



## How RenewAire Energy Recovery Ventilation (ERV) Can Contribute LEED Credits to Your Project

### LEED – A Standard for Energy Efficient, Green Building Design

The Leadership in Energy and Environmental Design (LEED™) Green Building Rating System™, administered by the U.S. Green Building Council, has become the recognized standard for specifying green building design. While energy efficiency is a major criterion, LEED is more than just an energy program. It awards points for many other aspects of green building design, such as project siting and transportation, water efficiency, the use of recycled materials, and indoor environmental quality. LEED programs are available for New Construction (NC), Existing Buildings (EB), Commercial Interiors (CI) and for Homes (H).

Selecting and specifying RenewAire Energy Recovery Ventilators as a part of an HVAC design can contribute to achieving a significant number of LEED credits for your NC, EB, CI or H projects.

RenewAire ERVs can contribute a significant number of credits in two of five LEED categories: “Indoor Environmental Quality” and “Energy and Atmosphere” with additional potential contribution in the “Innovation in Design” category.

### RenewAire – the Smart Way to Deal with **Indoor Air Quality** and **Energy Efficiency**

Today’s buildings are built to be air-tight to control energy costs, humidity migration and provide stable, comfortable temperature conditions. Consequently, building occupancy and activities produces indoor air pollutants that can accumulate to unhealthy levels resulting in growing cases of short and long term building related illnesses. The solution prescribed by health authorities, building scientists and code officials is mechanical ventilation – an equal or pressure balanced ‘exhaust out’ of room air and ‘supply in’ of fresh outdoor air. But typical ventilation systems require a large amount of heating and cooling energy to maintain comfort in the space, bringing energy recovery ventilation back in a circle to today’s imperative need for energy efficiency.

RenewAire provides ample, pressure balanced ventilation. It controls the size of conventional heating and air conditioning equipment and cuts the energy costs associated with ventilation air by approximately two-thirds. Using an advanced static plate exchanger, RenewAire efficiently transfers both heat and humidity with positive air-stream separation thus insuring exhaust pollutants are not recaptured, (a concern with competing wheel technologies).

Manufactured since 1983, in Madison, Wisconsin, RenewAire has proven itself to be a reliable, maintenance free ventilation product with thousands of installations from Puerto Rico to Point Barrow, Alaska.



### RenewAire Factory – LEED Certification Pending

RenewAire’s mission since beginning ERV production in 1983 has been to provide the best energy efficient ventilation systems for homes and commercial applications. With growing sales, in 2005 RenewAire needed to more than double its production and office space and not surprisingly, the new facility will be LEED Certified. The RenewAire project is unique in that it took an existing metal building shell and on a tight budget developed a very functional factory with attractive, modern corporate offices. Many common and innovative “green building” practices are put to use. Of course, the building is a showcase and “test bed” with seven fully operational RenewAire ERVs.

## LEED Credit Information

LEED Category	Description	RenewAire	Possible Credits
Energy & Atmosphere EA Credit 1	Optimized Energy Performance	Ventilation air in energy efficient buildings can account for 50% or more of the total building design energy cost. RenewAire savings amount to 50-70% of the total ventilation load	3-5 Points for new buildings. 5-7 Points for existing buildings.  (50% times 0.5-0.7 equals a savings of 25-35% (see Note 1)
Indoor Environmental Quality EQ Credit 1	Carbon Dioxide (CO2) Monitoring	Through use of RenewAire's optional CO2 monitor/control, ventilation is provided as required to maintain proper IAQ	1 Point
Indoor Environmental Quality EQ Credit 2	Ventilation Effectiveness	RenewAire provides pressure balanced ventilation through the use of mechanical (fan) exhaust and fresh air supply. With proper air distribution design, a ventilation effectiveness of 0.9 (per ASHRAE 129) can be readily achieved	1 Point
Innovation & Design Process ID Credit 1	Innovation in Design	Creatively designed installations	1-4 Points
Innovation & Design Process ID Credit 2.1	LEED Accredited Professional	Staff member accreditation pending to assist with project ventilation design	1 Point
RenewAire can significantly contribute to a number of additional credits. Note 1: Savings and points earned depend on the actual energy cost budget developed for the project.			

## RenewAire Contributes LEED Credits and Pays for Itself

Costs are a major concern on any project and RenewAire can help. First by moderating the temperature and humidity of the required ventilation air, RenewAire will reduce the size and cost of conventional heating and air conditioning equipment. This equipment downsizing pays for much, and sometimes all the cost, of the RenewAire ERVs. On an ongoing basis RenewAire will save hundreds, if not thousands of dollars in reduced energy bills; not to mention gains from the enhanced health and productivity of the building occupants. How RenewAire performs, as a company and on the job, is a true test of its value. In both areas, RenewAire measures up to its reputation as a *Trouble-Free* ERV®.

## All Ventilation Systems should be this Easy to Use

### *Easy to design and specify*

- o Available in packages from 70-8000 CFM for both indoor and rooftop applications
- o Installation compatible with most HVAC designs including distributed and central-station approaches
- o Unlimited CFM capacities with a patented modular applied system

### *Easy to install*

- o Rapid availability through "Quick Response Manufacturing"
- o No condensate drains or defrost systems
- o Static plate design means no complex wheel set up and adjustment

### *Easy to operate and maintain*

- o Optional full line of automatic controls including time-clocks, motion sensor and CO2
- o Hinged and latched doors allow access to replaceable MERV-8 rated filters and core faces for once-a-year vacuuming with a soft brush

# RenewAire LEED / "Green" Projects

## Schools



Northern Michigan University

## Offices



WI Electrical Employee's Union

## Hospitality



Suwannee River Visitor Center

## Retail



Bokoo Bike Shop