

# LEED<sup>®</sup>

## Leadership in Energy and Environmental Design

### United States Green Building Council (USGBC)

Founded in 1993, the United States Green Building Council (USGBC) was the first Green Building Council formed in the United States: there are now 78 regional Chapters across the US; and 19 other national Green Building Councils worldwide (coordinated by the World Green Building Council). The USGBC is comprised of more than 18,000 organizations from across the building industry, including building owners and end-users, real estate developers, facility managers, architects, designers, engineers, general contractors, subcontractors, product and building system manufacturers and government agencies.

The mission of the USGBC is to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy and prosperous environment that improves the quality of life. Two of the inherent principals of sustainability in the built environment underpin the mission statement. Firstly, a triple-bottom-line approach...negative environmental, social and economic effects are avoided or mitigated while the positive effects are maximized. Secondly, a life cycle perspective...it is not just the effects of using a building that need to be considered but instead the entire process from site selection and design, materials selection and construction, operation and eventual decommissioning should all be considered.

### LEED<sup>®</sup> Green Building Rating System™

The USGBC developed the first version of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System in 2000 to encourage and accelerate the adoption of sustainable green building and development practices globally. LEED has subsequently become the accepted benchmark for the design, construction and operation of high performance green buildings across the US, as well as in parts of Asia, Latin America, the Pacific Region and India. The LEED program has been revised over time to become more stringent relative to building and energy codes. The current version of LEED is LEED 2009. Within the LEED program there are nine assessment tools available:

1. **LEED for New Construction and Major Renovations** is designed to guide and distinguish high-performance commercial and institutional projects;
2. **LEED for Existing Buildings: Operations & Maintenance** provides a benchmark for building owners and operators to measure operations, improvements and maintenance on existing buildings;
3. **LEED for Commercial Interiors** is a benchmark for the tenant improvement market that gives the power to make sustainable choices to tenants and designers;
4. **LEED for Core & Shell** aids designers, builders, developers and new building owners in implementing sustainable design for new core and shell construction;

5. **LEED for Schools** recognizes the unique nature of the design and construction of schools and addresses the specific needs of school spaces;
6. **LEED for Retail** recognizes the unique nature of retail design and construction projects and addresses the specific needs of retail spaces;
7. **LEED for Healthcare** promotes sustainable planning, design and construction for high-performance healthcare facilities;
8. **LEED for Homes** promotes the design and construction of high-performance green homes; and
9. **LEED for Neighborhood Development** integrates the principles of smart growth, urbanism and green building into a program for neighborhood design.

The assessments attempt to comprise universally understood and accepted performance criteria in five key areas of human and environmental health:

1. Sustainable Sites (SS)
2. Water Efficiency (WE)
3. Energy & Atmosphere (EA)
4. Materials & Resources (MR)
5. Indoor Environmental Quality (IEQ)

The categories within each LEED rating tool are divided into credits. Each credit addresses an initiative that improves, or has the potential to improve, the sustainability of a building. Points are awarded under each credit for actions that demonstrate that the project has met the overall objectives of LEED. Some credits allow for more than one strategy to achieve the aim and award points, whereas others are more prescriptive. Some categories also have prerequisites, which mandate a particular action or feature. LEED assessments are third-party certified and there are four levels of LEED Certification that a building can receive:

1. Certified
2. Silver
3. Gold
4. Platinum

It is important to note that buildings, not products, qualify for certification in LEED.

## LEED® Assessment Tools

### LEED for New Construction & Major Renovations

The LEED for New Construction rating system was designed primarily for new commercial office buildings but can be applied to other building types such as hotels, museums, churches, libraries and high-rise residential projects, and well as major renovations to existing buildings.

There are seven categories in the assessment (Table 1), totaling 110 possible points, which are translated into the four levels of certification (Table 2).

**Table 1: Summary of the LEED for New Construction & Major Renovations assessment tool**

Categories	Possible Points	Number of Credits	Number of Prerequisites
Sustainable Sites	26	8	1
Water Efficiency	10	3	1
Energy & Atmosphere	35	6	3
Materials & Resources	14	7	1
Indoor Environmental Quality	15	8	2
Innovation in Design	6	2	0
Regional Priority	4	1	0

**Table 2: The four levels in the LEED for New Construction & Major Renovations**

Achievement Level	Points Required
Certified	40 – 49
Silver	50 – 59
Gold	60 – 79
Platinum	80 – 110

#### 1. Sustainable Sites (SS)

**Construction Activity Pollution Prevention is a prerequisite.** An Erosion and Sedimentation Control (ESC) Plan must be implemented for all construction activities to minimize soil loss, sedimentation of receiving waters and dust and particulate pollution. Temporary and permanent seeding, silt fencing and sediment traps can all be used as part of the plan.

Credit categories include:

1. **Site Selection:** Points are awarded for sites that avoid ecologically sensitive areas or previously undeveloped land; reducing site disruption; and/or minimizing the building footprint;
2. **Development Density and Community Connectivity:** The intent of this credit is to encourage development in existing urban areas to protect greenfield and ecological areas;

3. **Brownfield Redevelopment:** Recognizes developments that remediate historical site contamination;
4. **Alternative Transportation:** Points can be awarded by, for example, providing bicycle storage, locker facilities and changing areas; locating the development close to existing public transport infrastructure; and providing preferential parking for fuel efficient, small cars and carpool vehicles;
5. **Site Development:** Points are awarded for protecting or restoring habitat and maximizing open space;
6. **Storm Water Design:** Points are awarded for designs that reduce the quantity and improve the quality of the storm water released from the site (e.g. capturing and using rainwater, limiting the amount of impervious surfaces and maximizing vegetated areas);
7. **Heat Island Effect:** Points are awarded for shading the building area; using paving and roofing materials with high solar reflectance; and/or vegetating the roof area; and
8. **Light Pollution Reduction:** Recognizes designs that do not contribute to night sky pollution (e.g. install full cut-off lights, low-angle spotlights and low-reflectance surfaces).

## 2. Water Efficiency (WE)

**Water use reduction by 20% from the baseline for the building (excluding irrigation) is a prerequisite** to reduce the pressure on municipal water supply and wastewater systems. Water use reduction is usually achieved through the installation of low flow and efficient fixtures and fittings.

Buildings qualify for points under the following credits:

1. **Water Efficient Landscaping:** Points are awarded for a 50% reduction (2 points), or elimination (cumulative 4 points), of potable water used for irrigation. Capturing rainwater, recycling wastewater and planting native species that are suited to the local climate is often effective at reducing the need to irrigate;
2. **Innovative Wastewater Technologies:** Points are awarded for either reducing the potable water used for sewage conveyance by 50% (through the use of water-conserving fixtures or non-potable water) or treating 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site; and
3. **Water Use Reduction:** Points are awarded for either a 30% (2 points), a 35% (cumulative 3 points) or a 40% (cumulative 4 points) reduction in water use, which may be achieved by water harvesting and recycling, installation of low flow fittings and water efficient appliances.

### 3. Energy and Atmosphere (EA)

There are three prerequisites in this section:

- **Fundamental Commissioning of the Building Energy Systems:** Independent verification that the building's energy related systems are installed, calibrated and perform according to the owner's project requirements, basis of design and construction documents;
- **Minimum Energy Performance Required:** The building and systems must demonstrate a 10% improvement (new buildings) or 5% improvement (existing buildings); or comply with the appropriate ASHRAE Advanced Energy Design Guide; or comply with the Advanced Buildings Core Performance Guide;
- **Fundamental Refrigerant Management Required:** In order to reduce ozone depletion, chlorofluorocarbons (CFCs) must not be part of new HVAC systems. Where existing HVAC systems that depend on CFCs are reused, there must be a schedule for replacement of these refrigerants

There are six other credits under which a building project can be awarded points. Some build on the baselines set out in the prerequisites, while others encourage additional sustainability measures:

1. **Optimize Energy Performance:** This credit aims to improve on the mandatory energy efficiency demonstrated in prerequisite 2. There are 19 points available and 3 compliance paths: whole building simulation; prescriptive compliance with the appropriate ASHRAE Advanced Energy Design Guide; or prescriptive compliance with the Advanced Buildings Core Performance Guide;
2. **On-Site Renewable Energy:** Up to 7 points are awarded for renewable energy production on-site. One point is awarded when 1% of the energy used is produced on-site, with another point awarded for every additional 2% of energy needs that are produced on-site, up to a maximum of 13% (7 points);
3. **Enhanced Commissioning:** This builds on the prerequisite for owners to contract a Commissioning Authority (CxA). For the enhanced commissioning credit (2 points), the CxA must be commissioned early in the process and be contracted from the design or construction management firms not holding construction contracts, as well as undertake additional verification steps after systems performance verification is completed;
4. **Enhanced Refrigerant Management:** The intent of this credit is to reduce ozone depletion, support early compliance with the Montreal Protocol and minimize direct contributions to climate change. Compliance requires either not using refrigerants or selecting HVAC&R systems that minimize or eliminate compounds that have global warming potential (GWP) or ozone depleting potential (ODP). Design elements that take advantage of passive solar heating, passive cooling and natural ventilation can help reduce dependence on HVAC&R systems. To comply with the credit, fire suppression systems must also be free of substances with ODP (e.g. CFCs, hydrochlorofluorocarbons (HCFCs) and Halons);
5. **Measurement & Verification:** Compliance requires the development and implementation of a Measurement & Verification (M&V) Plan, operational for a period of no less than a year post-construction. The M&V Plan must be consistent with the International Performance Measurement & Verification Protocol (v3) and may require installation of sub-meters or modeling energy use;
6. **Green Power:** This credit is designed to encourage the development and use of grid-source renewable, net zero pollution technologies. Two points are accrued if at least 35% of the energy used in the building is from renewable sources, supplied on at least a two-year contract.

#### 4. Materials & Resources (MR)

**Providing adequate, easily accessible areas for recycling is a prerequisite** of this category.

There are seven other credits:

1. **Building Reuse:** To extend the life cycle of existing building stock, 1 point is awarded when 55% of the existing building structure, envelope and framing are reused. Two points are awarded when 75% of the building is reused and 3 points are awarded when 95% is reused. A point is also awarded when 50% (by area) of interior non-structural elements are reused;
2. **Construction Waste Management:** One point is awarded for recycling or salvaging 50% of non-hazardous construction and demolition debris. An additional point is awarded for diverting 75% (an additional 25%) of waste from disposal. A Construction Waste Management Plan can help establish best practice on-site;
3. **Materials Reuse:** One point is awarded for the reuse of salvaged materials such as beams, posts, flooring, paneling, doors, door frames, cabinetry and furniture when these materials constitute 5% of the total value of materials used on the project. An additional point is awarded when 10% (based on cost) of materials are reused;
4. **Recycled Content (post-consumer + ½ pre-consumer)^:** One point is awarded when the materials used have recycled content such that the sum of post-consumer recycled content, and half the pre-consumer recycled content constitute 10% of the total value of the materials used in the development. An additional point is awarded when post-consumer plus half the pre-consumer recycled content represents 20% of the cost of materials used;
5. **Regional Materials:** One point is awarded when 10% of the total cost of the materials used in the development are produced (extracted, harvested, recovered and manufactured) within 500 miles of the project site. If only a fraction of a product or material is produced locally, then only that percentage (by weight) contributes to the regional value. An additional point is awarded when 20% of the materials used in the development are sourced regionally;
6. **Rapidly Renewable Materials:** One point is awarded when rapidly renewable building materials and products are used for 2.5% of the total value of all building materials and products used in the development, based on cost. Rapidly renewable materials are typically harvested on no more than a ten-year cycle and include bamboo, wool, cotton insulation, agrifiber, linoleum, wheat board, strawboard and cork; and
7. **Certified Wood:** To achieve this credit at least 50% of wood-based materials and products used must be certified in accordance with the Forest Stewardship Council's (FSC) Principles and Criteria for wood building components. Components assessed include structural framing and general dimensional framing, flooring, sub-flooring and doors.

<sup>^</sup> Recycled content is defined in accordance with ISO 14021, environmental labels and declarations, self-declared environmental claims (Type II environmental labeling). Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Reutilization of materials such as rework, regrind or scrap generated in a process, and capable of being reclaimed within the same process that generated it, is not considered pre-consumer recycling

## 5. Indoor Environmental Quality (IEQ)

**Compliance with ASHRAE 62.1-2007 (Sections 4-7) sets the prerequisite minimum standard for indoor ventilation rates** in both mechanically and naturally ventilated buildings.

**Environmental tobacco smoke (ETS) control is also a prerequisite.** The prerequisite can be achieved through two prescriptive paths that prohibit smoking in the building, except in designated smoking areas that must be designed to effectively contain the smoke, and mandate that designated exterior smoking areas be located 25 feet away from any building opening or air intake point.

There are eight other IEQ credits, totaling 15 possible points:

1. **Outdoor Air Delivery Monitoring:** This credit requires the installation of CO<sub>2</sub> and outdoor airflow monitors;
2. **Increased Ventilation:** One point is awarded for providing additional outdoor air ventilation. For mechanically ventilated buildings this requires an outdoor air ventilation rate 30% above the prerequisite (ASHRAE Standard 62.2-2007). Naturally ventilated spaces must meet the recommendations set out in the Chartered Institution of Building Services Engineers (CIBSE) Applications Manual;
3. **Construction IAQ Management Plan:** Requires the adoption of indoor air quality (IAQ) management plans for the construction (1 point) and pre-occupancy (1 point) phases;
4. **Low-Emitting Materials:** Points are awarded for complying with standards which specify maximum volatile organic compound (VOC) concentrations in adhesives and sealants (1 point), paints and coatings applied on-site (1 point) and flooring systems (1 point). One point is also awarded if it is demonstrated that composite wood and agrifiber products do not contain urea-formaldehyde resins;
5. **Indoor Chemical & Pollutant Source Control:** One point is awarded for minimizing exposure of building occupants to potentially hazardous particulates and chemical pollutants. The design should minimize and control pollutant entry into buildings, and later cross-contamination of regularly occupied areas. This can be achieved by, for example, designing cleaning and maintenance areas with isolated exhaust systems for contaminants;
6. **Controllability of Systems:** Building occupants can reduce energy use if they are able to control lighting and air-conditioning systems. To achieve this credit, 90% of occupants must be able to adjust their lights to meet their individual needs (1 point) and 50% must have individual temperature controls to maximize personal thermal comfort (1 point). Shared, multi-occupant spaces must also have temperature and lighting controls to meet group needs;
7. **Thermal Comfort:** These credits build on the prerequisite and Credits 1 and 2 above. HVAC systems and building envelopes must be designed (1 point), and verified post-occupancy (1 point), to comply with ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy; and
8. **Daylight & Views:** One point is awarded when 75% of regularly occupied areas have a minimum daylight illumination level equivalent to 25 foot-candles. There are four options that can be used to demonstrate compliance while accounting for potential glare. One point can also be awarded when 90% of all regularly occupied areas have a direct line of site to an outdoor area.



#### 6. Innovation & Design Process

Up to five points can be awarded for ***Innovation in Design***. These credits are designed to encourage and reward designs that perform above LEED standards and/or innovations not specifically addressed by LEED. One point is awarded when at least one principal participant of the project team is a LEED Accredited Professional.

#### 7. Regional Priority

Up to four points can be awarded for achieving ***Regional Priority Credits***, which are determined by USGBC regional Chapters to address geographic-specific environmental priorities.



## How Steelscape Products may be used to help buildings meet LEED requirements

Steelscape products can be utilized in greener building design to improve energy efficiency and thermal comfort, reduce energy and water demand, and thus help designers meet LEED requirements in their building projects. (Table 3)

**Table 3: Where Steelscape products may help a project qualify for points in LEED 2009 New Construction & Major Renovations**

Category	Credit		Possible Points
<b>Sustainable Sites</b>	Credit 6.1	Storm Water Design – Quantity Control	1
	Credit 7.2	Heat Island Effect – Roof	1
<b>Water Efficiency</b>	Credit 1	Water Efficient Landscaping	2 - 4
	Credit 3	Water Use Reduction	2 - 4
<b>Energy &amp; Atmosphere</b>	Credit 1	Optimize Energy Performance	1 - 19
	Credit 2	On-Site Renewable Energy	1 - 7
<b>Materials &amp; Resources</b>	Credit 1.1	Building Reuse – Maintain Existing Walls, Floors and Roof	1 - 3
	Credit 2	Construction Waste Management	1 - 2
	Credit 4	Recycled Content	1 - 2
<b>Indoor Environmental Quality</b>	Credit 7.1	Thermal Comfort – Design	1
	Credit 8.1	Daylight and Views – Daylight	1
	Credit 8.2	Daylight and Views – Views	1
<b>Maximum number of points accessible or facilitated by using steel products</b>			<b>14 - 46</b>

### Sustainable Sites (SS)

Steel water tanks designed for rainwater harvesting can be utilized as part of the building project, which may help meet the criteria for stormwater quantity in *SS Credit 6.1: Stormwater Design - Quantity Control* (one point). Harvesting rainwater means that stormwater can be used on-site, and is not contributing to the erosion of soil on-site, or in the receiving environment

External cladding products, such as metal roofing, are available with high Solar Reflectance Index (SRI) values. These products reflect a higher proportion of incoming solar energy away from a roof surface versus products with lower SRI values. The more incoming shortwave radiation reflected, the lower the external surface temperatures will be...a contribution to reducing the intensity of urban heat islands (UHIs).

Steelscape offers pre-painted steel products which incorporate solar reflectance technology which will meet required SRI values. In addition, our bare and resin-coated ZINCALUME® steel products have SRI values that meet the criteria of *SS Credit 7.2 (Heat Island Effect - Roof)* for both steep-slope and low-slope designs.

### **Water Efficiency (WE)**

Harvested rainwater can be used for non-potable purposes such as irrigation and toilet flushing, which reduces demand for water from mains supply in accordance with the intent of *WE Credits 1 and 3*.

### **Energy & Atmosphere (EA)**

Steelscape products can help realize many of the design elements that are key to reducing energy demand (*EA Prerequisite 2 and Credit 1 & 2*).

Steel building envelopes are more airtight than building envelopes constructed from many other materials that can be used for the same purpose. A steel envelope can help reduce air leakage, thereby reducing energy demand.

As well as helping to reduce the intensity of UHIs (see *MR Section 4*), the range of color finishes produced in steel can aid management of thermal comfort and reduce peak energy demand. In warmer climates, light colored reflective roofs and walls can be used to reflect energy away from the building and reduce energy demand for internal cooling. Further, the high thermal emittance of painted steel products means that any heat that is absorbed into the building is quickly re-radiated at night. Steel cladding and roofing can also be used in cool climates to create more energy efficient buildings. Dark roofs and walls are effective at absorbing solar energy and result in warmer buildings that require less energy to heat.

Lightweight steel construction also responds quickly to changes in thermal conditions, spaces can be heated or cooled quickly without expending a lot of energy on heating or cooling the structure. Lightweight framing and cladding are also ideal for designs constructed using reverse mass principles.

Reverse mass designs place dense materials inside a highly insulated, lightweight frame, the opposite of many conventional building techniques that locate dense materials (such as bricks and concrete) on the outside of the building. In summer, the internal thermal mass absorbs the heat that enters the building because it has a lower initial temperature than the surrounding air. With the building absorbing the heat, internal air temperatures are lower during the day, potentially providing comfort for occupants without the need for supplementary cooling. In winter, high thermal mass in floors and walls absorbs radiant heat from the sun through south and east facing windows in the northern hemisphere, and reradiate that heat to the room in the afternoon and early evening, again potentially reducing the need for supplementary heating.



Metal roofing is also the ideal platform for photovoltaic and/or wind generation, outlasting the equipment and allowing attachment with no penetrations (*EA Credit 2*).

## Materials & Resources (MR)

Steel structural roof decking can be used to add volume to existing buildings, particularly heritage buildings that are weight sensitive. Additional function may be added while maintaining (reusing) the existing structural roof deck (in accordance with *MR Credit 1.1: Building Reuse - Maintain Existing Walls, Floors and Roof*). This reduces retrofit costs, and may help award points under *MR Credit 1.1*.

Because steel building components, and entire building envelopes, can be cut to measure off-site, any waste that is produced can be reclaimed within the process that created the product, and there is minimal on-site waste to be diverted from landfill. This may assist in awarding points under *MR Credit 2 (Construction Waste Management)*. Because steel is 100% recyclable, but not 100% recovered, ensuring that any steel components that cannot be used, or reused, are recycled is a meaningful contribution to resource sustainability. It is important to note that the embodied energy in steel is not lost in the recycling process.

**LEED MR Credit 4 – Recycled Content:** As this credit is very popular when considering the use of steel in a LEED project, the following paragraphs will provide definitions of recycled content, review the steel-making processes and highlight the correct way to calculate recycled content.

**It is important to note here that products do not need to meet the LEED 2009 MR Credit 4 - Recycled Content thresholds on their own.** The *MR Credit 4* thresholds of 10% and 20% for the project are based on **virtually all materials used**. This credit is calculated as a weighted average based on the type of recycled content and the cost of the product. Post-consumer recycled content counts for full % value and pre-consumer (post-industrial) recycled content counts for half the % value in the calculation.

For example, say product A costs \$100 dollars and is composed of 10% post-consumer recycled content and 30% pre-consumer recycled content. To determine the specific product's value for *MR Credit 4 - Recycle Content* you would run the following calculation... $(10\% \times \$100) + (1/2 (30\% \times \$100)) = a \$25$  *MR Credit 4 - Recycle Content* contribution for the thresholds of 10% and 20%, based on the total project.

In Steelscape's manufacturing process, the raw material from which we produce our products is hot band steel coil. Therefore, the recycled content of our steel products is directly related to the recycled content of the hot band steel coil we utilize.

**STANDARD HOT BAND:** Currently, Steelscape's main hot band suppliers, which provide our "standard" hot band, use a basic oxygen furnace (BOF) process. Unless a customer specifies otherwise at time of order quote and order entry, this **standard** hot band is applied to all orders. As the amount of recycled content in BOF hot band steel varies by producer, the specific recycled content within our products utilizing **standard** hot band will vary. In addition, as most of our **standard** hot band suppliers do not track recycled content utilized within their own manufacturing processes, the exact percentages of recycled content within our products manufactured utilizing **standard** hot band are not available.

**HIGH-RECYCLED CONTENT HOT BAND:** Steelscape does have the ability to utilize a higher recycled content hot band steel upon request. This “**high-recycled content**” hot band steel may contain 50-75% recycled content in total. On average, the pre-consumer portion accounts for 20-35%, the post-consumer portion accounts for 30-40%, and the remaining portion represents “reutilized” materials. Steelscape products utilizing **high-recycled content** hot band may be available upon request and must be specified at the time of order quote and order entry. Please inquire with your Steelscape Sales Representative.

**In accordance with the USGBC LEED 2009...”For steel products where no recycled content information is available, assume the recycled content to be 25% post-consumer. No other material has been recognized as having a similarly consistent minimum recycled content.”** Therefore, the default recycled content for Steelscape products utilizing **standard** hot band is 25% post-consumer when calculating **LEED MR Credit 4 - Recycled Content**.

**Again, please note that products do not need to meet the LEED MR Credit 4 - Recycled Content thresholds on their own. It is a calculation that takes into account the recycled content and cost for each applicable product, can include virtually all materials used in the project, and is based on the total project cost.**

## Indoor Environment Quality (IEQ)

The high strength to weight ratio of steel allows the realization of designs with wide spans, which create large open spaces. Large internal volumes allow for cross ventilation to help maintain thermal comfort without supplementary heating and/or cooling (*IEQ Credit 7.1: Thermal Comfort - Design*).

More glazing can also be incorporated into high-volume rooms, which allow for external views and good daylight penetration rates (*IEQ Credit 8*), and can be important in designs incorporating passive solar heating for thermal comfort (*IEQ Credit 7*). High levels of natural light and controlling thermal comfort via design, rather than air-conditioning, also contribute to reducing overall and peak-energy demand.

## Summary

LEED is designed to help deliver sustainable buildings during operation, with a particular focus on energy and water efficiency and thermal comfort. There are no Credits or Points directly assessing steel products, although *SS Credit 7.2* and *MR Credit 4* do assess the properties of steel in terms of solar reflectivity and recycled content respectively. It is important to note that these Credits represent a maximum of 3 points in an assessment that is comprised of 110 points. There are, however, another 43 maximum points across 12 Credits that steel products can help facilitate indirectly.

## Resources

USGBC [www.usgbc.org](http://www.usgbc.org)