



November 28, 2017

LEED and Radiant Heating Systems

Radiant heating systems meets LEED requirements in many areas as RHS (Radiant Heating Systems) can meet the overall energy efficiency and sustainability requirements.

The effective use of RHS (radiant heating systems) can contribute towards a project attaining up to 12 LEED points under the following USBGC rating system for New Construction & Major Renovations.

IMPORTANT ADDITIONS in LEED V4

LEED is taking a more active approach to Smart Grid technologies. ***“LEED v4 brings smart grid thinking to the forefront, rewarding projects for participating in demand response programs.”*** Consideration is now given to:

Advanced Energy Metering

Demand Response

Renewable Energy Production

INDOOR ENVIRONMENTAL QUALITY

◦**EQ Credit 6.2** Controllability of Systems: **Thermal Comfort - 1 Point** Inherent design capabilities and necessities of RHS meet the INTENT & REQUIREMENTS with zoning of the system.

◦**EQ Credit 7.1 Thermal Comfort Design - 1 Point.** RHS designers and engineers have ascertained the resultant environment approach is the IDEAL Heating Curve (see graph). As such these systems meet the credit's INTENT & REQUIREMENTS.

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◦ **EQ Credit 7.2 Thermal Comfort Verification - 1 Point.** RHS can contribute towards a project obtaining this point. *HOWEVER*, the attainment under this provision cannot be secured by the system itself but requires the cooperation and assistance of the owner/occupant of the building in order to meet BOTH the INTENT & REQUIREMENTS.

ENERGY AND ATMOSPHERE

To receive LEED credit under the Energy & Atmosphere section, first each of the four prerequisites:

- **EA Prerequisite 1:** Fundamental Commissioning of the Building Energy Systems
- **EA Prerequisite 2:** Minimum Energy Performance
- **EA Prerequisite 3:** Fundamental Refrigerant Management

EA Prerequisite 4: Building Level Energy Metering

EA Credit: Optimize Energy Performance - 1-18 Points

Similar to EQ 7.2, RHS will be able to provide the impetus for but will require the combined efforts of the design team (including architect, systems designer, and HVAC consultant engineers) to establish the most effective system design for minimizing energy consumption.

EA Credit: Advanced Energy Metering – 1 Point.

EA Credit: Demand Response – 2 Points. Involves load shedding or shifting.

EA Credit: Renewable Energy Production – 3 Points

INTENT & REQUIREMENT – one of the three compliance path options:

OPTION 1 – Whole Building Energy Simulation (1-10 points)

OPTION 2 – Prescriptive Compliance Path (4 points)

OPTION 3 – Prescriptive Compliance Path (1 point)

Note: RHS may contribute towards a project obtaining LEED certification for a number of different rating systems; i.e. LEED for Homes, Schools, etc.

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General LEED Information

LEED stands for:

Leadership in

Energy and

Environmental

Design

LEED is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

The US Green Building Council (USGBC) - www.usgbc.org - is responsible for the LEED standards, certifications, education and training.

Products are not certified as LEED. Buildings are certified as LEED and there are several levels of LEED certification. These are all based on a point system.

Certified	40–49 points
Silver	50–59 points
Gold	60–79 points
Platinum	80 points and above

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