



ERSystems and Prairie Technologies Corporate Headquarters

A Model of Sustainability for Industrial Buildings

Sustainability, energy management and conservation are all pressing issues in the construction community. Not only are municipal state and federal buildings being mandated to address these issues, but corporate America is learning through life cycle costing that there are ever increasing financial benefits .

Since 1993 ERSystems has been a leader in cool roofing technology and a strong supporter of sustainable and renewable building technologies. ERSystems is a charter member of the Energy Star Roof Products Program by the DOE and EPA, were instrumental in starting the Cool Roof Rating Council, and were one of the first roof coatings manufacturers to have products that meet USGBC LEED requirements for reflectivity and emissivity.

Like its sister company ERSystems, Prairie Technologies has quickly become the leader in sustainable and renewable technologies that can be utilized on the roof top. Prairie technologies is the first company to offer a highly reflective roof coating that meets the USGBC LEED requirements for reflectivity and emissivity but also has a high post industrial recycled content. The Prairie Green Roof System has demonstrated both reliability and performance in a rapidly developing technology. Prairie Technologies knowledge and background in energy instrumentation and renewable energy resources (Solar and Wind) make it a leading resource for building owners, corporations, government, and educational facilities.

The Building

The 50,000 ft² manufacturing and office facility is located in Rockford, MN. The building and site were designed to meet the needs of a functioning, fast growing corporation while mitigating the environmental impact. Although the industrial use of the building and site provided a number of challenges, this same use offered many opportunities for sustainable design. The ERSystems and Prairie Technologies corporate headquarters is unique in the Midwest and demonstrates that industrial buildings can economically minimize their environmental impact. The project is currently registered with the USGBC (US Green Building Council) in their LEED (Leadership in Energy and Environmental Design) program. In February of this year, the building was awarded the "2005 Excellence in Design Award" by the National Roofing Contractors Association for its innovative roof design. The building has also received the "Energy Star Label for Buildings" based on the guidelines provided by the U.S. EPA and DOE.

Sustainable Features

Land

- Over 15,000 ft² of pervious parking. The parking spaces can hold over 10,000 gallons of water during large rain events.
- 2.2 acres of Prairie restoration. This will return almost half of the site to its pre-farmland original prairie vegetative state
- 5,000 ft² of vegetated garden roof. The Prairie Green Roof System, reduces storm water run off and naturally filters storm water.



Prairie Green Roof System

Water

- Low water use toilets and urinals. These features save over 6,000 gallons of water annually.
- Rooftop rainwater collection systems for irrigating landscaping.

Energy

- 4.8 kW Photovoltaic Solar Array with net metering
- 5 x 400 W roof mounted wind turbines
- 5,000 ft² of vegetated garden roof. The vegetated roof reduces rooftop air temperatures and adds insulative value
- High Efficiency lighting in the entire building
- LED Exit Lights
- 43,000 ft² of white highly reflective Energy Star certified roofing materials
- Energy management system including fully instrumented rooftop HVAC units.
- Occupancy sensors throughout the building



Rooftop Solar Panels and Wind Turbines

Air

- Low VOC paints and adhesives
- No materials used containing CFCs
- Low emitting, green certified carpeting

Materials

- All structural steel and rebar used in the construction has a minimum of 90% recycled content
- Materials with low embodied energy
- Local suppliers used to minimize transportation effects on environment
- Durable low maintenance materials like concrete and steel used for the majority of construction

Weather station with live webcam
Webcam and rooftop weather can be viewed at www.ersystems.com and www.prairie-tech.com



www.ersystems.com

IMPORTANT: While the information and data contained herein are presented in good faith and believed to be reliable, they do not constitute part of our terms and conditions of sales. Nothing herein shall be deemed to constitute a warranty, expressed or implied, that said information or data are correct or that the products described are merchantable or fit for a particular purpose, or that said information, data or products can be used without infringing patents of third parties.