

# LEED FOR HOMES

The Leadership for Energy and Environmental Design (LEED) for Homes program is the latest adaptation of the popular LEED rating system Administered by the U.S. Green Building Council (USGBC). LEED for Homes was developed to provide both a national metric for measuring the environmental impact of homes and a widely recognizable brand for homebuyers.

The LEED family of rating systems is known for its rigorousness, and the LEED for Homes program is no exception. The USGBC claims that LEED for Homes targets the top 25 percent of green homes in the U.S

## How It Works

LEED for Homes is based on a nationwide network of accredited Providers that are responsible for home certification. The first step to applying for LEED certification is to contact a Provider prior to designing and building the home. Providers employ Green Raters that conduct field inspections and also offer consulting services during the design phase of the project. A list of accredited Providers can be found on the USGBC website ([www.usgbc.org](http://www.usgbc.org)).

An integrated design process is an essential part of the LEED for Homes program. The builder applying for certification is responsible for identifying the project team and facilitating communication between team members, such as the architect, HVAC engineer, and landscape professional.

LEED for Homes provides defined goals and processes for all team members to evaluate potential design challenges and offer solutions. This approach ensures the interoperability of systems in a high-performance home. Accountability forms are used to verify the participation of team members in the design process.

Once the home design is complete, the LEED for Homes Provider or Green Rater will conduct an estimate of how the home will score on the rating system. Four levels of certification are offered depending on the amount of points earned: Certified, Silver, Gold, and Platinum. Based on the preliminary evaluation, the builder may wish to include additional green technologies to meet the desired goal.

The Green Rater conducts two onsite inspections of the home, one during construction, usually just prior to drywall installation, and another when the home is completed. During the final inspection, the Green Rater conducts the required blower door test, duct leakage test, and other performance tests. The rater is also responsible for verifying that all the green measures in the preliminary evaluation have been successfully installed in the home.

The final step in the certification process is submitting the appropriate paperwork to the LEED for Homes Provider, who will review the documentation and certify the project. The builder receives a certificate from the USGBC and the home can be marketed as LEED for Homes certified.

## How do SIPs Score?

It is important to note that the below table is meant for reference only. Actual project scoring will depend on the individual rater, builder, and other factors.

### EA – Energy and Atmosphere Category

|   |  |
|---|--|
| <p><b>EA 1: Optimize Energy Performance</b><br/>Maximum 34 Points</p> | <p>Using the Performance Pathway, the home is awarded points based on overall energy performance, measured by a HERS Index. A home's HERS Index is calculated by a certified energy rater and takes into account the insulation, results from a blower door test, HVAC, lighting, and other relevant information. LEED points are allocated on a scale ranging from 0 points for ENERGY STAR and 34 points for a net zero energy home. Homes must meet ENERGY STAR requirements as a prerequisite for this credit.</p> |
| <p><b>EA 2.2: Insulation</b><br/>Maximum 2 points</p>                 | <p>SIPs make it easy to provide insulation that meets or exceeds the requirements of the 2004 International Energy Conservation Code (IECC) by 5%. SIP homes must undergo a visual inspection using the ENERGY STAR SIP Visual Inspection Form to earn this credit</p>   |
| <p><b>EA 3: Air Infiltration</b><br/>Maximum 3 points</p>             | <p>Well-sealed SIP homes have a proven track record of achieving extremely low levels of air infiltration. Homes are awarded points based on their blower door test results, with a maximum of 3 points possible.</p>  |

### MR – Materials and Resources Category

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|---|---|
| <p><b>MR 1.4 Framing Efficiencies</b><br/>Maximum 3 points</p>                | <p>The project is given one point for each SIP system used: walls, roofs, and floors. If SIP floors are not used, points can be earned by using other material-efficient framing techniques, such as spacing floor joists greater than 16 " on.center.</p>                      |
| <p><b>MR 2.2 Environmentally Preferable Products</b><br/>Maximum 3 points</p> | <p>If SIPs with FSC-certified OSB are used, the project will be awarded 0.5 points per component (walls, roofs, floors). If the SIPs are manufactured within 500 miles, the project will be awarded an additional 0.5 points per component.</p>                                 |
| <p><b>MR 3.2 Construction Waste Reduction</b><br/>Maximum 3 points</p>        | <p>Using prefabricated SIPs decreases the amount of onsite construction waste, helping builders qualify for waste reduction points. Waste reduction points are given on a scale ranging from 0 to 3 depending on the amount of waste generated per square foot of the home.</p> |

| <b>LEED for Homes Certification Levels</b> | <b>Number of LEED for Homes Points Required</b> |
|--|---|
| Certified                                  | 45-59   |
| Silver                                     | 60-74   |
| Gold                                       | 75-89   |
| Platinum                                   | 90-136  |
| Total Points Available                     | 136   |

# LEED FOR NEW CONSTRUCTION

The Leadership for Energy and Environmental Design (LEED) for New Construction is the flagship of the LEED body of rating systems administered by the U.S. Green Building Council (USGBC). LEED for New Construction provides guidelines for the design and construction of high-performance commercial, institutional and high-rise residential buildings.

Initiatives that require or provide incentives for LEED certification have been adopted by states and localities across the nation. With many school districts and higher educational institutions jumping on the LEED bandwagon as well, the LEED for New Construction rating system is a driving force in the green building movement.

## How It Works

Projects certified under the rating system must meet a total points minimum by accumulating points in the following categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, and Innovation and Design Process. Buildings must also meet prerequisites in each category. Four levels of certification are available, based on the total number of points awarded: Certified, Silver, Gold, and Platinum.

The evaluation of LEED for New Construction submittals typically takes place in two phases. A design review that analyzes design related credits is followed by a commissioning of the building once it is substantially completed.

## How do SIPs Score?

*It is important to note that the below table is meant for reference only. Actual project scoring will depend on the individual rater, builder, and other factors.*

### EA – Energy and Atmosphere Category

|  |  |
|--|--|
| <b>EA 1: Optimize Energy Performance</b><br><i>Maximum 19 Points</i> | The project can be awarded up to 19 points for total energy savings, determined by whole building energy modeling according to ANSI/ASHRAE/IESNA Standard 90.1-2004, Appendix G. Alternately, certain types of commercial buildings can qualify for energy efficiency points by complying with several listed prescriptive standards.<br>By reducing the amount of energy needed for heating and cooling, SIPs contribute to overall energy savings. Space heating and cooling account for 44% of energy use in commercial buildings |
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### MR – Materials and Resources Category

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|---|--|
| <b>MR 7: Certified Wood</b><br><i>1 Point</i> | If 50% of the wood products used in the building are Forest Stewardship Council (FSC) certified, 1 point will be awarded. SIPs are available with FSC certified OSB facings from some manufacturers. |
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## IEQ – Indoor Environmental Quality Category

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|---|---|
| <b>IEQ 3.2: Construction Indoor Air Quality Management Plan</b><br><i>1 Point</i>     | As a low-VOC product, SIPs assist in reaching the required VOC levels for healthy indoor air quality.   |
| <b>IEQ 4.1: Low Emitting Materials: Adhesives and Sealants</b><br><i>1 Point</i>      | The structural adhesives used in SIP production meet the requirements for low emitting materials defined in EQ Credit 4.1. All adhesives and sealants used on the interior of the building must meet the requirements to earn the credit. |
| <b>IEQ 4.4: Low Emitting Materials: Wood and Agrifiber Products</b><br><i>1 Point</i> | The OSB used in SIPs meets the requirement that composite wood products used on the interior of the building (defined as inside of the weatherproofing system) shall contain no added urea-formaldehyde resins.                           |
| <b>IEQ 7.1: Thermal Comfort—Design</b>  | SIPs create a well-insulated and airtight building envelope that contributes to overall thermal comfort.  |

| LEED for New Construction Certification Levels | Number of LEED New Construction Points Required |
|--|---|
| Certified                                      | 40-49   |
| Silver   | 50-59   |
| Gold   | 60-79   |
| Platinum                                       | 80-110  |
| Total Points Available                         | 110   |