LEED®-NC v2.2 Credit Explanation for Pella® Impervia®

Energy & Atmosphere – Prerequisite 2 – Minimum Energy Performance (prerequisite)
"Design the building project to comply with both the mandatory provisions and the prescriptive requirements of ASHRAE/IESNA 90.1-2004 or the local energy code if the code demonstrates quantitative and textual equivalence following, at a minimum, the U.S. Department of Energy standard process for commercial energy code determination."
"Design the building envelope, HVAC, lighting and other systems to maximize energy performance."

- Pella Impervia windows are highly energy efficient with Total unit U-values as low as 0.28 and air infiltration rates as low as 0.05 cfm/sq. ft. Plus, most vent windows are tested for air infiltration when manufactured. Additionally, total-unit Solar Heat Gain Coefficients (SHGC) as low as 0.1 are available.

Energy & Atmosphere – Credits 1 - Optimize Energy Performance (1 credit each, up to 10 points)
"Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use."

- Pella Impervia provides superior winter and summer energy efficiency while transmitting desirable daylight and providing views to the outdoors. The addition of Low-E insulating glass with argon significantly improves both U-values and SHGCs.

Materials & Resources – Credits 4.1 and 4.2 – Recycled Content (1 point each)
Credit 4.1 - *"Use materials with recycled content such that the sum of post-consumer recycled content and plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project."*
Credit 4.2 – *"Use materials with recycled content such that the sum of post-consumer recycled content and plus one-half of the pre-consumer content constitutes an additional 10% beyond MR credit 4.1 (total of 20%, based on cost) of the total value of the materials in the project."*

- A typical Pella Impervia window contains 21% post-industrial recycled content.

Materials & Resources – Credits 5.1 and 5.2 – Regional Materials (1 point each)
Credit 5.1 – "Use building materials or products that have been extracted, harvested or recovered, as well and manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only a percentage (by weight) shall contribute to the regional value."
Credit 5.1 – "Use building materials or products that have been extracted, harvested or recovered, as well and manufactured, within 500 miles of the project site for an additional 10% beyond MR Credit 5.1 (total of 20% based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only a percentage (by weight) shall contribute to the regional value."

- Pella Impervia products are manufactured in Murray, Kentucky. Any project sites within 500 miles of this location and the place of harvest or extraction for materials that are used to manufacture Pella Impervia products may help contribute to this point.

Indoor Environmental Quality – Minimum IAQ Performance (Prerequisite 1)
"Establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in buildings, thus contributing to the comfort and well-being of the occupants."
"Meet the minimum requirements of sections 4 through 7 of ASHRAE 62.1-2004 and/or Naturally Ventilated Buildings shall comply with ASHRAE 62.1-2004, paragraph 5.1."

- Operable Pella Impervia products allow for natural ventilation to the building and the building occupants.

Indoor Environmental Quality – Credit 2 - Increased Ventilation (1 point)
"Provide additional outdoor air ventilation to improve indoor air quality for improved occupant comfort, well-being and productivity."

- The use of additional operable Pella Impervia products allow for more natural ventilation to the building and the building occupants.

Indoor Environmental Quality – Credit 4.1 – Low-Emitting Materials – Adhesives and Sealants (1 point)
"All adhesives and sealants used on the interior of the building (defined as inside of the waterproofing system and applied on-site) shall comply with the requirements of the reference standards for Adhesives, Sealants and Sealant Primers as stated by the South Coast Air Quality Management District (SCAQMD) Rule #1168."

- Pella Impervia windows and doors meet these requirements by using Low VOC content adhesives and sealants as well as additional VOC content being emitted before installation. Adhesives and Sealants used for waterproofing and installation of Pella Products on-site would be the responsibility of the Contractor or Installer. Pella recommended low expansion window and door installation foam meets these requirements with a VOC content of 158.1 g/L

LEED®-NC v2.2 Credit Explanation for Pella® Impervia®

Indoor Environmental Quality – Credit 4.2 – Low-Emitting Materials – Paints & Coatings (1 point)
"Paints and Coatings used on the interior of the building (defined as inside of the waterproofing system and applied on-site) can not exceed the VOC content limits established in Green Seal Standard GS-11, Green Seal Standard GS-03 and/or South Coast Air Quality Management District (SCAQMD) Rule 1113." The standard will depend on the application.

- Pella Impervia windows and doors don't need painting. They arrive with a durable powder-coat paint finish. Overspray of paint from the powder-coating process can be collected and used again and again.

Indoor Environmental Quality – Credit 6.1 – Controllability of Systems – Lighting (1 point)
"Daylighting can be integrated with this credit by using daylighting technologies and strategies to compensate for the reduced foot-candle levels in the space, as detailed in EQ credits 8.1 and 8.2."

- Pella Impervia windows and doors can easily and effectively integrate fixed and operable windows glazed with glass for natural daylighting.

Indoor Environmental Quality – Credit 6.2 – Controllability of Systems – Thermal Comfort (1 point)
"Operable windows can be used in lieu of comfort controls for occupants of areas less than 20 feet inside of and 10 feet to either side of the operable part of the window." "The areas of the operable window must meet the requirements of ASHRAE 62.1-2004, paragraph 5.1, Natural Ventilation."

- Pella Impervia windows offer a variety of operable window types for natural ventilation. Pella casement and awnings could be operated remotely for locations where windows are out of reach.

Indoor Environmental Quality – Credit 7.1 – Thermal Comfort (1 point)
"Design HVAC systems and the building envelope to meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy. Demonstrate design compliance in accordance with the section 6.1.1 Documentation."

- Pella Impervia windows offer a variety of operable window types for natural ventilation. Pella casement and awnings could be operated remotely for locations where windows are out of reach.

Indoor Environmental Quality – Credit 8.1 – Daylight & Views – Daylight 75% of Spaces (1 point)
"Achieve a minimum Glazing Factor of 2% in a minimum of 75% of all regularly occupied areas."

- Pella Impervia windows and doors can easily and effectively be integrated using fixed and operable windows glazed with glass for daylighting and views to the outdoors.

Indoor Environmental Quality – Credit 8.2 – Daylight and Views – Views for 90% of Spaces (1 point)
"Provide direct line of sight to the outdoor environment via vision glazing between 2'6" and 7'6" above finish floor for building occupants in 90% of all regularly occupied areas."

- Pella Impervia windows and doors can easily and effectively be integrated using fixed and operable windows glazed with glass for daylighting and views to the outdoors.

Innovation in Design – "To provide 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 LEED™ Green Building Rating System."

- Pella Impervia windows and doors offer exceptional U-values and SHGCs, which can contribute to the Innovation in Design credit when exemplary energy performance is achieved under the Energy and Atmosphere category.