



Warmboard and LEED for Homes Certification

The following table shows potential point contributions for a home that uses a Warmboard radiant floor heating system:

LEED for Homes Category	Maximum Number of Pts WB/Radiant Contributes
Innovation and Design Process	0
Location and Linkages	0
Sustainable Sites	0
Water Efficiency	0
Energy and Atmosphere	11
Materials and Resources	0
Indoor Environmental Quality	4
Awareness and Education	0
Total	15

Further detail on Warmboard’s contribution is as follows (page numbers refer to the LEED for Homes Rating System):

Prerequisites (Warmboard can help meet these requirements of LEED for Homes):

1. If a minimum of R3 insulation is used around all radiant pipes/tubing located in unconditioned spaces (ie Garages), this will fulfill the Prerequisite of section EA 5.1. (pg. 64)
2. Depending on the project’s location, if the radiant heating system utilizes a boiler (gas or oil fueled) with an efficiency of greater than or equal to 80 AFUE (in climate zones 1-3), or 85 AFUE (in climate zones 4-8), this will satisfy the prerequisite of section EA 6.1. (pg. 66)
3. A radiant heating system with sealed combustion (supply and exhaust ducting), will contribute to meeting the EQ 2.1 (Indoor Environmental Quality) prerequisite. (pg. 87)
4. If the radiant heating system is designed with room by room heat load calculations and following the manufacturer’s guidance in meeting these loads, this will fulfill prerequisite EQ 6.1. (pg. 93)

Points (Warmboard can help gain points under LEED for Homes in the following areas):

1. If the entire radiant heating system, including the heat source, is contained within the conditioned envelope of the home, this will earn 2 points, per section EA 5.2. (pg. 64)
2. If an outdoor reset control is installed, this will earn 3 points per section EA 5.3. (pg. 65)
3. If the radiant heating system utilizes a boiler with an efficiency of greater than or equal to 87 AFUE (in climate zones 1-3), or 90 AFUE (in climate zones 4-8), the home will earn 3 points under EA 6.3. (pg. 66)
4. If a ground source heat pump is used in conjunction with a boiler meeting the requirements of #3 (above), the home will earn 1 extra point under EA 6.3. (pg. 66)
5. If the boiler has a Combined Annual Efficiency greater than .08, and is also serving as the heat source for the domestic hot water, this will earn 2 points under EA 7.3. (pg. 70)
6. If the radiant heating system incorporates thermostatic control in each room, the home will gain 1 point under EQ 6. (pg. 93)
7. If at least two distinct zones with independent controls are designed and installed, the home will earn 2 points under EQ 6.2. (pg. 93)
8. By using a radiant floor heating system without ducts, the home will be awarded 1 point automatically under EQ 8.1 with no further work required. (pg. 96)

Using a Warmboard radiant floor heating system meeting the above requirements could help meet 4 prerequisites, and earn a home up to 15 points under LEED for Homes.

Note that most radiant floor heating systems can be designed to meet the above requirements. Warmboard makes these systems easier to plan and cheaper to install.

Key sales points:

- LEED for Homes is designed to be builder friendly and budget conscious.
- Efficient Radiant Floor systems can simplify the documentation and testing required to complete LEED for Homes certification.
- Heating systems without ducts can enhance Indoor Air Quality, a key component of the LEED for Homes program (as described above).

References: USGBC LEED for Homes Rating System, www.usgbc.org/leed/homes
EPA Indoor Air PLUS www.epa.gov/indoorairplus