LEED v4 Energy and Atmosphere (EA):
EAc2 Optimize Energy Performance for AEP Span

Applicable Credits:

EAc2 Optimize Energy Performance

EAc2.2 Option 2: Prescriptive Compliance: ASHRAE Advance Energy Design Guide (1-18 points)

AEP Span cool metal roof panels with high Solar Reflectance Index (SRI) are an energy conservation measure which improves energy efficiency in most climates. Roofing materials that meet the LEED minimum requirements for SRI are included in the energy simulation model that predicts energy costs, contributing to the total predicted energy cost savings for a building.

Energy performance is improved when the roof reflects more sunlight and absorbs less heat, keeping the interior spaces below cooler, compared to a standard roof. The percentage savings from a cool roof are variable based on several factors including climate zone, building geometry, and the HVAC system type.

EA prerequisite Minimum Energy Performance is required.

Notable References:

- In LEED v4, the baseline building performance uses the ANSI/ASHRAE/IESNA Standard 90.1–2010, Appendix G, with errata (or a USGBC-approved equivalent standard for projects outside the U.S.).
- This credit is typically achieved through energy modeling, using computer simulation software such as eQUEST or EnergyPlus to compare the design project's predicted energy use with the baseline. The methodologies for energy analysis are established in ASHRAE 90.1-2010, Appendix G. The number of points awarded in this credit depends on the percentage of energy cost savings for the whole building, meaning that individual products or building systems, such as an AEP Span cool roof, can contribute.
- The SRI of roofing material is considered in the model. If the roof meets the SRI requirements for LEED, it contributes to reducing the predicted energy performance of the design project.
- In very cold climates, a higher SRI may penalize the energy model.