

BREEAM[®] USA



www.breem.com/usa

ENERGY STAR[®] and BREEAM USA In-Use

Driving building performance through energy,
water and waste efficiency



bre

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

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Using ENERGY STAR tools with BREEAM USA In-Use

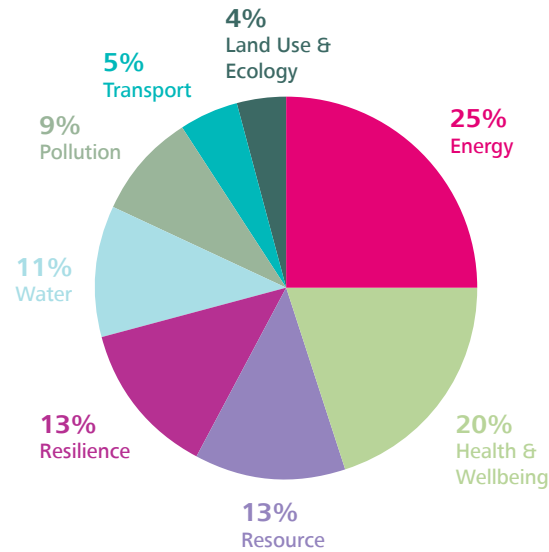
BREEAM USA In-Use is made up of nine categories, which are weighted to reflect their relative impact. This provides a framework for assets to prioritize the performance which has the most significant impact. Energy is strongly emphasized, with CO₂ emissions at the heart of how the credits are awarded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

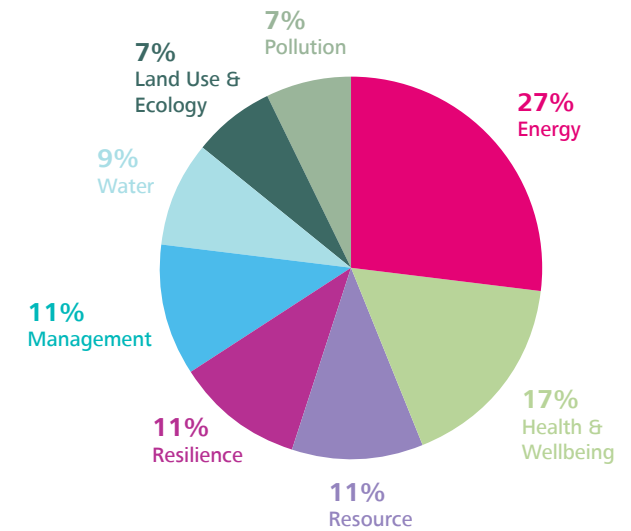
Users are able to generate the data required for BREEAM through Portfolio Manager's standard reports, supporting their efforts to pursue BREEAM certification. While BREEAM does not award credits based on the 1-100 ENERGY STAR score, BREEAM does recognize ENERGY STAR as a local energy performance asset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



Part 2: Management Performance



Building Attributes

BREEAM: Building Attributes	
	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
	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	ENERGY STAR certification under Ene 12 as a local energy performance asset rating 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
	Active Water Meters	Active Water Meters 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: 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

- Setting benchmarks that exceed regulations and local practices
- Recognizing actions and initiatives that are innovative and improve on BREEAM benchmarks and certifications
- Gathering industry feedback 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, improve guidance and increase BREEAM's value.

Value of BREEAM

Created in 1990 by BRE (the Building Research Establishment), BREEAM was the first green building certification program and today is recognized as the world's leading sustainability assessment method with over 2,300,000 assets registered and 593,000 certificates issued in 88 countries.

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.



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 on-going development in accordance with the underlying principles and the pace of change in performance standards (accounting for policy, regulation and market capability).



BRE Global

BRE is a world leading building science centre. Our clients use our sustainability, safety and security services, the BRE Academy and our Innovation Centres, to deliver on their social, environmental and economic goals. We are committed to developing knowledge on every aspect of the built environment and we set the standards for the way buildings, homes and communities are made to keep people safe, protect the environment, make buildings affordable and to create places where people want to live, work and play.
www.bregroup.com

Getting Started

Visit our website www.breeam.com/usa/refurbishment-fitout to learn more about the processes and fees involved and to find a licensed Assessor.

If you have any further questions, give us a call on +1 (415) 747-5152 or send us an email at BREEAMUSA@bregroup.com.

BRE Global

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