Wausau Window and Wall Systems’ primary manufacturing center, opened in September 2008, has been certified Silver through the USGBC LEED® Green Building Rating System™.

While justifiably proud, we understand that LEED® is just a tool - a means to an end. The sustainable design movement is really about the triple bottom line - protecting the environment, social responsibility, and financial viability.
SUSTAINABLE BUILDING DESIGN FEATURES

- Spectrally selective Viracon glass
- Thermal barrier Wausau window and curtainwall frames
- Use of recycled and regional content
- Natural landscaping, storm water management, and alternative transportation accommodations
- Low-flow plumbing fixtures
- High-efficiency HVAC designed to use air compressor waste heat
- White roof
- Tri-level lighting, with energy-saving lamps and ballasts
- Exterior lighting designed to prevent light pollution

SUSTAINABLE CONSTRUCTION PRACTICES and OPERATION

- Construction waste recycling
- Facility manager electrical load shedding
- Advanced commissioning
- Significant utility cost savings documented annually

SUSTAINABLE MANUFACTURING PROCESSES

- Minimized packaging materials in receiving and shipping
- Scrap recycling: aluminum, steel, cardboard, wood, glass, fluorescent bulbs, paper, beverage containers, toner cartridges, electronic equipment
- “Paperless” environment supported by Wausau ShopView™ software
- 100% VOC-capture spray painting of durable AAMA 2605-tested fluoropolymer
- No-VOC finish options: Powder coatings and durable Class I anodic finishes
- Resource-wasting internal rework minimized through Lean/Six Sigma

SUSTAINABLE BUSINESS PRACTICES

- Leadership within industry trade organizations and research groups
- Design charrettes supported with pre-bid engineering
- All operable windows are durable, cycle-tested AW-Class
- LEED-GAs on staff
- Award-winning safety performance
- Extruded aluminum frames contain recycled content averaging 70% or greater

LEED® - Silver Facility

SOLAR CONTROL and NATURAL DAYLIGHTING

- ClearStory™ exterior sun shades and interior light shelves
- Between-glass Venetian blinds

ENHANCED ENERGY EFFICIENCY

- Triple glazing options
- Multi-level thermal barrier systems
- Polyamide thermal barrier curtainwall
- Enhanced condensation resistance
- HVAC cut-off switches for operable vents

RENEWABLE ENERGY and DYNAMIC GLAZING DEMONSTRATION PROJECTS

- Facade-integrated photo-volatrics
- Electrochromic SageGlass®
- Motorized vent operators

RENOVATION and RE-USE

- Simulated double-hung projected windows
- Historically-accurate (Retro™)
- Unitized curtainwall for re-cladding

SUSTAINABLE DESIGN TOOLS

at www.wausauwindow.com

- Performance upgrade tables for Wausau’s standard products
- LEED criteria and rating systems
- LEED checklist and sample submittals
- Recycled, regional and innovative materials
- Potential credit contributions of windows and walls
- Supplemental guide specifications for LEED projects
- The Wausau Energy Modeling Tool

Choosing efficient windows for a commercial building can be difficult, using published U-Factor, Solar Heat Gain Coefficient, Visible Light Transmittance, and Condensation Resistance Factor, as relative importance depends on site- and building-specific variables.


* Developed by the University of Minnesota Center for Sustainable Building Research. Simulations use COMFEN from Lawrence Berkeley National Lab’s Windows and Daylighting Group.
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Sustainable Sites specifications and/or other documents. This information and the products described are subject to change at any time, without notice, and at Wausau’s sole discretion. “INvent,” Chart updated August 2014 to include LEED v4.0. Note: Schools and healthcare facilities may have supplemental requirements and/or credit opportunities. Disclaimer: Wausau Window and Wall Systems takes no responsibility for product selection or application, including, but not limited to, compliance with building codes, safety codes, laws, merchantability or fitness for a particular purpose; and further disclaims all liability for the use, in whole or in part, of the information contained herein in preparation of project specifications and/or other documents. This information and the products described are subject to change at any time, without notice, and at Wausau’s sole discretion. “INvent,” “Visuline,” “INvent PLUS,” “SuperWall,” “Custom Window” and “ClearStory” are trademarks of Apogee Wausau Group. All rights reserved. ©2014 Apogee Wausau

<table>
<thead>
<tr>
<th>Credit Category</th>
<th>Credits Impacted by Wausau Products</th>
<th>Commentary</th>
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<tr>
<td>Integrative Process (IP)</td>
<td>IPC1: LEED v4.0 only Integrative Process</td>
<td>Available as an online support resource at <a href="http://www.wausauwindow.com">www.wausauwindow.com</a>. Wausau’s Energy Modeling Tool provides comparative building energy performance - annual energy use, peak demand, carbon emissions, daylight, glare and condensation – to optimize product selection. (Tool developed by the University of Minnesota Center for Sustainable Building Research. Simulations use COMFEN from Lawrence Berkeley National Laboratory’s Windows and Daylighting Group.)</td>
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<tr>
<td>Location and Transportation (LT)</td>
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<td>Sustainable Sites (SS)</td>
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<tr>
<td>Water Efficiency (WE)</td>
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</tbody>
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### Energy and Atmosphere (EA)

#### Materials and Resources (MR)

- **Mic1: LEED v4.0 only**
  - Building Product Disclosure and Optimization – Environmental Product Declarations (EPDs)
- **Mic2: LEED v4.0 only**
  - Building Product Disclosure and Optimization – Source of Raw Material
- **Mic3: LEED v4.0 only**
  - Building Product Disclosure and Optimization – Material Ingredients

#### Indoor Environmental Quality (EQ)

- **2 Increased Ventilation**
- **4.1 Low-Emitting Materials – Adhesives and Sealants**
- **6.2 Controllability of Systems – Thermal Comfort**
- **7.2 Thermal Comfort Design**
- **8.1 Daylight and Views 75% and 82.9%**

#### Innovation and Design Process (ID)

- **1.1 thru 1.4 Innovation in Design**

Wausau’s products have long-standing recognition as some of the industry’s best in energy performance. Combined with Viracon’s high-performance glass, the “right” windows are always available for your building type and climate zone, including our extensive triple-glazed-capable product offering.

Wausau Window and Wall Systems’ Invent.PLUS™ operable and fixed windows offer European benchmark thermal performance, but with clean styling and narrow sightlines attained to U.S. architectural preferences. Innovative composite framing design creates an American Architectural Manufacturers Association (AAMA) AW Class architectural window series with best-in-class R6 fixed and R5 operable performance. No-compromise product selection is made possible by a unique combination of 45% aluminum extrusions and 55% engineered polymers (by volume).

Wausau’s SuperWall™ XL5 Series curtainwall incorporates composite fiberglass pressure plates for lower U-Factor and better condensation resistance, which is ideal for cold climates and high-humidity applications such as hospitals.

Photovoltaic panels generate renewable electrical energy directly from sunlight, and can be readily integrated into building facades and skylights. Wausau was a pioneer in development of building-integrated photovoltaic (BIPV) facade systems in the U.S. Wausau SuperWall has been UL-listed as a BIPV system for several projects, and Wausau holds U.S. Patent # 6,646,196 B2 “Window Structure with Photovoltaic Panel.”

Photovoltaic panels provide a complete line of replacement windows and paneling for historic renovations, energy upgrades and buildings’ re-use. The Custom Window™ by Wausau brand is recognized nationally for its historically accurate windows utilizing true-divided lite muntin grids. These windows are well suited for application in tax-credit-eligible historic districts, buildings listed on the National Register of Historic Places, or whenever thoughtful restoration is a design goal. Wausau SEAL™ interior accessory windows also improve sound, energy, air and light control when existing single-glazed windows are left in place.

Wausau products are fabricated from aluminum extrusions containing LEED-defined “combined” post-consumer and post-industrial recycled content of 42% to 69%. Glass, steel and hardware components also contain high percentages of recycled or recyclable content.

**Note:** Schools and healthcare facilities may have supplemental requirements and/or credit opportunities.

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