



Guide for Earning LEED® Credits with Innovas Technologies

Updated for LEED® v2009

LEED® Program and Innovas Technologies Contribution



The US Green Building Council LEED® Program is a third-party certification program and the nationally accepted benchmark for the design, construction and operation of high-performance green buildings. LEED® gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. The LEED® rating systems are designed for rating new and existing commercial, institutional, and residential buildings and LEED® credits are organized into 6 categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation in Design. Innovas Technologies' solutions contribute to satisfying multiple credit requirements in most LEED® rating systems, including LEED for New Construction, LEED for Existing Buildings, and LEED for Healthcare.

Innovas Technologies' Helios Tube Cleaning System is an innovative solution for improving energy efficiency associated with water cooled HVAC systems in building applications. The Helios Tube Cleaning System preempts fouling due to scale, corrosion and microbial buildup--allowing chillers and chilled water plants to operate more efficiently, and eliminate cleaning chemical use and subsequent discharge of contaminated waste water. The Helios Tube Cleaning System is easily integrated in new and existing buildings, thereby contributing to credit requirements for most of LEED® rating categories. Innovas Technologies has expert professionals dedicated to assist building designers and operators maximize energy efficiency and accrue project LEED® Points.

Summary: Innovas Technologies Applicable Contributions to LEED® Points

USGBC LEED® Environmental Category	LEED® for New Construction Credit Points	LEED® for Existing Buildings Credit Points	LEED® for Healthcare Credit Points
1. Energy and Atmosphere	1 Point	1 Point	1 Point
2. Innovation in Design	2 points	2 points	2 points
Total Applicable LEED® Credit Points	3 Points	3 Points	3 Points

Helios Tube Cleaning System Technology Review



The **Helios Tube Cleaning System** is the most efficient and reliable automatic on-line solution for keeping chiller condenser and evaporator tubes continuously clean and working at full capacity. The **Helios** cleans condensers by propelling a barrage of soft balls through the tubes. The water and balls are injected under controlled water pressure into the condenser inlet nozzle. The friction of passing balls, which are slightly larger in diameter than tubes, removes accumulating residue every few minutes, before it can adhere to tube walls. The balls are captured at the end of the cycle, washed and returned to the beginning waiting for the next cycle. Keeping heat exchangers surfaces clean results in substantial economic savings due to reduced maintenance costs, energy consumption and emissions of greenhouse gases.

Fouling negatively impacts operation and maintenance of HVAC systems by increasing:

1. Energy use and demand
2. Water acquisition and discharge costs
3. Cost of maintenance and repair
4. Shortens life of capital equipment such as chillers, pumps, cooling towers
5. Uncomfortable environmental conditions due to poor performance of HVAC system

The Helios Tube Cleaning System optimizes HVAC energy efficiency in real time. Innovas Technologies' solutions are currently servicing companies and facilities in nine different states and one Canadian province.

Energy and Atmosphere

Optimize Energy Performance

LEED for New Construction 1 pt, LEED for Existing Buildings 1 pt, LEED for Healthcare 1 pt

Intent: Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Requirements: Select one of the four compliance path options.

Helios Tube Cleaning System Contribution: Innovas Technologies' Helios tube cleaning system preempts fouling in chiller condensers and evaporators, optimizing chiller and chilled water plant efficiency—thus reducing HVAC energy consumption.

Innovation and Design Process

Innovation in Design

LEED for New Construction 2 pt, LEED for Existing Buildings 2 pt, LEED for Healthcare 2 pt

Intent: To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED for New Construction Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED for New Construction Green Building Rating System.

Requirements: Credit 1.1 (1 point) In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach (strategies) that might be used to meet the requirements. Credit 1.2 (1 point) Same as Credit 1.1 Credit 1.3 (1 point) Same as Credit 1.1 Credit 1.4 (1 point) Same as Credit 1.1

Helios Tube Cleaning System Contribution: The Helios Tube Cleaning System is an innovative and ecofriendly alternative to traditional chiller tube cleaning methods, providing designers with opportunities to go beyond LEED requirements in improving energy efficiency, water efficiency, and chemical use reduction or elimination for HVAC systems.
