

What Is LEED Certification?

The U.S. Green Building Council developed the Leadership in Energy and Environmental Design (LEED) Green Building Rating System as a nationally recognized standard that promotes the design and construction of high-performance “green” buildings. LEED Certification recognizes and rewards builders for meeting the highest performance standards, and LEED-Certified buildings are environmentally responsible, healthy places to live and work. As a member of the U.S. Green Building Council (USGBC), CertainTeed supports the LEED design and construction program.

LEED for Homes

LEED for Homes is a standard for the design and construction of high performance “green” homes. A green home uses less energy, water, and natural resources; creates less waste; and is healthier and more comfortable for the occupants. The benefits of a LEED home include lower energy and water bills; reduced greenhouse gas emissions; and less exposure to mold, mildew and other indoor toxins. In addition, a LEED rating can give homeowners confidence that their homes are durable, healthy, and environmentally friendly.

Before a home can be LEED Certified, it must meet the standards set by the USGBC. Individual products are not LEED Certified, but choosing environmentally responsible products can contribute to the overall LEED points gained on a project. LEED Certification standards for homes include:

Category	Points*
Location and Linkages.....	10
Sustainable Site.....	21
Water Efficiency.....	15
Indoor Environmental Quality.....	20
Materials and Resources.....	14
Energy and Atmosphere.....	38
Homeowner Awareness.....	3
Innovation and Design Process.....	9
Total Possible Points.....	130

*Based on LEED H, Version 1.11a, January 2007

Vinyl and Polymer Building Products

How can vinyl and polymer building products contribute to earning LEED points?

Environmentally Preferable—Vinyl and polymer building products are preferable to alternative products because they have less effect on human health and the environment when compared to wood, stucco, and brick. This Environmental and Economic Sustainability encompasses the life cycle of the products, from raw materials to manufacturing, use, recycling, and waste management. In addition, unlike wood and fiber cement, you can clean vinyl siding, polymer siding, and trim with a mild soap and water, thus eliminating the environmental impact associated with some paints and cleaning products.

Unlike brick, stucco and many other building products, vinyl and polymer products can also be recycled at the end of their life to create new products. CertainTeed is leading an initiative to take back post-consumer siding from builders and manufactured housing plants to be recycled into new products. We are working to develop an efficient process to close the loop and develop a cradle-to-cradle system that will reduce landfill waste, save

resources, and reduce the overall carbon footprint of our operations and products.

Siding and trim products can contribute to achieving points as environmentally preferable products in the LEED for Homes (H) and LEED for New Construction (NC) standards for recycled content and local materials.

- **Recycled Content**—Using materials that contain recycled materials can earn up to 2 points under LEED 2009 and 0.5 points per product for LEED H. CertainTeed vinyl siding, polymer siding, and trim are typically made using some recycled content. CedarBoards™ D6 Insulated siding contains 60% recycled content. Using recycled material protects our environment by finding a use for material that would otherwise be landfilled.
- **Energy Efficiency**—When installed properly, vinyl siding and polymer siding create an efficient building envelope that does not conduct heat or cold. Some products—like our CedarBoards Insulated siding—can actually increase the R-value of the building envelope, which reduces energy consumption and related CO₂ emissions and can contribute to ENERGY STAR certification of your building.
- **Durability**—Exterior walls, window frames, soffit, and trim that will not rot, peel, or warp can contribute to achieving points for Quality Management of Durability requirements for LEED H. Unlike wood, vinyl siding, polymer siding, and trim do not absorb water and are not subject to insect damage; they do not pit, rust, or corrode, and they never need painting. Most of our vinyl and polymer siding is warranted for the lifetime of the original owner, with the warranty transferable to a new homeowner for as long as 50 years from the date of installation. Vinyl siding, polymer siding, and PVC trim require less maintenance than wood and fiber cement.
- **Local Sources**—Using materials that have been extracted, processed, and manufactured within 500 miles of a home or commercial building can earn up to 2 points for LEED 2009 and 0.5 points for LEED H. Our Restoration Millwork® products are shipped from our manufacturing facility in Georgia. Depending on site location, projects within 500 miles of this facility may earn points contributing to LEED certification.



Installing Restoration Millwork® Trim on projects located within 500 miles of our Social Circle, GA, plant can earn LEED points for regional and local materials.

NAHB National Green Building Standard

The National Association of Home Builders (NAHB) released its Model Green Home Building Guidelines in 2005 and received ANSI approval for the ICC 700-2008 National Green Building Standard™ (NGBS) in January of 2009. It is the only green building standard approved by the American National Standards Institute (ANSI).

Much like LEED criteria, these standards incorporate environmental considerations into every phase of the building process. According to the NAHB, "That means that during the design, construction, and operation of a home, energy and water efficiency, lot development, resource-efficient building design and materials, indoor environmental air quality, homeowner maintenance, and the home's overall impact on the environment are all taken into account."

The National Green Building Standard has seven major categories of credits.

- **Site Planning and Land Development**—Considering the entire community and existing infrastructure in addition to the additional building(s).
- **Lot Design, Preparation, and Development**—Saving trees, construction of onsite storm water retention/infiltration, orienting houses to maximize passive solar heating and cooling.
- **Resource Efficiency**—Using resource-efficient materials, reducing jobsite waste, basing the selection of materials on environmental impact.
- **Energy Efficiency**—Adopting a "whole systems" approach to maximize energy performance: heating and cooling, windows, building envelope, duct sealing, and proper placement of air and vapor barriers.
- **Water Efficiency**—Using efficient water delivery systems.
- **Indoor Environmental Quality**—Controlling, diluting, and capturing the effects of potential indoor contaminants, especially chemicals that can off-gas from building materials.
- **Operation, Maintenance, and Homeowner Education**—Providing homeowners with a manual that explains proper operation and maintenance procedures, offering alternatives to toxic cleaning products and lawn and garden chemicals, and pointing out water-saving practices.

Green Building with Vinyl Siding, Polymer Siding, and Trim

Builders who follow the NAHB National Green Building Standard can earn points much as in the same way as the LEED point system. Qualifying buildings can earn four different NGBS ratings: Bronze (222 points), Silver (406 points), Gold (558 points), Emerald (697 points). See page 4 for a list of CertainTeed products that can earn NAHB NGBS points.

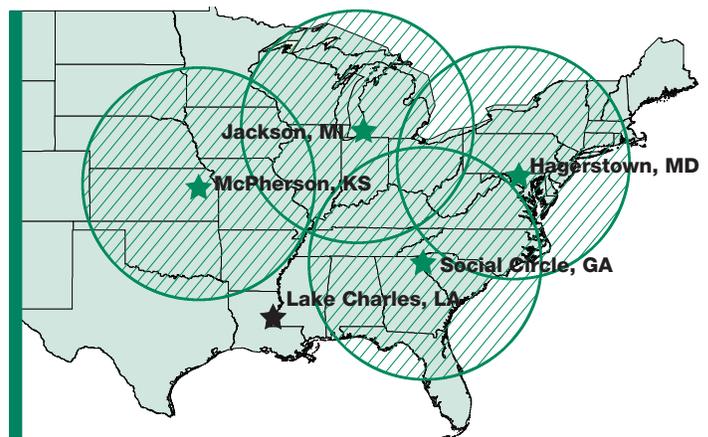
Builders who use CertainTeed siding and trim may qualify for Green Building points in four categories.

- **Resource Efficiency**—Our vinyl and polymer products are typically made using some recycled products. CedarBoards D6 Insulated siding contains 60% recycled material. Using recycled material protects our environment by finding a use for material that would

otherwise be landfilled. In addition, our manufacturing plants regrind and recycle products that do not meet our rigid manufacturing specifications. This regrind is then incorporated into the manufacturing process. In fact, one of our plants has achieved nearly 100% recycling of all plant waste.

CertainTeed siding and trim require no on-site finishing, which minimizes the environmental impact of painting or staining siding materials and reduces installation costs for the builder. CertainTeed siding and trim never need scraping and painting and can be cleaned with a mild soap and water.

- **Energy Efficiency**—Properly installed, vinyl and polymer siding form a complete building envelope that does not conduct heat or cold. Also, Triple 3-1/3" InvisiVent® Ventilated Soffit delivers the ASHRAE-prescribed amount of ventilation to attic areas.
- **Locally Available Indigenous Materials**—CertainTeed's vinyl and polymer building products are shipped from one of four manufacturing facilities, ensuring that you are rarely more than 500 miles from a factory location. In addition, we ship the majority of our products by rail. This reduces the carbon footprint for transportation of our raw materials compared to materials shipped exclusively by truck.
- **Operation, Maintenance, and Homeowner Education**—CertainTeed makes maintenance and cleaning instructions available to every homeowner. These important instructions are included with the printed warranty builders leave at the end of every job.



CertainTeed vinyl and polymer building products that are manufactured within 500 miles of the jobsite can earn National Green Building Standard points for your project. The areas indicated on this map qualify for NAHB points under locally available, indigenous materials.

For More Information

For complete details on the LEED rating system and certification process, contact your LEED professional or visit www.usgbc.org/LEED. For more information on the NAHB Model Green Home Building Standard, call 800-368-5242 x8290 or visit www.nahb.org/gbg. For information about earning LEED and NAHB points with specific CertainTeed products, call our Sales Support Group at 800-233-8990.

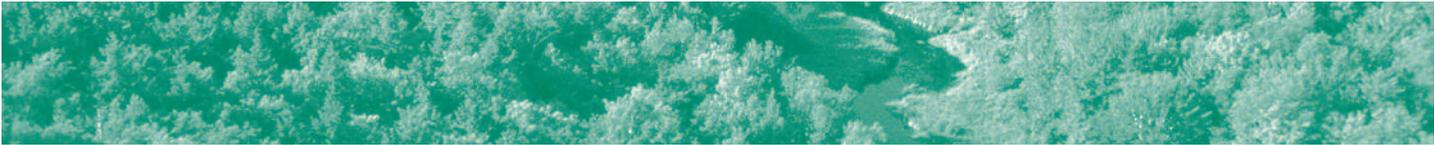


Listed below is a sampling of CertainTeed siding and trim products that can contribute to achieving LEED points. These recommendations highlight the U.S. Green Building Council LEED Green Building Rating System. They should not be construed as comprehensive recommendations for LEED design and construction. For complete details on the LEED certification process, consult a LEED professional or contact the U.S. Green Building Council.

LEED CRITERIA		REQUIREMENT	POSSIBLE POINTS	CERTAINTEED PRODUCTS
LEED H Version 1.11a				
EA 1	ENERGY STAR Labeled Home	Improve the overall energy performance of the home. Points are earned by exceeding a base HERS Index (85 for Southern States, 80 for Northern States).	1-34	CedarBoards™ Insulated siding
MR 2	Environmentally Preferable Products	Use environmentally preferable products (EPP).	0.5	CedarBoards D6 Insulated siding (60% recycled content)
		Use materials that have been extracted, processed, and manufactured within 500 miles of the home (local).	0.5	Social Circle plant: Restoration Millwork®

LEED for New Construction (NC), LEED for Core and Shell (CS), and LEED for Schools 2009

EA 1	Optimize Energy Performance	Increase levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.	1-19 (NC and schools) 3-21 (CS Only)	CedarBoards Insulated siding
MR 4.1 MR 4.2	10% - 20% Recycled Content	Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (1 point) or 20% (2 points) of the cost of the total value of the materials in the project.	1-2	CedarBoards D6 Insulated siding (60% recycled content)
MR 5.1 MR 5.2	10% - 20% Regional Materials	Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (1 point) or 20% (2 points) of the cost of the total materials value.	1-2	Social Circle plant: Restoration Millwork



Listed below is a sampling of CertainTeed siding and trim products that can earn NAHB Green Building Standard points.

NAHB STANDARD	REQUIREMENT	POSSIBLE POINTS	CERTAINEED PRODUCTS
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Resource Efficiency

601.7	No site-applied finishing materials	2-5	All siding and trim (NAHB Research Center Green Approved Product)
602.8	Termite-resistant materials	2-6	All siding and trim (NAHB Research Center Green Approved Product)
604.1	Recycled content materials	2-4	CedarBoards D6 Insulated siding (60% recycled content) (NAHB Research Center Green Approved Product)
605.3	Construction materials recycled offsite	3	Vinyl siding and soffit Restoration Millwork Trim
608.1	Locally available, indigenous materials	2	All siding and trim
609.1	Use LCA to determine most environmentally preferable material	3	Vinyl siding and soffit Restoration Millwork Trim

Energy Efficiency

702.2	Energy/cost performance	30-120	CedarBoards Insulated siding
703.1.1	Building envelope	10-36	CedarBoards Insulated siding

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