

Sustainable Building Products Glossary of Terms

The Appalachian Sustainable Products Network (ASPN) is working to equip Upper Appalachia to meet increasing residential and commercial sector demand for the products and materials used to construct, renovate, maintain and operate resilient, energy-efficient buildings and infrastructure, and connect buildings to a cleaner grid. ASPN is funded by the **Appalachian Regional Commission's Appalachian Initiative for Stronger Economies (ARC ARISE)**, together with support from the Claude Worthington Benedum Foundation. For more information, contact info@gbapgh.org.

| Term | Definition |
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| Adaptive Reuse | Repurposing a building to be used in a way other than its original intent. For example: turning a school building into apartments. |
| Architecture, Engineering, & Construction (AEC) | This sector encompasses architects, engineers, and construction professionals as they provide services involving the planning and building of commercial, industrial, residential, and other construction projects. |
| Building Envelope | All the external building materials and components that enclose the interior space (including walls, windows, roof, foundation). This can determine the quality of insulation and energy efficiency of the building. |
| Carbon Footprint | A measure of the environmental impact over the lifecycle of a product, individual, or organization in reference to its indirect or direct carbon emissions. |
| Circular Material/System/ Economy | A model of producing and consuming that is conscious of the entire product lifecycle, focusing on reducing waste and keeping the product or material in the production chain as long as possible. |



Sustainable Building Products - Glossary of Terms

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|------------------------------------|---|
| Clean Energy Standard (CES) | A standard that requires utility electricity sales to source a portion of the energy they sell from clean sources, such as renewables or low-emitting sources. |
| Cradle-to-Cradle (C2C) | An approach to product or system design that mimics natural cycles, focusing on the ability of a product to be completely recycled and used in new products at the “end” of their lifetime, reducing waste. |
| Cradle-to-Gate | An assessment of a product’s life from creation to when it leaves the factory gate (before consumer use). This is evaluated in a product’s Life Cycle Assessment (LCA). |
| Cradle-to-Grave | The lifecycle of a product where there is an end to its use, and it becomes waste. This is evaluated in a product’s Life Cycle Assessment (LCA). |
| Deep Energy Retrofit | The retrofit and renovation of a building that results in an immense decrease in energy costs, often requiring a more invasive reconstruction of structures and systems. This can have a larger upfront cost but has cost benefits over time (these renovations can also take place over several years instead of all at once). |
| Embodied Carbon | The total amount of carbon emissions from a building or project’s life cycle, from materials, transportation, and construction, through to demolition, based on the Life Cycle Analysis study range. |



Sustainable Building Products - Glossary of Terms

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|---|--|
| Embodied Energy | The total energy used in a product's lifecycle, from growth to disposal, based on the Life Cycle Analysis range. |
| Energy Efficiency | Requiring less energy while still producing the same result. |
| Environmental Product Declaration (EPD) | A comprehensive report of the creation of a product and the story of its environmental impact. This can also detail the product's applicability to green building rating systems. |
| Environmental, Social & Governance (ESG) | A set of standards to measure an organization's environmental and social impact. |
| Federal "Buy Clean" Initiative | Part of President Biden's Federal Sustainability Plan, prioritizing the use of low-carbon products manufactured within the U.S. in federally funded projects, increasing sustainability, industry, and jobs in America. |
| Green Building | Also known as "sustainable" or "healthy and high-performance" building. The practice of designing and constructing buildings and their systems with consideration of resource efficiency, occupant health and comfort, and reducing their environmental impact throughout their entire life cycle. |
| Greenwashing | A product or practice that is claiming to be more environmentally conscious or to have less of an environmental impact than it does, thus deceiving consumers. |



Sustainable Building Products - Glossary of Terms

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| Health Product Declaration (HPD) | Disclosure of the contents of a product that may be of concern for its hazardous chemical content, which can detrimentally affect the health of occupants. |
| Indoor Air Quality (IAQ) | The air quality in an enclosed space and how it relates to the short- and long-term health of occupants. |
| Indoor Environmental Quality (IEQ) | The overall quality of a building's interior environment as it relates to occupant health, safety, and comfort. This may include indoor air quality, as well as lighting and acoustics. |
| Intergovernmental Panel on Climate Change (IPCC) | A scientific body of the UN that evaluates and tracks all data related to climate change. |
| LEED Certification | LEED stands for Leadership in Energy and Environmental Design and is a green building rating system that awards sustainable buildings or communities in their design, construction, operation, and performance. There are four levels of certification: Certified, Silver, Gold, and Platinum. |
| Life Cycle Assessment (LCA) | The measure of a process or product's environmental impact throughout its entire life cycle, from raw material extraction to disposal. |
| Locally Sourced Materials | Materials sourced from near the construction site, reducing transportation costs and emissions, as well as energy use. For purposes of LEED, these are materials sourced within 100 miles of the project site. |



Sustainable Building Products - Glossary of Terms

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| Low VOC | Building materials that have low levels of emitting VOCs (Volatile Organic Compounds), which negatively impact human health. The label is important to look for when considering indoor air quality and occupant health. |
| Mechanical, Electrical, & Plumbing (MEP) Systems | These systems encompass the components that make a building liveable and functional. They include heating, ventilation, and air conditioning (HVAC), lighting, power systems, fire systems, and plumbing services. |
| Net Zero Carbon Building | A building that is highly energy efficient, does not emit greenhouse gases directly from energy use, and is powered solely by clean energy. |
| Off-Gassing | The release of potentially hazardous chemicals from a material. |
| Passive Design | A highly energy efficient approach to design that focuses on having a very tight building envelope. Methods of successfully achieving this include the selection of materials with specific properties and considering how to utilize the surrounding climate. |
| Post-Consumer Recycled Material | Materials that have been used by consumers, recycled, and then applied to the production of new products. |
| Pre-Consumer Recycled Content | Waste material from the manufacturing of a product that did not reach the end consumer, that can then be reused in the manufacturing process. |



Sustainable Building Products - Glossary of Terms

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| R-Value | A value that measures how effectively building insulation can prevent heat from passing in or out of it (measuring thermal resistance). |
| Real Estate Investment Trust (REIT) | A company that is directly involved in real estate by investing in income-producing properties. |
| Recycled Content | The amount of recovered material used in the manufacturing of other products – can include pre- and post-consumer contents. |
| Refurbished Material | A material that has reached the end of its original lifecycle but is restored to be reused as its original form and intent. |
| Regional Greenhouse Gas Initiative (RGGI) | An initiative of the Eastern US (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont) taking a market-based approach to cap and reduce carbon emissions in the power sector. |
| Renovation | The process of improving or updating a building by making changes such as replacing fixtures, painting, updating flooring, and altering layouts to enhance functionality and aesthetics. |
| Retrofit | A retrofit of an existing building represents an opportunity to upgrade the energy performance of commercial building assets for their ongoing life. Often retrofit involves modifications to existing commercial buildings that may improve energy efficiency or decrease energy demand. |



Sustainable Building Products - Glossary of Terms

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| Science Based Targets Initiative (SBTi) | A corporate climate action organization that helps companies set greenhouse gas (GHG) emissions reductions targets in reaction to climate change. |
| Scope 1, 2, & 3 Emissions | Categories of greenhouse gas emission types from company processes. Scope 1 is direct and controllable emissions, Scope 2 is indirect from where the company's energy is produced, and Scope 3 is everything else uncontrolled by the company along the chain of their product's creation. |
| Sick Building Syndrome | An illness identified in building occupants directly caused by the quality and/or condition of materials in a building or the structure itself. |
| Source Reduction | Also known as "waste prevention" or "pollution prevention," it is the elimination of waste before it is created. This involves the design, manufacture, purchase or use of materials and products to reduce the amount or toxicity of what is thrown away. |
| Sustainability | In general, meeting the needs of the present without compromising the needs of future generations in a balance of environment, equity, and economy. In applying this to green building products and methods, it is the consideration of using materials and practices that have less of a detrimental environmental impact. |
| Sustainable Building Materials | Building materials that are less environmentally damaging to produce and/or contribute to the ongoing sustainability of a building project. |



Sustainable Building Products - Glossary of Terms

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| Thermal Mass | Also called heat capacity. The capacity of a material to store and release heat. Using a material with high thermal mass can help counteract outdoor temperature fluctuations, improving occupant comfort. |
| Volatile Organic Compounds (VOCs) | Chemicals that, when emitted, can cause negative health effects to those exposed to them. |
| Whole-Home Repairs Program | A Pennsylvania program that provides funding to county agencies to improve living conditions by addressing safety, accessibility, and energy and water efficiency, as well as funding for development of the workforce in the construction sector. |



ASPN Funders & Partners

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| GBA | Green Building Alliance |
| ARC | Appalachian Regional Commission |
| ARISE | Appalachian Regional Initiative for Stronger Economies |
| YBI | Youngstown Business Incubator |
| BRITE | BRITE Energy Innovators - Bold, Resilient, Inclusive, Transparent, Empathetic |
| Catalyst Connection | |
| Claude Worthington Benedum Foundation | |
| West Virginia University (WVU) Extension Service and Vantage Ventures | |

