

### 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 home is 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 NC 2.2 and 0.5 points for LEED H. CertainTeed vinyl siding, polymer siding, and trim are typically made using some recycled products, and some of our products contain as much as 80% recycled material. Using recycled material protects our environment by finding a use for material that would otherwise be landfilled.
- **Energy Efficiency**—When they are 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 CO<sub>2</sub> 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 much 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 NC 2.2 and 0.5 points for LEED H. Our Restoration Millwork™ products are shipped from our manufacturing facility in Georgia, which will contribute LEED points for projects within 500 miles of this facility (see map).



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 Green Building Guidelines

The National Association of Home Builders (NAHB) has established Model GREEN Building Guidelines for the “mainstream builder” to serve as a tool kit for home builder associations to create new Green Building Programs in their areas.

Much like LEED criteria, these guidelines 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 Green Building program has eight guiding principles.

- **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 maximized 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.
- **Global Impact**—Avoiding items that are a by-product of home construction, like paints that have high volatile organic compounds (VOC).
- **Site Planning and Land Development**—Considering the entire community and existing infrastructure in addition to the additional building(s).

## Green Building with Vinyl Siding, Polymer Siding, and Trim

Builders who practice Green Building techniques can earn points, much in the same way as the LEED point system. Qualifying buildings can earn three different Green Building ratings: Bronze (237 points), Silver (311 points), or Gold (395 points). See page 4 for a list of CertainTeed products that can earn NAHB Green Building points.

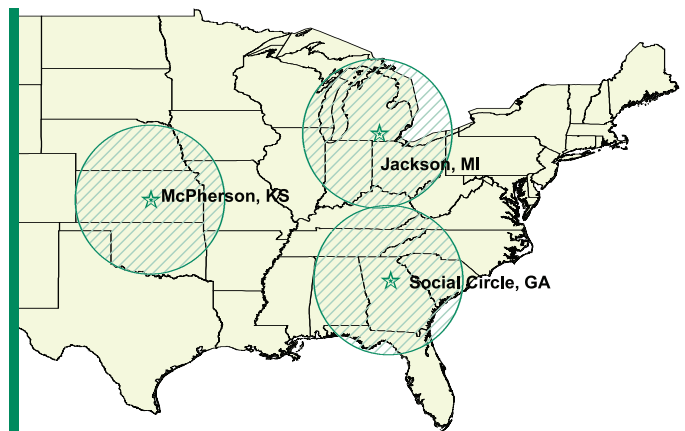
Builders who use CertainTeed siding and trim may qualify for Green Building points in four categories.

- **Resource Efficiency**—Our vinyl and polymer products are typically made using some recycled products, and some of our products contain as much as 80% 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. They never need scraping and painting and can be cleaned with a mild soap and water.

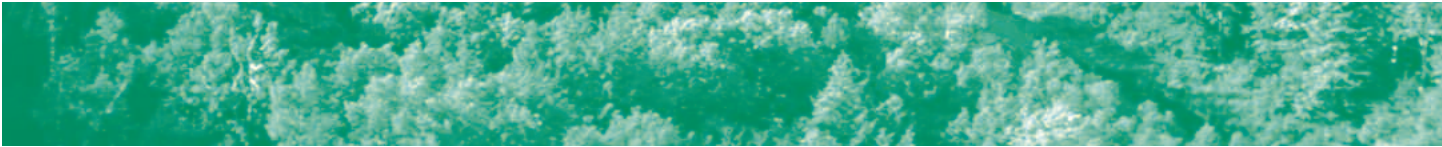
- **Energy Efficiency**—Properly installed, vinyl and polymer siding form a complete building envelope that does not conduct heat or cold. Also, Triple 3-1/3" InvisiVent Ventilated Soffit delivers the ASHRAE-prescribed amount of ventilation to attic areas.
- **Locally Available Indigenous Materials**—CertainTeed’s vinyl and polymer building products are shipped from one of three manufacturing facilities, ensuring that you are rarely more than 300 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 extracted, processed, and manufactured within 300 miles of the jobsite can earn NAHB Green Building 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](http://www.usgbc.org/LEED). For more information on the NAHB’s Model Green Home Building guidelines, call 800-368-5242 x8290 or visit [www.nahb.org/gbg](http://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.

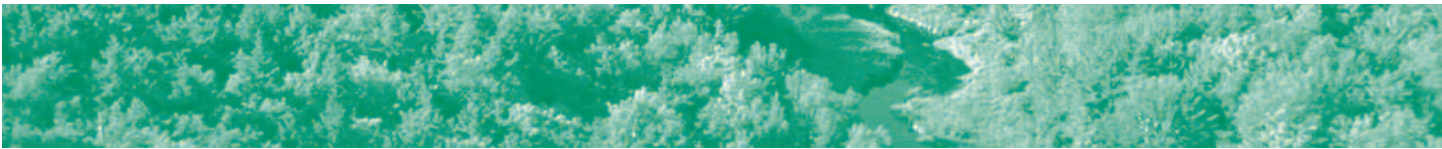
LEED CRITERIA	REQUIREMENT	POSSIBLE POINTS	CERTAINTEED PRODUCT
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**LEED H Version 1.11a**

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	Jackson plant: Newtown Monogram
		Use materials that have been extracted, processed, and manufactured within 500 miles of the home (local)	0.5	Social Circle plant: Restoration Millwork

**LEED NC v2.2 Credit**

EA 1	Optimize Energy Performance	Demonstrate a percentage improvement in the proposed building performance rating compared to the baseline building performance rating per ASHRAE/IESNA Standard 90.1-2004 by a whole building project simulation using the Building Performance Rating Method.	1-10	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	Jackson plant: Newtown Monogram
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 points.

NAHB GUIDELINE		REQUIREMENT	POSSIBLE POINTS	CERTAINTEED PRODUCTS
2.1.5	Use building materials that require no additional finish to complete application onsite.	Materials that do not require additional finish resources save on priming, painting, and/or additional resources at the installation stage.	4	All siding and trim
2.2.8	Use termite-resistant materials for walls, floor joists, trusses, exterior decks, and other exterior wood in regions known to be termite infested.	Verify that the material is used.	7	All siding and trim
2.4.1	Use recycled-content building materials.	Use at least two recycled content materials for 3 points. Each additional material will add a point.	3-6	Jackson plant: Newtown and Monogram
2.8.1	Use locally available, indigenous materials.	To earn 3 points, incorporate at least one type of locally available, indigenous material into the home's construction. Additional points can be earned for each locally available, indigenous material.	3-5	Products from Jackson, McPherson, and Social Circle
3.2.1	Increase building energy efficiency.	Points are based on the percent increase in energy efficiency over the baseline IECC 2003.	Up to 100	CedarBoards Insulated Siding

OR

3.3.1	Increase the effective R-value of the building envelope.	Use advanced framing techniques, continuous insulation, and/or integrated structural insulating system. Measures may include insulated corners and continuous insulation on exterior walls.	8	CedarBoards Insulated Siding
2.8.2	Based on life-cycle assessment (LCA), use the most environmentally preferable product for the building component.	A life cycle assessment (LCA) compares the cradle-to-grave environmental effects and costs of common building materials. Modeling tools such as Athena™ examine the life-cycle environmental effects of a complete structure or of individual assemblies. Software such as BEES can also identify the life-cycle costs of select building components.	8	All