LEED® with COLD-FORMED STEEL

SUSTAINABLE STEEL

Steel is one of the world's most sustainable construction materials. Its strength and durability coupled with its ability to be endlessly recycled without ever losing quality make it truly compatible with long-term sustainable development.

The world's most recycled material

In 2012 alone, 88 million tons of steel were recycled in North America. Each year, more steel by weight is recycled in North America than paper, plastic, aluminum and glass, combined.

- Through recycling, the steel industry saves the energy equivalent to power 20 million homes for one year.
- All North American steel products have a significant amount of recycled content, including some products with more than 90 percent.
- Today, 97 percent of steel by-products are re-used. The overall recycling rate for steel from all industries combined is 81 percent, with some construction segments reporting values as high as 98%.
- While other building materials can only be recycled into a lower quality product (down-cycled), steel can be recycled over and over again and remade into new products (multi-cycled) without any loss of quality. This makes it the first and only true cradle-to-cradle building material.

LEED and GREEN BUILDING

Cold-formed steel (CFS) is well suited to meet the highest sustainability standards. It is recognized in all major green building standards and rating programs, including the National Green Building Standard (ICC-700) for residential buildings, ASHRAE Standard 189.1 for commercial construction, the International Green Construction Code (IgCC), and the US Green Building Council's LEED program, which covers all types of buildings.

One of the most popular sets of criteria for scoring the sustainability of a building has been developed by the U.S. Green Building Council, and is known as LEED® (Leadership in Energy & Environmental Design. This Green Building Rating System aims to improve occupant well-being, environmental performance, and economic returns of buildings using established and innovative practices, standards, and technologies.

Cold-formed steel products manufactured by Steel Framing Industry Association members help your project quality for up to

- Up to 7 points under LEED® v4 for BD+C
- Up to 7 points for LEED® 2009 (LEED-NC Version 2.2 and 3.0)

LEED® v4

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LEED v4 was introduced in 2013 and is the newest version of the world's premier benchmark for high-performance green buildings. Steel framing is recognized for a number of important environmental benefits, particularly high recycling rates and recycled content, and makes key contributions to achieving LEED certification.

Building Product Disclosure and Optimization—Sourcing of Raw Materials - 1 point

A credit is available for projects where at least 25%, by cost, of the total value of permanently installed building products in the project meet the criteria for responsible extraction. The Recycled Content of cold-formed steel makes an important contribution to achieving this goal.

Construction and Demolition Waste Management - up to 2 points

Cold-formed steel framing is 100% recyclable, an attribute that is rewarded with credits for diverting construction debris from the waste stream. Calculations can be by weight or volume and so the specific contribution will vary by project and must be determined by the contractor.

Building Product Disclosure and Optimization— Environmental Product Declarations - up to 2 points

LEED v4 approaches building materials content credits in a completely different way than previous editions of LEED by placing an emphasis on transparency and documentation, and cold-formed steel. This is achieved through an Environmental Product Declaration (EPD) which is compiled from a life cycle assessment (LCA) that is developed according to the rules put forth in the product category rule (PCR).

- In this category, credits are earned when at least 20 installed products from at least five manufacturers provide an EPD. The industry-wide EPD soon to be released enables cold-formed steel to qualify as ½ of a product. Your SFIA manufacturer member may also be able to provide a product specific EPD which is valued as one full product.
- A second options for an additional credit is available when the value of products covered by the EPD represents 50% of the project cost.

An additional exemplary performance point is available here for sourcing at least 40 qualifying products from five manufacturers. (See below: LEED v4 IN Credit: Innovation)

LEED v4 IN Credit: Innovation - up to 2 points

Achieve exemplary performance in an existing LEED v4 prerequisite or credit that allows exemplary performance, as specified in the LEED Reference Guide, v4 edition. An exemplary performance point is typically earned for achieving double the credit requirements or the next incremental percentage threshold.

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As new versions of LEED are released, previous versions are retired or "sunset" – keeping the newest projects paired with the latest and best version of the rating system. With the introduction of LEED v4, a project aimed for certification under the LEED 2009 rating system must be registered by October 31, 2016 and the deadline for completing the project is June 30, 2021.

LEED 2009 Credit MR 2 (Construction Waste Management) – up to 2 points

Credits are awarded based on recycling and recovery rates for construction products. Steel is 100% recyclable, and because it plays a key role in diverting construction debris from the waste stream is eligible for LEED Credits MR 2.1 and 2.2. The specific contribution will vary by project and must be determined by the contractor.

LEED 2009 Credit MR 4 (Recycled Content) – up to 2 points

Cold-formed steel framing contains a high percentage of recycled content, earning one LEED credits for recycled content that constitutes 10% of the total value of construction materials (4.1) and a second point when recycled content is 20% of the total cost.

An additional point for Innovation in Design (ID) credit is available here if project's overall recycled content exceeds 30% (See below: LEED 2009 Credit ID: Innovation in Design)

LEED 2009 Credit MR 5 (Regional Materials) – up to 2 points

LEED Credit MR 5 requires the jobsite to be within a 500 mile radius of the manufacturing facility and the location where raw materials are extracted. The national network of SFIA Manufacturer members makes it likely that they will be able to qualify for this credit within the market areas that the individual companies service.

LEED 2009 Credit ID: Innovation in Design – 1 point

An additional credit is available when the overall recycled content used in a project exceeds 30%. The minimum default rate for recycled content reported by the Steel Recycling Institute is 34.9%, but your SFIA member manufacturer is likely to produce or have available cold-formed steel framing with even higher content, and can provide you with the necessary documentation when you order materials.

More information about Recycled Content is available at this location: http://goo.gl/NIszN3

If you would like to learn more about how cold-formed steel framing meets the tests for resilience, a publication is available at this location: http://goo.gl/nvfxHP

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