

# LEED CERTIFICATION

Kawneer  
Sustainable  
Solutions



Architectural aluminum systems  
Entrances + Framing  
Curtain walls  
Windows

 **KAWNEER**  
AN ALCOA COMPANY

Heifer International World Headquarters  
Little Rock, Arkansas, USA

ARCHITECT  
Polk Stanley Rowland Curzon  
Porter Architects, LTD.,  
Little Rock, Arkansas, USA

GLAZING CONTRACTOR  
ACE Glass Co., Inc.,  
Little Rock, Arkansas, USA

KAWNEER PRODUCTS  
1600 Wall System® 1  
1600 SunShade®  
InLighten® (Light Shelf)  
Trifab® 400  
350 Medium Stile Entrances  
1010 Sliding Mall Fronts  
990 Sliding Doors



# KAWNEER PRODUCTS AND SYSTEMS: MAXIMIZING LEED CREDITS WITH SUSTAINABLE SOLUTIONS.



The future is now. No longer is sustainable design a lofty goal or an aspiration reserved for the ambitious few.

The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Kawneer is dedicated to creating products and systems that help comply with LEED standards and promote integrated, whole-building design practices.

This guide outlines the many ways that Kawneer products and solutions can contribute to LEED certification and start building a better tomorrow, today.

**KAWNEER PRODUCTS AND SERVICES**



1600 SUNSHADE®



THERMAL & HIGH-PERFORMANCE PRODUCTS

Designed to shade interiors and optimize energy performance by reducing solar heat gain, 1600 SunShade works with 1600 curtain wall to allow greater use of glazing while reducing demand on the HVAC. These properties can qualify for LEED points in the Energy & Atmosphere category.

Kawneer systems are designed to provide optimum thermal performance leading to greater energy conservation. Systems offer infill from 1" I.G. to 2" maximum performance triple-glazed units. Pour-and-debridge design; traditional extruded silicone compatible elastomer thermal breaks or higher performance polyamide are used to expand the thermal performance of the systems. These systems can qualify for LEED points in the Energy & Atmosphere category.

**ENERGY & ATMOSPHERE**

	Potential Points	Earned Points	LEED Requirements	Kawneer Products + Services
<p><b>1 Optimizing Energy Performance</b> Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impact associated with excessive energy use.</p>	1-10		Reduce project energy cost compared to the energy cost budget for energy systems regulated by ASHRAE / IESNA Standard 90.1 – 199 (without amendments), as demonstrated by a whole building simulation using Energy Cost Budget Method described in Section 11 of the Standard.	<ul style="list-style-type: none"> <li>1600 SunShade®</li> <li>1600 PowerShade®</li> <li>Thermal &amp; High-performance Products</li> <li>InLighten® Light Shelf</li> </ul>
<p><b>2 On-site Renewable Energy</b> Encourage and recognize increasing levels of self-supply through renewable technologies to reduce environmental impact associated with fossil fuel energy use.</p>	1-3		Use on-site renewable energy systems to offset building energy cost. Calculate project performance by expressing the energy produced by renewable systems as a percentage of the building's annual cost determines points achieved by the percentage of the energy offset. 2.5% renewable energy: 1 point 7.5% renewable energy: 2 points 12.5% renewable energy: 3 points	<ul style="list-style-type: none"> <li>1600 PowerShade®</li> <li>1600 PowerWall®</li> <li>1600 PowerSlope®</li> </ul>



1600 POWERSHADE®

Credits may be obtained for renewable energy in the Energy & Atmosphere category for LEED certification. Photovoltaic (PV) cells in the 1600 PowerShade convert light energy from the sun into electricity, which can be fed into the building's system. On-site renewable energy reduces the environmental impact associated with the use of fossil fuels.



1600 POWERWALL®  
1600 POWERSLOPE®

1600 PowerWall is the first proven curtain wall system to produce electricity by capturing the energy of the sun. 1600 PowerSlope combines slope glazing with PV cells to convert light energy from the sun into electricity. Credits may be obtained for renewable energy in the Energy & Atmosphere category for LEED certification by utilizing these systems.



ARCHITECTURAL GRADE CASEMENT,  
PROJECTED SINGLE HUNG, DOUBLE HUNG  
AND CONCEALED SIGHTLINE WINDOWS

Thermally broken windows are designed to provide both aesthetic and thermal performance. Points can be obtained in the Energy & Atmosphere category for LEED certification by using Kawneer's thermally broken windows, which are designed to optimize energy performance.

**MATERIALS & RESOURCES**

	Potential Points	Earned Points	LEED Requirements	Kawneer Products + Services
<p><b>4.1 Recycled Content (Specify 10%)</b> Increase demand for building products that incorporate recycled content materials, therefore reducing the impact resulting from extraction and processing of new virgin materials.</p>	1		Use materials with recycled content, such that the sum of the pre-consumer and post-consumer recycled content constitutes at least 10% of the total value of the materials in the project.	Use of Recycled Aluminum
<p><b>4.2 Recycled Content (Specify 20%)</b> Increase demand for building products that incorporate recycled content materials, therefore reducing the impact resulting from extraction and processing of new virgin materials.</p>	(4.1) + 1		Use materials with recycled content, such that the sum of the pre-consumer and post-consumer recycled content constitutes at least 20% of the total value of the materials in the project.	Use of Recycled Aluminum
<p><b>5.1 Regional Materials: 10% Extracted, Processed and Manufactured Regionally</b> Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impact resulting from transportation.</p>	1		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% of the total material value. If only a fraction of a product or material is extracted / harvested / recovered and manufactured locally, then only that percentage shall contribute to the regional value.	Nationwide Customer Network Use of Recycled Aluminum
<p><b>5.2 Regional Materials: 20% Extracted, Processed and Manufactured Regionally</b> Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impact resulting from transportation.</p>	1-10		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 20% of the total material value. If only a fraction of a product or material is extracted / harvested / recovered and manufactured locally, then only that percentage shall contribute to the regional value.	Nationwide Customer Network Use of Recycled Aluminum



**INLIGHTEN® LIGHT SHELF**

**1600 SLOPED GLAZING & 2000 SKYLIGHT**

**ARCHITECTURAL SERVICES TEAM (AST)**

InLighten Light Shelf is designed to integrate with 1600 curtain wall systems to channel natural light into greater occupied spaces. InLighten directs available natural light to interior spaces and qualifies for points in the LEED certification system within the Indoor Environmental Air Quality category. In addition, light shelves have been proven to reduce requirements for artificial perimeter lighting, thereby conserving electrical energy costs.

Opening the center of a building with overhead pyramid skylights is one of the fastest and easiest ways to provide natural lighting to an interior space. The insulating thermal break is placed to the exterior of the plane of glass to minimize heat loss and condensation. These systems can qualify for points in the Indoor Environmental Air Quality category of the LEED certification process.

When planning projects for LEED qualification, Kawneer's Architectural Services Team (AST) is available to assist with the selection of products that can qualify for LEED points. Points for the Innovation & Design Process could be achieved by documenting the development of a project in a paperless environment, with the assistance of the AST via the internet – saving the energy often invested in traveling to face-to-face meetings. Division 8 can be developed in a paperless, low-energy-consuming environment.

**INDOOR ENVIRONMENTAL AIR QUALITY**

**Potential Points**

**Earned Points**

**LEED Requirements**

**Kawneer Products + Services**

**2 Increased Ventilation**

Provide for the effective delivery and mixing of fresh air to support the safety, comfort and well-being of building occupants.

1

For mechanically ventilated buildings, design ventilation systems that result in an air change effectiveness (Eac) greater than or equal to 0.9 as determined by ASHRAE 129-1997. For naturally ventilated spaces, demonstrate a distribution and laminar flow pattern that involves not less than 90% of the room or zone area in the direction of air flow for at least 95% of occupancy.

Architectural grade casement, projected single hung, double hung and concealed sightline windows

**6.2 Controllability of Systems: Thermal Comfort**

Provide a high level of thermal, ventilation and lighting system control by individual occupants or specific groups in multi-occupant spaces to promote the productivity, comfort and well-being of building occupants.

1

Provide at least an average of one operable window and one lighting control zone per 200 square feet for all regularly occupied areas within 15 feet of the perimeter wall.

Architectural grade casement, projected single hung, double hung and concealed sightline windows

**8.1 Daylight and Views (Daylight 75% of Spaces)**

Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

1

Achieve a minimum daylight factor or 2% (excluding all direct sunlight penetration) in 75% of all spaces occupied for critical visual tasks. Some spaces are excluded, such as storage rooms, copy rooms and other low-occupancy support areas.

InLighten® Light Shelf

1600 Sloped Glazing & 2000 Skylight

Thermal & High-performance Products

**8.2 Daylight and Views (Daylight 90% of Spaces)**

Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

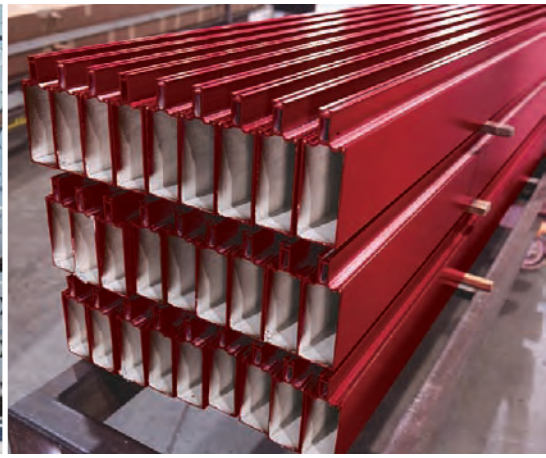
1

Achieve direct line of sight to vision glazing for building occupants in 90% of all regularly occupied spaces. Examples of exceptions include copy rooms, storage areas, mechanical, laundry and other low-occupancy support areas.

InLighten® Light Shelf

1600 Sloped Glazing & 2000 Skylight

Thermal & High-performance Products



**NATIONWIDE CUSTOMER NETWORK**

**USE OF RECYCLED ALUMINUM**

**SOLVENT-FREE POWDER COAT FINISHES**

Kawneer works selectively in all markets to maintain a network consisting of the best-trained, highly qualified, Division 8 subcontractors. Final assembly of Kawneer components occurs in a local shop of the top glass and glazing subcontractors in the industry. Local manufacturing of Kawneer products, qualifies, in most cases for LEED points in the category of Materials & Resources, providing the project site is within 500 miles of the subcontractor's shop.

Standard billet contains an average of 25% pre-consumer recycled aluminum, which can contribute 25% of its value for credit as regional materials in the Materials & Resources category. To qualify, the project site must be within 500 miles of the producing Kawneer facility. Higher recycled content billet can have up to an average of 55% pre-consumer recycled content, which can contribute 55% of its value to regional materials.

Kawneer offers a wide palette of powder coat paints in attractive colors that are free from the harmful environmental effects of VOCs associated with liquid paints. These powder coat paints are available to finish all Kawneer products. Points for Innovation & Design could be achieved by applying for credit and providing substantiation that the powder coat finish is a low-emitting material that results in improved air quality and no negative environmental impact.

**INNOVATION & DESIGN PROCESS**

**Potential Points**

**Earned Points**

**LEED Requirements**

**Kawneer Products + Services**

**1.1 Innovation in Design: Provide Specific Title**  
To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the Green Building Rating System.

1

In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance and the design approach (strategies) that might be used to meet the requirements.

Solvent-Free Powder Coat Finishes

Architectural Services Team (AST)

If you are looking for product applications or need technical assistance with your LEED project, contact Kawneer's Architectural Services Team (AST) at our toll-free numbers: (tel) 1.877.767.9107 or (fax) 1.877.767.9102.



Printed using soy inks on paper that is 100% recycled, post-consumer fiber and made with windpower.

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