

Residential energy efficiency pilot program - Fact sheet

Conrad family pilot project - Donnellson, Iowa

Frank and Susan Conrad were selected by their local electric cooperative, Access Energy Cooperative, to participate in a one-time pilot project through the Take Control & Save energy efficiency program. After an audit was conducted on the more than 150 year-old home, energy efficient measures were installed to help reduce electricity use. Now, the Conrads are saving energy and money and are staying more comfortable when the weather turns cold.

Problems identified:

- Inadequate heating system
- Excessive whole-house air leakage
- No insulation in the attic, basement or rim joists
- Old, inefficient air conditioner

Member goals:

- Reduce electric bill
- Increase whole-house comfort
- Significantly reduce the home's air flow

Completed energy efficiency measures:

- Replacement of old, inefficient heating and cooling system with highly efficient ground-source heat pump
- Foam insulation added in basement, attic, kitchen area crawl space and exterior walls
- Replaced leaky entry doors with energy-efficient models
- Air-sealed all windows
- Replaced all lighting with compact fluorescent light (CFL) bulbs
- Repaired/replaced all duct work

Conrad home statistics:

- Construction type: stone foundation
- Exterior: metal
- Home style: house with farm
- Age of home: 150 plus years
- Square footage: 2,500

Energy audit information:

- Conducted May 12, 2009
- By Access Energy Cooperative's energy audit staff

Energy and money-saving results!

- Saved **9,040** kilowatt-hours (a 24 percent reduction) in the first year!
- Saved **\$817** in the first year!
- CFM (Cubic feet per minute) reduction of 2,359 (from 3,864 to 1,505)
- ACH (Air exchanges per hour) reduction of 6.25 (from 10.24 to 3.99)
- **Air leakage reduction of 61 percent!**

