

A low-angle photograph of a modern skyscraper with a vertical garden facade. The building's facade is composed of numerous balconies, each overflowing with lush green plants and trees. The building is set against a clear blue sky, and the lighting suggests a bright, sunny day. The overall aesthetic is one of sustainable urban architecture.

The Zero-Zero Vision:
Fueling Net Zero Goals
through the LEED Zero Program



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Every small rise beyond the 1.5°C global temperature benchmark set in the Paris Agreement profoundly impacts our existence. As we near the 2050 deadline, we also risk exceeding this crucial limit. While a minor yearly increase does not indicate immediate disaster, it represents a concerning pattern for future years, possibly leading to irreversible consequences for the people and the planet. UN reports that the current climate situation is a “code red for humanity”. We must act now.

To beat the deadline towards stabilizing the global temperature, it is imperative to understand the drivers of carbon emissions. The World Resources Institute’s Climate Watch for Global Historical Emissions in 2021 reveals five sectors that drive the climate situation – Energy, Agriculture, Industrial Processes, Waste, and Land-Use Change and Forestry.

The Energy sector alone contributes about three-quarters of global emissions. Within this sector, the biggest contributors are electricity and heat generation, followed by transportation and manufacturing. Meanwhile, the Land-Use Change and Forestry sector play both the roles of carbon source and sink, making it a crucial sector in achieving net zero. Understanding these factors is essential for creating effective strategies to lower emissions and achieve sustainability goals.

From Sustainable Vision to Action

Bridging the path towards a regenerative future, the LEED® Zero Program was established by the US Green Building Council (USGBC) to support the transition towards a net zero built environment. It is an extension of the LEED certification system targeting operational sustainability. This means that buildings can complement their existing LEED Certifications, whether under BD+C (Building Design and Construction) or O+M (Operations and Maintenance), with one or more LEED Zero certifications.

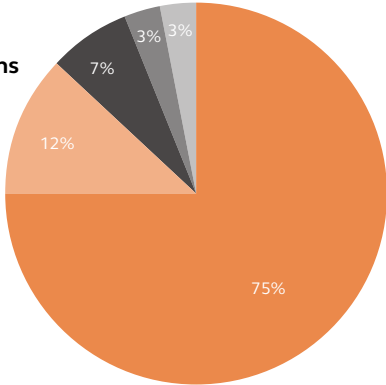
LEED® Zero focuses on four areas namely carbon emissions, energy and water efficiency, and waste reduction.

Each of these addresses a specific sustainability aspect related to above mentioned statistical factors, solidifying the built environment’s role in providing sustainable solutions towards net zero. Buildings certified under LEED for Core and Shell are eligible for LEED Zero if the building has an average occupancy of 50% or greater over the previous 12 months. For LEED Zero Carbon, Energy and Water certifications, at least 12 months of performance data is required.

LEED Zero certification is valid for three years from the date of certification acceptance. To maintain a project’s certification, project teams must submit performance data annually for the duration of the three-year period when the certification is valid. This guarantees that the building consistently maintains a third-party verified net zero performance in its selected focus area throughout its lifetime.

Global Historical Emissions

- Energy
- Agriculture
- Industrial Processes
- Waste
- Land-Use Change and Forestry



The LEED Zero program's comprehensive guidelines and standards integrate relevant aspects of sustainability, providing a framework for strategizing towards net zero goals. Certifying for this program proves the built environment's continuous efforts to adopt innovative solutions, thereby fostering accountability and transparency to sustainability claims.



LEED® Zero Carbon

Recognizes projects that achieve a balance between carbon emitted and avoided. Carbon emitted includes energy delivered on site and transportation, while carbon avoided includes on-site and off-site renewables and carbon offsets.

Energy Attribute Certificates (EACs), Renewable Energy Certificates (RECs) or carbon offsets that are Green-e certified or equivalent can be purchased towards attaining Zero Carbon. This is usually done over the three-year period when the certification is valid since on-site renewable energy generation and consumption will vary based on weather and operating conditions.



LEED® Zero Energy

Earned by buildings that match their annual energy use with on-site or off-site renewable energy generation over 12 months. Same rules with LEED® Zero Carbon apply in purchasing EACs, RECs and carbon offsets.



LEED® Zero Water

Awarded to projects that achieve a balance between the total potable water consumed and total alternative water used, or water returned to its original source.

Alternative water sources include reclaimed water, captured rainwater, AHU (Air Handling Unit) condensate, greywater reuse, and similar, while water returned to its original source can include rainwater stored and infiltrated on site via green infrastructure.



LEED® Zero Waste

Earned by projects which achieved Green Business Certification Inc.'s (GBCI) TRUE Zero Waste Platinum certification. Minimum program requirements include having a zero-waste policy and achieving a minimum waste diversion rate of 90% for solid, non-hazardous wastes for the most recent 12 months. The project team should also provide data representing waste diversion and measurements from a base year, noting the changes in size, type, and nature of business; as well as a submission of a case study of zero waste initiatives on the TRUE Zero Waste website.

Certification is secured by projects, provided that they do not exceed a 10% contamination level for any materials that leave the project site and that the project meets all local solid waste and recycling laws and regulations which includes all air, water and land discharge permits required for collection, handling, or processing of materials.

Investing in Sustainable Excellence

The LEED® Zero program offers a straightforward fee structure to encourage a wide range of projects to participate. For the 3-year certification review, the cost varies depending on project size. Projects up to 499,999 square feet (46,451 square meters) are charged a flat rate of \$2,250, making it affordable for smaller ventures. For projects over 500,000 square feet (46,451 square meters), the flat fee is \$3,350, accommodating bigger developments. Registration is free. This fee structure is practical, offering a viable opportunity for LEED®-certified projects to advance their sustainability objectives.

The time is now to exhaust the critical role of the built environment to achieve Net Zero by 2050. The LEED® Zero program outlines a clear and achievable route for enhancing sustainability in buildings, emphasizing the reduction of carbon, energy, water, and waste. By adopting such a program, organizations contribute significantly towards a more sustainable future, aligning with global efforts to mitigate the impacts of climate change.

Sources:

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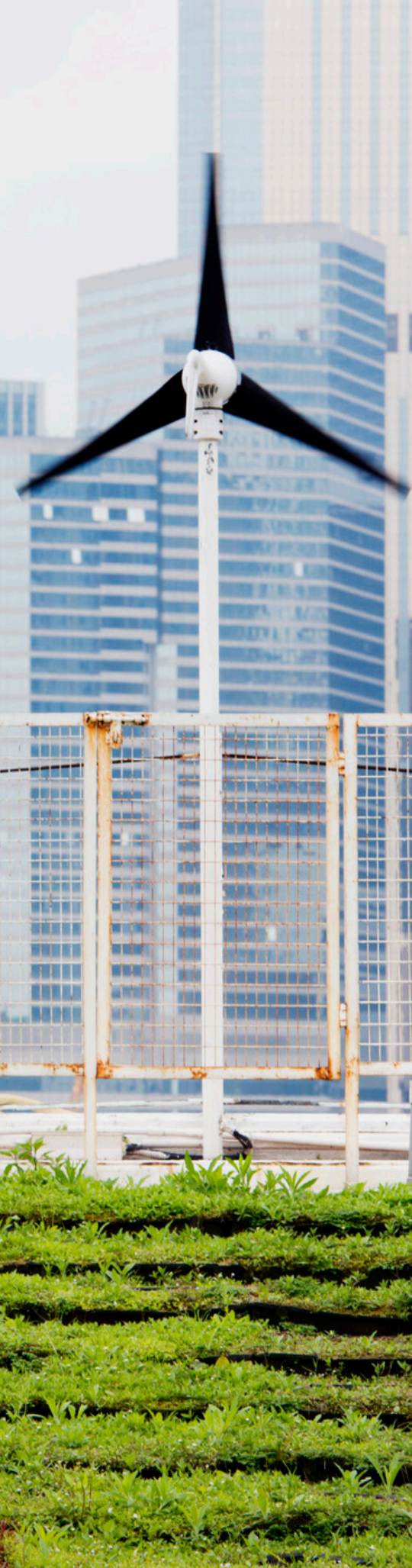
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Arcadis is the world's leading company delivering data-driven sustainable design, engineering, and consultancy solutions for natural and built assets. We are more than 36,000 architects, data analysts, designers, engineers, project planners, water management and sustainability experts, all driven by our passion for improving quality of life. As part of our commitment to accelerating a planet positive future, we work with our clients to make sustainable project choices, combining digital and human innovation, and embracing future-focused skills across the environment, energy and water, buildings, transport, and infrastructure sectors. We operate in over 30 countries, and in 2023 reported €5.0 billion in gross revenues.

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