

A Closer Look at Materials & Resources in LEED v4

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"LEED has the power to connect people and pull them in, no matter where they are starting from." *Scot Horst, Senior Vice President, LEED, U.S. Green Building Council*

The hallmark of LEED is its consensus based development process and continuous improvement. Guided by the market and shaped by stakeholder feedback, LEED undergoes a number of public comment periods before the final document is balloted by USGBC's membership. For LEED v4, the development process was opened much earlier than it had been in the past so the public could provide input as credits were developed. Although this process asked a lot of stakeholders, the feedback has been invaluable and current draft reflects more than 21,500 comments USGBC received. Once a LEED rating system passes ballot, it is ready to be launched to the market.



LEED v4 entered its fifth public comment period on **October 2**. This fifth public comment period addresses a small subset of credits within LEED v4 that are not yet finalized; not all of the LEED v4 credits are open for comment. Everyone is invited to review the drafts and submit comments.

Substantially reworked, the Materials & Resources section of LEED v4 is different from LEED 2009 in that it applies lifecycle thinking at the whole-building and product level. Proposed credits reward projects for reusing as much material as possible and optimizing design to use less material overall. LEED 2009 credits were based on single attributes of materials, such as recycled content. This approach only tells part of the story; a product could have higher than average performance on that one attribute but far lower than average performance on others. The LEED v4 approach paints a more complete picture of materials and products, enabling project teams to make more informed decisions that will have greater overall benefit for the environmental, human health, and communities.

LEED credits open for comment in the Materials & Resources section include:

Building Product Disclosure and Optimization—Environmental Product Declarations

- Rewards project teams for selecting manufactured goods that have Environmental Product Declarations (EPD), which are a standardized way of quantifying the environmental impact of a product or system. Declarations include information on the environmental impact of raw material acquisition, energy use and efficiency, content of materials and chemical substances, emissions to air, soil and water and waste generation. Product and company information is also included. Environmental impact is quantified in terms of global warming potential, ozone depletion, acidification, eutrophication, and more.
- A variety of different EPD programs exist and this credit encourages manufacturers to obtain EPDs for their products, disclosing information on these products. To earn one point, LEED project teams should look for a label or declaration provided by a manufacturer to ensure that the product has met the appropriate requirements. Another point can be earned for selection of products with an optimized environmental profile. There is also an added incentive for purchasing domestic or locally manufactured products and materials meeting criteria.

Building Product Disclosure and Optimization—Raw Materials Extraction

- Changes to this credit include the addition of a point for product manufacturers reporting information regarding human and ecological impacts, specifically their extraction practices, land use practices, and other sourcing-related impacts, using formats developed by programs including the Global Reporting Initiative, U.N. Global Compact Communication of Progress, the OECD Guidelines for Multinational Enterprises, and ISO 26000 Guidance on Social Responsibility. A second point rewards project teams for using products that optimize the extraction process, by limiting or eliminating extraction of new resources (using reused materials or using recycled content) or using best practices for extraction processes such as FSC-certified new wood products or biobased material meeting the Sustainable Agriculture Network's Sustainable Agriculture Standard.

Building Product Disclosure and Optimization—Material Ingredient Reporting

- Changes to this credit include references to a wider variety of reporting programs, including Cradle 2 Cradle and Health Product Declarations, among others, considered to meet the intent of this credit. The first point provides credit for products that disclose constituents through one of the reporting programs. A second point is available for products that demonstrate optimization through one of the referenced comparative assessment systems. This gives choice and flexibility to both product manufacturers and project teams, intended to result in the

accelerated adoption of material ingredient reporting programs. Added incentive is included for purchasing domestic or locally manufactured products and materials.

Construction and Demolition Waste Management

- Changes have been made to this credit so that projects that cannot meet credit requirements through reuse and recycling, waste-to-energy systems (creating energy in the form of electricity or heat from the incineration of waste source) may now be considered for use globally as long as systems meet applicable European Union CEN EN 303 standards.

Other credits open for comment during this period include:

- **Green vehicles:** The credit requirements center on providing preferred parking for green vehicles and charging stations for alternative fuel vehicles. Adjustments were made based on feedback from the fourth public comment period and to improve clarity. Requirements for electric charging stations are set at Level 2 and above. Green vehicles reference only ACEEE scores to reduce market confusion, and require that 7% of parking spaces be set aside for their use.
- **Minimum energy performance:** The Minimum Energy Performance beyond ASHRAE 90.1-2010 has been changed from 10% to 5% at the prerequisite level. For Interior Design and Construction projects, Advanced Energy Design Guidelines (AEDGs) have been removed from the prescriptive option and replaced with broader requirements, making this option more accessible to a wider variety of projects not currently covered by the AEDGs.
- **Demand response:** With this draft, this credit has graduated from the pilot credit library into LEED v4. It brings the benefits of smart grid thinking to the forefront with a credit that rewards projects for participating in demand response programs.
- **Daylighting:** Revisions have been made to continue to increase clarity of credit. Illumination levels have been revised.
- **Protect or restore habitat:** In LEED for Existing Buildings: Operations & Maintenance, the cost per square foot has been adjusted in the option allowing for project teams to financially support natural land acquisition or management, restoration of native habitat, watershed management and restoration, or public urban green space restoration or revitalization.

Since the opening of the first public comment period, the U.S. Green Building Council has received over 21,500 comments and recommendations. We need your voice - now during the public comment period, through beta and during the ballot. [Learn more about LEED v4.](#)

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