

Building GREEN in Greensburg

Prairie Pointe Townhomes



Credit: Rachel Sullivan, NREL

After a tornado destroyed most of Greensburg, Kansas, in 2007, the residents needed affordable housing. Prairie Pointe Townhomes is a low-income rental development that was completed in July 2008. Eight of the 16 units in this townhome complex were awarded the first residential U.S. Green Building Council Leadership in Energy and Environmental Design (LEED®) Platinum rating in Kansas and are estimated to use about 50% less energy than similar buildings built to existing building codes.

ENERGY EFFICIENCY FEATURES

- **Well-insulated 2 x 6 walls** use blown-in cellulose insulation with an R-Value of 22.5 to prevent heat loss and save energy
- **Well-insulated roof** with an R-value of R-38 prevents heat loss through the roof and helps keep building cool in summer
- **"Floating floor" insulation** provides foam insulation to concrete slab and does not need to be nailed or glued to the subfloor
- **Energy-efficient windows and doors** maximize the use of natural light while minimizing solar gain and heat loss (U-Value of glass is 0.32; solar heat gain coefficient is 0.30)
- **High-efficiency air source heat pumps** provide efficient heating and cooling with a cooling efficiency rating of SEER (seasonal energy-efficiency ratio) 15 and a heating efficiency rating of HSPF (heating seasonal performance factor) 9.0
- **Energy-efficient appliances** including refrigerators, freezers, and dishwashers save energy
- **Compact fluorescent lights** reduce energy consumption for lighting.

RENEWABLE ENERGY FEATURES

- Purchase energy from community wind farm.

WATER EFFICIENCY

- **Low-flow** toilets, showerheads, and aerators were used in all apartments to conserve water
- **Drought resistant landscaping** conserves water and is aided by an efficient irrigation system.

SUSTAINABLE MATERIALS AND CONSTRUCTION

- **Clustered building design** preserves open space and protects habitat
- **Biodegradable materials** were used when possible in construction.

AIR QUALITY AND INDOOR ENVIRONMENT

- **Nontoxic paints and bio-based tiles** were used on the interior walls of the apartments
- **Nontoxic** adhesives, sealants, and carpets were used.

LEED RATING ACHIEVED

- Platinum



Courtesy of John Holton, IBACOS