

Building GREEN in Greensburg



Courtesy of Joah Bussert, Greensburg GreenTown

Business Incubator Building

Completed in May 2009, the SunChips® Business Incubator building not only achieved the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) Platinum status with greater than 50% energy savings—it became the first LEED Platinum certified municipal building in Kansas. The 9,580-square-foot building features five street-level retail shops and nine second-level professional service offices. It provides an affordable, temporary home where businesses can grow over a period of several years before moving out on their own to make way for new start-up businesses. The building was funded by the United States Department of Agriculture (USDA), Frito-Lay SunChips division, and actor Leonardo DiCaprio.

ENERGY EFFICIENCY FEATURES

- **Well-insulated building envelope** significantly reduces energy costs (R-Values include R-22 for concrete form walls, R-30.3 for roof, and R-10 for concrete slab perimeter)
- **Daylighting** created by adding clerestories (stair-step building design) to an east-facing building maximizes the use of natural light to reduce electrical lighting loads
- **Skylights** provide lots of natural light to reduce electricity used for artificial lighting (a reduced solar heat gain coefficient prevents overheating in summer when sun is higher)
- **Optimized windows** flood the interior with natural light in winter (U-Value of glass is 0.28, solar heat gain coefficient is 0.27)
- **Window overhangs** block the high summer sun, reducing cooling loads
- **Lightshelves** located near windows allow natural light to penetrate further into dim spaces
- **Lighting controls** dim spaces where bright lights are not needed, reducing energy consumption
- **Occupancy sensors** turn off lights in vacant rooms to reduce electricity consumption
- **Energy-efficient lights** save energy at night
- **Energy-efficient office equipment** conserves energy used for administrative tasks
- The all-electric heating and hot water system takes advantage of the abundant renewable electricity from the *Greensburg Wind Farm*.

RENEWABLE ENERGY FEATURES

- **A 6.8 kilowatt photovoltaic system** meets 10% of the building's total energy needs
- **A ground-source heat pump provides** heating and cooling by moving the earth's natural even temperature into and out of the facility through twenty-one 340-foot deep wells.

WATER EFFICIENCY

- **Waterless urinals** conserve water in the bathrooms
- **Graywater recycling** uses water from sinks and showers to flush toilets
- **Rainwater** is collected and used to supplement graywater and for landscaping
- **Rain gardens** provide natural stormwater management.

AIR QUALITY AND INDOOR ENVIRONMENT

- **Nontoxic paint** with no volatile organic compounds is used in the interior
- **Demand-control ventilation** ensures continuous fresh air and helps to maintain proper CO₂ levels
- A **rain screen system** on the exterior cladding provides moisture control and is low maintenance.

LEED RATING ACHIEVED

- Platinum



Courtesy of Scott Reinecke, Studio 54 Glass Art



Energy Efficiency &
Renewable Energy

