

# Awnings, Canopies and Solar Shade Products and Their Impact to LEED

The latest LEED version 4 (v4) is mandatory for new registration on November 1, 2016. This report covers LEED v4 rating system. This rating system version is estimated to be utilized for building assessments until 2022.

## **Improved Building Energy Performance**

Awnings, canopies and solar shade products help reduce overall energy use of buildings by providing necessary shading to the building exterior and/or interior. Overall energy use reduction not only helps in energy cost savings (to achieve LEED® credits under minimum energy performance and optimize energy performance), but also reducing the peak power requirements of the building which can reduce HVAC system sizing. As a stakeholder, you may think, “How do I measure energy savings of these awnings, canopies and solar shade products?” *The answer is simple:* if these products are permanently fixed, they can be modeled in the energy simulation tool.

Depending on the awning and solar shade products, several credits may be obtained which in turn will help the building project achieve higher LEED rating.

The awning and solar shade products applicable to LEED rating system are:

### ***Stationary Awnings***

These are used to shelter windows from sun and heat, control light and glare, for privacy, and for aesthetics. Stationary awnings are

fixed in place and provide shade over windows or other openings.

### ***Drop-arm (Adjustable) Window Awnings***

Drop-arm window awnings provide total privacy and sun protection. They can be controlled manually or by using a motor (automatic) to extend, retract and change the angle of the awning. The shading device can thus provide total privacy and sun protection, like an exterior shade curtain, or it can extend horizontally at any angle to provide partial or full shade while allowing daylight and views to the outside.

### ***Exterior Solar Shades***

Exterior solar shades are mounted above a window or storefront and extend or retract in a plane parallel to the window to protect the window and interior. Similar to drop-arm window awnings, exterior solar shades can be controlled manually or by using a motor, and even using an automation system that uses sensors to optimally extend or retract. Control of exterior solar shade screens can be with a gear and hand crank, a motor with a toggle switch, a motor with a remote control, or a motor controlled by an automation system.

### ***Stationary Commercial Canopies***

These are fabric structures that provide shelter and shade. By definition, they are attached to the building at one end and supported by at least one post at the other, or, they can be constructed independently of a building.

Product	Improved Building Energy Performance Related LEED® Credit	Reduced Environmental Impact Related LEED® Credit	Improved Occupant Comfort Related LEED® Credit	Total Credits*
<b>Stationary Awnings</b>	Minimum Energy Performance / Optimize Energy Performance	<ul style="list-style-type: none"> <li>• Recycled Content</li> <li>• Regional Materials</li> <li>• Sustainable Purchasing – Facility Alterations and Additions</li> <li>• Sustainably Sourced Materials and Products</li> </ul>	<ul style="list-style-type: none"> <li>• Daylight and Views – Daylight</li> <li>• Daylight and Views (Combined)</li> </ul>	30
<b>Drop-arm (Adjustable) Window Awnings</b>	Minimum Energy Performance / Optimize Energy Performance	<ul style="list-style-type: none"> <li>• Light Pollution Reduction</li> <li>• Site Selection</li> <li>• Recycled Content</li> <li>• Regional Materials</li> <li>• Sustainable Purchasing – Facility Alterations and Additions</li> <li>• Sustainably Sourced Materials and Products</li> <li>• Bird Collision Avoidance (Pilot Credit)</li> </ul>	<ul style="list-style-type: none"> <li>• Daylight and Views – Daylight</li> <li>• Daylight and Views (Combined)</li> </ul>	29
<b>Exterior Solar Shades</b>	Minimum Energy Performance / Optimize Energy Performance	<ul style="list-style-type: none"> <li>• Light Pollution Reduction</li> <li>• Recycled Content</li> <li>• Regional Materials</li> <li>• Sustainable Purchasing – Facility Alterations and Additions</li> <li>• Sustainably Sourced Materials and Products</li> <li>• Bird Collision Avoidance (Pilot Credit)</li> </ul>	<ul style="list-style-type: none"> <li>• Daylight and Views – Daylight</li> <li>• Daylight and Views (Combined)</li> </ul>	13
<b>Stationary Commercial Canopies</b>	Minimum Energy Performance / Optimize Energy Performance	<ul style="list-style-type: none"> <li>• Site Selection</li> <li>• Recycled Content</li> <li>• Regional Materials</li> <li>• Sustainable Purchasing – Facility Alterations and Additions</li> <li>• Sustainably Sourced Materials and Products</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative Transportation – Bicycle Storage and Changing Rooms</li> <li>• Heat Island Effect – Nonroof</li> </ul>	11

\*Total number of credits dependent upon your local energy provider, municipality or LEED <https://new.usgbc.org/leed>.  
PAMA Architect Resources <https://awnings.ifai.com/resources/resources-for-architects/>