

BREEAM® | USA

ENERGY STAR®
ENERGY STAR Portfolio Manager®

ENERGY STAR® and BREEAM USA In-Use

Driving building performance through
energy, water and waste efficiency

Introduction

Advancing energy efficiency and sustainability through better buildings

Since its launch in 1990, BREEAM has set evidence-based standards that go beyond regulatory requirements and standard practice. This includes encouraging energy efficiency optimization of assets as part of a broad and holistic evaluation of a building's social, environmental, and economic impacts and benefits. Among many programs, the US Environmental Protection Agency (EPA)'s ENERGY STAR program hones in on

the peer-to-peer energy ranking for buildings, as well as tracking water use and waste generation, encouraging them to improve performance.

BRE and ENERGY STAR are excited to work together to address sustainability performance in the built environment across their research programs.

About ENERGY STAR

ENERGY STAR® is a voluntary program from the US Environmental Protection Agency (EPA) that delivers environmental benefits and financial value through superior energy efficiency. Their online platform, ENERGY STAR Portfolio Manager®, allows users to measure energy, water and waste performance and helps operations teams:

- Benchmark the energy use of all properties in their portfolio
- Compare buildings against a national sample of similar properties
- Track energy, water, and waste usage over time in a single building, groups of buildings, or entire portfolios
- Track and report cost savings and CO2 emissions
- Set priorities for use of limited staff time and/or investment capital
- Receive an energy use intensity (EUI) value for each property
- Apply for ENERGY STAR certification

www.energystar.gov/benchmark

About BREEAM USA In-Use

Administered by Building Research Establishment, BREEAM USA In-Use is a benchmarking and certification method available to all existing commercial and residential buildings, regardless of size, age or performance level. The methodology allows for an independent assessment of physical asset performance and management performance. Certification is conducted by an independent, third-party licensed Assessor.

The BREEAM In-Use online platform allows asset owners and managers to:

- Benchmark the holistic sustainability performance use of all properties in their portfolio
- Compare their assets against a science-based building science standard
- Evaluate sustainability performance over time in a single building, groups of buildings, or entire portfolios
- Be rewarded for lower CO2 emissions and for reducing emissions over time
- Set priorities for use of limited staff time and/or investment capital
- Receive and apply for a BREEAM certification

breeamusa@bregroup.com

www.breeam.com/usa



Using ENERGY STAR tools with BREEAM USA In-Use

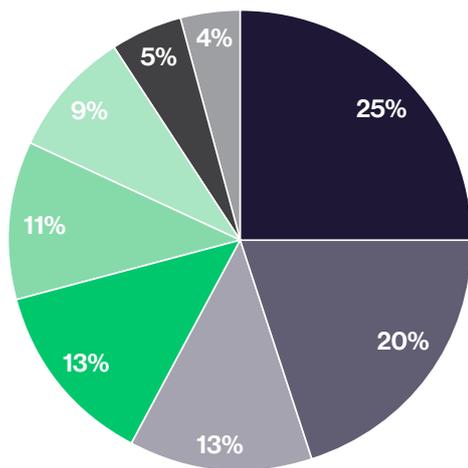
BREEAM USA In-Use is made up of nine categories, which are weighted to reflect their relative impact. This provides a framework for assets to prioritize the performance which has the most significant impact. Energy is strongly emphasized, with CO2 emissions at the heart of how the credits are awarded in both Parts of the program.

Measuring energy, water and waste are strongly encouraged, with ENERGY STAR Portfolio Manager®, specifically encouraged to be used as a benchmarking tool to track and manage granular data.

Users are able to generate the data required for BREEAM through Portfolio Manager's standard reports, supporting their efforts to pursue BREEAM certification. While BREEAM does not award credits based on the 1-100 ENERGY STAR score, BREEAM does recognize ENERGY STAR as a local energy performance asset rating.

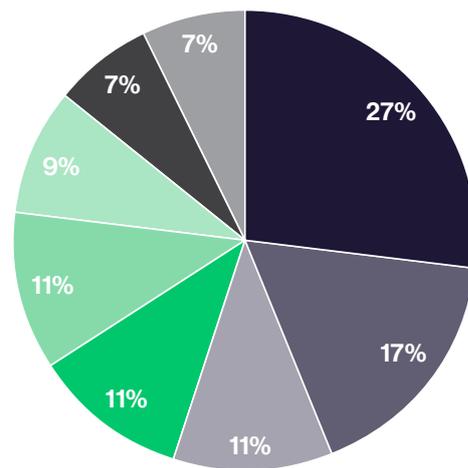
The following table shows which Portfolio Manager data inputs correspond with BREEAM USA In-Use issues. Users can generate standard reports from Portfolio Manager to report their performance for BREEAM benchmarking and certification.

Part 1: Asset Performance



- 25% - Energy
- 20% - Health & Wellbeing
- 13% - Resource
- 13% - Resilience
- 11% - Water
- 9% - Pollution
- 5% - Transport
- 4% - Land Use & Ecology

Part 2: Management Performance



- 27% - Energy
- 17% - Health & Wellbeing
- 11% - Resource
- 11% - Resilience
- 11% - Management
- 9% - Water
- 7% - Land Use & Ecology
- 7% - Pollution

Building Attributes			
 BREEAM: Building Attributes			
	<ul style="list-style-type: none"> - Address - Primary Building Type - Space Use Types - Year Built - Occupancy - Year Built - Gross Floor Area - Number of Workers on Main Shift - Weekly Operating Hours - Number of Residential Living Units 		
Energy			
 BREEAM: Basic Building Details	 BREEAM: Part 1: Ene 12	 BREEAM: Part 2: Ene 19-21	
	<ul style="list-style-type: none"> - Percent That Can Be Cooled/Heated - Active Meters – Electric - Active Meters – Natural Gas - Active Meters – District Steam - Active Meters – District Hot Water - Active Meters – District Chilled Water - Active IT Meters 	<ul style="list-style-type: none"> - ENERGY STAR certification under Ene 12 as a local energy performance asset rating 	<ul style="list-style-type: none"> - Electricity use – Grid Purchase - Electricity use – Generated from Onsite Renewables and Used On-site - Natural Gas Use - Fuel Oil #1 Use - Fuel Oil #2 Use - Fuel Oil #4 Use - Fuel Oil # 5 & 6 Use - Diesel #2 Use - Kerosene Use - Propane Use - District Steam Use - District Hot Water Use - District Chilled Water Use - Coal – Anthracite Use - Coal – Bituminous Use - Coke Use - Wood Use - Other Use
Water			
 BREEAM: Basic Building Details	 BREEAM: Part 1: Wat 01	 BREEAM: Part 2: Wat 11-14	
	<ul style="list-style-type: none"> - Active Water Meters 	<ul style="list-style-type: none"> - Active Water Meters 	<ul style="list-style-type: none"> - Water Use (All Water Sources) - Municipally Supplied Potable Water - Municipally Supplied Reclaimed Water - Alternative Water Generated On Site – Total Use - Well Water – Total Use - Alternative Water

Waste			
 BREEAM: Basic Building Details	BREEAM: Part 1: Rsc 02		BREEAM: Part 2: Rsc 06
	All of the following data points contribute to both BREEAM issues referenced:		
	 Waste - Donated/ Reused	 Waste - Recycled	 Waste - Disposed
	<ul style="list-style-type: none"> - Donated/Reused - Appliances (Tons) - Donated/Reused - Building Materials - Carpet/Carpet Padding (Tons) - Donated/Reused - Building Materials - Concrete (Tons) - Donated/Reused - Building Materials - Mixed/Other (Tons) - Donated/Reused - Building Materials - Steel (Tons) - Donated/Reused - Building Materials - Wood (Tons) - Donated/Reused - Cardboard/ Corrugated Containers (Tons) - Donated/Reused - Electronics (Tons) - Donated/Reused - Food/Food Scraps (Tons) - Donated/Reused - Furniture (Tons) - Donated/Reused - Glass (Tons) - Donated/Reused - Office Supplies (Tons) - Donated/Reused - Other (Tons) - Donated/Reused - Pallets (Tons) - Donated/Reused - Paper - Books (Tons) - Donated/Reused - Textiles/ Clothing (Tons) 	<ul style="list-style-type: none"> - Recycled - Appliances (Tons) - Recycled - Batteries (Tons) - Recycled - Beverage Containers (aluminum, glass, plastic) (Tons) - Recycled - Building Materials - Carpet/Carpet Padding (Tons) - Recycled - Building Materials - Concrete (Tons) - Recycled - Building Materials - Mixed/Other (Tons) - Recycled - Building Materials - Steel (Tons) - Recycled - Building Materials - Wood (Tons) - Recycled - Cardboard/ Corrugated Containers (Tons) - Recycled - Electronics (Tons) - Recycled - Fats/Oils/Grease (Tons) - Recycled - Glass (Tons) - Recycled - Lamps/Light Bulbs (Tons) - Recycled - Mixed Recyclables (Tons) - Recycled - Other (Tons) - Recycled - Pallets (Tons) - Recycled - Paper - Books (Tons) - Recycled - Paper - Copy Paper (Tons) - Recycled - Paper - Mixed (Tons) - Recycled - Plastics - Mixed (Tons) - Recycled - Plastics - Wrap/Film (Tons) - Recycled - Textiles/Clothing (Tons) 	<ul style="list-style-type: none"> - Disposed Waste - Landfill (Tons) - Disposed Waste - Incineration (Tons) - Disposed Waste - Waste to Energy (Tons) - Disposed Waste - Unknown/ Other Destination (Tons) - Disposed - Appliances (Tons) - Disposed - Batteries (Tons) - Disposed - Beverage Containers (aluminum, glass, plastic) (Tons) - Disposed - Building Materials - Carpet/Carpet Padding (Tons) - Disposed - Building Materials - Concrete (Tons) - Disposed - Building Materials - Mixed/Other (Tons) - Disposed - Building Materials - Steel (Tons) - Disposed - Building Materials - Wood (Tons) - Disposed - Cardboard/ Corrugated Containers (Tons) - Disposed - Compostable - Mixed/Other (Tons) - Disposed - Electronics (Tons) - Disposed - Fats/Oils/Grease (Tons) - Disposed - Food/Food Scraps (Tons) - Disposed - Furniture (Tons) - Disposed - Glass (Tons) - Disposed - Grass/Yard Trimmings (Tons) - Disposed - Lamps/Light Bulbs (Tons) - Disposed - Mixed Recyclables (Tons) - Disposed - Office Supplies (Tons) - Disposed - Other (Tons) - Disposed - Pallets (Tons) - Disposed - Paper - Books (Tons) - Disposed - Paper - Copy Paper (Tons) - Disposed - Paper - Mixed (Tons) - Disposed - Plastics - Mixed (Tons) - Disposed - Plastics - Wrap/Film (Tons) - Disposed - Regulated Medical Waste (Tons) - Disposed - Textiles/Clothing (Tons) - Disposed - Trash (Tons)

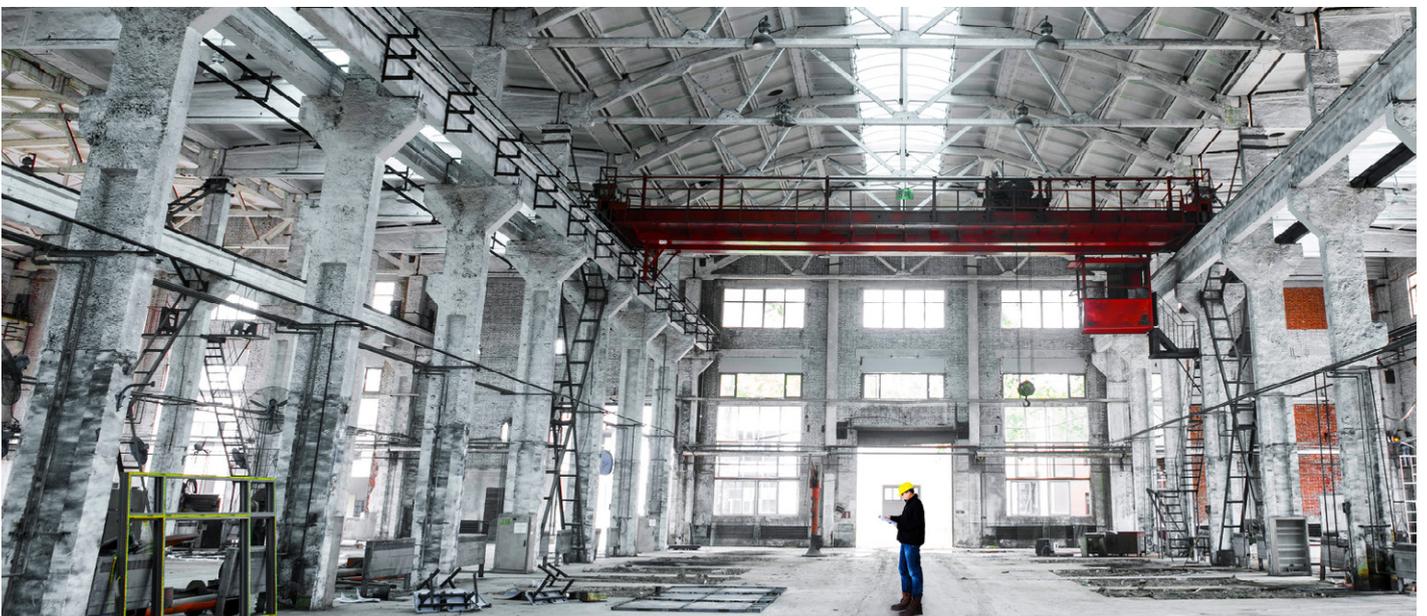
BREEAM drives success by:

- Focusing on improving building performance rather than recognizing ideal building design.
- Setting benchmarks that exceed regulations and local practices.
- Adopting a flexible approach that encourages and rewards positive outcomes, avoiding prescribed solutions.
- Using robust science and best practice as the basis for quantifying and calibrating a cost effective and rigorous performance standard for defining environmental quality.
- Reflecting the social and economic benefits of meeting the environmental objectives covered.
- Ensuring environmental quality through an accessible, holistic and balanced measure of environmental impacts.
- Using quantified measures for determining environmental quality.
- Providing a common international framework of assessment that is tailored to meet the 'local' context including regulation, climate and sector.
- Providing third party certification to ensure independence, credibility and consistency of the label.
- Engaging with a representative range of stakeholders to ensure its continuing relevance to the market.
- Promoting high levels of performance and best practice through published case studies and the BREEAM annual awards event.
- Monitoring and carrying out research to further knowledge, strengthen industry tools and improve guidance.

Value of BREEAM

BREEAM is the world's leading science-based suite of validation and certification systems for sustainable built environment. Since 1990, its third party certified standards have helped improve asset performance at every stage, from design through construction, to use and refurbishment. Millions of buildings across the world are registered to work towards BREEAM's holistic approach to achieve ESG, health and Net Zero goals.

BREEAM aims to deliver sustainable solutions, encourage a holistic approach to sustainability that is based on sound science and measures what is important, in terms of reducing building environmental impacts.



Why BREEAM

Clients choose BREEAM certification because it helps them deliver and validate the sustainability value of their assets cost effectively and to an internationally recognized and robust standard, tried and tested since it was first launched in 1990.

- Supporting and protecting the health and wellbeing of building users and their communities
- Providing a credible, internationally recognized and comparable certification awarded by an independent third-party.

Investors, developers, owners and occupiers benefit using BREEAM by:

- Considering impacts and costs from a lifecycle perspective
- Minimizing the environmental impact of their construction and operations

BREEAM principles

BREEAM is developed and operated to meet the following underlying principles:

- Focus on improving building performance rather than recognizing ideal building design.
- Ensure environmental quality through an accessible, holistic and balanced measure of environmental impacts.
- Use quantified measures for determining environmental quality.
- Adopt a flexible approach that encourages and rewards positive outcomes, avoiding prescribed solutions.
- Use robust science and best practice as the basis for quantifying and calibrating a cost effective and rigorous performance standard for defining environmental quality.
- Reflect the social and economic benefits of meeting the environmental objectives covered.
- Provide a common international framework of assessment that is tailored to meet the 'local' context including regulation, climate and sector.
- Integrate building professionals in the development and operational processes to ensure wide understanding and accessibility.
- Adopt third party certification to ensure independence, credibility and consistency of the label.
- Adopt existing industry tools, practices and other standards wherever possible to support developments in policy and technology, build on existing skills and understanding and minimize costs.
- Align technically and operationally with relevant international standards.
- Engage with a representative range of stakeholders to inform ongoing development in accordance with the underlying principles and the pace of change in performance standards (accounting for policy, regulation and market capability).

Getting started

Visit our website www.bregroup.com/breeamusa to learn more about the processes and fees involved.

If you have any further questions, give us a call use on: **+1 (888) 834-8680** or send us an email at: **BREEAMUSA@bregroup.com**.

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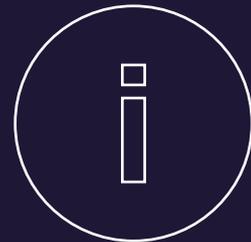
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About BRE

BRE delivers innovative and rigorous products, services, standards and qualifications which are used around the globe to make buildings better for people and for the environment.

For a century we have provided government and industry with cutting edge research and testing to make buildings safer and more sustainable. BRE is a profit-for-purpose organization. Any profits from BRE's work go to the BRE Trust, which invests in research projects for the public benefit, or are invested in upgrading our research facilities at the BRE Science Park.

Influential but independent and with a heritage of scientific rigor for 100 years, we will play a key role over the next 100 years, as the world adapts to meet the challenges of climate change.



For more information go to:

www.bregroup.com/breeamusa

 [@BRE_BREEAM](https://twitter.com/BRE_BREEAM)

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