



LEED v4 Credit Guidance for Andersen® Products

LEED® for Building Design and Construction: Homes and Multifamily Midrise

About LEED® Certification

The U.S. Green Building Council's LEED® green building program is a preeminent program for the design, construction, maintenance and operations of high-performance green buildings. To obtain certification, building projects satisfy prerequisites and earn points toward different levels of certification.

Prerequisites and credits differ for each rating system. Learn more at www.usgbc.org/LEED.

LEED v4 Credits

The latest version of LEED certification is LEED v4, which launched in November 2013. LEED v4 addresses credits in the following categories:

- *Integrative Process*
- *Location and Transportation*
- *Sustainable Sites*
- *Water Efficiency*
- *Energy and Atmosphere*
- *Materials and Resources*
- *Indoor Environmental Quality*
- *Innovation*
- *Regional Priority*

Information about how Andersen® products support earlier versions of LEED certification (e.g., LEED-Homes v2008) is available at www.andersenwindows.com.

How do Andersen Products Support LEED v4 BD+C: Homes?

Andersen windows and patio doors can support project teams in pursuing the following credits in the **LEED v4 BD+C: Homes** rating system. High-level summaries of each pertinent credit have been included below and are drawn from the online credit guidance available at <http://www.usgbc.org/credits/homes/v4/>. However, project teams should always refer to the official LEED v4 Reference Guide for full credit descriptions and guidance. The following guidance has not been reviewed for accuracy or endorsed by the USGBC.®

Energy and Atmosphere

- **Minimum Energy Performance Prerequisite**

Homes

Meet the requirements of ENERGY STAR® for Homes, version 3. Achieve a HERS index rating at or below the HERS index target (or USGBC approved equivalent for projects outside the U.S.) or



meet the requirements of the ENERGY STAR® for Homes version 3 Prescriptive Pathway, which includes meeting or exceeding all components of the ENERGY STAR Reference Design.

Andersen® products meeting ENERGY STAR requirements may work together with wall and roof systems to ensure home energy performance meets the requirements of ENERGY STAR for Homes version 3.

Multifamily Midrise

Meet both the whole building energy simulation and commissioning requirements.

Andersen products that feature acceptable U-Factor and solar heat gain coefficient (SHGC) values can help to achieve the minimum required energy performance calculated in computer modeling for whole building energy simulation.

- **Education of the Homeowner, Tenant or Building Manager Prerequisite**

Homes, Multifamily Midrise

Provide to all individuals or organizations responsible for ongoing maintenance of the home an operations and maintenance manual, binder, or CD.

The Andersen online Help Center provides cleaning guidance for all window and door products. Builders can download service information and LEED features unique to Andersen products from www.andersenwindows.com.

- **Annual Energy Use Credit**

Homes (1-29 points)

Option 1: Design and construct a building whose modeled annual energy usage is lower than the LEED energy budget, which is based on ENERGY STAR for Homes, HERS Index Target Procedure for National Program Requirements, version 3, with stated modifications. **Option 2:** Design and construct a home whose modeled annual energy usages achieves a HERS index rating of 70 or better (or USGBC approved equivalent for projects outside the U.S.)

Andersen products that feature acceptable U-Factor and SHGC values may work together with wall and roof systems to generate an energy performance model of the home lower than the LEED energy budget, or a 70 or below HERS Index ranking.

Multifamily Midrise (1-30 points)

Follow the criteria in EA Prerequisite Minimum Energy Performance to demonstrate a percentage improvement in the proposed building's performance compared with the baseline



building performance of ASHRAE 90.1-2010, or USGBC approved equivalent standard for projects outside the U.S.

Andersen® products that feature acceptable U-Factor and SHGC values may work together with wall and roof systems to demonstrate a percentage improvement compared to the baseline building performance stated in ASHRAE 90.1-2010.

- **Building Orientation for Passive Solar Credit**

Homes (3 points)

Meet all of the following requirements:

- The south-facing glazing area is at least 50% greater than the sum of the glazing area on the east- and west-facing walls.
- The east-west axis of the building is within 15 degrees of due east-west.
- At least 90% of the south-facing glazing is completely shaded (by awnings, overhangs, plantings) at solar noon on the summer solstice and unshaded at noon on the winter solstice.

In areas south of 25 degrees of latitude or where topography significantly impacts insolation, orientation may be adjusted to meet local conditions provided the team provides documentation to demonstrate that its building orientation decision is based on solar and meteorological data for the site.

Andersen products used to fulfill this design intent may assist the project team in achieving this credit.

- **Air Infiltration Credit**

Homes (1-2 points)

Meet the air leakage requirements shown in the tables in the LEED Reference Guidance. The rate of air leakage to outside must be tested and verified by a qualified energy rater. Multifamily must meet the requirements for leakage to outside the conditioned envelope for each dwelling unit, unless the whole building can be entirely and sufficiently depressurized by a blower door(s).

Andersen products are tested to certify compliance with air infiltration of a maximum 0.30 cfm/sq. ft., per ASTM E283, at a test pressure of 1.57 PSF. Therefore, Andersen products may influence building performance during testing to fulfill this requirement.

- **Windows Credit**

Homes (1.5-3 points)



Design and install windows, skylights and glass doors whose ratings from the National Fenestration Rating Council (NFRC) exceed the requirements in the ENERGY STAR® for Homes, version 3, prescriptive pathway, as shown in Tables 1-3 in the Reference Guide. Use the average window ratings, average skylight ratings and average exterior door ratings.

Table 1. Points for exceeding baseline window ratings

	Climate Zone				Points
	1,2	3	4	5-8	
U-Factor	≤0.45	≤0.30	≤0.26	≤0.26	1.5
SHGC	≤0.25	≤0.25	≤0.40	Any	
U-Factor	≤0.30	≤0.26	≤0.22	≤0.22	3
SHGC	≤0.25	≤0.25	≤0.40	Any	

(Table 2: Skylights- NA)

Table 3: Points for exceeding baseline door ratings.

	Opaque	≤1/2 lite	>1/2 lite
U-Factor	0.21	0.27	0.32
SHGC	N/A	0.30	0.30

Andersen® products with acceptable U-Factor and SHGC values meet the requirements of this credit. NFRC performance ratings are provided by product line in the Technical Documents section of www.andersenwindows.com.

Materials and Resources

- **Durability Management Prerequisite**

Homes, Multifamily Midrise

Meet the requirements of the ENERGY STAR for Homes, version 3, water management system builder checklist (with the exceptions for existing homes listed in EA Prerequisite Minimum Energy Performance). Midrise projects are exempt from this requirement

Andersen installation guides provide customers with guidance for water management techniques to help protect against water infiltration where products integrate with wall systems. These guidelines can help project teams comply with the requirements of the ENERGY STAR for Homes, version 3, water management system builder checklist. All windows must be fully flashed. Andersen continuous drip cap is provided with factory built combinations and can be purchased separately to cover head conditions at single units.

- **Environmentally Preferable Products Credit**

Homes (0.5-4 points), Multifamily Midrise (0.5-3 points)

Option 2: Use products that meet one or more of the stated criteria (0.5 points each). At least 90% of each compliant building component (shown in Table 2 of LEED Reference Guide), by weight or volume must meet one of the requirements below. A single component that meets more than one criterion does not earn additional credit.

- Wood products must be Forest Stewardship Council (FSC®) Certified, or USGBC approved equivalent.
- (Additional criteria listed in LEED Reference Guide.)

Andersen 200 Series, 400 Series, A-Series (FSC-C016636) and E-Series (FSC-C107730) products can be manufactured with FSC certified pine wood-based components.

- **Construction Waste Management Credit**

Homes (0.5-3 points), Multifamily Midrise (0.5-3 points)

Reduce total construction waste or divert from landfills and incinerators a large proportion of the waste generated from new construction. Use the tables provided in the LEED Reference Guide to calculate the percentage of waste avoided or recycled.

Andersen packaging materials are recyclable or have minimal non-recyclable components, helping to reduce landfill waste disposed of during construction and therefore achieve the diversion targets required by this credit.

Indoor Environmental Quality

- **Ventilation Prerequisite**

Homes, Multifamily Midrise

Case 1. Single Family: meet all of the stated requirements for local exhaust and outdoor air ventilation including the requirements of ASHRAE 62.2 – 2010, sections 4, 5 and 7 and Section 1504.4 of the 2009 International Residential Code. **Case 2. Multifamily:** Naturally ventilated spaces must comply with ASHRAE Standard 62.1-2010, Section 6.4. (Please see additional requirements in LEED Reference Guide.)

Inclusion of operable Andersen® windows may assist project teams with meeting the requirements for naturally ventilated spaces as described in this credit and related standards.

- **Low-Emitting Products Credit**

Homes (0.5-3 points), Multifamily Midrise (0.5-3 points)

In the interior of the home, use products that have been tested and found compliant with the California Department of Public Health Standard Method V1.1-2010, using CA Section 01350,



Appendix B, New Single-Family Residence Scenario, for emissions testing guidance. At least 90% of a component must meet the requirements to earn credit.

- For composite wood products, be constructed from materials documented to have low formaldehyde emissions that meet the California Air Resources Board requirements for ultra-low emitting formaldehyde (ULEF) resins or no-added formaldehyde based resins...
- (Additional criteria provided in LEED Reference Guide.)

Andersen® composite wood products contain no added urea-formaldehyde. In addition, Andersen 100 Series, 200 Series, 400 Series, A-Series and E-Series products have been independently certified to achieve SCS Global Service's Indoor Advantage Gold rating. This rating meets or exceeds CA section 01350 specifications.

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