEN CERTIFICATIONS AND RATINGS

The history and proliferation of green certifications in the past 40 years underlines the importance of trusted verification systems. Green building rating systems, ecolabels, product declarations, and professional credentials contribute to the creation of a more transparent marketplace. By adhering to stringent certification standards, companies must disclose information about their supply chains, manufacturing processes, and overall environmental performance. This transparency not only builds trust with consumers but also encourages companies to adopt sustainable practices as a competitive advantage. As a result, businesses are motivated to improve their environmental performance to attain and maintain these valued certifications. This pursuit of certifications often leads to the implementation of environmentally friendly practices throughout the entire value chain, from sourcing raw materials to disposal of end products. As more companies adopt sustainable practices in response to the demand for environmental transparency, industries as a whole move toward greener and more responsible operations.

Green certifications also serve as essential tools for governments and policymakers aiming to drive environmental policy and regulation. By recognizing and endorsing specific green certifications, governments can incentivize businesses to adopt sustainable practices and align with national or international environmental goals. Certifications thus become integral components of broader efforts to combat climate change, reduce pollution, and promote biodiversity.

Those efforts are often driven by global reporting frameworks such as GRESB or regulatory systems like the Sustainable Finance Disclosure Regulation (SFDR), both of which rely on validated data from green certifications to make accurate ratings and assessments. Combined with the growth of ESG, this symbiotic relationship between ESG reporting frameworks and green certifications ensures that green rating systems — especially for buildings — will continue to increase in use and sophistication.[45]

This shift is significant, as green building, product, and professional certifications must play a more pivotal role in advancing sustainability within the built environment. Globally, the buildings and construction industry accounts for 34% of energy consumption and 37% of greenhouse gas (GHG) emissions, surpassing all other sectors.[46] To effectively address climate change, the built environment must prioritize decarbonization and minimize its environmental impact. The broader the adoption of higher standards through certification, the more progress we can make in this regard.

In addition to their environmental benefits, green buildings offer social benefits by prioritizing the health and well-being of occupants. Features such as improved air quality, ample daylight, clean water supplies, and access to nature create a healthier indoor environment, resulting in enhanced cognitive function and productivity among occupants.[47] In a 2022 study, WELL certification, for example, was shown to increase overall workplace satisfaction by 30 percentage points, reported well-being

Our guidance report aims to provide a comprehensive and user-friendly guide for navigating the landscape of green certifications and rating systems.

by 26 percentage points, mental health by 10%, and physical health by 2%.[48]

As a result, these environmental and social benefits often translate into improved business performance. Enhanced resource efficiency allows owners to minimize energy-, water-, and waste-related utility costs. Prioritizing indoor environmental quality leads to the creation of more aesthetically pleasing and comfortable buildings, making them more desirable to tenants, residents, and employees.

In essence, green certifications have given rise to a new and superior asset class that enables owners to align their business and sustainability objectives. Over the long term, research supports this alignment, demonstrating that green buildings exhibit lower risk, reduced operating costs, and higher valuations and sale prices.[49] Similar benefits are available for owner-occupied projects, particularly resource efficiency savings and increases in valuations and eventual sale prices.

NAVIGATING THE LANDSCAPE OF GREEN CERTIFICATIONS AND RATING SYSTEMS

As green certifications and ratings have grown in popularity and diversity, the market has expanded to offer hundreds of distinct certifications, each with varying requirements, eligibility criteria, and levels of adoption. Navigating this complex landscape can be challenging for businesses, consumers, and professionals, especially with the constant emergence of new certifications and evolving standards of existing systems. Companies and professionals seeking green certifications often inquire about the factors that set them apart and the essential considerations for making informed choices.

Our guidance report aims to provide a comprehensive and user-friendly guide for navigating this crowded field. Within this report, we thoroughly explore green certifications and rating systems, organized into three main categories: building, product, and professional. In each category, we delve into the key certifications that define the landscape. Our analysis covers various aspects, comparing and contrasting sustainability focus areas, eligibility, minimum requirements, and associated costs.

Disclaimer

This guidance report focuses primarily on green building, product, and professional certifications most relevant to the commercial real estate industry. Still, this publication does not include all certification schemes currently in use across the U.S. or globally. Moreover, the information presented for individual certifications, though aimed to be comprehensive and consistent, does not include all details or requirements. Where citations are not provided, insight content, located on the left-hand side of each certification page, is subjective and is primarily based on Verdani Partners' experience with various building certifications, ecolabels, professional credentials, etc.

This guidance report is limited to the green building, product, and professional landscape at the time of its publication (December 2023). As updated versions of rating systems are released, new credentials and ecolabels are launched, and managing responsibilities transfer between various entities, VIBE aims to release periodic, updated versions of this report to reflect these changes and associated implications.

To ensure completeness and accuracy of content for each certification included, to the extent possible, VIBE attempted to collaborate with the governing organization behind the certification to obtain review and verification of content for individual summary pages. Many of the summaries on the ensuing pages would not be possible without the cooperation, content verification, and assistance of representatives of those organizations. Some reviews were initiated but were incomplete at the time of publication. For each organization that completed this review process, a green rectangle reading "verified" is included on the respective certification page. However, the verified designation should not be interpreted to apply to the subjective and largely unverified insights located on the left-hand side of each certification page. This publication is intended for educational purposes only and should not be considered or used as investment, accounting, legal, or other professional advice. Despite VIBE's belief that it has taken all reasonable efforts to ensure the accuracy of all sections of this publication, neither VIBE nor its sponsors can guarantee the accuracy of the materials provided within.

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Building Certifications and Rating Systems

Green building certifications serve as vital frameworks and standards to assess and enhance sustainability in various aspects of building design, construction, and operations. They cover a wide range of sustainability focus areas, including energy and water efficiency, carbon emissions reduction, waste management, indoor environmental quality, health impact, and more. Many certifications are administered by nonprofit organizations like the International Living Future Institute (ILFI) or Institute for Real Estate Management (IREM) or corporate certification bodies, such as Green Business Certification Inc. (GBCI). Additionally, government agencies and institutions offer building certification programs (e.g., the U.S. EPA's ENERGY STAR), some of which are mandatory for certain property types (e.g., Australia's NABERS).

We have focused our summaries on green building certifications that exhibit at least two of the following three qualities: 1) they are U.S.-based or internationally applicable; 2) they are significant due to their place in history or the transformative nature of their system; 3) they are active, with industry adoption beyond the state or country of origin.

BREEAM, for example, fulfills all three qualifying requirements. Singapore's BCA Green Mark Scheme is historically significant due to its influence in Southeast Asia (2), and it is an active standard with industry adoption in several other countries (3). The only green building rating systems that fulfilled two or more of these requirements and were not included in full were those for which we could not find enough up-to-date data, making their inclusion unhelpful for companies seeking to pursue them.

The following variables appear on each summary page and are being defined as follows:

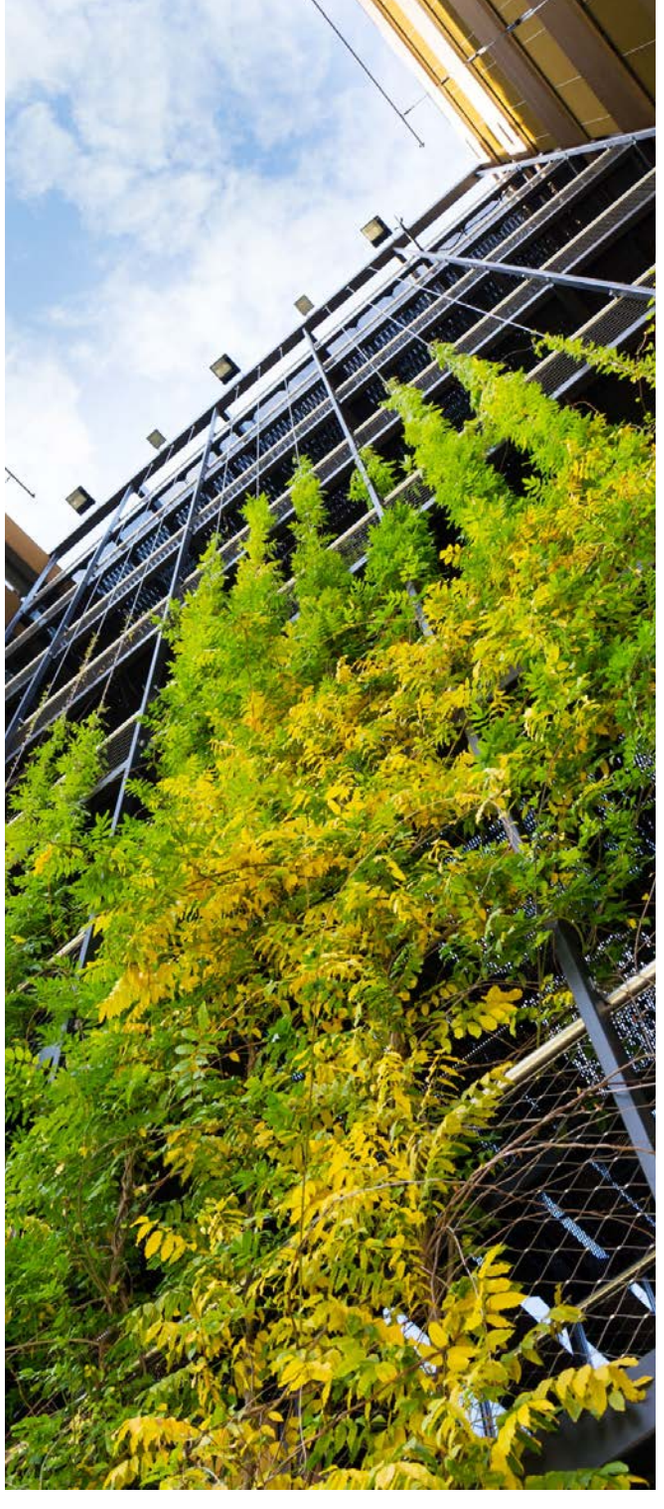
"Areas of Focus" denotes the specific environmental or social issues targeted by the certification, commonly including considerations such as energy efficiency, carbon footprint, water conservation, waste management, indoor environmental quality, and the overall operations and management of buildings.

The **"Managing Organization"** is the entity responsible for establishing and overseeing the certification standards, which often include nonprofit institutes like ILFI, as well as corporate entities such as GBCI. A founding organization is not necessarily the same as the managing organization.

"Regional Applicability" describes the geographic scope within which the certification is valid. While most green building certifications have global relevance, others are more region-specific, like Green Star.

"Eligible Property Types" outlines the range of properties that the certification can be applied to, encompassing broad categories such as office, residential, and industrial, or more specific property types like healthcare centers and universities.

"Eligible Buildings" encompasses the general criteria that buildings must meet to be considered for certification, which may include the phase of construction, whether it's new construction, existing



buildings, or major renovations, as well as specific metrics such as a minimum period of occupation or square footage.

The **"Scoring Scale"** indicates the levels of sustainability achievement recognized by the certification, which can range from basic certification to higher tiers like Silver, Gold, and Platinum, or use a star-based rating system.

"Minimum Requirements" are the essential criteria that projects must satisfy to achieve certification. These can vary widely, from implementing best practices to meeting certain energy, water, or waste reduction thresholds, or conducting site assessments and performance audits.

"Application Review Time" is the period required for the managing organization to evaluate a certification application once submitted, spanning from the application submission to the certification decision.

"Certification Fees" detail the costs associated with obtaining the certification, which can span a broad spectrum from a few hundred to several thousand dollars.

$: $0–$1,000

$$: $1,001–$10,000

$$$: $10,000–$30,000

$$$$: $30,000+

"Industry Adoption" quantifies the certification's prevalence, measured either by the number of certified projects or the number of currently active certifications.

Lastly, **"Recertification"** specifies whether and how often a certification needs to be renewed, with intervals ranging from annual to every three to seven years, although some certifications may not require renewal at all.

AN OVERVIEW OF BUILDING CERTIFICATIONS

	AREA OF FOCUS	SINGLE OR MULTI-ATTRIBUTE	REGIONAL APPLICABILITY	ELIGIBLE PROPERTY TYPES	ELIGIBLE BUILDINGS	SCORING SCALE	MINIMUM REQUIREMENT FOR CERTIFICATION	APPLICATION REVIEW TIME	CERTIFICATION FEES	INDUSTRY ADOPTION	RECERTIFICATION
BCA GREEN MARK	Energy efficiency, carbon reduction, other sustainability aspects	Multi	Singapore; Asia-Pacific	Commercial	New and existing	Yes; depends on scheme	Site assessment and verification	3–6 months	$$–$$$$	54% gross floor area in Singapore	Every 5 years
BIT BUILDING	Energy, water, waste, carbon, indoor air quality	Multi	International	All except single-family residential	Existing and occupied	None	Adopt 16 best practices	6 months	$$	79 buildings in 13 countries	None
BOMA 360	Building operations, safety, security, sustainability	Multi	International	Commercial	Occupied for at least 12 months	Meet minimum points across six categories	Minimum of 7–17 points per section	45 days	$$	3,668 designees	Every 3 years
BOMA BEST	Building operations, safety, security, sustainability	Multi	U.S. and international	Commercial	50% occupied for at least 12 months	Baseline, Bronze, Silver, Gold, Platinum	Meet Baseline Practices	30 days	$$	100+ in U.S.	Every 5 years
BREEAM	Building management, water, energy, health, resilience	Multi	International	Commercial and residential	New and existing	Acceptable, Pass, Good, Very Good, Excellent, Outstanding	Assessment validation from BREEAM Assessor	2–14 weeks	$$$	2.3+ million registered buildings	0–3 years
CORE	10 Imperatives: Place, Transit, Water, Energy, Health, Materials, Equity, Inclusion, Biophilia, Inspiration	Multi	International	Commercial and residential	New, existing, interiors	Certified, Silver, Gold, Platinum	Occupied for at least 12 months. All 10 imperatives met.	55 days	Based on gross floor area	64 projects	N/A
EDGE	Environmental footprint of emerging market construction sector	Multi	International	Commercial and residential	New and existing	Edge Certified, Edge Advanced, Zero Carbon	20% or more savings in energy, water, and embodied carbon	Varies	$0.29 per m^2 for 0–25,000m^2; $0.24 for 25,001–50,000$m^2$	64,581,000 m^2 certified	N/A
ENERGY STAR	Energy efficiency	Single	U.S. and Canada	Commercial	Existing buildings; 5,000+ sq ft	1–100 peer-relative socre	Score of 75 or above	2–14 days	Free	41,000 commercial buildings	Annual, but original does not lose validity
FITWEL	Health and well-being	Multi	International	Commercial and residential	New and existing	One to three stars	Minimum score on design and operartions strategies	12–16 weeks	$$–$$$	1,000+ projects	Every 3 years
GREEN GLOBES	Project/ESG Management, Site, Energy, Water, Materials, Indoor Environment	Multi	International	Commercial	New, existing, interiors	One to four Green Globes	Score at least 35% points; site visit	4–6 weeks	$$–$$$$	3,282 projects certified	Every 3 years recommended; original does not expire

AN OVERVIEW OF BUILDING CERTIFICATIONS

	AREA OF FOCUS	SINGLE OR MULTI-ATTRIBUTE	REGIONAL APPLICABILITY	ELIGIBLE PROPERTY TYPES	ELIGIBLE BUILDINGS	SCORING SCALE	MINIMUM REQUIREMENT FOR CERTIFICATION	APPLICATION REVIEW TIME	CERTIFICATION FEES	INDUSTRY ADOPTION	RECERTIFICATION
GREEN STAR	Sustainability: energy, transport, water, materials, emissions	Multi	Australia	Commercial and residential	New and existing	1–6 stars	Minimum of 15 credits; 3rd party assessment	10–12 weeks	$$–$$$$	55.5 million m^2	Every 3 years with annual reviews
HQE	Energy, water, waste, carbon, resilience, biodiversity, local economy	Multi	France and Europe	Commercial and residential	New, existing, major renovations	Good, Very Good, Excellent, Exceptional	At least 1 out of 12 stars earned	3–5 years to achieve certification	$$$	Used in 26 countries	Every 3–5 years
IREM	Energy, water, health, recycling, purchasing	Multi	U.S. and Canada	Commercial	Existing buildings; 25,000+ sq ft; 25+ units; ENERGY STAR score >50	0–90	62 points across 5 categories	3–8 weeks	$–$$	1,700+	Every 3 years
LEED (V5)	Carbon, energy, water, waste, transportation, materials, health, indoor environmental quality	Multi	International	All property types	New and existing, major renovations, interiors, etc.	Certified, Silver, Gold, Platinum	Must be in a permanent location on existing land and have reasonable boundaries. Min. square footage varies.	20-25 business days	$$-$$$	105,000+ buildings cerified	Every 3 years for certain subcategories
LEED (ZERO)	Carbon, energy, water, waste	Multi	International	Commercial and residential	New and existing	None	Zero balance on carbon, energy, water; TRUE Zero Waste Platinum certification; 12 months performance data	15–20 business days	$$	—	Every 3 years
LBC	Seven performance areas (or 'petals'): site, water, energy, materials, health, equity, beauty	Multi	International	Commercial and residential	New, existing, interiors, landscapes	20 imperatives across 7 performance areas	All requirements in all imperatives must be met	55 day audit	Based on gross floor area	215 projects	N/A
NABERS	Energy, water, waste, indoor environment	Multi	Australia, International	Commercial	Required for new and existing buildlings	1–6 stars per category	N/A	Assessment conducted after 12 months of operations	Varies	8,100 + buildings; 90% Australia office space	Annually
NGBS	Site design, resource efficiency, water, energy, indoor environmental quality, operations	Multi	U.S.	Residential	New and existing	Certified, Bronze, Silver, Gold, Emerald	Meet mandatory provisions; certified by accreddited verifier and pass inspections	One business day	$	482,000+ homes	Not required
NORDIC SWAN ECO LABEL	Indoor environmental quality, biodiversity, water, waste, energy, carbon	Multi	Nordic European Nations	Commercial and residential	New construction, major renovations	N/A	10–15% less energy usage than official requirement	3 months	$$–$$$	32,000 finished projects	Upon standard revision, approximately every 5 years

AN OVERVIEW OF BUILDING CERTIFICATIONS

	AREA OF FOCUS	SINGLE OR MULTI-ATTRIBUTE	REGIONAL APPLICABILITY	ELIGIBLE PROPERTY TYPES	ELIGIBLE BUILDINGS	SCORING SCALE	MINIMUM REQUIREMENT FOR CERTIFICATION	APPLICATION REVIEW TIME	CERTIFICATION FEES	INDUSTRY ADOPTION	RECERTIFICATION
PEER	Electricity infrastructure performance	Single	International	Power systems (e.g., city, campus)	Operational for at least 1 year prior	Certified, Silver, Gold, Platinum	Minimum 40 points	25 business days	$$	36 projects	Every 3 years
PHIUS	Energy, carbon, cost effectiveness, indoor environmental qualitiy	Multi	North America	Commercial and residential	New construction and retrofits	None	Minimum design and energy performance requirements	6–8 months	$$–$$$$	7,000 units	Not required
RELI	Resilience	Multi	International	Commercial and residential	New construction and existing buildilngs	Certified, Silver, Gold, Platinum	Minimum 300 points; 15 mandatory requirements	Varies	Based on gross floor area and certification type	N/A	None but can be revoked within 18 months
RESET	Air, Energy, Water, Waste	Multi	International	Core & Shell, Commercial interiors	All	None	Must install monitors; Pass site and data audit	6 months minimum to achieve certification	$$–$$$	160+ projects	Must retain RESET Cloud access and meet minimum standard thresholds
SITES	Biodiversity and ecosystem health	Mutli	International	Sites with or without buildings	New construction and major renovations; 2,000+ sq ft	Certified Silver, Gold, Platinum	Minimum score of 70	20–25 days	$$–$$$	1.27 billion gross sq ft	None, but can be revoked within 18 months
TRUE	Waste diversion and resource management	Single	International	All property types	At least 12 months of operations	Certified Silver, Gold, Platinum	31/81 credit points; six minimum requirements	4–5 weeks	$0.018–$0.023 / sq ft	327 projects	Every 3 years
WELL	Health and well-being	Mutli	International	Commercial	Must be 75% occupied	Bronze, Silver, Gold, Platinum	Minimum points on 10 concept preconditions; on-site testing	20–25 business days	$$$–$$$$	40,000+ projects	Every 3 years
ZC	Carbon neutrality	Single	International	Commercial and residential	New, existing, interiors	Meet minimum requirements	Net zero carbon (operational and embodied)	55-day audit	Based on gross floor area	133 projects	N/A
ZE	Energy performance, renewable energy	Mutli	International	Commercial and residential	New and existing	Meet all requirements	100% renewable energy use	55-day audit	Based on gross floor area	243 projects	N/A

BCA Green Mark Scheme

VERIFIED

Singapore's Green Building Product certification scheme (SGBP) allows building products to accrue points toward a project's Green Mark certification.

The Building and Construction Authority (BCA) Green Mark (GM) Scheme is an internationally recognized green building rating system tailored for the tropical climate. It provides a comprehensive framework for assessing the overall environmental performance of new and existing buildings, emphasizing the importance of sustainable design and best practices in construction and operations in building. Launched in 2005, the BCA GM scheme has gained popularity in Southeast Asia, especially in neighboring countries (e.g., Malaysia, Vietnam, Indonesia, China). The latest BCA GM scheme is Green Mark 2021. Positive energy, zero energy, and super low energy buildings are part of the Green Mark framework that certifies buildings with best-in-class energy efficiency performance, and Green Mark sections are mapped to the United Nations Sustainable Development Goals (UN SDGs).

For More Information:

- FAQ
- Assessment Criteria and Application

YEAR BEGAN	2005
AREAS OF FOCUS	Energy efficiency, carbon reduction in mitigating the effects of climate change, as well as other sustainable aspects — focusing on whole life carbon, health and well-being, resilience, intelligence, and maintainability
MANAGING ORGANIZATION	Building and Construction Authority (BCA)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	Singapore; Green Mark Certification has also been achieved by clients across 16 countries in the Asia-Pacific region
ELIGIBLE PROPERTY TYPES	Commercial, offices, residential, industrial buildings, healthcare facilities, data centers, transit stations, schools, districts
ELIGIBLE BUILDINGS	New and existing buildings, buildings in all phases of design, and districts
SCORING SCALE	Available GM ratings: Positive Energy, Zero Energy, Super Low Energy, Platinum, GoldPLUS, Gold, Certified (depends on the GM schemes). Available GM badges: Whole Life Carbon (Cn), Health and Well-being (Hw), Resilience (Re), Intelligence (In), Maintainability (Mt) (depends on the GM schemes).
MINIMUM REQUIREMENT FOR CERTIFICATION	Minimum requirements differ among schemes but can include going through a pre-assessment audit with a BCA Assessor, an assessment with design and documentary evidence being collected, and a site visit for verification upon project completion.
APPLICATION REVIEW TIME	Three to six months
CERTIFICATION FEES	For new or existing building projects: $7,700–$54,600, depending on the scheme and project size
INDUSTRY ADOPTION	54% gross floor area in Singapore as of June 2023
RECERTIFICATION	Every five years, barring major renovations or enhancements. Projects undergoing recertification can do so at 50% off the initial certifying cost.

Reference: [50] [51]

BIT Building

Intended as a stepping-stone certification, BIT Building is distinctive from other sustainable operations and management rating systems in that it is structured to be more accessible for in-house operators, reducing the need to hire outside consultants. It can also be scaled across diverse global portfolios and certifies based on improvement over the building's own baseline, rather than standardized thresholds. Certification costs are marginally cheaper than other programs, with discounts available for nonprofits. IREM CSP and BOMA 360 are good comparisons as they are also relatively cheap stepping stones into green building certifications that are more accessible for in-house operators.

BIT Building focuses on simple and cost-effective sustainable practices for building operations and maintenance. Their improvement-focused approach provides step-by-step guidance, resources, and expert advice. To earn the certification, buildings adopt 16 best practices across a wide range of green building attributes (e.g., Air Quality Audit, Green Purchasing). BIT is applicable for all commercial building types, regardless of current performance or year constructed. According to BIT, certified properties have thus far cumulatively saved $24,000 in utility costs, nearly 1 million gallons of water, and have avoided 842 metric tons of carbon emissions.

For More Information:

- FAQ
- Partner Stories

YEAR BEGAN	2018
AREAS OF FOCUS	Energy and water consumption, waste diversion, GHG emissions reduction, sustainable transportation, indoor air quality, building maintenance and operations
MANAGING ORGANIZATION	Southface Institute
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All building types except single-family residential
ELIGIBLE BUILDINGS	Building or tenant-controlled space must meet four criteria: 1) fixed, permanent structure; 2) not a wing or subset of building or tenant-controlled space (up to 10% of gross floor area can be excluded if separately metered); 3) no more than 20% of gross floor area is unfinished or unfitted; 4) occupied for more than 30 minutes per day.
SCORING SCALE	None
MINIMUM REQUIREMENT FOR CERTIFICATION	Must adopt all 16 best practices for sustainable operations and maintenance
APPLICATION REVIEW TIME	Approximately six months to earn certification
CERTIFICATION FEES	$1,500 per project for businesses, $1,200 per project for nonprofits; discounts apply for volume enrollment
INDUSTRY ADOPTION	As of November 2023: 79 participating buildings and office spaces in 14 U.S. cities and 13 countries
RECERTIFICATION	Must renew every three years

BOMA 360 Performance Program

VERIFIED

BOMA 360 is a great program for property management teams to assess building operations and maintenance of the asset in house. The certification is relatively cheap and more accessible for in-house operators as compared to similar programs. It is recognized by GRESB as a green certification for individual building operations.

The BOMA (Building Owners and Managers Association) 360 Performance Program is an internationally recognized designation available to occupied office and industrial buildings that demonstrate industry-leading sustainability performance and best practices. The Program evaluates performance holistically, assessing factors beyond energy efficiency, such as tenant relations and risk management. Office complexes with multiple buildings or properties with separate ENERGY STAR scores require separate applications. BOMA 360-certified buildings are eligible for BOMA's TOBY (The Outstanding Building of the Year) Award, which dates back to 2010.

For More Information:

- FAQ
- Office Criteria
- Industrial Criteria

YEAR BEGAN	2009
AREAS OF FOCUS	Building operations and management; life safety, security, and risk management; training and education; energy; environmental/sustainability; tenant relations and community involvement
MANAGING ORGANIZATION	Building Owners and Managers Association International (BOMA)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Office: Multi-tenant; single tenant; corporate facilities; government buildings; medical office buildings; suburban office buildings; multi-use buildings with partial office use.
ELIGIBLE BUILDINGS	Office: Must be previously occupied for at least one full year (minimum of 12 months of building operations); only office portion is applicable for certification in case of multi-use buildings.
SCORING SCALE	Split between six categories, there are 129 possible points with a minimum score of 75 to qualify. Applicants must meet the minimum required points in each of the six sections to qualify.
MINIMUM REQUIREMENT FOR CERTIFICATION	A minimum of anywhere between 7 and 17 points are required in each of the six sections, with a minimum of 75 out of 129 points being required.
APPLICATION REVIEW TIME	Applications submitted before the end of any given month will be reviewed within 45 days of the closure of the month in which you submit your application.
CERTIFICATION FEES	$850 (2023) / $995 (2024) for BOMA members; $1,335 (2023) / $1,500 (2024) for non-BOMA members
INDUSTRY ADOPTION	3,668 designees since 2009
RECERTIFICATION	Must renew every three years

Reference: [52]

BOMA BEST

VERIFIED

BOMA BEST
BUILDING CERTIFICATION PROGRAM

BOMA BEST compliments BOMA 360. Future updates of this guidance report will contain more insights once more data and experience with the program in the U.S. becomes available.

Canada's BOMA BEST program is North America's largest environmental assessment and certification program for existing buildings. Launched in Canada in 2005, BOMA BEST has since created two distinct tracks: BOMA BEST Sustainable (focused on more sustainable building operations) and BOMA BEST Smart (focused on using technology to optimize the building experience). Each is categorized into various property type-dependent modules, which influence the eligibility criteria and certification fees. In 2023, BOMA launched BOMA BEST in the U.S. to expand its goal of creating an aspirational and accessible building management tool in North America. In Canada, the program has over 4,000 active certifications and has led to a 25% reduction in energy use, 36% reduction in water use, and 84% reduction in greenhouse gas emissions in participating buildings.

For More Information:

- Certified Buildings Directory
- User Manual

YEAR BEGAN	2005 (2023 in U.S.)
AREAS OF FOCUS	Building operations and management; life safety, security, and risk management; training and education; energy; environmental/sustainability; tenant relations and community involvement; carbon/GHG mitigation; climate planning and risk resilience
MANAGING ORGANIZATION	BOMA BEST LLC
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	U.S. and international
ELIGIBLE PROPERTY TYPES	Offices, enclosed shopping centers, open-air retail, light industrial, multi-unit residential buildings, health care facilities, and more
ELIGIBLE BUILDINGS	Building occupancy rate of at least 50% for the past 12 months to achieve BOMA BEST Bronze, Silver, Gold, or Platinum; below 50% the building is only eligible for BOMA BEST Baseline. At least 75% of the building's use must fit the respective property type module definitions (otherwise it will utilize the Universal module); the exception is Health Care Facilities with a minimum use of 50% to utilize that module.
SCORING SCALE	Baseline: buildings that have met the Baseline Practices, Bronze: 30–59%, Silver: 60–79%, Gold: 80–89%, Platinum: 90–100%
MINIMUM REQUIREMENT FOR CERTIFICATION	On-site verification by a BOMA BEST Verification Professional. All buildings must meet the Baseline Practices to achieve any level of certification; there are 12 Baseline Practices for BOMA Best Sustainable and 5 Baseline Practices for BOMA BEST Smart.
APPLICATION REVIEW TIME	Typically reviewed by a third-party verification professional within 30 days of submission
CERTIFICATION FEES	Single stream fees range from $5,900 to $33,000 depending on project size, BOMA membership status, geographic location, and module type. Volume certification for five or more buildings is available via Portfolio assessment, where fees vary based on the same factors.
INDUSTRY ADOPTION	100+ buildings hold BOMA BEST certification in U.S. as of November 2023
RECERTIFICATION	Every five years

Reference: [53]

BREEAM

VERIFIED

BREEAM®

Generally, LEED is to U.S. as BREEAM is to Europe. BREEAM is most well known in the U.K. but is increasing in popularity in the U.S. It is a holistic program, as it includes evaluations of resiliency, unlike many other rating systems.

BREEAM (Building Research Establishment Environmental Assessment Method) launched in the United Kingdom in 1990 as the world's first green building standard and certification program. Though adoption remains concentrated in Europe, BREEAM is widely used across more than 85 countries. The BREEAM program offers five or six rating levels depending on the program and the standards consider a comprehensive set of factors when evaluating sustainability performance (e.g., energy, materials, health and well-being). Certification requires the submission of evidence and on-site verification by a licensed Assessor across all typologies, which are based on building life cycle stages: BREEAM NC covers new construction, BREEAM Refurbishment and Fit-Out applies mainly to major renovations, BREEAM In-Use is for existing buildings, and BREEAM Communities is for urban planning and city developments.

For More Information:

- Certified Projects
- New Construction info sheet
- Refurbishment and Fit-out info sheet

YEAR BEGAN	1990
AREAS OF FOCUS	Management; water; energy; transport; health and well-being; resources; resilience; land use and ecology; pollution; materials; waste; innovation
MANAGING ORGANIZATION	BRE Global (subsidiary of BRE Group)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
STANDALONE SUBCATEGORIES OF CERTIFICATION BY TYPOLOGY (SEE NEXT PAGE FOR DETAILS)	BREEAM New Construction (NC), BREEAM Refurbishment and Fit-Out, BREEAM In-Use. Offered, but not covered in this guidance report: BREEAM Communities.
VOLUME CERTIFICATION	BREEAM's Pre-Approvals program for New Construction allows for the relevant evidence assessed and audited once across multiple builds where standard design elements or specifications are used. This can be scaled to include as many issues as are common across the multiple builds. For In-Use, the Volume program streamlines the recertification process for assets by taking a risk-based approach to setting requirements for site visits. The program has no admission fee but is a longer-term agreement for using BREEAM to drive improvements over multiple certification cycles.
INDUSTRY ADOPTION	Over 2.3 million registered buildings and 600,000+ certifications in 93 countries

VERIFIED

BREEAM

	BREEAM NC	BREEAM REFURB AND FIT-OUT	BREEAM IN-USE
NEW CONSTRUCTION OR EXISTING BUILDINGS	New construction	Existing buildings and major renovations	Existing buildings
ELIGIBLE PROPERTY TYPES	Office, industrial, retail, education, residential long stay, residential short stay	Office, industrial, retail, education, residential long stay, residential short stay	Commercial, industrial, hospitality, leisure, laboratories, multifamily and single family and more
BUILDING ELIGIBILITY	N/A	N/A	A complete and finished structure; occupiable space designed for 30 minutes or more per day by building user; must comply with all relevant environmental, health, and safety legislation in its location
MINIMUM REQUIREMENTS FOR CERTIFICATION	BREEAM's third-party certification involves the validation of the assessment by BREEAM Assessors. The assessment then undergoes a Quality Audit (QA) check from the accredited third-party independent and impartial certification body, BRE Global Ltd. A project must score at least 30%.	BREEAM's third-party certification involves the validation of the assessment by BREEAM Assessors. The assessment then undergoes a Quality Audit (QA) check from the accredited third-party independent and impartial certification body, BRE Global Ltd. A project must score at least 30%.	BREEAM's third-party certification involves the validation of the assessment by BREEAM Assessors. The assessment then undergoes a Quality Audit (QA) check from the accredited third-party independent and impartial certification body, BRE Global Ltd. A project must score at least 10%.
CERTIFICATION PROGRAM FEES ($)	$1,500 per assessment and either, 1) $3,500 to $10,500 for non-residential developments, depending on size, or, 2) $7 to $38 per dwelling for residential developments depending on the number of dwellings, with a $2,250 minimum. Fast Track services are available on top of the stated fees above. Fast Track: $2,000 for a three-day turnaround and initial submission and two resubmissions. Fast Track 24: $1,250 for a 24-hour turnaround and single submission only. Assessor fees dependent on the scope of the project.	$1,500 per assessment and $1,275 to $5,350 depending on the number of parts and the size per assessment. Fast Track services are available on top of the stated fees above. Fast Track: $2,000 for a three-day turnaround and initial submission and two resubmissions. Fast Track 24: $1,250 for a 24-hour turnaround and single submission only. Assessor fees dependent on the scope of the project.	$1,200 per asset and $3,000 for two-part performance review. Fast Track services are available on top of the stated fees above. Fast Track: $2,000 for a three-day turnaround and initial submission and two resubmissions. Fast Track 24: $1,250 for a 24-hour turnaround and single submission only. Assessor fees dependent on the scope but typically range between $10,000 and $20,000 per assessment.
APPLICATION REVIEW TIME	2–14 weeks	2–14 weeks	2–14 weeks
SCORING SCALE	Pass 30–44% Good 45–54% Very Good 55–69% Excellent 70–84% Outstanding >85%	Pass 30–44% Good 45–54% Very Good 55–69% Excellent 70–84% Outstanding >85	Acceptable 10–24% Pass 25–39% Good 40–54% Very Good 55–69% Excellent 70–84% Outstanding >85%
RECERTIFICATION	None	None	Three years

Core Certification

VERIFIED

Core Certification is a straightforward program meant to simplify the process of achieving a green building certification. Current version Core 1.0. Update scheduled for Spring 2024.

Core Green Building Certification (Core) is the newest standard from ILFI, setting out 10 best practices meant to help create a holistic, sustainable building. The requirements of Core value nature, equity, and engendering a sense of well-being equally with traditional concerns like water, energy, and healthy materials. Core aims to bridge the gap between existing green certifications and ILFI's ambitious Living Building Challenge. As with other ILFI standards, Core certification is based on actual performance, not projections, and all requirements must be met to achieve certification.

For More Information:

- The Core Standard

YEAR BEGAN	2009
AREAS OF FOCUS	10 Imperatives addressing Place, Transit, Water, Energy, Health, Materials, Equity, Inclusion, Biophilia, and Inspiration
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All, including single-family residentials, multifamily residentials, commercial buildings, institutional buildings, mixed use, schools, industrial facilities, medical and laboratory buildings, and more.
ELIGIBLE BUILDINGS	New construction, existing buildings, and interior projects
SCORING SCALE	Core Certification levels are awarded. The levels are Certified (105 points), Silver (110 points), Gold (115 points), and Platinum (120 points).
MINIMUM REQUIREMENT FOR CERTIFICATION	All 10 imperatives (listed in Area of Focus above) must be met to achieve the certification for most typologies. Projects must be operational for at least 12 consecutive months prior to audit to verify compliance.
APPLICATION REVIEW TIME	Two-step process: 1) Ready audit: conducted post-construction, valid for two years; 2) Final audit: conducted after 12 months of occupancy. Audit duration averages 55 days.
CERTIFICATION FEES	Flat fee for single-family residential, all other building types based on gross floor area: 25% at registration, 50% prior to construction, and 25% prior to preliminary audit.
INDUSTRY ADOPTION	64 registered or certified projects
RECERTIFICATION	N/A at this time

EDGE

VERIFIED

Developed by IFC in 2014 and launched by GBCI in 2015, EDGE (Excellence in Design for Greater Efficiencies) certification, standard, and software is uniquely focused on the ROI (return on investment) for different green building strategies. EDGE provides free web-based software that helps owners calculate the business implications for different design strategies. EDGE initially secured startup funding from SECO, Switzerland's State Secretariat of Economic Affairs, and currently receives funding from the U.K. government and other international donors. Its highest adoption is in Colombia, which aligned its sustainable construction policy to EDGE, making it the first national green building code in Latin America.

For More Information:

- EDGE User Guides
- EDGE Zero Carbon Certification

YEAR BEGAN	2015
AREAS OF FOCUS	Environmental footprint of emerging market construction sector, energy, and water
MANAGING ORGANIZATION	International Finance Corporation (IFC); EDGE certification managed by Green Business Certification Inc. (GBCI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Residential and commercial
ELIGIBLE BUILDINGS	New and existing building projects (not building materials, suppliers, firms, or individuals)
SCORING SCALE	Three levels: EDGE Certified (20% savings, see below); EDGE Advanced (same as EDGE Certified and 40% energy savings); Zero Carbon (same as EDGE Advanced and become carbon-neutral with 100% renewable energy)
MINIMUM REQUIREMENT FOR CERTIFICATION	20% or more savings in energy, water, and embodied carbon in materials. Must use EDGE Auditor.
APPLICATION REVIEW TIME	Varies
CERTIFICATION FEES	$0.29 per m^2 for 0–25,000m^2; $0.24 for 25,001–50,000$m^2$; additional $500 for each mixed-use building. Registration fee: single $349 fee for all buildings within project site.
INDUSTRY ADOPTION	64,581,000+ m^2 certified
RECERTIFICATION	Required for EDGE Zero Carbon

Reference: [54]

Widely used in developing countries (Colombia, Costa Rica, Panama, Peru, etc.).

As of March 2023, the program had produced:

Energy Savings: 1,983,228 MWh/year

Water Savings: 95,275,015 m^3/year

Embodied Energy in Material Savings: 109,981,965 GJ

CO_2 Savings: 1,211,286 tCO_2/year

ENERGY STAR for Commercial Buildings*

VERIFIED

ENERGY STAR is one of the most well-known and highly adopted green building certifications in the commercial real estate sector. The goals of ENERGY STAR are to increase energy performance, reduce energy costs, and improve environmental outcomes (e.g., reduce greenhouse gas emissions) by implementing strategies such as lighting upgrades, energy efficient appliances, and improved operations. Though it is mostly used in the U.S. and Canada, ENERGY STAR has grown to become the standard for energy efficient commercial buildings globally. To be eligible for certification, property managers must upload at least 12 consecutive months of whole-building data (i.e., across all tenant- and landlord-controlled areas) onto ENERGY STAR Portfolio Manager, a free online platform created by the EPA. Beyond applying for ENERGY STAR certification, Portfolio Manager is also useful for energy and water performance benchmarking and tracking efficiency improvements over time. To become certified under ENERGY STAR, buildings must achieve an ENERGY STAR score of at least 75, with certification indicating that the building's energy performance is in the top 25% nationwide when compared to similar buildings. According to ENERGY STAR, certified buildings use 35% less energy on average than comparable non-certified buildings.

YEAR BEGAN	1999
AREAS OF FOCUS	Energy efficiency
MANAGING ORGANIZATION	U.S. Environmental Protection Agency (EPA)
SINGLE OR MULTI-ATTRIBUTE	Single-attribute
REGIONAL APPLICABILITY	United States and Canada
ELIGIBLE PROPERTY TYPES	19 in total (e.g., office, retail, multifamily, warehouse, school, hospital, hotel)
ELIGIBLE BUILDINGS	At least: 5,000 sq ft, 30 operational hours/week, one worker during main shift (with exceptions)
SCORING SCALE	1–100 peer-relative score
MINIMUM REQUIREMENT FOR CERTIFICATION	Must achieve score of 75 or higher
APPLICATION REVIEW TIME	Typically, two days for each round of application review (may take multiple rounds); may take two to 14 days during November and December.
CERTIFICATION FEES	Free application to EPA
INDUSTRY ADOPTION	As of March 2023, more than 41,000 commercial buildings have earned the ENERGY STAR, comprising more than 6.2 billion sq ft of floor space, along with more than 250 industrial plants.
RECERTIFICATION	Can recertify annually, but original certification does not lose validity

For More Information:

- About ENERGY STAR
- Score Criteria
- Eligibility

ENERGY STAR is a straightforward and cost-effective way for buildings to earn recognition for achieving a high standard of energy performance. If local benchmarking laws are in place, energy utilities may be required to provide aggregated whole-building data, and in some cases, utilities can automatically transfer energy data into a building owner's Portfolio Manager account. See this tool from ENERGY STAR to see if your local utility provides aggregated whole-building energy data.

*ENERGY STAR also offers certification for existing homes, new homes, industrial plants, and products. For product certification information, see page 63.

Fitwel Healthy Building Certification

Fitwel is a flexible and affordable certification option as it has no minimum requirements and pairs well with an operational certification such as Green Globes or LEED.

Created by the U.S. Centers for Disease Control (CDC) and General Services Administration (GSA), Fitwel Healthy Building Certification is a building certification system focused on health and well-being. Fitwel v2.1 is the predominant standard version used currently, while Fitwel is planning a December 2023 beta launch of v3. Both versions are applicable to both new and existing buildings, offering both Design Certification and Built Certification on the status of the project. The Fitwel Standard offers customized scorecards for both existing and new buildings and sites, allowing each project to maximize its potential to attain Fitwel's Healthy Building Certification.

For More Information:

- FAQ
- Scorecards

VERIFIED

YEAR BEGAN	2011
AREAS OF FOCUS	Health and well-being
MANAGING ORGANIZATION	The Center for Active Design
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Community, Commercial and Industrial Site, Senior Housing, Multi-Tenant Base Building, Multi-Tenant Whole Building, Single Tenant Building, Commercial Interior Space, Retail, and Multifamily Residential Building
ELIGIBLE BUILDINGS	None excluded except townhomes and single-family homes
SCORING SCALE	One star (90–104 points); Two star (105–124 points); Three star (125–144 points)
MINIMUM REQUIREMENT FOR CERTIFICATION	Requirements depend on certification (design or built); score depends on presence of design and operations strategies that contribute to a healthy environment. There are no prerequisites to begin certification process.
APPLICATION REVIEW TIME	12–16 weeks
CERTIFICATION FEES	$500 registration fee; $6,500 to $13,000+ building fee based on square footage
INDUSTRY ADOPTION	1,000+ projects certified or pending certification
RECERTIFICATION	Every three years

Green Globes

VERIFIED

Green Globes is an exceptional program especially when evaluating a building's performance and mechanical designs to improve energy and water efficiency. It is recognized for full credit for green building certifications under GRESB. Green Globes certification will positively impact a company's GRESB ranking.

Launched in Canada in 2000 and adopted in the U.S. in 2006, Green Globes is an international nonprofit dedicated to reducing climate impacts by improving the built environment. Green Globes mainly certifies offices, multifamily, hospitals, and industrial buildings under the six main category types: Core & Shell, Sustainable Interiors, New Construction, Existing Buildings, Multifamily New Construction, and Multifamily Existing Buildings.

For More Information:

- Fees

YEAR BEGAN	2000
AREAS OF FOCUS	Project (NC) / ESG Management (EB), Site, Energy, Water, Materials, Indoor Environment
MANAGING ORGANIZATION	Green Building Initiative (GBI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All commercial and multifamily
ELIGIBLE BUILDINGS	New construction, core and shell, sustainable interiors, existing buildings
SCORING SCALE	1,000 points across categories weighted based on environmental impact. One Green Globes: 35–54% Two Green Globes: 55–69% Three Green Globes: 70–84% Four Green Globes: 85–100%
MINIMUM REQUIREMENT FOR CERTIFICATION	Must achieve at least 35% of total applicable points; site assessment required. Be an enclosed structure or a space within an enclosed structure. Have a contiguous project boundary and its site be: a minimum of 400 sq ft, constructed as a fixed structure on a permanent site, designed for human occupancy.
APPLICATION REVIEW TIME	Final report and certificate delivered within four to six weeks of site assessment. Expedited process available for additional fee.
CERTIFICATION FEES	$1,500 for registration; $6,725 to $34,500 depending on program and square footage
INDUSTRY ADOPTION	3,282 projects certified; 611,914,166 sq ft of commercial real estate as of November 2023
RECERTIFICATION	Does not expire; recommended every three to five years

Reference: [55]

Green Star

VERIFIED

While licensed in other countries, Green Star itself is only suited for projects located in Australia. It is the most popular green building certification in the country.

Green Star is the sole, national, voluntary green building certification program in Australia. Developed specifically for the Australian environment, Green Star has certified thousands of sustainable fit-outs, buildings, homes, and communities across the country. The scheme certifies new and existing buildings, precincts, and volume homes through its five rating tools: Buildings, Performance, Interiors, Communities, and Homes. GBCA also licensed the New Zealand Green Building Council and Green Building Council South Africa to use its Green Star rating tools in the New Zealand and African markets.

For More Information:

- FAQ Page
- Fact Sheet

YEAR BEGAN	2003
AREAS OF FOCUS	Sustainability: energy, transport, water, materials, emissions, etc.
MANAGING ORGANIZATION	Green Building Council of Australia
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	Australia
ELIGIBLE PROPERTY TYPES	Residential, commercial: office, multifamily, retail, etc.
ELIGIBLE BUILDINGS	New or existing buildings, new fit out, master-planned precinct. Tools for: buildings, homes, interiors, performance, and communities
SCORING SCALE	1–6 stars (1: minimum practice, 2: average practice, 3: good practice, 4: best practice, 5: Australian excellence, 6: World leadership)
MINIMUM REQUIREMENT FOR CERTIFICATION	Tool-dependent; must be rated by 3rd-party assessor. To achieve a Green Star rating, a building must meet 15 minimum expectation credits. A building needs at least 45 points to achieve a 4 Green Star rating.
APPLICATION REVIEW TIME	Two rounds of assessment; approximately 10–12 weeks total
CERTIFICATION FEES	$15,000 to $120,000+ (buildings); $3,300 to $3,900 for Performance
INDUSTRY ADOPTION	55.5 million m^2 of certified building space; 400+ new buildings certified as of March 2023
RECERTIFICATION	Every three years and 90 days after the date of the Performance Rating certificate. Yearly reviews are required to maintain Green Star certification.

HQE has many similarities to BREEAM in both structure and content. There have been attempts to consolidate a more singular standard for green building certification among European countries; however, HQE and BREEAM still operate as separate standards in the region.

HQE (Haute Qualité Environnementale)

France's HQE (Haute Qualité Environnementale or High-Quality Environment) building certifications are issued internationally by two official certifying agencies: Certivea (non-residential buildings through HQE Building and HQE Sustainable Building certifications) and Cerqual (housing through HQE Residential certification). HQE Building and HQE Sustainable Building are subcategorized into three phase-specific designations: Construction, Renovation, and Operation.

For More Information:

- Cerqual
- Cerqual Details
- Certivea
- Certivea Scoring

YEAR BEGAN	1996
AREAS OF FOCUS	Energy, water, waste, carbon, adaptation to climate change, health, comfort, project governance, circular economy, biodiversity, inclusive design, local economy, lifecycle analysis
MANAGING ORGANIZATION	Alliance HQE-GBC France
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	France and other European countries
ELIGIBLE PROPERTY TYPES	Homes, offices, retail, warehouses, hotels, childcare centers, schools, museums, hospitals, etc.
ELIGIBLE BUILDINGS	New construction, existing buildings, major renovations
SCORING SCALE	Good, Very Good, Excellent, Exceptional
MINIMUM REQUIREMENT FOR CERTIFICATION	Cerqual awards 1-4 stars for each category (quality of life, economic performance, respect for the environment), and awards an HQE certification from Good to Exceptional based on the total number of stars earned (1–5 = Good, 6 = Very Good, 7–9 = Excellent, 10–12 = Exceptional.
APPLICATION REVIEW TIME	Three to five years to achieve certification, which can then be disclosed as such (e.g., HQE Certified 2023–2025)
CERTIFICATION FEES	Depends on project size and scope, but approximately $20,000 on average
INDUSTRY ADOPTION	Used in 26 countries, with 25% of France's collective housing being HQE-certified
RECERTIFICATION	three to five years

Reference: [56]

IREM Certified Sustainable Property (CSP)

IREM CSP is a cost-effective, holistic certification that is a great starting point for green building certifications. It pairs well with ENERGY STAR certifications and health and wellness programs such as Fitwel or WELL. Benchmarking is required for the CSP. IREM's Best Practices guide advises using a tool like ENERGY STAR® Portfolio Manager® to track consumption and identify savings. LEED- and ENERGY STAR- certified properties are eligible to fast-track to the CSP.

IREM Certified Sustainable Property (CSP) certification is a U.S.-based program for existing office properties, multifamily communities, and shopping centers. IREM CSP maintains a directory of all certified properties and has lauded its affordability in relation to other green building certifications. IREM partners with ENERGY STAR, incorporating ENERGY STAR tools into its recommendations; attaining ENERGY STAR building certification results in earning points at various junctures in the CSP program process.

For More Information:

- FAQ

VERIFIED

YEAR BEGAN	2015
AREAS OF FOCUS	Energy, water, health, recycling, purchasing
MANAGING ORGANIZATION	Institute of Real Estate Management (IREM)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	U.S. and Canada
ELIGIBLE PROPERTY TYPES	Existing office, industrial, medical office, senior housing, multifamily, retail properties, and, new in September 2023, self-storage facilities
ELIGIBLE BUILDINGS	Office: minimum of 25,000 sq ft; Multifamily: 25 unit minimum Must be at least 75% occupied, existing building for at least 18 months, ENERGY STAR score >50
SCORING SCALE	0–90
MINIMUM REQUIREMENT FOR CERTIFICATION	Complete 15 baseline requirements, must accumulate 62 points across the five sustainability categories, at least two points per category
APPLICATION REVIEW TIME	Three to eight weeks
CERTIFICATION FEES	IREM members: $695 Non-members: $1,155
INDUSTRY ADOPTION	1,700+
RECERTIFICATION	Must recertify after three years

Reference: [57]

LEED (v5)

VERIFIED

Leadership in Energy and Environmental Design

Across 185+ countries and 185,000 certified projects, LEED has become one of the most widely known green building rating systems in the world. Launched in 1998 by the U.S. Green Building Council (USGBC), LEED has evolved with several versions published since its inception. It currently comprises six major subcategories, four of which are covered in more detail below: Building Design and Construction (BD+C), Interior Design and Construction (ID+C), Building Operations and Maintenance (O+M), Residential, Neighborhood Development, and Cities and Communities. As of December 2023, LEED v5 is available for LEED O+M and is slated for other category launches in 2024. LEED v5's new emphases include continuous assessment of indoor air quality, equity and social impact, climate resilience, and decarbonization.

For More Information:

- Volume certification
- FAQ
- Pricing Calculator

YEAR BEGAN	1998
AREAS OF FOCUS	Carbon, energy, water, waste, transportation, materials, health, and indoor environmental quality
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI) and USGBC
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
STANDALONE SUBCATEGORIES OF CERTIFICATION BY TYPOLOGY (SEE NEXT PAGE FOR DETAILS)	LEED for Building Design and Construction (BD+C), LEED for Residential, LEED for Building Operations and Maintenance (O+M), LEED for Interior Design and Construction (ID+C). Offered, but not covered in this guidance report: LEED for Neighborhood Development and LEED for Cities and Communities
VOLUME CERTIFICATION	Available through LEED volume. To be eligible for volume certification, organization must own, manage, or lease real estate and its projects must be: 1) all under the control of the same owner or developer; and 2) new construction or major renovation projects that can utilize LEED ID+C including all adaptations or LEED BD+C including all adaptations, not including Residential and Multifamily Midrise.
INDUSTRY ADOPTION	More than 105,000+ LEED projects certified worldwide; 185+ countries

LEED
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

USGBC has outlined five primary guiding principles for LEED v5: 1) Decarbonizing the building industry swiftly, 2) creating resilient and adaptive built environments, 3) investing in human health and well-being, 4) creating equitable environments where DEI can thrive, and 5) supporting flourishing ecosystems through regenerative development practices. With this version update, LEED is moving even more toward a comprehensive performance focus.

VERIFIED

LEED

	LEED BD+C	LEED RESIDENTIAL	LEED O+M	LEED ID+C
NEW CONSTRUCTION OR EXISTING BUILDINGS	New construction and major renovations	New construction and major renovations	Existing buildings and interior spaces	New construction and existing commercial interior spaces
ELIGIBLE PROPERTY TYPES	Commercial, industrial, residential, institutional, healthcare, data centers, public, hospitality and tourism, cultural and recreational, transportation hubs, mixed-use development and more	Retail, shopping centers, outlets, big box retailers, mixed-use development, retail chains, showrooms	Commercial, industrial, residential, institutional, healthcare, data centers, public, hospitality and tourism, cultural and recreational, transportation hubs, mixed-use development and more	Commercial, retail, hospitality and lodging, institutional, healthcare, cultural and recreational, showrooms, mixed-use development
ELIGIBLE BUILDINGS	Minimum 1,000 sq ft or gross floor area (GFA). Must be in a permanent location on existing land and have reasonable boundaries	At least 60% of the project's gross floor area must be complete by the time of certification. The project must include the entire building's GFA. The project must include a minimum of 1,000 sq ft of GFA. No more than 40% of the certifying GFA of a LEED project may consist of incomplete space.	Minimum 1,000 sq ft or GFA. Must be in a permanent location on existing land and have reasonable boundaries	Minimum 250 sq ft or GFA. Must be in a permanent location on existing land and have reasonable boundaries
MINIMUM REQUIREMENTS FOR CERTIFICATION	Must be in a permanent location on existing land, must use reasonable LEED boundaries, must comply with project size requirements	Must be in a permanent location on existing land, must use reasonable LEED boundaries, must comply with project size requirements	Must be in a permanent location on existing land, must use reasonable LEED boundaries, must comply with project size requirements	Must be in a permanent location on existing land, must use reasonable LEED boundaries, must comply with project size requirements
CERTIFICATION PROGRAM FEES ($)	Fee varies per sq ft. Registration: $1,350 for members and $1,700 for non-members	More specific information available under Residential fees on the USGBC website	Fee varies per sq ft. Registration: $1,350 for members and $1,700 for non-members	Fee varies per sq ft. Registration: $1,350 for members and $1,700 for non-members
APPLICATION REVIEW TIME	20–25 business days	20–25 business days	20–25 business days	20–25 business days
SCORING SCALE	Certified: 40–49 Silver: 50–59 Gold: 60–79 Platinum: 80+	Certified: 40–49 Silver: 50–59 Gold: 60–79 Platinum: 80+	Certified: 40–49 Silver: 50–59 Gold: 60–79 Platinum: 80+	Certified: 40–49 Silver: 50–59 Gold: 60–79 Platinum: 80+
RECERTIFICATION	N/A at this time	N/A at this time	Every three years. Focuses on the project's performance during its operational phase.	N/A at this time

LEED Zero (complement to LEED)

VERIFIED

YEAR BEGAN	2018
AREAS OF FOCUS	Carbon, energy, water, waste
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI) and USGBC
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Commercial and Residential
ELIGIBLE BUILDINGS	Existing certified LEED BD+C or O+M projects
SCORING SCALE	None
MINIMUM REQUIREMENT FOR CERTIFICATION	Carbon (carbon balance of zero); Energy (source energy use balance of zero); Water (water use balance); Waste (TRUE Zero Waste Platinum certification); 12 months of performance data
APPLICATION REVIEW TIME	15–20 business days
CERTIFICATION FEES	No registration fee. Certification ranges $1,680 to $3,350; varies based on the size of each project.
INDUSTRY ADOPTION	N/A
RECERTIFICATION	Valid for three years

LEED
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

LEED Zero is a great compliment to any high-performing building that is looking for the next step in sustainable building operations. For example, if a project team has consistently hit LEED Platinum for their Operations and Management project over several recertifications and is looking for that next threshold of achievement, LEED Zero would be a good option. They will need to assess the project's specific strong suit (i.e., energy, carbon, water, or waste) and pursue one or multiple of the LEED Zero options. The documentation is fairly simple, so turnaround can be quick. It is a great program for distinction beyond a typical LEED or other green building certification.

Building on the work of LEED, the USGBC launched LEED Zero to verify the achievement of net zero goals in existing buildings through four categories: LEED Zero Energy, LEED Zero Carbon, LEED Zero Waste, and LEED Zero Water. LEED Zero is for existing buildings that are already LEED BC+D or O+M certified. For all categories but waste, the following documentation is required:

- Utility bills for all energy and water sources, with consumption values and dates highlighted
- Calculations showing net zero balance ≤ 0

For Carbon and Energy tools only, the following documentation is required:

- Documentation for each source of renewable energy, including purchase contract for off-site renewable energy, or purchase contract for carbon offsets, as applicable.

The Water tool requires:

- Narrative description of alternative water sources and water returned to original water source

The Waste tool requires:

- TRUE Zero Waste Platinum certification

For More Information:

- Program Guide
- Fees

Living Building Challenge (LBC)

VERIFIED

The Living Building Challenge is one of the most rigorous certifications available, considering all aspects of a building from the materials used, design elements, and the building's ongoing performance. This sustainable design framework may be best suited for those companies who already have sustainability teams in place adept at operational energy, water, and waste efficiency and are ready to move to regenerative, net positive construction. Current version LBC 4.0. Update scheduled spring 2024.

The Living Building Challenge (LBC) is a holistic performance-based standard that aims to transform how the built environment sector approaches every act of design and construction from a notion of "doing no harm" to one of creating a positive impact. Living buildings are regenerative, self-sufficient, healthy, and provide a connection to nature and culture. To achieve Living certification, all requirements must be met as demonstrated over 12 consecutive months of building operation. Meeting the Challenge requires "leading-edge technical knowledge, an integrated design approach, and design and construction teams well-versed in advanced practices related to green building."

For More Information:

- The LBC Standard
- Case Studies

YEAR BEGAN	2006
AREAS OF FOCUS	Seven performance areas (or 'petals'): site, water, energy, materials, health, equity, beauty
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All, including single-family residential, multifamily, commercial/office, institutional, mixed use, medical and laboratory, etc.
ELIGIBLE BUILDINGS	New construction, existing buildings, interior projects, or landscape/infrastructure
SCORING SCALE	20 imperatives (e.g., responsible water use) across seven performance areas (e.g., water)
MINIMUM REQUIREMENT FOR CERTIFICATION	All requirements within all imperatives must be achieved
APPLICATION REVIEW TIME	Two-step process: 1) Ready audit: conducted post-construction, valid for two years; 2) Final audit: conducted after 12 months of occupancy. Audit Duration averages 55 days.
CERTIFICATION FEES	Flat fee for single-family residential; all other building types based on gross floor area: 25% at registration, 50% prior to construction, and 25% prior to preliminary audit
INDUSTRY ADOPTION	215 projects registered or certified
RECERTIFICATION	N/A at this time

NABERS

VERIFIED

In June 2023, the NABERS Renewable Energy Indicator launched, with 116 ratings issued in the first month of practice. The Indicator, which discloses the percentage of fossil fuels and clean renewable energy a building consumes, is best for those transitioning their project toward net zero through various NABERS categories.

NABERS (National Australian Built Environment Rating System) serves Australia, U.K., and New Zealand, and has piloted other licensed programs in Hong Kong, Indonesia, and India in the past. The certification is mandatory for all new buildings over 2,000 m^2 and buildings that are up for sale or lease in Australia. The main six rating types are: Carbon Neutral, Energy, Indoor Environment, Renewable Energy Indicator, Waste, and Water. The NABERS website states that its customers have saved customers "$1.7 billion in energy bills and avoided 11.57 million tons of CO_2 emissions," over the past two decades.

For More Information:

- Fees
- Handbook for estimating NABERS Ratings

YEAR BEGAN	1998
AREAS OF FOCUS	Energy, water, waste, and indoor environment
MANAGING ORGANIZATION	NABERS (via New South Wales Government)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	Australia; NABERS International serves New Zealand, United Kingdom
ELIGIBLE PROPERTY TYPES	Offices, hotels, shopping centers, apartment buildings, public hospitals, data centers, residential aged care, retirement living, warehouses, and cold stores
ELIGIBLE BUILDINGS	Required for all new office buildings over 1,000 m^2 and existing buildings that are up for sale or lease
SCORING SCALE	One to six stars on each building efficiency category: energy, water, waste, and indoor environment
MINIMUM REQUIREMENT FOR CERTIFICATION	N/A
APPLICATION REVIEW TIME	Star rating assessment is conducted after building is operational for 12 months.
CERTIFICATION FEES	Fees vary based on single rating type; lodging or combining certain single ratings (e.g., Water Rating and Energy Rating for Office Buildings) presents savings opportunities
INDUSTRY ADOPTION	8,100+ individual buildings rated at least once since start of program; 90% of Australia's office space has been rated by NABERS
RECERTIFICATION	Valid for 12 months; must recertify annually

National Green Building Standard (NGBS) Green

NGBS is the first residential green building rating system approved by ANSI, the American National Standards Institute, as an American National Standard. NGBS is a similar program to LEED for Homes; however, LEED is more stringent based on minimum requirements and prerequisites (namely minimum energy performance). LEED was also developed by a third-party organization (USGBC), whereas NGBS was developed by NAHB, an organization that works on behalf of homebuilders, which could present a potential conflict of interest.

The ICC 700 National Green Building Standard™ (NGBS) began as a response to the lack of residential property green certifications. Property certification categories include: Multifamily or Mixed-Use (include Core and Shell; Remodeling), Land Development (Includes residential and mixed-use communities), Single-Family (Includes Remodeling), Existing Building (Includes Core and Shell), and NGBS Green+. NGBS Green is the only residential green certification program that requires increasingly higher point thresholds in all categories for a home to reach the next level of certification.

For More Information:

- Fees

YEAR BEGAN	2009
AREAS OF FOCUS	Site design, resource efficiency, water and energy efficiency, indoor environmental quality, building operation and maintenance
MANAGING ORGANIZATION	National Association of Home Builders (NAHB)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	United States
ELIGIBLE PROPERTY TYPES	Residential: Single and multifamily
ELIGIBLE BUILDINGS	Multifamily or Mixed-Use (include Core and Shell; Remodeling), Land Development (Includes residential and mixed-use communities), Single-Family (Includes Remodeling), Existing Building (Includes Core and Shell)
SCORING SCALE	Five certification levels: Certified, Bronze, Silver, Gold, Emerald
MINIMUM REQUIREMENT FOR CERTIFICATION	Must meet mandatory provisions and minimum green building practices, depending on certification level; must be certified by accredited project verifier and pass inspections
APPLICATION REVIEW TIME	Once final verification report is submitted, certificate is issued in one business day.
CERTIFICATION FEES	Free registration; certification fee depends on property type: single family starts at $100 per home; multifamily starts at $300 per building + $30 per unit; accessory structures $150 per building. Volume pricing applies.
INDUSTRY ADOPTION	As of December 2023 there were 482,000+ NGBS Green Certified Homes (this number updates daily)
RECERTIFICATION	Not required

Reference: [58]

Nordic Swan Ecolabel

VERIFIED

To maintain its stringent requirements, the Nordic Swan Ecolabel criteria is consistently re-evaluated to ensure it stays up-to-date with the latest technical knowledge and market conditions.

The Nordic Swan Ecolabel is the official and most recognized environmental label in the Nordics (Denmark, Norway, Sweden, Finland, and Iceland), with 95% of Nordic consumers familiar with the label. The Ecolabel is a holistic certification promoting resource efficiency, reduced climate impact, a non-toxic circular economy, and the preservation of biodiversity, with tough requirements on harmful chemicals. The entire lifecycle is considered, from raw materials, production, and use to re-use, recycling, and waste. The Nordic Swan Ecolabel certifies new buildings, including:

- Buildings classified as residential buildings, including student housing, homes for the elderly, and homes for persons with disabilities.
- Educational buildings, including preschool buildings, kindergartens and day-care centers, schools, universities, and other schools for higher education. For gymnastics halls and sports halls that are constructed in the same project as an educational building the following applies: a) Gymnastics and sports halls that are an integrated part of the educational building must be included in the license and fulfill the requirements; b) Gymnastics and sports halls built as separate buildings can be included in the license and must then fulfill the requirements.
- Office buildings, including all associated facilities in the building.

YEAR BEGAN	1989
AREAS OF FOCUS	Indoor environmental quality, biodiversity, water, waste, and energy efficiency, emissions, a more circular economy
MANAGING ORGANIZATION	Ecolabelling Norway
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	Denmark, Finland, Sweden, Norway, Iceland
ELIGIBLE PROPERTY TYPES	New construction, major renovations
ELIGIBLE BUILDINGS	Offices, schools, kindergartens, homes, apartments, universities, and temporary constructions such as modules, pavilions, or annexes classified as residential buildings, offices, or educational buildings
SCORING SCALE	N/A
MINIMUM REQUIREMENT FOR CERTIFICATION	Low energy demand, which corresponds to 10 to 15% lower energy demand than the official requirement, and at least 10% lower than the level for NZEB (Nearly Zero-Energy Buildings). For existing buildings, the renovation must amount to a minimum of 25% of the existing building or at least 25% of the climate shell's total surface.
APPLICATION REVIEW TIME	Three months
CERTIFICATION FEES	Application fee of 25,000 NOK ($2,280 USD); certification fees $5,500 to $14,000+ dependent upon project type and size
INDUSTRY ADOPTION	Almost 32,000 finished building units certified — 45,000 under construction, as of January 2023
RECERTIFICATION	Whenever the standards are revised by Ecolabelling Norway (approximately every five years)

Reference: [59][60][61][62]

PEER

VERIFIED

PEER is primarily intended for larger scale project types including cities, utilities, campuses, and transit systems to ensure power grids and infrastructure are more resilient and reliable. Building-level projects with minimal control over local power grids and infrastructure are not recommended to pursue PEER. PEER is also piloting a certification for renewable energy systems.

PEER (Performance Excellence in Electricity Renewal) is the first rating system designed to measure the performance of power systems and enhance the overall dependability, durability, and quality of a building's electricity infrastructure. The certification is applicable to all types of power infrastructure, and PEER-certified projects include leading hospitals, rural cooperatives, city-owned utilities, microgrids, universities, and more. According to its website, PEER certification saves $66 million in maintenance costs and mitigates 21 million metric tons of emissions per year.

For More Information:

- PEER Guide to Certification
- Case Studies

YEAR BEGAN	2015
AREAS OF FOCUS	Electricity infrastructure and power system performance: reliability, resilience, and power quality
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI)
SINGLE OR MULTI-ATTRIBUTE	Single-attribute
REGIONAL APPLICABILITY	Global; benchmark energy efficiency values are only available for U.S. and India
ELIGIBLE PROPERTY TYPES	Power systems: cities and utilities, campuses, transit, and more
ELIGIBLE BUILDINGS	Project must be operational for at least one year to apply for certification
SCORING SCALE	Four certification levels: Certified (40–49), Silver (50–59), Gold (60–79), and Platinum (80+)
MINIMUM REQUIREMENT FOR CERTIFICATION	Earn at least 40 points to achieve 'Certified' level
APPLICATION REVIEW TIME	Once submitted, approved within 25 business days
CERTIFICATION FEES	USGBC members: $6,000 to $8,000; non-members: $8,000 to $10,000
INDUSTRY ADOPTION	36 certified projects
RECERTIFICATION	Required after three years

Phius Project Certification

VERIFIED

Phius launched its cost-optimized, climate-specific standard in 2015. It has undergone three-year cycles for revisions, including an update in 2018, 2021, and one planned for 2024. Their program incorporates two general levels of certification, Phius CORE and Phius ZERO. Phius CORE targets an aggressive level of energy efficiency achieved by emphasis on passive design paired with high performance mechanical equipment. ZERO uses the same baseline threshold as CORE but eliminates fossil-fueled combustion on site and requires producing (or procuring) enough annual renewable energy generation to offset annual energy consumption. For existing buildings, the standards are Phius CORE REVIVE and Phius ZERO REVIVE. For commercial buildings, the standards are Phius CORE COMM and Phius ZERO COMM.

For More Information:

- Phius Certification Guidebook 2023

YEAR BEGAN	2015
AREAS OF FOCUS	Energy and carbon performance, cost effectiveness, indoor environmental quality
MANAGING ORGANIZATION	Phius
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	North America
ELIGIBLE PROPERTY TYPES	Single-family residential, multifamily, campus/community, commercial/non-residential, mixed-use
ELIGIBLE BUILDINGS	New construction and retrofits
SCORING SCALE	None
MINIMUM REQUIREMENT FOR CERTIFICATION	Phius CORE: meet design and energy performance requirements, including HERS score of 30–40; Phius Zero projects also require renewable energy generation, no fossil-fuel combustion, and a HERS score of 0. Site visits are required during construction phase for relevant projects.
APPLICATION REVIEW TIME	Six to eight months
CERTIFICATION FEES	Estimated rates, varies based on square footage: minimum $2,200 to $2,750, up to $52,225
INDUSTRY ADOPTION	7,000+ units pre- or fully Phius-certified; 7.4 million sq ft of Phius pre- and fully certified projects; 42 states and provinces home to a Phius-certified project
RECERTIFICATION	Not required

Phius places an emphasis on passive design principles that are more cost-effective, quality-assured, and climate-appropriate, with customized plans for each project's specific needs. Buildings that achieve Phius Certification have typically demonstrated 40–60% reduction in energy use as compared to code-built buildings, having accomplished this reduction with minimal upfront cost premiums. Cities across the U.S. are beginning to adopt Phius Certification as a standard building code requirement, with Boston being the first major city to do so earlier in 2023.

The standard was developed so builders and developers would further prepare and consider external factors such as hazardous materials, extreme weather, and civil disturbances. An estimated 20% of RELi overlaps with LEED, supporting GRESB and ESG reporting.

RELi

After a period of being managed by the USGBC (2017–2021) RELi is once again administered by MTS. At its core, RELi is an itemized list of action items a building owner or manager can take to improve the resilience of their property. RELi follows a structure similar to LEED and other point-based rating systems and can be used as standalone certification or alongside LEED, LBC, and other rigorous standards. RELi utilizes a "living design approach" to design integrated systems that achieve the highest levels of building resilience. Projects can be developed at the building or home scale (Structure) or the district, neighborhood, campus, or urban planning scale (Community).

For More Information:

- Action Checklist
- The Living Design Approach

YEAR BEGAN	2014
AREAS OF FOCUS	Panoramic Approach, Hazard Preparedness, Hazard Adaptation, Community Vitality, Productivity/Health and Diversity, Energy/Water and Food, Materials and Artifacts, and Applied Creativity
MANAGING ORGANIZATION	The Institute for Market Transformation to Sustainability (MTS)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Commercial, residential
ELIGIBLE BUILDINGS	New construction and existing buildings
SCORING SCALE	Certified 300–349 points Silver 350–449 points Gold 450–599 points Platinum 600–800 points
MINIMUM REQUIREMENT FOR CERTIFICATION	Earn 300 points; a project must achieve 15 mandatory Requirements as outlined in the RELi v2.0 Rating System Guidelines
APPLICATION REVIEW TIME	Dependent on a number of factors, including level of certification sought
CERTIFICATION FEES	Flat registration fee and fees charged on a per-project basis and based on the size and scope of the project and level of certification sought
INDUSTRY ADOPTION	Unknown
RECERTIFICATION	Annual recertification not required, but certification may be revoked within 18 months upon successful challenge made by MTS or a third party

RESET Certification

VERIFIED

RESET is explicitly designed for implementing continuous IAQ monitoring within built environments. There is a heavy focus on collecting data and using that data on a global scale. The certification addresses many IAQ parameters and pairs well with WELL.

Experiencing growth in the United States and China, the RESET Standard and accompanying certification is modularized into two main categories (Embodied and Operational), which break down into RESET Embodied, RESET Air, RESET Energy, RESET Water, and RESET Waste. RESET Certification emphasizes individualized data monitoring and collection over prescriptive pathways. Projects seeking RESET certification can progress through four statuses toward achieving certification: RESET Entry, which is best for initial commissioning and gap analysis; RESET Connected, which is for projects starting to utilize the RESET Cloud for analytics; RESET Pre-Accredited, which is for projects that pass the RESET Standard documentation audit; and RESET Accredited, which is awarded to projects that have met all monitoring deployment criteria, and have submitted quality data to third party verifiers, but have not yet met the performance-based criteria.

For More Information:

- RESET Projects

YEAR BEGAN	2013
AREAS OF FOCUS	Air, Energy, Water, Waste
MANAGING ORGANIZATION	RESET
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Core & Shell, Commercial interiors
ELIGIBLE BUILDINGS	All types of buildings are eligible.
SCORING SCALE	No scoring scale, but the five project statuses are: Entry, Connected, Pre-Accredited, Accredited, and Certified
MINIMUM REQUIREMENT FOR CERTIFICATION	Project must: be registered with RESET, utilize RESET Accredited Monitors and a RESET Accredited Data Provider, install monitors in accordance with the corresponding RESET Standard, meet all monitor calculation requirements and deploy the correct quantity of monitors according to the respective RESET Standard, pass the documentation audit as performed by an official RESET Auditor, where the pre-deployment plan becomes the Approved Deployment plan of record, and pass the site audit as performed by an official RESET Auditor as well as the Data Audit.
APPLICATION REVIEW TIME	At least six months. Approximately one to two weeks to determine monitor deployment. Two weeks for Documentation Audit. One month to purchase, install, and connect monitors and data provider with the RESET Cloud. Two to four weeks for Site Audit. Three months minimum to pass threshold requirements.
CERTIFICATION FEES	Fees dependent on project size and other factors. First year Commercial Interiors: $2,000 to $17,300; $670 to $11,700 annually after first year. First year Core & Shell: $3,800 to $19,000; $1,000 to $9,500 annually after first year. Includes one project documentation audit, one site audit, and annual RESET Cloud access.
INDUSTRY ADOPTION	160+ projects
RECERTIFICATION	Valid as long as RESET Cloud Access is maintained and project does not fall below RESET Standard thresholds for more than three consecutive months

Reference: [63][64]

SITES

VERIFIED

THE Sustainable SITES Initiative®

SITES sets an extremely high standard in terms of biodiversity-related metrics for green project certifications. GBCI is currently piloting a SITES certification for existing built landscapes. SITES can be used as a standalone system or in tandem with LEED.

Alongside EDGE, PEER, and TRUE, SITES is another of GBCI's certification systems that aims to produce a more sustainable built environment, fostering important ecosystem services through land conservation and ecological restoration, reducing water consumption, managing stormwater runoff, boosting biodiversity, creating habitats for pollinators and wildlife, curtailing energy usage, enhancing air and water quality, promoting human well-being and social equity, and expanding outdoor recreation and education possibilities. SITES for outdoor landscapes and spaces was originally developed by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden. It is being used by over 330 projects in 22 countries and has been adopted into policy in the U.S. at federal, state, and municipal levels.

For More Information:

- Project Directory

YEAR BEGAN	2015
AREAS OF FOCUS	Water, wildlife habitat, energy, air quality, human health and well-being, outdoor recreation opportunities, soil, vegetation, biodiversity, education, social equity
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	Development projects located on sites with or without buildings: open spaces, streetscapes and plazas, commercial real estate, residential areas, institutional/hospital campuses.
ELIGIBLE PROJECT SITES	New construction and major renovations; government, academic, and mixed use; minimum project size: 2,000 sq ft. Precertification is available for projects in their planning phases.
SCORING SCALE	0–200; Certified (70–84), Silver (85–99), Gold (100–134), Platinum (135+)
MINIMUM REQUIREMENT FOR CERTIFICATION	Must score at least 70
APPLICATION REVIEW TIME	Preliminary and final: 20 to 25 days per review phase
CERTIFICATION FEES	USGBC and ASLA Members: $8,000 to $9,000 (precertification is an additional $2,500) Non-members: $9,500 to $12,000 (pre-certification is an additional $3,500)
INDUSTRY ADOPTION	More than 1.27 billion gross sq ft of outdoor space
RECERTIFICATION	Permanent; can be challenged and revoked within 18 months of certification

Reference: [65]

Total Resource Use and Efficiency (TRUE)

VERIFIED

TRUE (Total Resource Use and Efficiency) is GBCI's certification system focused on waste diversion and resource management, with a goal of zero waste. TRUE, which was originally created by U.S. Zero Waste Business Council in 2013, recently began certifying events in addition to buildings, assessing how they perform in minimizing their non-hazardous, solid wastes and maximizing resource efficiency. In 2022, TRUE launched a pilot program for Construction Projects. Construction projects may achieve precertification or certification, and eligible construction may include any completed new construction or major renovation projects.

For More Information:

- Certification Guide
- Fees

TRUE extends beyond typical recycling and diversion practices at the building level. It takes a more comprehensive and holistic approach to waste by looking at opportunities such as reduction, reuse, and redesign for implementing closed-loop and circular systems. All levels of management are considered, including upstream supply chains and where the waste ends up after material use.

YEAR BEGAN	2017
AREAS OF FOCUS	Waste diversion and resource management
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI)
SINGLE OR MULTI-ATTRIBUTE	Single-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All property types
ELIGIBLE BUILDINGS	Any physical facility and its operations must be operational for at least 12 months
SCORING SCALE	0–81; Certified (31–37), Silver (38–45), Gold (46–63), Platinum (64–81)
MINIMUM REQUIREMENT FOR CERTIFICATION	Must attain 31/81 credit points and meet six minimum program requirements (e.g., 90% diversion from landfill)
APPLICATION REVIEW TIME	Preliminary and final review: four to five weeks total
CERTIFICATION FEES	USGBC Silver, Gold and Platinum Level Members: flat registration fee of $1,200 and project size-based certification fees starting at $3,500 with starting rate of $0.018/square foot. Precertification fee of $2,500. Non-members: flat registration fee of $1,500 and project size-based certification fees starting at $4,375 with starting rate of $0.023/square foot. Precertification fee of $3,125.
INDUSTRY ADOPTION	327 projects and 136 million+ gross sq ft certified across 32 countries
RECERTIFICATION	Must recertify every three years

WELL Building Standard

WELL is a stringent health and wellness certification. It requires third-party testing and verification of the documented preconditions and optimizations. It is an excellent option for new developments or the highest IEQ performing assets. You can streamline the certification by submitting the application alongside a LEED application for the asset.

WELL v2, the second version of the WELL Building Standard, prioritizes human health and well-being through research-backed design, protocols, and a global community of experts. Created in 2013 and updated to v2 in 2020, the standard aims to benefit a variety of populations, especially disadvantaged and vulnerable communities. WELL v2 offers participants the ability to customize their WELL scorecard according to their project specs, occupant need, and overall health and well-being goals. It also offers four related certifications specific to certain criteria: WELL at Scale for volume certification; WELL Health-Safety, which is focused on emergency preparedness, stakeholder engagement, and various health variables; WELL Equity for diversity, equity, inclusion, and transparency; and WELL Performance, which utilizes continuous monitoring systems and data-based insights into improved IEQ. All but WELL at Scale can exist as standalone certifications or progressive building blocks to a WELL Building Standard certification.

For More Information:

- Performance Verification Guidebook
- Certification Timeline Estimator Tool

VERIFIED

YEAR BEGAN	2013
AREAS OF FOCUS	10 concepts: Air, Water, Nourishment, Light, Movement, Thermal Comfort, Sound, Materials, Mind, and Community
MANAGING ORGANIZATION	International WELL Building Institute™ (IWBI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
STANDALONE SUBCATEGORIES OF CERTIFICATION BY TYPOLOGY (SEE NEXT PAGE FOR DETAILS)	WELL at Scale, WELL Health-Safety, WELL Equity, WELL Performance
ELIGIBLE PROPERTY TYPES	Office, residential, retail, educational, industrial, hospitality
ELIGIBLE BUILDINGS	Must be 75% occupied
SCORING SCALE	Bronze (40–49), Silver (50–59, Gold (60–79), Platinum (80+)
MINIMUM REQUIREMENT FOR CERTIFICATION	Minimum points across all 10 concept preconditions; on-site testing
APPLICATION REVIEW TIME	20–25 business days (four rounds of review)
CERTIFICATION FEES	Registration: $2,500; Program fee: $0.16/sq ft ($8,000 to $98,000); On-site performance testing: starts at $8,000
INDUSTRY ADOPTION	40,000+ projects; 4.7 billion sq ft; 124 countries
RECERTIFICATION	Every three years

VERIFIED

WELL

	WELL AT SCALE	WELL HEALTH-SAFETY	WELL EQUITY	WELL PERFORMANCE
NEW CONSTRUCTION OR EXISTING BUILDINGS	Existing buildings, buildings under renovation, and new construction	Existing buildings, buildings under renovation, and new construction	Existing buildings, buildings under renovation, and new construction	Existing buildings, buildings under renovation, and new construction
ELIGIBLE PROPERTY TYPES	Commercial, multi-unit/family residential systems, industrial, hospitality, airports, fitness, coworking, education, higher education, retail, healthcare	Commercial, multi-unit/family residential systems, industrial, hospitality, airports, fitness, coworking, education, higher education, retail, healthcare	Commercial, multi-unit/family residential systems, industrial, hospitality, airports, fitness, coworking, education, higher education, retail, healthcare	Commercial, multi-unit/family residential systems, industrial, hospitality, airports, fitness, coworking, education, higher education, retail, healthcare
ELIGIBLE BUILDINGS	To achieve compliance with WELL at Scale, a minimum of five locations must be included.	N/A	N/A	N/A
MINIMUM REQUIREMENTS FOR CERTIFICATION	A site visit is required.	A minimum of 15 out of the 20 specified action areas must be met. A site visit is required.	A minimum of 21 points out of the 40 specified action areas must be met. A site visit is required.	A minimum of 21 points out of the 30 specified action areas must be met. A site visit is required.
CERTIFICATION PROGRAM FEES ($)	Enterprise: flat fee based on location count. Portfolio: cost per location. E.g., an Enterprise subscriber with 75 locations pays $65,000, and a Portfolio subscriber with 60 locations pays $67,500, including minimum pricing for each tier.	Pricing is tiered based on number of locations. Single location: $5,000 2–10: $1,300 11–50: $1,000 51–100: $750 etc. Cap of $166, 000	Pricing is tiered based on number of locations. Single location: $5,000 Multiple locations: minimum of $17 per location	Pricing details, including fees for enrollment and on-site testing, are coming soon.
APPLICATION REVIEW TIME	Variable. IWBI offers Timeline Estimator tool.	Variable. IWBI offers Timeline Estimator tool.	Variable. IWBI offers Timeline Estimator tool.	Variable. IWBI offers Timeline Estimator tool.
SCORING SCALE	Bronze: 40–49 Silver: 50–59 Gold: 60–79 Platinum: 80–100	None. Healthy and Safety Seal is earned or not.	None. WELL Equity Rated or not.	None. WELL Performance Rated or not.
RECERTIFICATION	Annual	Annual	Annual	Annual

Zero Carbon Certification (ZC)

VERIFIED

Current version ZC 1.0. Update scheduled for Spring 2024. As with other ILFI standards, ZC sets a high bar for its attribute of focus; in this case, that is carbon emissions in the built environment.

Zero Carbon Certification is the first global zero carbon third-party certified standard. ZC is a broad-based tool for highlighting highly energy efficient buildings that eliminate combustion and are designed and operated to fully account for their carbon emissions impacts. Projects achieving Zero Carbon certification: 1) demonstrate over a 12-month period that 100% of operational energy is offset by new on- or off-site renewable energy, and 2) disclose and offset 100% of embodied carbon emissions associated with construction and project materials.

For More Information:

- ZC Standard
- Embodied Carbon Guidance
- Case Studies

YEAR BEGAN	2018
AREAS OF FOCUS	Carbon neutrality for both operational and embodied carbon emissions
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
SINGLE OR MULTI-ATTRIBUTE	Single-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All, including single-family residential, multifamily residential, commercial, institutional, mixed-use, medical and laboratory buildings
ELIGIBLE BUILDINGS	New construction, existing buildings, interiors
SCORING SCALE	Bronze (40-49), Silver (50–59, Gold (60–79), Platinum (80+)
MINIMUM REQUIREMENT FOR CERTIFICATION	Building must be occupied and demonstrate net zero carbon operations across 12-month period: 25–30% energy use intensity reduction, 100% renewable energy, no new combustion sources.Embodied carbon emissions: minimum 10% reduction, total emissions cannot exceed 500 kg-CO_2e/m^2, all emissions must be offset.
APPLICATION REVIEW TIME	Two-step process: 1) Ready audit: conducted post-construction, valid for two years; 2) Final audit: conducted after 12 months of occupancy. Audit duration averages 55 days.
CERTIFICATION FEES	Flat fee for single-family residential, all other building types based on gross floor area: 25% at registration, 50% prior to construction, and 25% prior to preliminary audit.
INDUSTRY ADOPTION	133 registered or certified projects
RECERTIFICATION	N/A at this time

Zero Energy Certification (ZE)

VERIFIED

Current version ZE 1.0. Update scheduled for Spring 2024. As with other ILFI standards, ZE sets a high bar for its attribute of focus; in this case, that is renewable energy use.

Since 2010, the requirements of the Zero Energy Certification program (ZE) have reflected a concept of a project living within the carrying capacity of its site, utilizing only the energy resources available locally. Zero Energy certification requires that 100% of the building's energy needs on a net annual basis be supplied by on-site renewable energy. To achieve ZE, projects need to decarbonize and demonstrate that the project has used no more energy than it has generated over a 12-month performance period.

For More Information:

- ZE Standard
- Case Studies

YEAR BEGAN	2010
AREAS OF FOCUS	Energy performance, renewable energy
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
SINGLE OR MULTI-ATTRIBUTE	Multi-attribute
REGIONAL APPLICABILITY	International
ELIGIBLE PROPERTY TYPES	All; single-family residential, multifamily, commercial/office, mixed-use, institutional, medical and laboratory, etc.
ELIGIBLE BUILDINGS	New construction and existing buildings
SCORING SCALE	All requirements must be met to be certified
MINIMUM REQUIREMENT FOR CERTIFICATION	100% of the building's energy needs on a net annual basis must be supplied by on-site renewable energy
APPLICATION REVIEW TIME	Two-step process: 1) Ready audit: conducted post-construction, valid for two years; 2) Final audit: conducted after 12 months of occupancy. Audit duration averages 55 days.
CERTIFICATION FEES	Flat fee for single-family residential, all other building types based on gross floor area: 25% at registration, 50% prior to construction, and 25% prior to preliminary audit.
INDUSTRY ADOPTION	243 registered or certified projects
RECERTIFICATION	N/A at this time

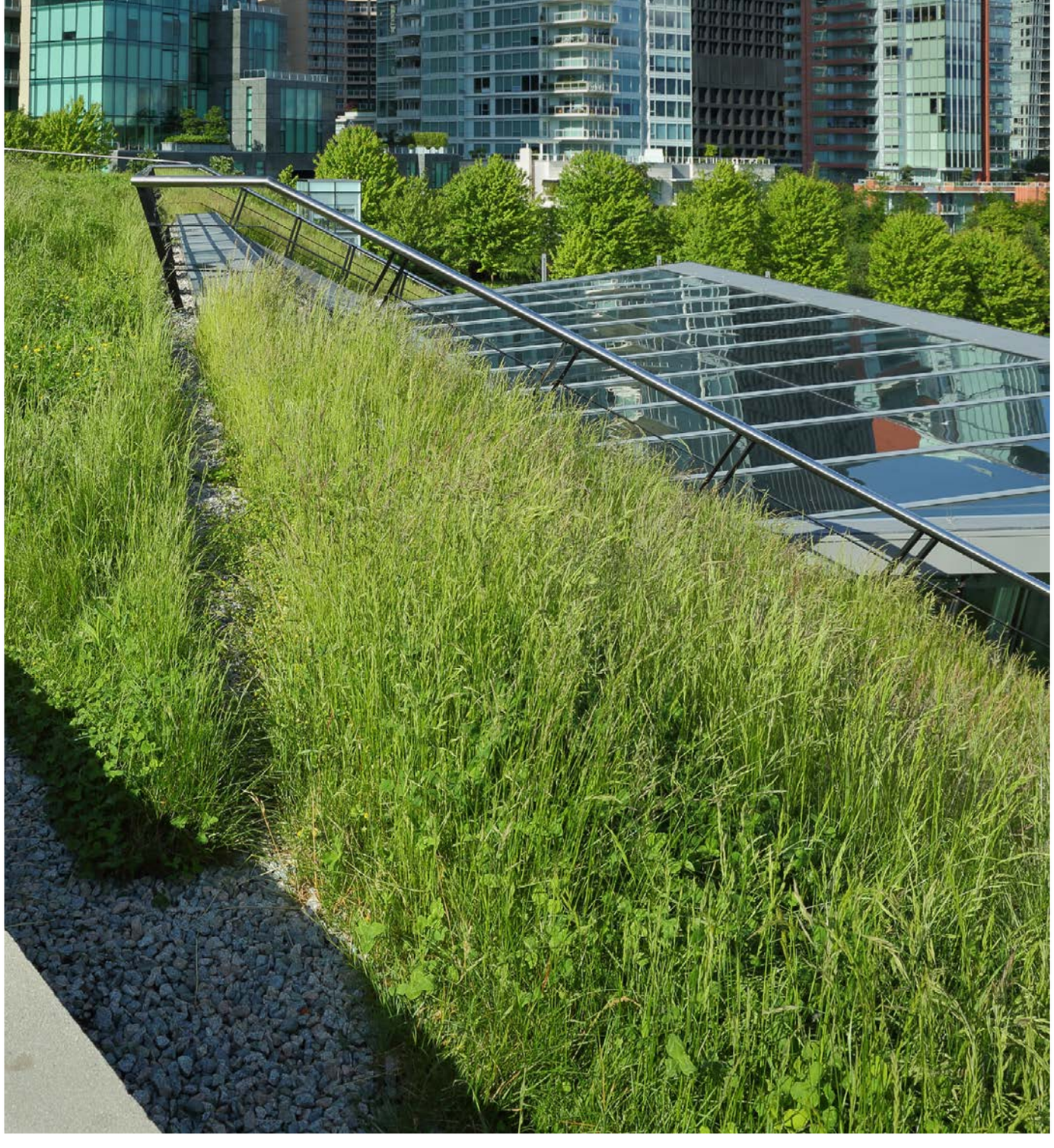
Additional Building Certifications and Rating Systems

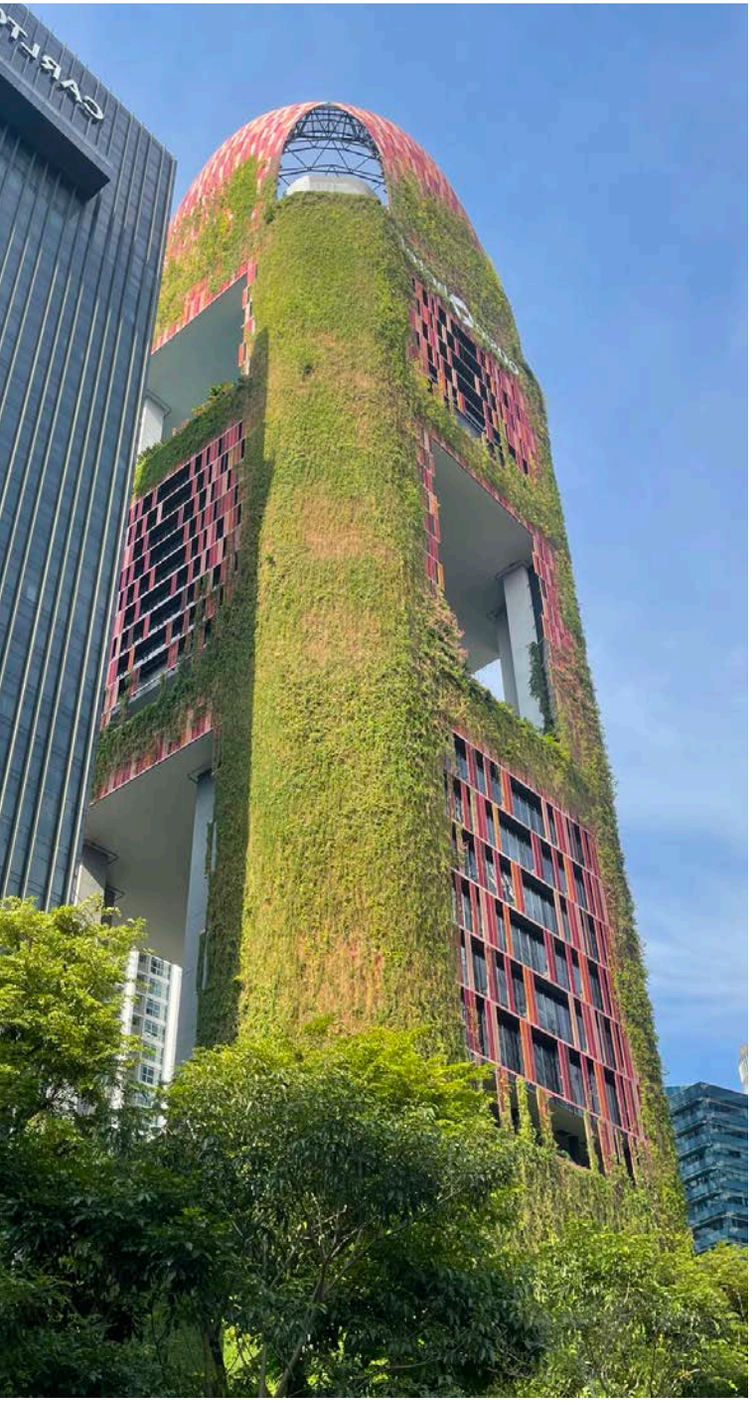
There are numerous regional and international green building certification systems that we have not covered in greater detail, either because we were not able to confirm data with the organization, its industry adoption is low, or it is a national certification that has not yet extended outside the borders of its country of origin. Below is an exhaustive, though not comprehensive, summary of those regional certifications. They likely have had and will continue to have a significant impact on the global mitigation of climate change effects, the reduction of GHGs, and the proliferation of green building codes and other promising policies related to sustainable real estate.

Dozens of national green building councils around the world — many of which are listed on the World Green Building Council's website as member councils — manage their own green building rating systems in addition to adhering to the standards of international rating systems such as BREEAM or LEED. Nonprofit organizations make up the majority of other entities managing green building certifications across the globe.

AFRICA

In 2007, Green Building Council South Africa obtained the license to use Australia's Green Star rating tools and launched Green Star South Africa. It has since become the leading green building certification scheme across the African continent, certifying nearly 1,000 buildings as of December 2022.[66]

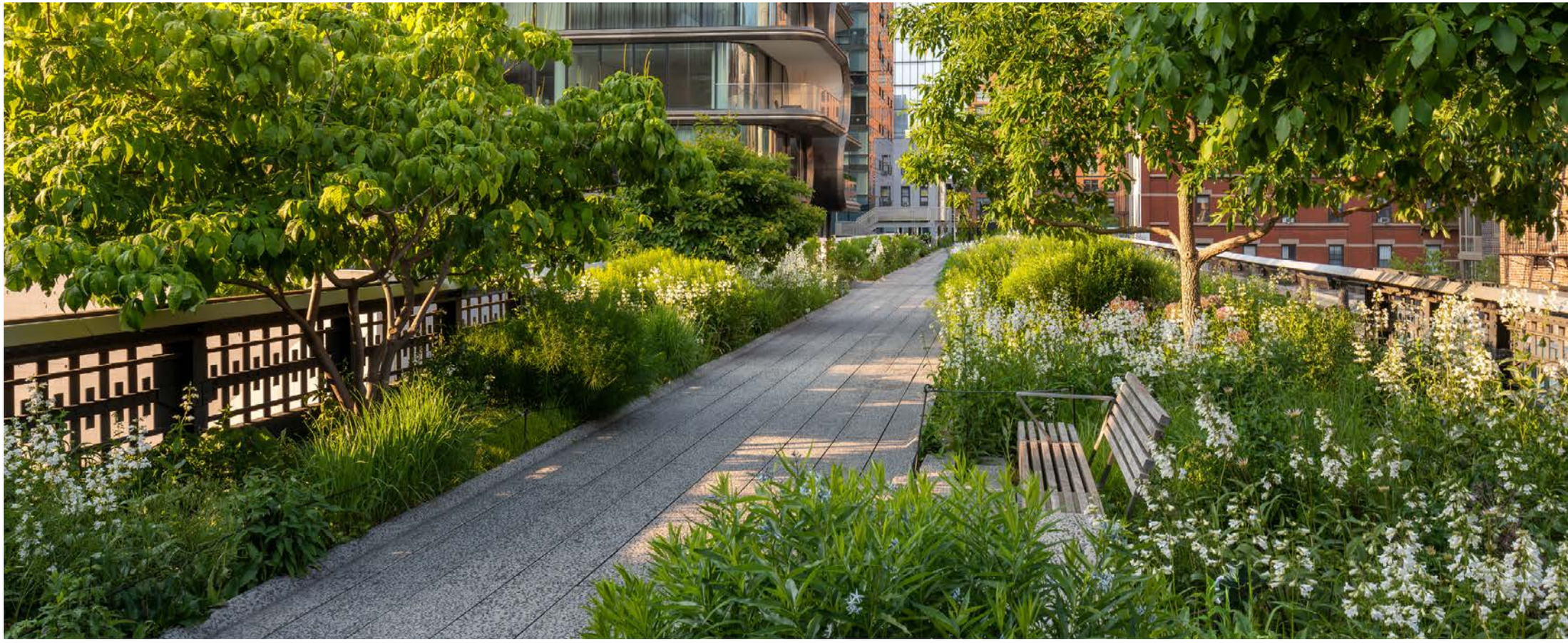




ASIA-PACIFIC

Numerous countries in the Asia-Pacific region have their own green building councils and rating systems, many of which began over 20 years ago. In East Asia, Taiwan created a green building certification specifically for subtropical countries, the Ecology, Energy Saving, Waste Reduction, and Health (EEWH) system.[67] EEWH, the longest-running certification scheme in Asia, has been active since 1999 and continues to issue ratings in the multi-tiered style of LEED or HQE. Established in 2001 by Japan's Ministry of Land, Infrastructure, Transport, and Tourism and the Japanese Sustainable Building Consortium (JSBC) and managed by the Institute for Built Environment and Carbon Neutral for SDGs (IBECs), CASBEE (Comprehensive Assessment System for Built Environment Efficiency) is another of the earliest green building certifications in Asia.[68][69] Since 2019, CASBEE voluntary assessment results have been publicly disclosed by the JSBC in an effort to expand the certification's reach and promote transparency. Endorsed by the Hong Kong Green Building Council (HKGBC), BEAM (Building Environmental Assessment Method) Plus began in 2010 and has seven different rating tools: New Buildings, Existing Buildings, New Data Centers, Existing Data Centers, Interiors, Neighborhood, and Existing Schools.[70] China launched its Green Building Evaluation Standard in 2006, and under it, the Green Building Label.[71] The Green Building Label is for buildings in all phases, from design and construction to in-use operations, though LEED has become the dominant rating system in the country.[72] The South Korean government established Green Standard for Energy and Environmental Design (G-SEED) in 2002, and 15 years later, 20% of the total housing area of the country had obtained G-SEED certification.[73] Much like China, South Korea has become a leader in LEED project certification.[74] Vietnam's LOTUS grew from a single rating tool in 2010 to a family of certifications covering nearly all project types and scopes, though it remains less popular than LEED or Green Mark within Vietnam due to its late introduction, among other factors.[75] The LOTUS tools use a scoring scale similar to LEED's, rating a building from Certified to Platinum based on a set of sustainability performance metrics.[76]

The region of South Asia is led by the Indian Green Building Council (IGBC), which has over 3,600 certified projects, including new construction, homes, factories, special economic zones, townships, schools, and existing buildings.[77] Managed by the Confederation of Indian Industry since its inception in 2001, the IGBC scheme has rating tools for five broad categories: Commercial, Industrial, Residential, Built Environment, and Other Typologies, each of which has its own subcategories of tools for specific structure types. Pakistan's Sustainability in Energy and Environmental Development (SEED) program is modeled after LEED, with various typologies based on construction phase and property type; its standards align with the U.N. Sustainable Development Goals.[78]



In Southeast Asia, Indonesia utilizes two green building rating systems: EDGE certification (referenced on page 28), and Green Building Council (GBC) Indonesia's GREENSHIP, which currently offer six types of certifications: New Building, Existing Building, Interior Space, Homes, Neighborhood, and Net Zero Healthy.[79] BERDE (Building for Ecologically Responsive Design Excellence) is the premier voluntary green building certification system in the Philippines, rating buildings from one to five stars similar to NABERS or Fitwel.[80] Launched in 2009 with two unique pathways (Buildings and Districts), BERDE has grown to offer associated professional credentials and training. Like BCA Green Mark in neighboring Singapore, Malaysia's Green Building Index focuses on the subtropical climate of its country of origin, certifying residential, commercial, and industrial properties.[81]

Finally, in the Oceania region, New Zealand uses three main systems of certification, two of which are licensed by and modeled after Australian counterparts. Green Star NZ is licensed by Australia's Green Star program and focuses on operations performance and existing buildings. NABERSNZ, another Australian offshoot, is meant for office buildings. To go along with Green Star NZ and NABERSNZ, the New Zealand Green Building Council created Homestar for new home certification and HomeFit for existing home certification, both of which assess the health, efficiency, and sustainability of residential properties within the country.[82]

EUROPE

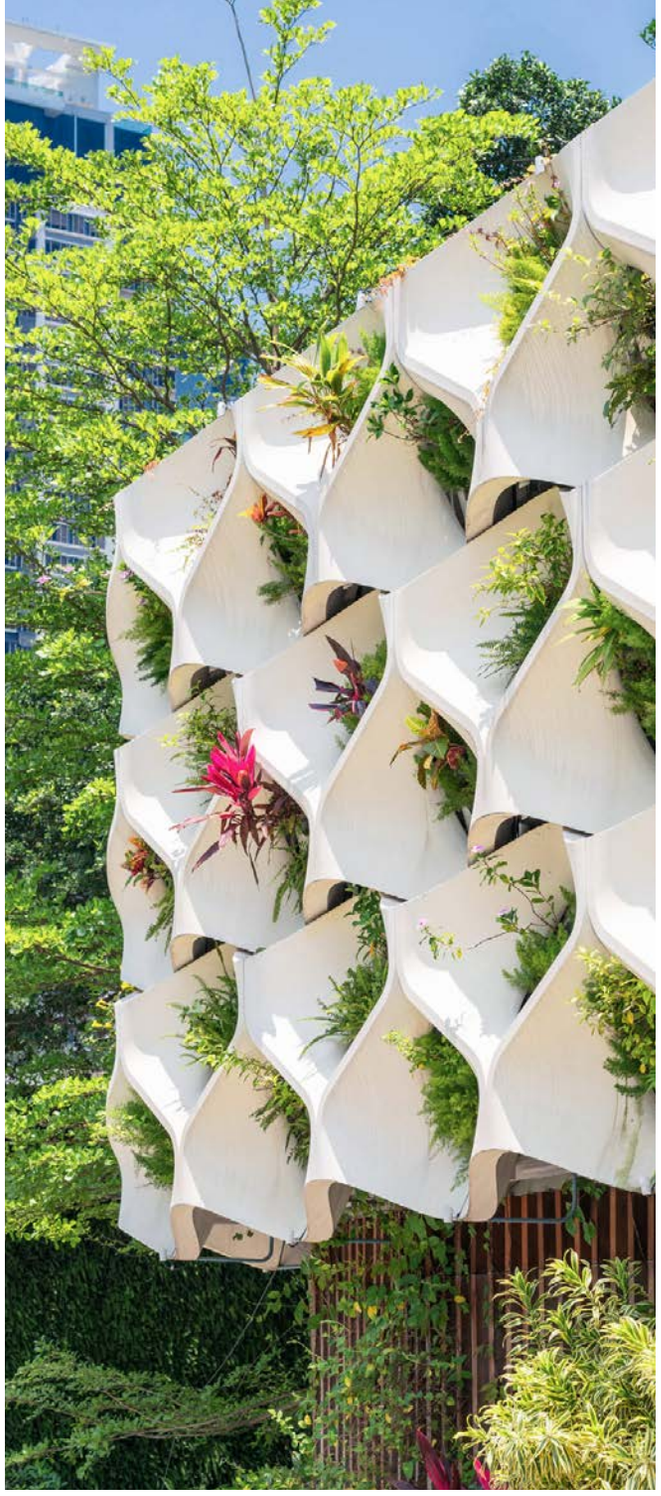
Most of the European Union, and by extension, Europe, leans on the ubiquitous and well-known international certifications of LEED, BREEAM, WELL Building Standard, and Green Globes. Several countries have partially or completely phased out their national green building certification systems in favor of those international systems (e.g., Sweden).[83] However, there are a handful of national certifications worthy of mention. Passive House, also referred to as Passivhaus, was established in Germany during the late 1990s. It is a widely recognized certification in Europe and is increasingly being adopted around the world, particularly for new construction projects. Similar to Phius (page 43), the Passive House certification enforces rigorous standards concerning energy usage and thermal comfort.[84] The German DGNB Certification for Buildings has certified more than 10,000 projects across 30 countries, all of which meet the standards of the original certification scheme.[85] The Turkish government developed B.E.S.T. for residential buildings through its green building council, debuting in 2013.[86] Italy's Green Building Council modeled its green rating systems (GBC Home, Historic Building, Neighborhoods, and Condominiums) after LEED, establishing levels of Base, Silver, Gold, and Platinum and developing associated professional credentials.[87] Spain's Green Building Council (GBCe) offers certification and pre-certification for commercial buildings, assessing sustainability throughout the full building life cycle.[88] LEED and BREEAM are also popular green building rating systems in Spain, both topping 1,300 certifications as of December 2023.[89]

LATIN AMERICA

There are several green building certifications in South America, but the region largely relies on international programs such as LEED.[90] Brazil, Mexico, Chile, and Colombia are among the few Latin American countries with national green building rating systems. Brazil, which also ranks 4th in the world in LEED projects, has required public buildings to display the PBE (Programa Brasileiro de Etiquetagem or Brazilian Labelling Program) Edifica energy efficiency label since 2014.[91] Chile's government founded the CES (Certificación Edificio Sustentable) in 2014, certifying public buildings in the country based on six variables: indoor environmental quality, energy, water, materials and waste, management, and innovation.[92] After introducing the first mandatory green building code in Latin America in 2015, Colombia collaborated with IFC, a member of the World Bank Group, to introduce EDGE certification to the country. It has since certified upwards of six million sq ft of green space through EDGE since 2017.[93]

MIDDLE EAST

Gulf Organization for Research and Development (GORD) established its green building rating system in 2007: GSAS (Global Sustainability Assessment System).[94] Founded in Qatar originally as a national scheme, GSAS now covers the Middle East and North Africa (also known as the MENA region) and stands out due to its consideration of the specific social, economic, environmental, and cultural



characteristics unique to the region. The Pearl Rating System (PRS) is Abu Dhabi's green building rating program, guiding sustainable development from design to operation.[95] It focuses on Estidama (sustainability) and aligns with the country's cultural and environmental context, considering the high energy demands and water scarcity inherent to the region's hot, arid climate. The Lebanese Green Building Council has recently implemented the ARZ Green Building Rating System, with modules based on what it calls the "five elements of nature:" Cosmos, Earth, Water, Air, Fire.[96] It is currently only focused on commercial buildings. Egypt's Green Pyramid Rating System (GPRS) rates buildings through various levels of pyramids (Silver, Golden, Green), with Green being the highest level of certification.[97]

STATE AND LOCAL CERTIFICATIONS IN THE U.S.

While LEED and other rating systems dominate the landscape of building certifications across the U.S., meaningful progress has been made on the local level for several decades. Often, it is the municipalities and the states from which national ideas spring and gain traction; green buildings are no different. As early as the mid-1990s, states were implementing green building certification systems that mirrored the earlier successes of ENERGY STAR and would foreshadow the rise of LEED and WELL. In 1999 to 2000 alone, Built Green (Washington), Green Built Homes Wisconsin, EarthCraft (Georgia), and Florida Green Building Coalition (FGBC) all released certifications that remain in use today.[98][99][100][101] To date, these four programs have collectively certified more than 100,000 buildings. Even in states not known for their energy efficiency standards, green building rating systems have grown; Green Built Texas started in 2005 as a program of the Dallas Builders Association and remains a vital part of the commercial real estate landscape there.[102] Like the FGBC and others, Green Built Texas offers professional credentials to become a verifier for the standard.

Several of these regional certifications came from managing organizations that were either already well known in the sector or grew to expand their green certification offerings. Built Green was a product of the NAHB (see page 40), which eventually offered both a professional accreditation and national building certification. EarthCraft came from Southface Institute, which also launched BIT Building (see page 22). Build It Green started as a California-only building certification before offering the CGBP credential all over the country (see page 87).[103] FORTIFIED Commercial, which is currently only available in Alabama, is part of the broader FORTIFIED suite of certifications offered by the Insurance Institute for Business and Home Safety (IHBS), focusing on standards for more resilient commercial buildings that can better withstand the impacts of severe weather.[104]

Building Product Certifications and Declarations

Often designed to work in synchrony with green building standards, green product certifications and declarations serve as a means for manufacturers to showcase their commitment to sustainability and transparency while buoying the case for the expanded use of green products in the built environment. These initiatives provide consumers with valuable information about the environmental and social impacts of products, empowering them to make informed choices.

Within the buildings and construction industry, the range of products covered by these certifications is vast, encompassing everything from building materials and interior design elements to cleaning products, appliances, furniture, plumbing fixtures, and more. These initiatives address a wide array of critical areas, including energy efficiency, human health and well-being, indoor air quality, and life cycle impacts. To attain these certifications or declarations, manufacturers typically need to meet stringent criteria, which often include assessments, compliance with standardized requirements, post-market verification testing, and transparent disclosure of product ingredients.

Many green product certifications and ecolabels are designed to dovetail with green building standards like those covered in our Building Certifications and Rating Systems section. Among these initiatives is the 2012 Declare label, which was expressly designed to help achieve the requirements of the Living Building Challenge, created six years earlier.[105] Others, such as UL GREENGUARD, while not directly part of building certification programs, were developed to be harmonious with standards like LEED, BREEAM, and Fitwel.[106] IWBI has even developed Works with WELL, a program that licenses products to use the Works with WELL mark to indicate they align with the WELL Building Standard.[107]

We have focused our summaries on product certifications and declarations that exhibit at least two of the following three qualities: 1) they are U.S.-based or have significant U.S. adoption; 2) they are significant due to their place in history or the transformative nature of the label; 3) they are multi-attribute. In addition to these three criteria, all summaries refer to certifications or declarations specific to products related to buildings, building materials, building operations, or construction.

Just, for example, fulfills all three qualifying requirements. WaterSense is U.S.-based (1) and was the first governmentally developed certification scheme of its kind for water-efficient products (2). The only product certifications, declarations, or ecolabels that fulfilled two or more of these requirements and were not included in full were those for which we could not find enough up-to-date data, making their inclusion unhelpful for companies seeking to pursue them.

The following variables appear on each summary page and are being defined as follows:

"Year Began" indicates the year in which the certification was first introduced to the market.

The **"Managing Organization"** refers to the body that establishes the certification standards and processes,

encompassing nonprofit entities, certification firms, or government bodies. Often, organizations mandate that independent third-party licensees carry out the actual certification to ensure impartiality and adherence to the established standards.

"Category" differentiates between a formal certification process that aligns a product with a specific standard and a declaration that discloses and verifies a product's ingredients or performance metrics.

"Products of Focus" describes the spectrum of products eligible for certification, which can include building materials, interior design components, cleaning products, appliances, furniture, plumbing fixtures, and beyond.

"Areas of Focus" encompasses the certification's targeted environmental and health aspects, such as energy efficiency, human health and well-being, indoor air quality, and life cycle impacts.

"Basic Requirements" are the essential criteria for certification, potentially involving third-party assessments, adherence to standard requirements, post-market testing, and transparent ingredient disclosure.

"Level of Achievement" applies to certain certifications and indicates the performance tier a product has reached (e.g., Basic, Bronze, Silver, Gold, and Platinum).

"Recertification" specifies the duration for which a certification remains valid, which can be indefinite, contingent upon standard changes, or set within a one-to-five-year period.

"Certification Program Fees" encompass the costs of obtaining certification, including registration costs, annual fees, and the expenses associated with any required audits.

"Regional Applicability" assesses the geographical relevance of a certification, determining whether it is recognized globally or is specific to certain regions or countries.

"Industry Adoption" gauges the extent to which a certification is embraced within the market, indicated by the volume of products sold or the range of product models that have been certified.

AN OVERVIEW OF BUILDING PRODUCT CERTIFICATIONS

	CATEGORY	PRODUCT(S) OF FOCUS	AREA(S) OF FOCUS	BASIC REQUIREMENTS	LEVELS OF ACHIEVEMENT	RECERTIFICATION	CERTIFICATION PROGRAM FEES	REGIONAL APPLICABILITY	INDUSTRY ADOPTION
CRADLE TO CRADLE CERTIFED	Certification	Building, interior, and lifestyle products	Human and environmental health	Compliance with Cradle to Cradle product certification standards	Basic, Bronze, Silver, Gold, Platinum	2–4 years	$3,600 and annual community fee (revenue-based)	International	1,000+ certifications across 75,000+ products
DECLARE	Voluntary declaration	Manufactured goods for the built environment	Human and ecosystem health	Membership in Living Future and ingredient transparency	LBC Red List Free, LBC Red List Approved, Declared	Annual renewal	12-month license fee	U.S. and international	1,854 declarations over 16,000 products
ENERGY STAR PRODUCT	Certification	Energy consuming products	Energy efficiency	Third-party energy performance testing and review	N/A	Post market testing for certified products	Verification costs by engineer/architect	U.S. and partner countries	7 billion products sold
ENVIRONMENTAL PRODUCT DECLARATION	Voluntary declaration	All types of goods and services	Life cycle environmental impact	Conducting life cycle assessments and generating EPDs	None	5 years	Registration and annual fees (organization size)	Sweden and international	5,823 declarations
FOREST STEWARDSHIP COUNCIL (FSC) CHAIN OF CUSTODY (COC)	Certification	Wood products	Forest health and resiliency	Meet Chain of Custody (CoC) Standard	FSC 100%, FSC Mixed, FSC Recylced, FSC Controlled Wood	Annual audits	FSC certification costs (varies)	U.S. and international	—
GREEN SEAL	Certification	Cleaning products	Human and environmental health	Meet Green Seal standards for product approval	None	Green Seal conducts periodic monitoring	Application scope affects costs	International	36,000+ certified products
GREEN SQUARED	Certification	Tile	Environmental and social sustainability	Audit and certification based on ANSI A138.1 criteria	N/A	Annual audits, recertification after 5 years	UL Solutions and SCS Global Services costs (varies)	North America	1,500+ products certified
HEALTH PRODUCT DECLERATION	Voluntary declaration	Building products	Human health	Ingredient disclosure in accordance with HPD standards	None	3 years	Full/associate membership costs	International	40,000 products with HPDs
JUST	Voluntary declaration	All organizations	Social justice and equity	Disclose on 16/22 indicators	None	2 years	Base and employee fee (org. size)	International	310 active labels
LIVING PRODUCT CHALLENGE	Certification	Manufactured goods	Increasing environmental handprint	Meet minimium performance and disclosure thresholds	Living Product Imperative Certification, Living Product Petal Certification, Living Product Full Certification	3 years with continuous improvement	Pricing varies by scope	U.S. and international	42 active certifcations across 5,000+ products
UL GREENGUARD	Certification	Building materials and products	Indoor air quality	Compliance with emissions limits, including formaldehyde	GREENGUARD Certification, GREENGUARD Gold Certification	Retesting every 1–3 years	Starting from $10,000 (scope-based)	U.S.	50,000+ certified products
WATERSENSE	Certification	Plumbing fixtures	Water efficiency and performance	20% more water efficient than industry average	WaterSense label	Upon major revision in product specification	Certification costs vary (region, type)	U.S.	42,400+ product models

Cradle to Cradle Certified

VERIFIED

Cradle to Cradle Certified products are usually innovative and beautifully crafted, and oftentimes mimic nature.

Cradle to Cradle Certified is a product certification program that evaluates products for their safety to humans and the environment while emphasizing their suitability for future life cycles. The program prioritizes the use of safe materials that can either be disassembled and recycled as technical components or composted as biological components. Distinguished from single-attribute eco-labels, the Cradle to Cradle Certified Products Program adopts a comprehensive approach to product evaluation, considering not only design but also manufacturing practices. It evaluates products across five key categories: Material Health, Product Circularity, Clean Air and Climate Protection, Water and Soil Stewardship, and Social Fairness.

YEAR BEGAN	2005
MANAGING ORGANIZATION	Cradle to Cradle Products Innovation Institute
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Building materials, interior design products, textiles and fabrics, paper and packaging, apparel and footwear, and personal and homecare products
AREA(S) OF FOCUS	Human health, circular economy, renewable energy, clean air and water, safe and equitable labor practices
BASIC REQUIREMENTS	To certify a material or product to the Cradle to Cradle Certified Product Standard (or to receive a C2C Certified Material Health Certificate), companies must work with a qualified independent assessment body to ensure that it meets the standard requirements.
LEVELS OF ACHIEVEMENT	Basic, Bronze, Silver, Gold, Platinum
RECERTIFICATION	Required every two years for certifications up to Version 3.1; every four years for certifications up to Version 4.0
CERTIFICATION PROGRAM FEES	$3,600 + an annual community fee between $1,800 to $15,000, depending on annual revenue of company
REGIONAL APPLICABILITY	International
INDUSTRY ADOPTION	1,000+ certifications issued with 75,000+ products covered as of October 2023

Declare

VERIFIED

Declare is often used when pursuing certain programs through ILFI such as LBC. A Declare label provides transparency to the building user in regards to the materials that were manufactured and utilized for the construction of the asset.

Declare serves as a platform for eco-conscious product manufacturers, allowing them to showcase their environmental commitment. It simplifies complex chemical and raw material data into a user-friendly 'nutrition label' for consumers. Additionally, Declare helps streamline materials selection and certification processes for teams pursuing the Living Building Challenge (LBC) by screening products for LBC Red List materials, chemicals, and elements considered harmful to humans or ecosystems. Moreover, it aligns with various other certification standards, including LEED, Core Certification, and WELL.

YEAR BEGAN	2012
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
CATEGORY	Voluntary Declaration
PRODUCT(S) OF FOCUS	Manufactured goods for the built environment
AREA(S) OF FOCUS	Human and ecosystem health
BASIC REQUIREMENTS	Become Living Future member, disclose all intentionally-added ingredients in product at or above 100ppm.
LEVELS OF ACHIEVEMENT	LBC Red List Free, LBC Red List Approved, Declared
RECERTIFICATION	Renew on annual basis
CERTIFICATION PROGRAM FEES	Base fee for a 12-month license with tiered pricing for manufacturers with 10 to 25 and more than 25 labels: 20% discount for renewal.
REGIONAL APPLICABILITY	United States and international
INDUSTRY ADOPTION	1,854 declarations issued representing over 16,000 products

ENERGY STAR

Purchasing appliances and HVAC systems with the ENERGY STAR label is often recommended when pursuing energy reduction strategies at the asset level.

Established in 1992 as a voluntary program, ENERGY STAR is a prominent government-backed certification label for energy-efficient products, jointly administered by the U.S. Environmental Protection Agency (EPA) and the Department of Energy (DOE). ENERGY STAR encompasses a broad range of certified products, spanning appliances, HVAC systems, lighting, electronics, commercial roofing, and office equipment. Its standards undergo regular updates, typically strengthening every two years. The EPA currently supervises third-party certification, maintains extensive lists of certified product models, and collaborates with over 20 certification bodies and over 500 recognized laboratories. It also conducts post-market testing and periodic audits of product labeling at major retailers to ensure performance and correct use of the ENERGY STAR mark.

For More Information:

- Product Partner Resources

YEAR BEGAN	1992
MANAGING ORGANIZATION	U.S. Environmental Protection Agency and U.S. Department of Energy
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Energy consuming products: heating and cooling equipment, lighting, home electronics, office equipment, etc.
AREA(S) OF FOCUS	Energy efficiency
BASIC REQUIREMENTS	Third-party testing and review against energy performance requirements, data disclosure
LEVELS OF ACHIEVEMENT	N/A
RECERTIFICATION	Certified products are subject to post-market verification testing
CERTIFICATION PROGRAM FEES	Costs vary depending on verification cost by licensed Professional Engineer or Registered Architect
REGIONAL APPLICABILITY	United States and partner countries: Canada, Japan, Switzerland, Taiwan
INDUSTRY ADOPTION	Seven billion ENERGY STAR products sold since 1992

Reference: [108]

Environmental Product Declaration (EPD)

VERIFIED

YEAR BEGAN	1998
MANAGING ORGANIZATION	EPD International AB
CATEGORY	Voluntary Declaration
PRODUCT(S) OF FOCUS	All types of goods and services
AREA(S) OF FOCUS	Life-cycle environmental impact
BASIC REQUIREMENTS	Life cycle assessment (LCA) of product, EPD background project report, public EPD document, third-party verification according to ISO 14025 and EN 15804. No environmental performance requirements. Must disclose according to appropriate project category rules.
VALIDITY	Typically valid for five years, but can depend on EPD. During validity period, must update EPD if an environmental indicator worsens more than 10%.
PROGRAM FEES	One time registration fee and annual fee (depends on organization size)
REGIONAL APPLICABILITY	Sweden and international
INDUSTRY ADOPTION	5,823 declarations issued as of October 2023; approx. 2,000 issued per year

EPD®

THE INTERNATIONAL EPD® SYSTEM

GreenBadger is a useful database that allows people to find several EPD-compliant products, which may be utilized for green building certification projects.

Accepted for BREEAM and LEED.

An Environmental Product Declaration (EPD) is a verified document that provides clear and comparable data on a product's life-cycle environmental impact. The International EPD System, following ISO 14025 and EN 15804 standards, is a global program for such declarations, featuring over 500 registered EPDs from 150 firms across 27 nations. Having an EPD for a product doesn't inherently signify its environmental superiority over alternatives. Instead, it serves as a transparent disclosure of its environmental impact throughout its life cycle, aiding consumers and stakeholders in making informed choices.

For More Information:

- FAQs

Forest Stewardship Council (FSC) Chain of Custody (CoC)

VERIFIED

Major companies worldwide prefer FSC-certified products. Green building standards incentivize FSC material use and many governments mandate it in their green procurement policies, contributing to green building rating system credits.

The Forest Stewardship Council (FSC) establishes responsible forest management criteria, with FSC overseeing the standards while third parties issue certifications. The FSC's Chain of Custody (CoC) certification tracks wood products from harvest or reclamation to the consumer, ensuring sustainability throughout the supply chain (e.g., processing, distribution). The CoC Standard incorporates the Controlled Wood Standard within its verification process, permitting the inclusion of non-FSC Certified material alongside FSC-Certified material under specific controlled conditions.

For More Information:

- Chain of Custody Overview

YEAR BEGAN	1993
MANAGING ORGANIZATION	Forest Stewardship Council (FSC)
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Wood products
AREA(S) OF FOCUS	Forest health and resiliency along supply chain
LEVELS OF ACHIEVEMENT	FSC claims include FSC 100%, FSC Mixed XX%, FSC Recycled Credit, FSC Mix Credit, FSC Recycled XX%, FSC Controlled Wood
RECERTIFICATION	Must conduct annual audits to maintain certification
CERTIFICATION PROGRAM FEES	Costs vary depending on FSC-accredited certification body. Group certification available if gross annual sales of wood products are less than $5 million USD annually.
REGIONAL APPLICABILITY	U.S. and international
INDUSTRY ADOPTION	N/A

Reference: [109]

Green Seal

VERIFIED

Green Seal products are recognized in green cleaning policies and credits in many rating systems including LEED, Fitwel, WELL, etc.

Green Seal is a third-party ecolabel focusing on a diverse array of products with sector-specific criteria, particularly consumables (e.g., cleaning products, toilet paper) for building operations and household use. Green Seal has been certifying products since its inception in 1989, complying with ISO 14020 and 14024 international guidelines for environmental labeling programs. Green Seal considers a product's environmental impacts across its entire life cycle when formulating its standards and is included in several federal, state, and local environmentally preferable purchasing policies and the LEED green building standard.

For More Information:

- FAQs

YEAR BEGAN	1989
MANAGING ORGANIZATION	Green Seal
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Cleaning and facility care products and services (e.g., cleaning products, sanitary paper, paints)
AREA(S) OF FOCUS	Human and environmental health
BASIC REQUIREMENTS	Must meet all requirements in Green Seal standard (pass/fail). Eighteen product standards available (e.g., Sanitary Paper Products, Cleaning and Degreasing Agents).
LEVELS OF ACHIEVEMENT	None
RECERTIFICATION	Certification lasts as long as it continues to meet Green Seal standards; Green Seal conducts periodic monitoring.
CERTIFICATION PROGRAM FEES	Depends on type and number of products or services on application
REGIONAL APPLICABILITY	International
INDUSTRY ADOPTION	36,000+ certified products by SKU

Green Squared

VERIFIED

Recognized by a number of green building rating systems and standards, including LEED, ASHRAE, Green Globes, International Green Construction Code, NAHB, and the U.S. EPA.

Green Squared is a sustainability certification designed specifically for tiles and tile installation materials, aligning with ISO 14024. Green Squared certification encompasses a wide range of aspects, including product attributes, manufacturing processes, end-of-life management, forward-thinking corporate governance, and innovative practices. Its objective is to establish comprehensive sustainability criteria that encompass a product's entire life cycle, with certified products meeting the ANSI A138.1 American National Standard Specifications for Sustainable Ceramic Tiles, Glass Tiles, and Tile Installation Materials.

YEAR BEGAN	2012
MANAGING ORGANIZATION	The Tile Council of North America (TCNA)
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Tile: ceramic, porcelain, and glass; stone; relevant installation goods
AREA(S) OF FOCUS	Broad range of environmental and social sustainability criteria
BASIC REQUIREMENTS	Audit and certification from authorized third-party certification body to ensure product meets ANSI A138.1 standard. Products are evaluated based on five categories: product characteristics, manufacturing and raw material extraction, end of product life management, progressive corporate governance, and innovation.
LEVELS OF ACHIEVEMENT	N/A
RECERTIFICATION	Must conduct annual surveillance audit; recertification required every five years
CERTIFICATION PROGRAM FEES	UL Solutions and SCS Global Services are the two third-party organizations who can issue Green Squared Certification.
REGIONAL APPLICABILITY	North America
INDUSTRY ADOPTION	1,500+ products certified since inception

Reference: [110]

Health Product Declaration (HPD)

VERIFIED

YEAR BEGAN	2012
MANAGING ORGANIZATION	Health Product Declaration (HPD) Collaborative
CATEGORY	Voluntary declaration
PRODUCT(S) OF FOCUS	Building products
AREA(S) OF FOCUS	Human health
BASIC REQUIREMENTS	Disclosure of known ingredients and hazards down to thresholds (i.e., 100 ppm, 1,000 ppm) specified in the HPD Open Standard
VALIDITY	Valid for three years; may upgrade any time to HPD Open Standard to receive three more years of validity
PROGRAM FEES	Full Membership for five participants: $2,000; Associate Membership for two participants: $750; HPD Builder per use fee for five HPDs: $375
REGIONAL APPLICABILITY	International
INDUSTRY ADOPTION	Over 40,000 products with HPDs

HPDs would be best suited for all project types. Projects pursuing LEED Certification will benefit from using HPDs by boosting their overall score and award level.

A Health Product Declaration (HPD) is a self-disclosure of a product's material contents and the associated human health hazards to these contents. The HPD Open Standard provides specific requirements on how to disclose ingredients and other product information. HPDs may be third-party verified. To create and publish an HPD report, companies can use the HPD Builder, an online tool that helps with data entry, hazard screening, formatting, and compliance with the HPD Open Standard. As of 2016, HPDs can be used to comply with LEED v4 MRc: Building Product Disclosure and Optimization: Material Ingredients and the LEED v4.1 equivalent credit. Verified HPDs can be found on the HPD Public Repository. Similar to EPDs (page 64), HPDs do not signify the product meets a particular health standard but rather are transparent disclosures to help consumers make informed choices.

For More Information:

- HPD Open Standard

Just

VERIFIED

Similar to Declare, Just is a transparency tool. It allows companies to rigorously evaluate their policies and practices to ensure they are being socially responsible and fair across all aspects of the organization. Aligns with LEED and WELL.

The Just program helps organizations demonstrate their commitment to transparency and action on social justice and equity. To receive a Just label, organizations must report on measurable indicators like Gender Diversity, Healthcare Benefits, Charitable Giving, and Freedom of Association. Each indicator is associated with a performance level between 1–4 (four indicating highest performance). With the goal to create a common language for social justice issues and leverage transparency to shift the market toward social change, Just stands out from other labeling schemes by focusing on social sustainability.

For More Information:

- Just Manual 2.0
- Fees

YEAR BEGAN	2014
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
CATEGORY	Voluntary Declaration
PRODUCT(S) OF FOCUS	All organizations
AREA(S) OF FOCUS	Social justice and equity
BASIC REQUIREMENTS	To receive a Just label, organizations must disclose on at least 16/22 Just program Indicators across six categories: Diversity and Inclusion, Equity, Employee Health, Employee Benefits, Stewardship, and Purchasing and Supply Chain.
LEVELS OF ACHIEVEMENT	None
RECERTIFICATION	Must be renewed every two years
CERTIFICATION PROGRAM FEES	Base fee and employee fee depending on organization size
REGIONAL APPLICABILITY	International
INDUSTRY ADOPTION	310 active labels

Living Product Challenge

VERIFIED

YEAR BEGAN	2015
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Manufactured goods
AREA(S) OF FOCUS	Increasing environmental handprint (i.e., positive impact), human health impacts, facilitating net positive operations on impact categories such as water, energy, carbon, and waste
BASIC REQUIREMENTS	Must meet minimal performance and disclosure thresholds. Performance categories (also called 'Petals' or 'spheres of influence') include place, water, energy, health and happiness, materials, equity, and beauty. Must not engage in certain activities (e.g., weapons, tobacco, fossil fuel extraction).
LEVELS OF ACHIEVEMENT	Living Product Imperative Certification, Living Product Petal Certification, Living Product Full Certification
RECERTIFICATION	Valid for three years after which product must meet continuous improvement requirements
CERTIFICATION PROGRAM FEES	Pricing dependent on scope. Contact lpc.support@living-future.org for estimate.
REGIONAL APPLICABILITY	International, but primarily the United States
INDUSTRY ADOPTION	42 active Living Product Challenge certifications representing 5,000+ individual products.

The Living Product Challenge is a philosophy, advocacy tool, and certification with the aim of raising the bar on sustainability product standards, shifting the paradigm away from harm reduction alone and instead toward regenerative design and positive impact. The certification program helps manufacturers measure and reduce their environmental footprint and improve upon their environmental handprint. Coined by ILFI, the environmental handprint is a concept that represents a product's positive environmental and social impacts, driving manufacturers to achieve net positive impacts (i.e., handprint > footprint) — for instance, by harvesting an amount of rainfall that exceeds water consumption. To obtain the certification, organizations must meet requirements for seven spheres of influence: Place, Water, Energy, Health and Happiness, Materials, Equity, and Beauty.

For More Information:

- Case Studies
- Petals Handbook
- LPC Standard 2.0

Living Product Challenge is another certification that pairs well when pursuing ILFI's LBC certification. Like many of ILFI's certifications and credentials, Living Product Challenge represents a very high standard in comparison to similar environmental ecolabels.

UL GREENGUARD

VERIFIED

UL GREENGUARD products are especially important to utilize in new development and renovations as they ensure minimal VOCs are emitted from products, thus protecting optimal air quality for occupants. Aligns with BREEAM, Fitwel, LEED, and WELL.

Established in 2001, UL GREENGUARD is a third-party certification and label. Initially, its emissions limits served as purchasing standards for the EPA and Washington state regarding furniture and commercial building products. Since 2002, UL GREENGUARD criteria have been foundational for the LEED credit on low-emitting furniture. UL Solutions certifies products that meet stringent formaldehyde, emissions, and chemical testing standards. UL GREENGUARD Certification and UL GREENGUARD Gold Certification, which includes health-based criteria and stricter VOC emissions limits, make products suitable for environments like schools and healthcare facilities. They help contribute to green building rating systems like LEED, BREEAM, Fitwel, and others, as well as meeting indoor air quality request for proposal (RFP) requirements and code criteria.

YEAR BEGAN	2001
MANAGING ORGANIZATION	UL Solutions
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Building materials, furniture and furnishings, electronic equipment, cleaning and maintenance products
AREA(S) OF FOCUS	Indoor air quality
BASIC REQUIREMENTS	Meet emissions limit requirements for formaldehyde, aldehydes, and volatile organic compounds (VOCs); Gold level products must comply with requirements of California's Department of Public Health requirements
LEVELS OF ACHIEVEMENT	GREENGUARD Certification, GREENGUARD Gold Certification
RECERTIFICATION	Retesting of representative products required every one to three years, depending on product type
CERTIFICATION PROGRAM FEES	Starting from $10,000 depending on product type and project scope
REGIONAL APPLICABILITY	United States
INDUSTRY ADOPTION	50,000+ certified products, 900 manufacturers

Reference: [111]

WaterSense

WaterSense is the most recognized water-efficiency label for consumer products. It is widely referenced in new construction rating systems (including LEED, NGBS, etc.) as the standard for high-efficiency water fixtures. Look for the "WaterSense: Meets EPA Criteria" label, not just "WaterSense Partner." The "partner" label indicates that an organization or manufacturer has signed an agreement with the EPA to promote water efficiency but does not address performance of a specific product.

WaterSense is a government-backed certification label for water-efficient products, administered by the U.S. Environmental Protection Agency (EPA). To obtain the certification, plumbing products (e.g., showerheads) must maintain high performance while being at least 20% more water efficient than the industry average. WaterSense is overseen by the EPA, but product manufacturers must work with a licensed third-party certifying body. After a product obtains certification, there is no need for recertification, though the EPA mandates certification bodies perform yearly audits on a minimum of 15% of the models they have certified within each product category, and then submit the findings to the EPA.

For More Information:

- Product Search Tool

YEAR BEGAN	2006
MANAGING ORGANIZATION	U.S. Environmental Protection Agency
CATEGORY	Certification
PRODUCT(S) OF FOCUS	Plumbing fixtures: showerheads, toilets, faucets, urinals, and valves
AREA(S) OF FOCUS	Water efficiency and performance
BASIC REQUIREMENTS	Must be independently certified from EPA-licensed body according to WaterSense Product Certification System. Product must be at least 20% more efficient than industry average while maintaining high performance. Annual retesting according to market surveillance requirements.
LEVELS OF ACHIEVEMENT	WaterSense label
RECERTIFICATION	Must recertify product model if product specification undergoes major revision
CERTIFICATION PROGRAM FEES	Depends on certifying body, region, and property type
REGIONAL APPLICABILITY	United States
INDUSTRY ADOPTION	42,400+ WaterSense-labeled product models

Reference: [112][113]

Additional Building Product Certifications and Declarations

Outside of the 12 product certifications and declarations covered in these individual summaries, there are numerous other schemes at the international, national, and state level that continue to have a positive impact on the global transition to a more sustainable economy. These certifications or declarations may not have wide enough applicability or the building products they are covering may be extremely specific. With such a narrow scope and without connection to an organization also known for green building standards, such certifications did not warrant inclusion in this version of our guidance report. We plan to update this report in 2024/2025 to broaden our standards and include in more detail many of the certifications below. One other type of organization to mention is the third-party verifier. UL Solutions (see UL GREENGUARD on page 71) is an example of a third-party verifier, and several other well-known entities are performing similar work to certify many of the ecolabels we've already covered.

NARROW SCOPE

Many of the ecolabels and certifications covered above are multi-attribute, with one of the few exceptions being Green Squared, which certifies one specific building product: tile. Several other schemes and ecolabels serve equally specific segments of the buildings and construction sector. In 1992, the Carpet and Rug Institute (CRI) launched Green Label, and more than a decade later, Green Label Plus, both of which apply to floor coverings. Green Label Plus has since been recognized by the EPA in its "Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing."[114] The Electronic Product Environmental Assessment Tool (EPEAT) has become the premier environmental certification for electronics since its launch in 2003 by the Green Electronics Council.[115] All EPEAT-certified products meet ENERGY STAR standards, though not all electronic products with ENERGY STAR qualifications are EPEAT certified.[116] FloorScore is the most recognized certification for hard surface flooring materials, adhesives, and underlayment, qualifying for LEED, Green Globes, WELL, and other prestigious building standards.[117]

Many other countries aside from the U.S. offer ecolabels, including China, Denmark, England, Germany, India, Japan, South Africa, and more. To date, none of these certifications have moved beyond their borders in a meaningful way, yet they are useful within those countries. An exception is Norway's Nordic Swan Ecolabel, which is widely known in the Scandinavian countries (Denmark, Finland, Iceland, Norway, Sweden) and has 58 different ecolabels outside of the scheme for buildings (covered on page 41).[118] In its buildings and building products category, there are 10 total ecolabels, with specific typologies including compost bins, floor coverings, and windows and exterior doors.

THIRD-PARTY VERIFIERS

Managing organizations will often outsource the actual certification of a standard to a third party. An example is TCNA's Green Squared certification, which is only able to be administered and issued by two organizations: SCS Global Services and UL Solutions. Both are considered third-party verifiers, meaning they may offer their own branded certifications (e.g., UL GREENGUARD, see page 71), but much of what they do is certify for other programs and institutions.

SCS Global Services has offered multiple certifying services since its founding in 1984 and has become one of the preeminent third-party verifiers around the world.[119] With more than 100 programs offered, covering everything from food safety to environmental product declarations, SCS plays a significant role in the landscape of product certifications. SCS administers Green Squared, Lead Safe Paint for IPEN, and ASSURE Certified for the Resilient Floor Covering Institute, among others.[120][121] The aforementioned FloorScore is one of several standards not just administered but developed in part by SCS. Others include SCS Indoor Advantage and SCS Certified Recycled Content.

UL Solutions offers a similar variety of certifications and verifications, including several in the green building products category. Like SCS, UL Solutions certifies for the EPA's Toxic Substances Control Act (TSCA) Title VI Compliance Rule in 2016 for composite wood, ensuring manufacturers' formaldehyde emissions are verified.[122] Also similar to SCS, UL Solutions has developed several of its own certifications, including UL ECOLOGO, a multi-attribute lifecycle-based standard with multiple product categories, including building products, plastic packaging, and sanitary paper.[123] Outside of being a third-party verifier of specific standards and developing its own, UL Solutions also offers Environmental Claim Validation for companies wishing to put their declarations or ecolabels through rigorous scientific analysis.[124]

Accepted third-party verifiers for specific product certifications will usually be listed on that ecolabel's website. For example, HPDs (see page 68) may be verified by independent third parties, and the HPD Collaborative site lists several options, including Green Seal and EuroCert.[125]

Professional Accreditations and Credentials

The proliferation of green building certifications was accompanied by the rise of professional credentials, which equipped experts with the skills to evaluate and endorse green building projects. This trend supported the expansion and efficacy of certification programs and contributed to a workforce more knowledgeable in sustainable practices. Many of these certifications originate from trusted organizations in the sector, such as IREM and the Association of Energy Engineers. Others are directly connected to the requirement of a building standard, though they retain value beyond that specific use; these certifications prepare individuals to evaluate and assess building projects according to each building standard's rigorous criteria. For example, LEED, BREEAM, and WELL each require on-site assessment by an entity-specific credentialed professional (e.g., a BREEAM Assessor for BREEAM building certification).

Eligibility criteria for green professional certifications can vary significantly. Some certifications require a minimum duration of experience managing a real estate portfolio, while others stipulate years of relevant professional experience or educational qualifications. In some cases, prior attainment of another professional certification may also serve as a prerequisite. To support individuals in their certification journey, many certifying organizations provide digital study materials, including courses, handbooks, and study kits. The associated costs for these materials vary widely, from free resources to investments of thousands of dollars for comprehensive coursework, contingent upon the certification's complexity and rigor.

Typically, the certification process involves completing coursework and/or passing an online exam, with many exams allowing for open book referencing. The time required to obtain these certifications varies, with some achievable within a month, depending on the individual's study pace, while others demand the completion of a series of courses and may take anywhere from one to two years to acquire. To maintain their certification status and stay aligned with industry best practices, professionals are often obligated to fulfill ongoing requirements, such as paying annual fees or dues, retesting, and completing continuing education. When a new certification version is released, professionals in the midst of obtaining the related credential often must complete their exam with expediency before the exam is updated to reflect the new version information.

We have focused our summaries on professional accreditations and credentials that exhibit at least two of the following three qualities: 1) they are U.S.-based or have significant U.S. adoption; 2) they are significant due to their place in history or the transformative nature of the credential; 3) they confer status beyond their standard use as a required part of their related green building certification. In addition to these three criteria, all summaries refer to credentials specific to the buildings and construction industry or real estate sector.

LEED with Specialty, for example, fulfills all three qualifying requirements. NABERS Accredited Assessor is a credential tied to one of the few mandatory building certifications in existence (2) and is recognized in Australia, New Zealand, the U.K., and beyond as a premier green credential (3).[126] The only professional accreditations and credentials that fulfilled two or more of these requirements and were not included in full were those for which we could not find enough up-to-date data, making their inclusion unhelpful for individuals seeking to pursue them.

The following variables appear on each summary page and are being defined as follows:

"Year Began" refers to the initial year when the certification became available.

"Offering Entity" denotes the organization responsible for issuing the certification, with notable examples including IREM, the Building Performance Institute, and the Association of Energy Engineers.

"Method of Attaining" outlines the approach required to obtain the certification, which can vary from completing coursework to passing exams, with many offering an open-book option.

"Time to Acquire" reflects the varying time commitments required for obtaining a certification. While some certifications may be earned swiftly with minimal study hours and a single exam, others demand more extensive study, numerous courses, and multiple exams, potentially stretching over several years.

"Prerequisites or Eligibility" lists the necessary qualifications or conditions that must be met before pursuing the certification, such as a minimum amount of professional experience or previously obtained certifications.

"Ongoing Requirements" details any continuous obligations, such as paying annual fees or participating in ongoing education to maintain the certification status.

"Training Course or Study Materials" encompasses the types of materials provided for exam preparation, including online courses, handbooks, and other study aids.

"Cost of Training Course or Study Materials" covers the range of expenses for preparatory materials, which can vary from free to several thousand dollars based on the certification's complexity.

$: $0–$50

$$: $51–$600

$$$: $601–$1,750

$$$$: $1,750+

"Cost for Testing" relates to the fees associated with taking the certification exam, which can differ depending on the certification and geographic location.

$: $0–$100

$$: $101–$400

$$$: $401–$1,000

$$$$: $1,000+

"Industry Adoption" assesses the extent to which a certification is valued and recognized in the market, with some certifications held by hundreds of professionals and others by several hundred thousand.

AN OVERVIEW OF PROFESSIONAL CREDENTIALS

	METHOD OF ATTAINING	TIME TO ACQUIRE	PREQUISITES OF ELIGIBILITY	ONGOING REQUIREMENTS	TRAINING COURSE OR STUDY MATERIALS	COST OF STUDY MATERIALS	COST FOR TESTING	INDUSTRY ADOPTION
ACCREDITED COMMERCIAL MANAGER (ACOM)	100-question open-book exam, 70%	2–3 months	12 months of experience	ACoM and IREM chapter dues	Two courses: Ethics and Managing Commercial Properties	$$$	$	350+
ACCREDITED RESIDENTIAL MANAGER (ARM)	100-question open-book exam, 70%	2–3 months	12 months of experience	ARM and IREM chapter dues	Two courses: Ethics and Managing Commercial Properties	$$$	$$$$	3,600+
BREEAM ASSESSOR	Course and open-book exams	Varies by course, recommend 30 hours of study	Prequisites may be required	Assessor's license, insurance, audits	BREEAM Assessor training courses	$$$	Free	1,197+
BUSINESS ENERGY PROFESSIONAL	Preparatory program and 130-question open-book exam, 68%	5-day program, can wait up to 3 years to take exam	Combination of education and experience	$300 renewal every 3 years	Certified Business Energy Professional (BEP) Training Program	$$$	$$	484+
BPI MULTIFAMILY BUILDING ANALYST	75-question online and 50-question picture-based exams, 65%	One year maximum	Age 16+	Recertify every 3 years; CEUs/ experience	Certification Scheme Handbook and Testing Knowledge List	Free	$$$$	—
BPI MULTIFAMILY BUILDING OPERATOR	75-question online and field exams, 65%	One year maximum	Age 16+	Recertify every 3 years; CEUs/ experience	Certification Scheme Handbook and Testing Knowledge List	Free	$$$$	—
CERTIFIED ENERGY MANAGER (CEM)	Preparatory program and 130-question open-book exam	5-day program	Combination of education and experience	Renew every 3 years, 10 credits	CEM Body of Knowledge and Study Guide	$	$$$	16,686+
CERTIFIED GREEN BUILDING PROFESSIONAL (CGBP)	Course exam: 1-hour, open book, 80%.	16 hours (four, four-hour webinars)	None	Annual CEUs, dues: $49 basic, $199 professional	Online live-stream webinar course (16 hours)	$$	$	6,500+
CERTIFIED PROPERTY MANAGER (CPM)	Eight courses and two exams: open-book, 70%	18–24 months to graduate, 12 months as CPM candidate	36 months of experience	CPM dues, IREM chapter dues, NAR dues.	CPM Capstone: MPSA Prep and CPM Handbook	$$$$	Free	7,890+
CERTIFIED REP	Preparatory program and 117-question open-book exam, 68%	2-day program, can wait up to 3 years to take exam	Combination of education and experience	$300 renewal every 3 years	Certified Renewable Energy Professional (REP) Training Program	$$$	$$	273+
CSDP	Preparatory program and 114-question open-book exam, 70%	2-day program, can wait up to 3 years to take exam	Combination of education and experience	$300 renewal every 3 years	Certified Sustainable Development Professional (CSDP) Training Program	$$	$$	332+
FITWEL AMBASSADOR	Exam: 50-question, open-book, 80%.	1-hour video and exam, 60-day window	None	None	Fitwel Ambassador Course: pre-recorded video and guides	$	Free	4,200+

AN OVERVIEW OF PROFESSIONAL CREDENTIALS

	METHOD OF ATTAINING	TIME TO ACQUIRE	PREQUISITES OF ELIGIBILITY	ONGOING REQUIREMENTS	TRAINING COURSE OR STUDY MATERIALS	COST OF STUDY MATERIALS	COST FOR TESTING	INDUSTRY ADOPTION
GPRO	GPRO course and 75-minute online exam, 80%	4–14 hours coursework and exam	Assumes basic knowledge of respective trade	None	Course e-book	$	$$	20,000+
GREEN GLOBES EMERGING PROFESSIONAL (GGEP)	Online training and 50-question open-book exam, 80%	5–10 hours	Designed for college students interested in sustainability	Valid up to 5 years	Manual and online training	$	Free	252+
GREEN GLOBES PROFESSIONAL	Online training and 100-question exam, 80%	8–15 hours	5+ years of experience, 3+ years with associate degree	$250 renewal every 2 years	Self-paced online training program	$$	Free	889+
LEED WITH SPECIALTY	LEED with Specialty exam: 100-question, 170/200	12 months to take exam	Requires current LEED Green Associate credential, age 18+	$85 renewal, 30 CEU hours	LEED with Specialty Candidate Handbook and resources	$$	$$	129,000+
LEED GREEN ASSOCIATE	Exam: 100-question, 170/200	Approximately 60 hours of studying	Exposure to LEED and green building concepts	$85 renewal every 2 years, 15 CEU hours	LEED Green Associate Candidate Handbook and resources	$$	$$	36,000+
LIVING FUTURE ACCREDITATION	LFA credits: 36 in a year, 80%	Complete within 1 year, 20–30 hours	None	Lifetime accreditation, no renewal necessary	LFA Foundational Curriculum	$$	N/A	1,300+
NABERS ACCREDITED ASSESSOR	NABERS Assessor courses: 80% on final exams	Courses vary from hours to days	Experience in building operations and management	Annual accreditation fee: $865	NABERS training courses	$$$	$$	500+
NAR GREEN DESIGNATION	NAR GREEN Course and exam, 80%	2-day course, in-person, virtual, or online	None	Resource Council and NAR dues	NAR GREEN Designation Course	$	Free–$$	3,378+
RESET ACCREDITED PROFESSIONAL	Four-hour intensive, online knowledge test and offline practicum, 60%	Approximately 10 hours, incl. 5-hr videos and 4-hr practicum	Familiarity with RESET Standard	RESET AP status valid indefinitely	Pre-recorded video training and knowledge pre-test	Free	$$$	573+
WELL AP	WELL AP 115-question closed-book exam, 170/200	Max one year, 3 months of study recommended	Age 18+, knowledge of health and well-being in built environment	Renew every 2 years, $125 fee	WELL AP resources and additional cost options	$	$–$$$	24,000+

Accredited Commercial Manager (ACoM)

VERIFIED

YEAR BEGAN	2006
MANAGING ORGANIZATION	Institute of Real Estate Management (IREM)
METHOD OF ATTAINING	Coursework and ACoM Certification Exam: 100-question, multiple-choice, open-book, must receive at least 70% to pass
TIME TO ACQUIRE	Two to three months: five days of coursework; half day for online open-book exam; one hour to apply; about one to two months to graduate
PREREQUISITES OR ELIGIBILITY	At least 12 months of experience managing minimum size portfolio, performing at least 14 of 29 commercial real estate management functions.
ONGOING REQUIREMENTS	Annual ACoM ($250) and IREM chapter dues (varies by location)
STUDY MATERIALS	Two courses: 1) Ethics for the Real Estate Manager (classroom) or Real Estate Management Ethics (online) and, 2) Managing Commercial Properties
COST OF STUDY MATERIALS	$1,217 for ACoM Track (ACMTRK) coursework ($977 for IREM members)
COST FOR TESTING	Testing: $129 ($99 for IREM members) Application: $80 fee ($40 for IREM members); $100 for international
INDUSTRY ADOPTION	350+

Reference: [127]

ACoM ACCREDITED COMMERCIAL MANAGER

This affordable credential is highly respected by the real estate management community and gives graduates the necessary tools to manage commercial properties. You are eligible for fast track if you hold the following designations: CPM, CCIM, CSM, PCAM, or RPA; or, if you hold a bachelor's or graduate degree with major, minor, or concentration in real estate or property management – or an associate degree in a non-residential property or real estate management program. Both still require taking one of two courses (ETH800 or ETH001).

The Accredited Commercial Manager (ACoM) is best suited to early-career commercial property managers who want to demonstrate proficiency in core management principles and effectively communicate with owners, tenants, and investors. ACoM is applicable to all types of commercial property managers, including office, retail, mixed-use, industrial, and self-storage. Though it is mostly adopted in the U.S., the certification is also applicable to managers outside the U.S.

For More Information:

- FAQ
- ACoM Checklist
- International ACoM Guide

Accredited Residential Manager (ARM)

VERIFIED

This affordable course is highly respected by the real estate management community and gives graduates the necessary tools to manage residential properties.

The Accredited Residential Manager (ARM) is well suited to early-career residential property managers who want to demonstrate proficiency in core management principles and effectively communicate with owners, tenants, and investors. ARM is applicable to managers of any type of residential property, including multifamily rental communities, condominiums, homeowners' associations, single-family homes, and mixed-use properties. Though it is mostly adopted in the U.S., the certification is also applicable to managers outside the U.S. According to IREM, managers with the ARM designation earn an average annual salary of $66,813, while the average base salary for a non-certified manager is $48,340 (approximately 38% higher earnings with ARM).

For More Information:

- FAQs
- ARM Checklist

YEAR BEGAN	1975
MANAGING ORGANIZATION	Institute of Real Estate Management (IREM)
METHOD OF ATTAINING	Coursework and ARM Certification Exam: 100-question, multiple-choice, open-book, must receive at least 70% to pass
TIME TO ACQUIRE	Two to three months: five days of coursework; half day for online open-book exam; one hour to apply; about one to two months to graduate
PREREQUISITES OR ELIGIBILITY	At least 12 months of experience managing minimum size portfolio, performing at least 14 of 29 residential real estate management functions.
ONGOING REQUIREMENTS	Annual ARM ($250) and IREM chapter dues (varies by location)
TRAINING COURSE OR STUDY MATERIALS	Two courses: 1) Ethics for the Real Estate Manager (classroom) or Real Estate Management Ethics (online) and 2) Managing Residential Properties
COST OF TRAINING COURSE OR STUDY MATERIALS	$1,217 for ARM Track (ARMTRK) coursework ($977 for IREM members)
COST FOR TESTING	Testing: $129 ($99 for IREM members) Application: $80 application fee ($40 for IREM members)
INDUSTRY ADOPTION	3,600+

Reference: [127]

BPI Certified Professional — Multifamily Building Analyst (MFBA)

The MFBA credential provides the skills and knowledge needed for a professional to conduct energy audits and assess overall building performance. MFBA is valuable and intended for professional consultants and engineers who want to provide those services to owners or operators of multifamily buildings. It will allow them to provide expert recommendations on how to improve energy efficiency and general facility operations.

The Multifamily Building Analyst (MFBA) certification qualifies building professionals to conduct energy audits and evaluate the overall performance of multifamily buildings. By analyzing the relationship between building systems, these professionals provide recommendations that improve energy efficiency and durability and enhance occupant's health, safety, and comfort. This accreditation is suited for envelope and HVAC systems analysts but is not designed for envelope and HVAC systems installers (who should seek AC and Heat Pump certification).

For More Information:

- FAQs
- Multifamily Certification Scheme Handbook
- Testing Knowledge List

YEAR BEGAN	2008
MANAGING ORGANIZATION	Building Performance Institute (BPI)
METHOD OF ATTAINING	Within one year, complete 75-question online exam and 50-question picture-based practical exam (also online); for both, must receive 65% to pass; for both, can attempt exam six times within 12 months
TIME TO ACQUIRE	Maximum of one year to complete two exams; results for exams may take four to six weeks
PREREQUISITES OR ELIGIBILITY	Must be over the age of 16 (anyone under 18 needs parental or guardian consent and waiver of liability form); HVAC experience recommended
ONGOING REQUIREMENTS	Must recertify every three years; exempt from online exam if one accumulates 30+ BPI CEUs within three years; exempt from practical exam if one meets minimum technical experience requirements within three years.
TRAINING COURSE OR STUDY MATERIALS	Certification Scheme Handbook and Testing Knowledge List; training at BPI Test Centers is optional
COST OF TRAINING COURSE OR STUDY MATERIALS	Free
COST FOR TESTING	Exam prices set by BPI Test Centers; averaging from $800 to $1400 based on location, including training
INDUSTRY ADOPTION	N/A

Reference: [128]

BPI Certified Professional — Multifamily Building Operator (MFBO)

The MFBO credential is intended to provide basic knowledge about the science of existing multifamily buildings and how their operations impact occupant health and wellness and energy efficiency. The most appropriate candidates for this credential would be current or aspiring multifamily property managers, engineers, or college students who are interested in working in the industry.

Useful for building operators, property managers, and other building professionals, the Multifamily Building Operator (MFBO) certification demonstrates knowledge of multifamily building science operations and maintenance. These professionals analyze the relationship between building systems to understand how interactions impact energy efficiency, durability, and occupant health, safety, and comfort. By applying building science principles, the MBFO can recommend operations and maintenance changes that reduce costs for owners and occupants.

For More Information:

- FAQs
- Multifamily Certification Scheme Handbook
- Testing Knowledge List

YEAR BEGAN	2005
MANAGING ORGANIZATION	Building Performance Institute (BPI)
METHOD OF ATTAINING	Within one year: complete 75-question online exam and receive 65% to pass; must pass two-hour hands-on field exam
TIME TO ACQUIRE	Maximum of one year to complete two exams; results for exams may take four to six weeks
PREREQUISITES OR ELIGIBILITY	Must be over the age of 16 (anyone under 18 needs parental or guardian consent and waiver of liability form); HVAC experience recommended
ONGOING REQUIREMENTS	Must recertify every three years; exempt from 75-question online exam if one accumulates 30+ BPI CEUs; exempt from practical exam if one meets minimum technical experience requirements within three years.
TRAINING COURSE OR STUDY MATERIALS	Certification Scheme Handbook and Testing Knowledge Kit
COST OF TRAINING COURSE OR STUDY MATERIALS	No cost
COST FOR TESTING	Exam prices set by BPI Test Centers, averaging from $800–$1400 based on location, including training
INDUSTRY ADOPTION	N/A

BREEAM Assessor

VERIFIED

BREEAM®

There are limited BREEAM Assessors in the U.S. currently; however, they are essential and required to have on a successful BREEAM project, and BREEAM building certification is growing in the U.S.

Connected to the BREEAM building certification schemes (see page 25), licensed BREEAM Assessors conduct BREAM assessments, calculate ratings, and comply with BREEAM certification scheme requirements. Each BREEAM certification scheme is associated with a BREEAM Assessor designation (e.g., New Construction, In-Use). Applicable both in the U.K. and internationally , this certification is well suited to building and real estate professionals, designers, engineers, and energy and environmental consultants.

For More Information:

- Guide to Understanding BREEAM Assessors
- U.K. Assessor Training

YEAR BEGAN	1990
MANAGING ORGANIZATION	BRE
METHOD OF ATTAINING	For each BREEAM certification scheme: training course (e.g., New Construction, Refurbishment and Fit-out, In-Use) and open book exams
TIME TO ACQUIRE	Time varies depending on course, with more coursework and study time required for new assessor courses. Most recommend 30 hours of self-study time.
PREREQUISITES OR ELIGIBILITY	Some have prerequisites. For example, BREEAM In-Use assessors are required to have a minimum of two years full time experience in the last five years in one of six designated professions.
ONGOING REQUIREMENTS	Once qualified, the Assessor's organization must take out an assessment license for the Assessor. Assessor must maintain license and Professional Indemnity Insurance, as well as potentially go through Quality Assurance audits on their assessments.
TRAINING COURSE OR STUDY MATERIALS	BREEAM Assessor training course (e.g., New Construction, Refurbishment and Fit-out, In-Use). Different courses are offered for new vs. existing assessors and U.K. vs. international. BREEAM courses are only offered by BRE Academy or by recognized training partners.
COST OF TRAINING COURSE OR STUDY MATERIALS	Training costs are priced by market and in local currency. For example, BREEAM USA In-Use Assessor training is $1,500 and BREEAM International New Construction Assessor training for new assessors is $2,000.
COST FOR TESTING	Exam cost included in training course
INDUSTRY ADOPTION	At least 1,197 individuals

Reference: [129]

Business Energy Professional (BEP)

BEPs have experience evaluating energy-consuming systems for buildings and making informed decisions on what projects, retrofits, audits, etc. should be pursued to reduce a company's overall bottom line.

The Business Energy Professional (BEP) designation is appropriate for non-technical business professionals that oversee energy improvement programs or supervise technical energy professionals: financial executives, facilities managers, energy consultants, etc. Once certified, BEPs are prepared to make informed energy-related business decisions, applying knowledge on how different energy management strategies can impact financial and employee performance. BEPs are trained on a wide variety of topics, such as energy accounting, building codes, energy use management, utilities, building systems, energy audits, commissioning, and energy efficiency.

For More Information:

- FAQs
- Professional Directory

VERIFIED

YEAR BEGAN	2004
MANAGING ORGANIZATION	Association of Energy Engineers (AEE)
METHOD OF ATTAINING	Attend five-day preparatory training program and open book exam: 130 questions, must receive 68% to pass
TIME TO ACQUIRE	Five-day training program; can wait up to three years to take exam following training; can take 60 days after exam for approval/denial
PREREQUISITES OR ELIGIBILITY	Combination of education and experience: 1) at least two years of experience and four-year related degree or Professional Engineer or Registered Architect (RA); 2) at least three years of experience and four-year unrelated degree; 3) at least five years of experience and two-year degree; 4) at least eight years of experience; 5) current Certified Energy Manager (CEM)
ONGOING REQUIREMENTS	$300 renewal every three years
TRAINING COURSE OR STUDY MATERIALS	Must take Certified Business Energy Professional (BEP) Training Program Free materials: BEP Body of Knowledge
COST OF TRAINING COURSE OR STUDY MATERIALS	For AEE members: $1,750 to $1,850 Non-member: $1,995 to $2,095
COST FOR TESTING	$400 for application and exam ($200 to retest)
INDUSTRY ADOPTION	At least 484 individuals have been certified

Reference: [130]

Certified Energy Manager (CEM)

Good fit for energy managers, consultants, building owners or managers, or anyone else involved in improving performance and driving energy and cost savings. If education/experience requirements are not met at the time of exam completion, the professional may apply for an Energy Manager-In-Training (EMIT) accreditation until the time that CEM requirements are met.

The Certified Energy Manager (CEM) designation is one of the most recognized and highly regarded certifications on building systems and energy management. Integrating knowledge on electrical, mechanical, process, and building infrastructure, the CEM certification prepares professionals to cost-effectively optimize the energy performance of a building, facility, or industrial plant. The CEM designation is useful for professionals in a variety of building industry roles, such as facility management, energy auditing, real estate management, manufacturing, engineering, architecture, and contracting.

For More Information:

- Candidate Handbook
- Professional Directory
- Study Guide

VERIFIED

YEAR BEGAN	1981
MANAGING ORGANIZATION	Association of Energy Engineers (AEE)
METHOD OF ATTAINING	Complete the following in this order: attend CEM training program, submit CEM certification application, take and pass four-hour, 130-question open-book exam
TIME TO ACQUIRE	Training program takes place over at least five eight-hour days; total time to obtain certification varies based on level of experience
PREREQUISITES OR ELIGIBILITY	Combination of education and work experience, with more years of experience needed for lower levels of education (e.g., four-year engineering degree requires at least three years of related experience, two-year associate degree requires at least eight years of related experience)
ONGOING REQUIREMENTS	Every three years: $300 renewal fee, 10 professional credits, submit Renewal Form
TRAINING COURSE OR STUDY MATERIALS	CEM Body of Knowledge and Study Guide (refers to Handbook of Energy Engineering, Energy Management Handbook, Guide to Energy Management); AEE CEM training course is required (pricing below).
COST OF TRAINING COURSE OR STUDY MATERIALS	For AEE member: $1,750 to $1,850 Non-member: $1,995 to $2,095
COST FOR TESTING	$500 application and exam fee; $250 to retake exam
INDUSTRY ADOPTION	Over 16,686 active CEMs

Reference: [131]

Provides an introduction to green building best practices. The content overview is similar to LEED Green Associate.

Certified Green Building Professional (CGBP)

Best known in California but recognized nationwide, the Certified Green Building Professional (CGBP) certification prepares building professionals to inform homeowners, homebuyers, and renters on green building principles, focusing on energy efficiency, resource and water conservation, and indoor air quality. Professionals with this certification work in all aspects of the high-performance home building and remodeling industry, from contractors to architects, engineers, urban planners, real estate agents, and appraisal experts.

For More Information:

- Professional Directory

YEAR BEGAN	2003
MANAGING ORGANIZATION	Build It Green
METHOD OF ATTAINING	Course exam: 90 minutes, open book, 44 multiple-choice questions; must receive 80% to pass
TIME TO ACQUIRE	16 hours (four, four-hour webinars)
PREREQUISITES OR ELIGIBILITY	None
ONGOING REQUIREMENTS	Annual CEUs (2); membership dues: $49 for basic, $199 for professional
TRAINING COURSE OR STUDY MATERIALS	Online live-stream webinar course taught over four days, 16 hours cumulatively. Consists of presentations, pop quizzes, and Q&A with green building consultant. Candidates have access to training and exam for 148 hours.
COST OF TRAINING COURSE OR STUDY MATERIALS	$399 course fee (virtual)
COST FOR TESTING	Included in course fee; $50 to retake exam if failed
INDUSTRY ADOPTION	6,500+ currently certified as of November 2023

Certified Property Manager (CPM)

CPM is the premier property management designation for all asset classes. Property managers in the U.S. with a CPM make, on average, $70,043 more than their counterparts without the designation. IREM projects receive a discount for having a CPM on the project.

Appropriate for property, finance, and asset managers, the Certified Property Manager (CPM) designation requires comprehensive, in-depth training on ethics, asset analysis, accounting, marketing and leasing, leadership, maintenance and operations, financing, and property valuation and cash flow. Once graduated, CPMs are qualified for high-level management positions (e.g., Officer, Director, VP, District Manager, Owner/Partner) and can expect to earn nearly 2.5 times more than the average property manager, according to Department of Labor statistics. Requiring eight courses and 36 months (three years) of experience in real estate management, CPM is one of the most rigorous and respected designations in the real estate industry.

For More Information:

- FAQs
- Checklist
- CPM Handbook
- IREM Profile and Compensation Study 2019

VERIFIED

YEAR BEGAN	1938
MANAGING ORGANIZATION	Institute of Real Estate Management (IREM)
METHOD OF ATTAINING	Eight CPM certification courses (e.g., Ethics for the Real Estate Manager, Asset Analysis of Investment Real Estate)CPM Capstone — Part 1: Management Plan Skills Assessment (MPSA), Part 2: CPM Certification Exam (CPMEXM). Both exams are open book and require 70% to pass.
TIME TO ACQUIRE	Approximately 18–24 months from enrollment to graduation; must be CPM candidate for at least 12 months
PREREQUISITES OR ELIGIBILITY	36 months of qualifying real estate management experience
ONGOING REQUIREMENTS	Annual CPM dues, IREM chapter dues (includes IREM membership, varies by location), and National Association of Realtors (NAR) Institute Affiliate dues
TRAINING COURSE OR STUDY MATERIALS	CPM Capstone — Part 1: MPSA Prep (two-day classroom intensive), Part 2: CPM Handbook
COST OF TRAINING COURSE OR STUDY MATERIALS	Average cost for tuition, fees, and dues is approximately $7,500
COST FOR TESTING	Included in cost of tuition and above fees
INDUSTRY ADOPTION	7,890 certified professionals

Reference: [127]

Certified Renewable Energy Professional (REP)

With more projects declaring net zero goals by 2050 or earlier and becoming more sustainable, this accreditation may become increasingly useful for those interested in specializing in renewable energy and energy efficiency.

Certified Renewable Energy Professionals (REPs) are trained in a wide range of renewable energy generation, production, and storage technologies and strategies, including solar, wind, hydropower, geothermal, biomass, and more. With an additional focus on financing and incentives, the designation is well suited to professionals that manage or consult on renewable energy installation and upgrade projects, from planning to implementation.

For More Information:

- Body of Knowledge Requirements
- FAQs
- Professional Directory
- Study Materials

VERIFIED

YEAR BEGAN	2010
MANAGING ORGANIZATION	Association of Energy Engineers (AEE)
METHOD OF ATTAINING	Attend two-day preparatory training program and multiple-choice, open-book exam: 117 questions, must receive 68% to pass
TIME TO ACQUIRE	Two-day training program; can wait up to three years to take exam following training; may take 60 days after exam to receive approval/denial
PREREQUISITES OR ELIGIBILITY	Three options depending on education and experience: 1) at least two years of experience and four-year related degree or must be Professional Engineer (PE) or Registered Architect (RA); 2) at least five years of experience and two-year degree; 3) at least 10 years of experience.
ONGOING REQUIREMENTS	$300 renewal every three years
TRAINING COURSE OR STUDY MATERIALS	Must take Certified Renewable Energy Professional (REP) Training Program Free materials: REP Study Guide and Sample Questions, Certification Scheme 1.0, REP Body of Knowledge
COST OF TRAINING COURSE OR STUDY MATERIALS	For AEE member: $1,550 to $1,650; Non-member: $1,650 to $1,750
COST FOR TESTING	$400 for application and exam ($200 to retest)
INDUSTRY ADOPTION	At least 273 individuals

Reference: [132]

Certified Sustainable Development Professional (CSDP)

As more nations, cities, and organizations around the world adopt sustainable development goals and sustainable programming projects, this accreditation could be increasingly useful.

The Certified Sustainable Development Professional (CSDP) designation signifies an understanding of what factors and approaches organizations should consider when undertaking sustainable development or sustainability programming. With training on sustainable development practices, policies, technical requirements, and financial assessments, the CSDP designation is appropriate for a wide range of sustainability-related roles across commercial, institutional, industrial, or governmental sectors (e.g., energy management, renewable energy, green building construction and operations, industrial facilities management, planning, sustainable transportation, and water conservation).

For More Information:

- Body of Knowledge Requirements
- FAQs
- Professional Directory

VERIFIED

YEAR BEGAN	2007
MANAGING ORGANIZATION	Association of Energy Engineers (AEE)
METHOD OF ATTAINING	Attend two-day preparatory training program and open-book exam: 114 questions, must receive 70% to pass
TIME TO ACQUIRE	Two-day training program; can wait up to three years to take exam following training; can take 60 days after exam for approval/denial
PREREQUISITES OR ELIGIBILITY	Five options depending on education and experience: 1) at least three years of experience and four-year related degree or must be Professional Engineer (PE) or Registered Architect (RA); 2) at least five years of experience and four-year degree; 3) at least eight years of experience and two-year degree; 4) at least three years of experience and current Certified Energy Manager (CEM); 5) at least 10 years of experience.
ONGOING REQUIREMENTS	$300 renewal every three years
TRAINING COURSE OR STUDY MATERIALS	Must take Certified Sustainable Development Professional (CSDP) Training Program
COST OF TRAINING COURSE OR STUDY MATERIALS	For AEE member: $850 to $950 Non-member: $950 to$1,050
COST FOR TESTING	$400 for application and exam ($200 to retest)
INDUSTRY ADOPTION	At least 332 individuals

Reference: [133]

Fitwel Ambassador

VERIFIED

Becoming a Fitwel Ambassador is a great starting point to learn about how certification programs work and are formatted. The exam is taken online and it is one of the more affordable accreditations to obtain.

Originally created by the U.S. Centers for Disease Control (CDC) and the U.S. General Services Administration, the Fitwel Ambassador designation demonstrates knowledge of healthy building strategies and the connection between design and human health. Applicable to a variety of positions (e.g., consultants, real estate agents, designers, project managers facility managers, property managers, sustainability professionals, etc.), accredited Fitwel Ambassadors are prepared to navigate the Fitwel platform and help buildings attain the Fitwel building certification (see page 30). Ambassadors are offered a fast track for project review and certification, reducing the certification timeline from 16 to 12 weeks.

For More Information:

- FAQs

YEAR BEGAN	2016
MANAGING ORGANIZATION	Fitwel
METHOD OF ATTAINING	Exam: 50-question, open-book, multiple-choice, must receive 80% to pass. Up to three attempts to pass
TIME TO ACQUIRE	One-hour training video and exam; 60-day window to take exam once purchased
PREREQUISITES OR ELIGIBILITY	None
ONGOING REQUIREMENTS	None
TRAINING COURSE OR STUDY MATERIALS	Fitwel Ambassador Course: one-hour pre-recorded training video and Fitwel Reference Guides
COST OF TRAINING COURSE OR STUDY MATERIALS	$300, all inclusive of training materials for Fitwel Ambassador Course
COST FOR TESTING	Included in cost of course
INDUSTRY ADOPTION	4,200+, 626 cities, 63 countries represented

GPRO credentials are intended to provide holistic and practical knowledge for anyone who is trying to work in the high-performance building industry. It focuses on providing fundamental training for a variety of trades, including construction, architecture, engineering, and facility operations. College students, recent graduates, or simply professionals that are looking to enter the building and construction industry workforce are all great candidates for GPRO.

GPRO

GPRO certificates are aimed toward trade- and contractor-related building, renovation, and operations jobs and provide training on high-performance construction and maintenance practices. GPRO's trade-specific courses include Operations and Maintenance, Plumbing, Electrical Systems, Mechanical, and Construction Management. GPRO Fundamentals of Building Green is the only course widely applicable to a range of jobs and assumes no prior knowledge in a specific trade. Each course is associated with its own exam and certificate. GBCI and AIA credits are available for all GPRO courses. GPRO Fundamentals qualifies for four AIA and GBCI CE Credits.

For More Information:

- FAQs
- Student Resources

YEAR BEGAN	2010
MANAGING ORGANIZATION	Urban Green Council
METHOD OF ATTAINING	GPRO course and 75-minute online exam: 25 to 50 questions (depending on the course), must receive 70% (in-person) 80% (online) to pass
TIME TO ACQUIRE	Four to 14 hours of coursework (depending on the course) and exam
PREREQUISITES OR ELIGIBILITY	None, but coursework assumes basic knowledge of respective trade (except Fundamentals of Building Green)
ONGOING REQUIREMENTS	No expiration once obtained
TRAINING COURSE OR STUDY MATERIALS	Course e-book
COST OF TRAINING COURSE OR STUDY MATERIALS	$100 to $400 for course, e-book, and testing, based on which GPRO course you choose
COST FOR TESTING	See above
INDUSTRY ADOPTION	Over 20,000 trained

Reference: [134][135][136]

Green Globes Emerging Professional (GGEP)

VERIFIED

Intended as an introductory green credential for college students interested in sustainability and green building certification and/or professionals who do not have the required five years of industry experience for the Green Globes Professional certification.

Green Globes Emerging Professional (GGEP) is designed for college students and early professionals pursuing a career in design, engineering, construction management, sustainability, and related disciplines. After passing the exam, GGEPs are accredited for up to five years, or until the minimum requirements have been met to be eligible for the Green Globes Professional (GGP) accreditation (see page 94). The GGEP training program covers topics including green building, sustainability, and an introduction to the Green Building Initiative (GBI) and the Green Globes certification system (see page 31).

For More Information:

- Professional Directory

YEAR BEGAN	2021
MANAGING ORGANIZATION	Green Building Initiative
METHOD OF ATTAINING	Online training and exam: open book, 50 multiple-choice, true/false, and fill-in-the-blank questions, 80% to pass
TIME TO ACQUIRE	Five to 10 hours
PREREQUISITES OR ELIGIBILITY	None, but it is designed for college students with interest in sustainability and green building certifications
ONGOING REQUIREMENTS	Valid for up to five years
TRAINING COURSE OR STUDY MATERIALS	Manual and online training
COST OF TRAINING COURSE OR STUDY MATERIALS	$50: GGEP Credential Package includes manual, online training, final exam
COST FOR TESTING	Exam included in $50 package
INDUSTRY ADOPTION	252 (as of September 2023)

Green Globes Professional

VERIFIED

Intended for professionals that already have industry experience but are looking to take the next step with green building knowledge and practice.

Focused on sustainable design and construction, the Green Globes Professional (GGP) accreditation prepares professionals to become experts in the Green Globes building assessment, certification process, and rating system (see page 31). The GGP training program covers the New Construction (NC), Existing Buildings (EB), Sustainable Interiors (SI), and Core & Shell (CS) Green Globes modules and protocols. It is aimed toward a variety of fields and roles: architecture, operations, maintenance, management, engineering, construction, building materials, auditing, appraisals, facility planning, energy analysis, commissioning, and sustainability management.

For More Information:

- Professional Directory

YEAR BEGAN	2009
MANAGING ORGANIZATION	Green Building Initiative
METHOD OF ATTAINING	Online training and exam: 100 questions (multiple-choice, true/false, and fill-in-the-blank), 80% to pass
TIME TO ACQUIRE	Eight to 15 hours
PREREQUISITES OR ELIGIBILITY	Five or more years of experience in commercial buildings industry; must be in one or more specific areas (e.g., architecture/design, facilities/operations, sustainability/environment, energy analysis, commissioning, etc.); three years for candidates with associate degree in related field.
ONGOING REQUIREMENTS	$250 renewal every two years; Green Globes Emerging Professionals (GGEP) receive two complementary years of credentialing with GGP certification
TRAINING COURSE OR STUDY MATERIALS	Self-paced online training program
COST OF TRAINING COURSE OR STUDY MATERIALS	$750 GGP Enrollment Package includes training program, exam, and two years of credential; $250 discount for GGEP candidates (must have only been GGEP for at least one year to receive discount)
COST FOR TESTING	Exam included in GGP Enrollment Package, $75 application fee
INDUSTRY ADOPTION	At least 889 individuals

LEED with Specialty

VERIFIED

LEED
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

After achieving your LEED Green Associate, the next step is to pursue LEED AP with a specialty that most closely matches the industry or field that you work in (the primary difference being between existing buildings and new construction). You can also pursue multiple different LEED AP credentials without having to take the LEED Green Associate exam again.

Associated with the Leadership in Energy and Environmental Design (LEED) green building certifications (see pages 35–37), LEED with specialty credentials are some of the most popular and well-known green professional credentials in the market, equipping professionals with advanced knowledge in green building design, construction, and operations, along with LEED rating systems. LEED AP credentials include LEED AP Building Design and Construction (BD+C), LEED AP Operations and Maintenance (O+M), LEED AP Interior Design and Construction (ID+C), LEED AP Neighborhood Development (ND), and LEED AP Homes. They are useful for a wide variety of building professionals, including architects/designers, construction managers, energy analysts, urban planners, real estate developers, sustainability managers, and more. To be eligible for the LEED AP, professionals must first earn the LEED Green Associate (see page 96); however, LEED offers a combined exam where professionals can earn a LEED Green Associate and LEED AP with specialty credential at the same time.

For More Information:

- Candidate Handbook
- Course Catalogue
- FAQs
- LEED Reference Guide

YEAR BEGAN	2009
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI)
METHOD OF ATTAINING	LEED with Specialty exam (specialties include BD+C, Homes, ID+C, ND, and O+M): 100 multiple-choice questions, must receive 170/200 to pass, available online or at Prometric Testing Center Combined exam (LEED Green Associate and LEED with Specialty): 200 multiple-choice questions, 100 questions for LEED Green Associate, 100 questions for LEED with Specialty, must receive score of 170/200 on both to pass, only available at Prometric Testing Center. You must pass both the LEED with Specialty section and the LEED Green Associate section in order to receive a credential.
TIME TO ACQUIRE	Once you register to take the exam, you have 12 months to complete the exam session; credential received within 72 hours of passing exam
PREREQUISITES OR ELIGIBILITY	Must hold current LEED Green Associate credential and be 18+ years of age; experience with LEED projects is recommended
ONGOING REQUIREMENTS	$85 renewal; 30 continuing education hours (at least six must be LEED-specific) within two years of passing certification exam
TRAINING COURSE OR STUDY MATERIALS	LEED with Specialty Candidate Handbook and a variety of courses, practice questions, reference guides, and study plans available at usgbc.org.
COST OF TRAINING COURSE OR STUDY MATERIALS	LEED with Specialty Candidate Handbook is free, price for courses, study plans, etc. varies
COST FOR TESTING	LEED with Specialty exam: $350 ($250 for USGBC members) Combined exam (LEED Green Associate and LEED with Specialty): $550 ($400 for USGBC members)
INDUSTRY ADOPTION	205,000+ with LEED credential (Green Associate and with Specialty); 129,000+ with just Specialty as of November 2023

Reference: [137][138]

LEED Green Associate

VERIFIED

LEED
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

This is an introductory green building credential that provides broad-based knowledge of sustainability within the built environment as well as how the LEED rating system is structured and works.

Associated with the Leadership in Energy and Environmental Design (LEED) green building certifications (see pages 35), the LEED Green Associate is a popular credential that prepares professionals with green building-related knowledge and skills, with topics including LEED, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and location and transportation. It is useful for a wide variety of building professionals, including architects/designers, construction managers, energy analysts, urban planners, real estate developers, sustainability managers, consultants, and more. After earning a LEED Green Associate credential, professionals are eligible to advance to the LEED with specialty credential (see page 95).

For More Information:

- Candidate Handbook
- FAQs

YEAR BEGAN	2009
MANAGING ORGANIZATION	Green Business Certification Inc. (GBCI)
METHOD OF ATTAINING	Exam: 100 multiple-choice questions; must receive 170/200 to pass. Combined exam (LEED Green Associate and LEED with specialty): 200 multiple-choice questions, 100 questions for LEED Green Associate, 100 questions for LEED with specialty, must receive score of 170/200 on both to pass, only available at Prometric Testing Center. You can pass the LEED Green Associate section of the combined exam, and, even if you fail the LEED with specialty section, receive a LEED Green Associate credential.
TIME TO ACQUIRE	Approximately 60 hours of studying
PREREQUISITES OR ELIGIBILITY	GBCI recommends applicants have exposure to LEED and green building concepts through work experience, volunteering, or educational courses prior to testing
ONGOING REQUIREMENTS	$85 renewal; 15 continuing education hours (at least three must be LEED specific) within two years of earning credential
TRAINING COURSE OR STUDY MATERIALS	LEED Green Associate Candidate Handbook and a variety of courses and exam prep resources (e.g., Green Associate exam study plan, Green Associate Study Bundle) at usgbc.org
COST OF TRAINING COURSE OR STUDY MATERIALS	LEED Green Associate Candidate Handbook is free Pricing for courses and other resources vary. Bundles include study bundle ($155), exam and prep bundle ($369), and exam, prep, and maintain (access to LEED courses for one year) bundle ($499).
COST FOR TESTING	Exam only: $250 for non-USGBC-member, $200 for USGBC member, $100 for full-time student, free for veterans with reimbursement
INDUSTRY ADOPTION	More than 36,000 LEED Green Associates

Reference: [137][139][140]

Living Future Accreditation (LFA)

VERIFIED

Those professionals starting with existing accreditations (e.g., Green Globes, LEED, WELL) may be eligible for a fast-track option.

The Living Future Accreditation (LFA) provides advanced training in sustainable design, regenerative design philosophy, and building certifications from the International Living Future Institute (ILFI), including the Living Building Challenge. After enrolling, participants are required to complete the LFA Foundational Curriculum along with more flexible general education credits (e.g., conference attendance, webinars, Living Future project team work experience) over the course of a year. The accreditation is received after a self-audit and ILFI Education Team audit confirming requirements have been met. For learners in groups of five or more, ILFI offers packages that include a discount on both LFA Foundational Curriculum enrollments and individual memberships.

For More Information:

- Complete Guide
- Membership

YEAR BEGAN	2012
MANAGING ORGANIZATION	International Living Future Institute (ILFI)
METHOD OF ATTAINING	Completing 36 LFA continuing education credits within one year (20 from Foundational Curriculum and 16 General); quizzes require 80% passing scores
TIME TO ACQUIRE	All requirements completed within one year once enrolled; approximately 20 to 30 hours to complete LFA Foundational Curriculum and 16 hours for general credits.
PREREQUISITES OR ELIGIBILITY	None
ONGOING REQUIREMENTS	No renewal necessary; this is a lifetime accreditation. Active Living Future annual membership: cost ranges from $50 to $250
TRAINING COURSE OR STUDY MATERIALS	LFA Foundational Curriculum
COST OF TRAINING COURSE OR STUDY MATERIALS	Flat fee for Foundational Curriculum, costs for General credits vary
COST FOR TESTING	No exam, but quizzes are required throughout the curriculum
INDUSTRY ADOPTION	1,300+

NABERS Accredited Assessor

VERIFIED

Accreditation from one country does not translate to accreditation in another (i.e., NABERS Assessors are not automatically NABERSNZ Assessors).

Connected to the National Australian Built Environment Rating System (NABERS) rating system for building efficiency, the NABERS Accredited Assessor accreditation prepares professionals to assess buildings and provide NABERS ratings. It is aimed mainly toward jobs in building operations and management but is also suitable for those that work in energy or water efficiency, waste management, and indoor environmental quality. Each Assessor course is associated with its own accreditation. Examples of courses include Energy and Water for Shopping Centers, Indoor Environment for Offices, and Energy for Data Centers. All new Assessors must complete the NABERS Assessor 101 course, which is taken as part of one's first accreditation course.

For More Information:

- Professional Directory

YEAR BEGAN	1998
MANAGING ORGANIZATION	NABERS (via New South Wales Government)
METHOD OF ATTAINING	First complete NABERS Assessor 101, then complete accreditation course (e.g., NABERS Energy and Water for Offices). Each course is associated with its own fee and accreditation. Some courses require prerequisite course. For brand new assessors, NABERS Assessor 101 is taken as part of first accreditation course. Must score 80% or higher on final exams.
TIME TO ACQUIRE	Courses range from a few hours to a few days to complete
PREREQUISITES OR ELIGIBILITY	None; ideal candidate has experience in building operations and management
ONGOING REQUIREMENTS	Annual accreditation fee: $865
TRAINING COURSE OR STUDY MATERIALS	NABERS training courses (e.g., Waste for Offices)
COST OF TRAINING COURSE OR STUDY MATERIALS	Assessors Accreditation courses (for new Assessors): $1,860 to $2,610; Introductory modules: free to $780 (e.g., NABERS Assessor 101) (for new Assessors); extra accreditation modules (for existing Assessors): $1,115
COST FOR TESTING	If you score between 75% and 79%, there is no fee to retake exam. Exam retesting fee of $355 required when score is between 50% and 74%. Full course must be retaken at full price if score is below 50%. Otherwise, cost of exam is included in module pricing above.
INDUSTRY ADOPTION	At least 500 individuals in Australia and New Zealand

Reference: [141]

NAR Green Designated professionals standout from other real estate agents by having the knowledge of navigating “green” financial grants or incentives that are available to buyers, finding high-performing and efficient assets and being able to communicate the benefits, knowing what makes a property green, being able to market and sell green homes and buildings, and helping to distinguish between industry rating and classification systems.

NAR GREEN Designation

Focused on the residential real estate sector, the NAR Green Designation is designed for real estate agents that desire training in energy efficiency and sustainability. Once certified, agents are knowledgeable of what features make for a high-performance home and are prepared to provide homeowners guidance on improving performance through low-cost DIY projects and larger retrofitting, remodeling, and new construction projects. Accredited agents are also listed in NAR’s GREEN directory and can access exclusive industry webinars, pre-written green social media content, marketing tools, and other NAR member resources. The designation is available for both U.S. and international real estate agents.

For More Information:

- Checklist
- International Checklist
- Membership
- Training

YEAR BEGAN	2008
MANAGING ORGANIZATION	National Association of Realtors (NAR)
METHOD OF ATTAINING	NAR GREEN Designation Course People, Property, Planet, Prosperity (online or classroom) and exam: must receive 80% to pass.
TIME TO ACQUIRE	Two-day course in-person, live-virtual or online
PREREQUISITES OR ELIGIBILITY	None
ONGOING REQUIREMENTS	Annual REsource Council membership cost: free for the first year; prorated according to the month you passed in second year; $98.50 for U.S. realtors after that, $75 for international realtors. Must remain REsource Council and NAR member (NAR membership dues are $156 per year in 2024). If either membership lapses for five years, you must retake the coursework and exam.
TRAINING COURSE OR STUDY MATERIALS	NAR GREEN Designation Course: People, Property, Planet, Prosperity
COST OF TRAINING COURSE OR STUDY MATERIALS	$597.50 for non-members, $295 for members
COST FOR TESTING	Cost for testing comes with course; application fee as follows: $0 for U.S. realtors, $170 for international realtors
INDUSTRY ADOPTION	3,378 designees as of November 2023

Reference: [142][143]

RESET AP*

VERIFIED

The RESET Accredited Professional (AP) certification is an umbrella term for four different standard-specific accreditations: RESET Air AP, RESET Energy AP, RESET Waste AP, and RESET Water AP. Each accreditation allows a professional to oversee the implementation of its respective standard toward a building project's RESET certification. While Energy, Waste, and Water are in process in terms of the AP programs, RESET Air AP requirements are outlined by RESET, shown in the accompanying table, and more than 500 RESET Air accredited professionals are active around the world.

For More Information:

- RESET Air

YEAR BEGAN	2015
MANAGING ORGANIZATION	RESET
METHOD OF ATTAINING	Four-hour educational intensive and exam. An online knowledge test consists of 50 questions. The offline practicum includes around 30 questions. A score of 60% or higher is required to pass.
TIME TO ACQUIRE	Approximately 10 hours; five hours of videos, some time spent studying the content, and the four-hour practicum training and exam
PREREQUISITES OR ELIGIBILITY	Familiarity with RESET Standard associated with specific AP (e.g., Air, Energy, Water)
ONGOING REQUIREMENTS	RESET AP status is valid indefinitely, barring major updates to the associated standard
TRAINING COURSE OR STUDY MATERIALS	Eight pre-recorded video training modules and an online knowledge pre-test are provided by RESET
COST OF TRAINING COURSE OR STUDY MATERIALS	Free
COST FOR TESTING	$515 in person; $450 for online. Membership discounts of 3% to 9% are available dependent upon exam class size.
INDUSTRY ADOPTION	573 as of November 2023

RESET AP stands out from other accreditations due to its focus on using data to help make better decisions in designing, constructing, operating, and managing a building.

*Unless otherwise noted, this chart details information accurate only for RESET Air AP, with RESET Energy, RESET Water, and RESET Waste AP still in the process of being launched.

WELL AP

VERIFIED

WELL

This is one of the more challenging accreditations to earn; studying for the WELL AP gives great insight to the scientific evidence behind WELL strategies.

The WELL Accredited Professional (AP) designation signifies expertise in the WELL Building Standard, which focuses on healthy building design and operations across areas air and water quality, lighting design, mental health, physical fitness, acoustics, and thermal comfort. WELL AP is suitable for any job concerned with promoting positive health and well-being in the built environment, but is particularly relevant for health, safety, and environment (HSE) professionals. Once certified, WELL APs are prepared to register, assess, and verify projects according to the WELL Building Standard.

For More Information:

- Candidate Handbook
- FAQs
- Free Mock Exam
- Study Materials

YEAR BEGAN	2015
MANAGING ORGANIZATION	International Well Building Institute (IWBI)
METHOD OF ATTAINING	Register for WELL AP 115-question exam and take within one year: must receive 170/200 to pass. Closed book test
TIME TO ACQUIRE	Maximum of one year. IWBI recommends three months of study.
PREREQUISITES OR ELIGIBILITY	Must be 18 or older; experience and/or knowledge in health, safety, and well-being in the built environment is recommended
ONGOING REQUIREMENTS	Every two years: $125 fee, 30 continuing education hours
TRAINING COURSE OR STUDY MATERIALS	Free resources: Get To Know The WELL AP Exam, WELL AP Program Overview, WELL Certification Guidebook, WELL AP Candidate Handbook, 30-question WELL AP mock exam, and more. Paid resources: Three months to the WELL AP exam study guide, WELL AP video course (seven hours), WELL AP practice tests and flashcards, and more.
COST OF TRAINING COURSE OR STUDY MATERIALS	Exam registration ($299) includes WELL AP Handbook, basic study resources, articles, and webcasts For additional cost (see below): three-month study guide, virtual training, exam prep course
COST FOR TESTING	General pricing: $299 for exam registration; $369 for exam registration and three-month study guide Special bundles: $468 for exam registration, three-month study guide, and half-day live virtual training; $518 for exam registration, three-month study guide, and seven-hour exam prep course Special pricing: as low as $164 for employer-sponsored bundles; $99 for students
INDUSTRY ADOPTION	24,000+ registered or accredited WELL APs across 128 countries

Additional Professional Accreditations and Credentials

We have discussed how many of the certifying organizations that manage green building certifications have launched accompanying professional accreditations (e.g., LEED, BREEAM, Green Globes, etc.). That trend has continued in recent years as more building standards have sprung up around the world. While many are still in their infancy, these certifications are worth observing as their related green building rating systems grow in industry adoption. The professional credential that accompanies the building certification is mainly useful for that specific system but can also add value and knowledge in various roles (e.g., architects, wellness consultants).

ACCOMPANYING ACCREDITATIONS

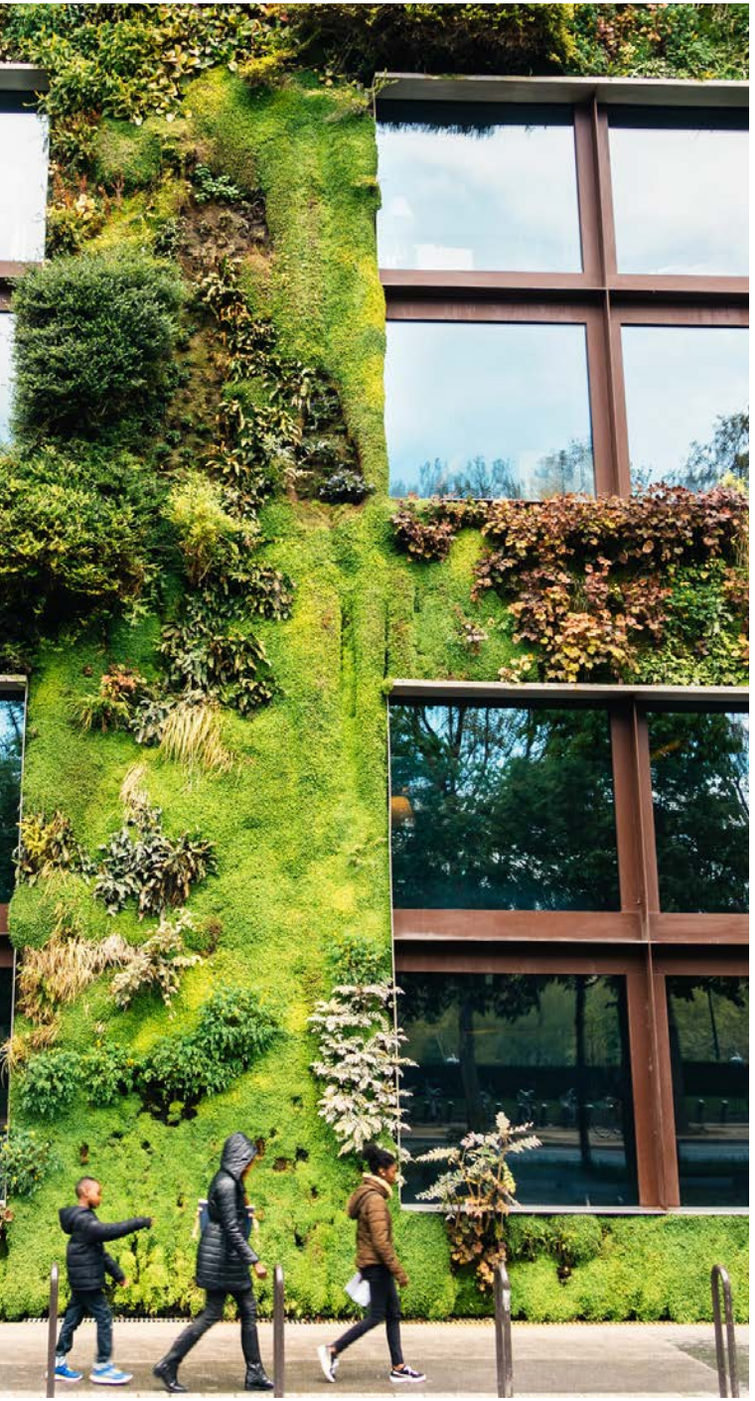
While LEED with Specialty and the LEED Green Associate are related to the LEED building certifications mentioned on page 35, the ubiquity of LEED and its prestige mean the credentials have standalone value. All three of the following credentials are connected to increasingly well-regarded and known certifications that we covered in this guidance report yet have extraordinary specificity, and as of the time of this writing, do not confer the same status as more broadly applicable green credentials. EDGE Expert, SITES AP, and TRUE Advisor are all managed by GBCI, and are connected with EDGE (page 28), SITES (page 46), and TRUE (page 47) certifications. Each credential demonstrates a broad knowledge base in their respective fields but are most useful for becoming an assessor or verifier aiming to help companies become certified through each specific scheme. Exam fees range from $100 (EDGE Expert) to $550 (SITES AP for non-USGBC members). There are more than 1,900 EDGE Experts, 600 professionals with SITES AP, and 1,200 TRUE Advisors around the world.[144][145]

Other professional accreditations offered by organizations we've covered include Phius's suite of four credentials (Consultant, Builder, Rater, Verifier) and Green Star's Certified Assessors (Performance and Communities). Those interested in the specific rating systems offered by those organizations would be best served by obtaining the related credentials alongside a broader professional credential such as Green Globes Professional or a LEED Green Associate.

NO LONGER AVAILABLE

The National Association of Home Builders (NAHB) offered its Certified Green Professional (CGP) and Master Certified Green Professional (MCGP) credentials from 2009 to 2022.[146][147] With more than 3,000 active CGPs in the U.S., the designation is well-recognized in the industry. The coursework required was aligned with NGBS Green (see page 40) and was meant for those professionals with at least two years of building industry experience.

Opportunities for Improvement



Unlike ESG reporting frameworks, which we covered in our second guidance report, green building certifications do not need to consolidate under a single banner in order to be optimized. In fact, local green building codes and culturally or geographically dependent factors make individualization and regionality preferable in many cases. Still, there is room for other types of improvement.

One danger is that a green building certification exists only to encourage professionals to seek the related green credential, and the green credentials only exist to certify a single standard without conferring significant knowledge or experience outside of it. While not the case for the certifications covered in this guidance report, it is easy to see how this echo chamber of relevance could be created. Greenwashing is another risk hanging over much of the sustainability and ESG marketplace; that includes green certifications. However, the risk is lower with verified ecolabels and rigorous building rating systems due to the analytic methods required to issue most certifications. Performance-based standards (e.g., ILFI's suite of certifications) are one way to avoid greenwashing; having third-party verifiers such as UL Solutions verifying environmental claims is another. Future versions of popular certifications (e.g., BREEAM) and other holistic rating tools should prioritize the adoption of performance-based standards that push for regenerative, carbon-positive buildings. Finally, better alignment between metrics in certifications and ESG framework requirements would streamline reporting efforts. Currently, the key performance indicators (KPIs) at the building level do not always align with the KPIs at the portfolio level, and variables may be defined and categorized differently within data management systems for certification purposes than what is required for reporting to GRESB or GRI (e.g., Scope 1, 2, or 3 emissions).

We hope to see more biodiversity-related certifications in the future, too. While the rise of SITES (see page 46) is encouraging, we would also like to see a more rigorous version of something like the National Wildlife Federation (NWF) Certified Wildlife Habitat scheme. Launched in 1972, it was initially designed for individual gardeners to combat the ecological impacts of development. The program has since grown to certify more than 250,000 gardens and habitats across the U.S and offers an option for corporate entities seeking to certify entire real estate portfolios. However, the program is self-verified and not up to the stringent standards of the other certifications covered here. With the right infrastructure and leadership, we envision the possibility of a green standard focused on biodiversity, one with the reach of NWF and the rigors of SITES. Alternatively, emphasizing and including more biodiversity-related criteria in existing rating systems (e.g., LEED, BREEAM) would potentially produce similar outcomes. This is not without precedent, as GBCI acquired and administered RELi for five years before returning managing responsibility to MTS, instead aiming to incorporate resilience-based criteria into future LEED versions.

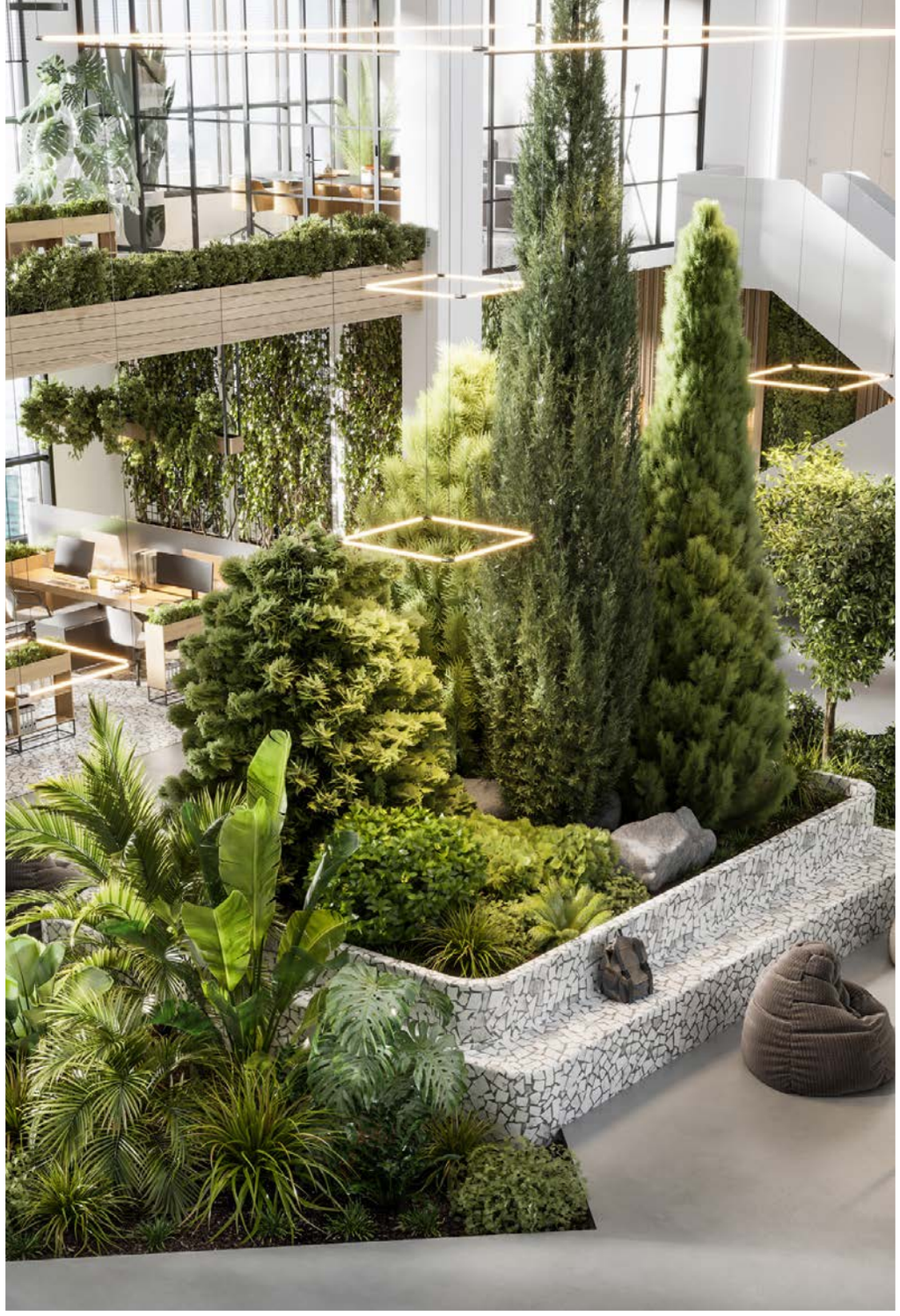
Conclusion

Conclusion

The evolution of sustainability certifications in the built environment over the past four decades reflects a dynamic journey driven by environmental concerns, corporate responsibility, and regulatory frameworks. From the 1970s energy crisis to the recent global commitment to net-zero emissions, green certifications have played a pivotal role in shaping industry practices. The interconnected nature of building, product, and professional certifications underscores their collective impact on sustainability. Recent developments, influenced by global agreements and the post-COVID landscape, highlight the growing importance of certifications in enhancing health, safety, and environmental responsibility in commercial real estate.

The current ecosystem of green building, product, and professional certifications has largely produced positive outcomes in terms of resource efficiency, health, wellness, GHG emissions reduction, and carbon neutrality. Certifications continue to be a vital validation tool for reporting frameworks like GRESB and GRI, as well as regulatory standards at the international, national, and municipal level. With a greater focus on biodiversity and resilience, upcoming versions of popular systems like LEED and BREEAM can take the next step forward to an even more holistic scheme. The proliferation of rating systems like SITES or ecolabels such as WaterSense likewise offers hope that these and other important variables could be taken up in a meaningful way through focused or single-attribute certifications.

For now, the current landscape of certifications offers a variety of options for companies seeking to improve and validate their environmental performance, consumers looking to make more informed purchasing decisions, and governments aiming to incentivize sustainable initiatives related to the built environment. We hope this guidance report will be a useful tool for industry professionals and decision makers in all of those sectors moving forward.



VIBE
VERDANI INSTITUTE FOR THE BUILT ENVIRONMENT

About VIBE

The Verdani Institute for the Built Environment (VIBE) is a San Diego, California-based nonprofit organization with the mission to position the global building sector as a positive force for sustainable development through green building and resilience practices, education, and collaboration. This guidance report is the second publication under the umbrella of VIBE's Sustainable Built Environment series. VIBE was founded in 2016 by Daniele Horton, a leader in the rapidly growing green building and corporate sustainability industries.

Verdani
PARTNERS

About Verdani Partners

Daniele Horton is also the founder and CEO of Verdani Partners, a full-service corporate ESG consulting firm with the mission to empower organizations with cost-effective strategies to create sustainable buildings and communities. Based in San Diego, California, Verdani Partners leads sustainability efforts, including ESG reporting, for national and international real estate firms with more than 4,500 diversified properties, representing 1.3 billion sq ft and $460 billion AUM.

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