



STEEL IS THE NEW GREEN Facts About Steel

Never before has awareness and interest in environmental conservation been as high as they are today. And nowhere is this more evident than in the construction industry, where sustainable building practices have become as important to the success of a project as quality construction and good design. Today the market demands an increased need to look at environmentally responsible materials like steel for construction. More steel is recycled each year than all other construction materials combined. But that's just the beginning of steel's environmental story.

Three-fourths of all American steel ends up recycled into new products, part of the steel industry's comprehensive environmental commitment. Over the past decade American steelmakers have reduced the energy required to produce one ton of steel by nearly 28 percent – and have already reduced emissions to levels well below **Kyoto standards.**

54 percent of U.S. energy consumption (*Source: "Sustainable Construction in the U.S." by Augenbroe & Pearce, Georgia Institute of Technology, 1998*) is directly or indirectly related to buildings and their construction. As a recognized green building material, steel framing projects can also earn credits or points for green building rating programs as well as other government incentives.

While many people agree that steel's recycled content is its hallmark environmental attribute, steel has several other green benefits.

Steel is 100 percent recyclable

With a minimum of 25 percent recycled content, steel meets the tests for an environmentally responsible material and can be an important addition to any project where sustainable construction and design is a critical requirement

Steel is the world's most versatile material to recycle – from old cars, buildings and bridges to appliances and soup cans. Steel is also the most highly recycled material in the world – more than aluminum, paper, glass and plastic combined. **Each year, nearly 68.7 percent of all steel scrap in North America is recycled.** (*Source: Steel Recycling Institute*)

Steel does not contribute to the growth of a landfill

Approximately sixty percent of the average landfill consists of construction debris (*Source: U.S. Environmental Protection Agency (EPA)*). Since steel studs are straight and true, there is only a minimal amount of job-site scrap. Scrap from steel framing is always recyclable.

Steel is a healthier building material

Indoor air quality is regarded as one of our top environmental health risks today, and compromises the well-being and productivity of many people. Building materials can release volatile chemicals into the air through evaporation, which can continue for years after they are installed. This means people can continue to breathe these chemicals as they work, sleep or relax. Since steel does not contain any VOC's (volatile organic compounds), steel-framed structures provide a healthier environment because there is no opportunity to pollute indoor air. Furthermore, steel does not support the growth of mold.

Steel-framed projects are energy efficient

Buildings consume two-fifths of all material and energy flows. But unlike other construction materials that expand and contract with humidity and temperature changes, steel framing members remain straight and true from the day they are installed through the life of the structure. This means door and window openings framed with steel remain stable, which ultimately saves on energy costs.

Steel - Sustainable Construction Material

Steel is highly durable, non-combustible and won't contribute fuel to a fire. Furthermore, its galvanized zinc coating (a natural element) prevents corrosion. This means the life of a structure framed with steel can last hundreds of years, which also reduces the need for future building resources.

Steel projects can be built with fewer materials

Steel framing allows for designs that use wider stud spacing and varying thicknesses of material. Cold-formed steel also has the highest strength-to-weight ratio of any structural building material, which allows builders and contractors to maximize the footprint of a structure by typically going higher with less impact on the foundation. As a result, it takes less material to build a project framed with cold-formed steel than for projects built with conventional materials.

About the Steel Framing Alliance

The Steel Framing Alliance (SFA) is a market-development organization established and funded by the steel framing industry, and charged with enabling and encouraging the growth of cold-formed steel framing in both the residential and commercial construction markets. In addition to education and training, research and solutions development, and supporting the development of codes and standards for steel framing, SFA activities include marketing and promotion, technical services, and special initiatives that continue to improve the competitive position of steel framing. Headquartered in Washington, D.C., the SFA has more than 1,700 corporate, organizational and individual members representing the full spectrum of trades, professions and virtually every product category within the construction industry. To learn more, visit www.steel framing.org.