

# Douglas Elementary School

Clinton, Illinois



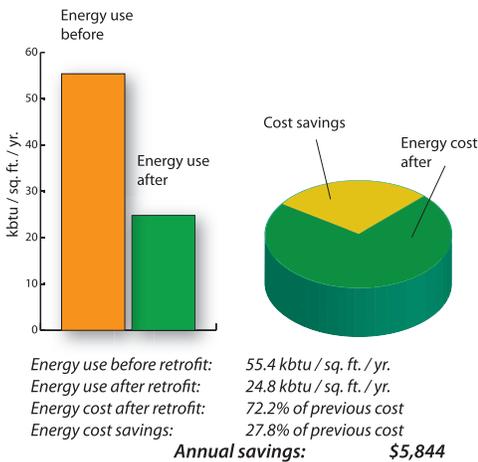
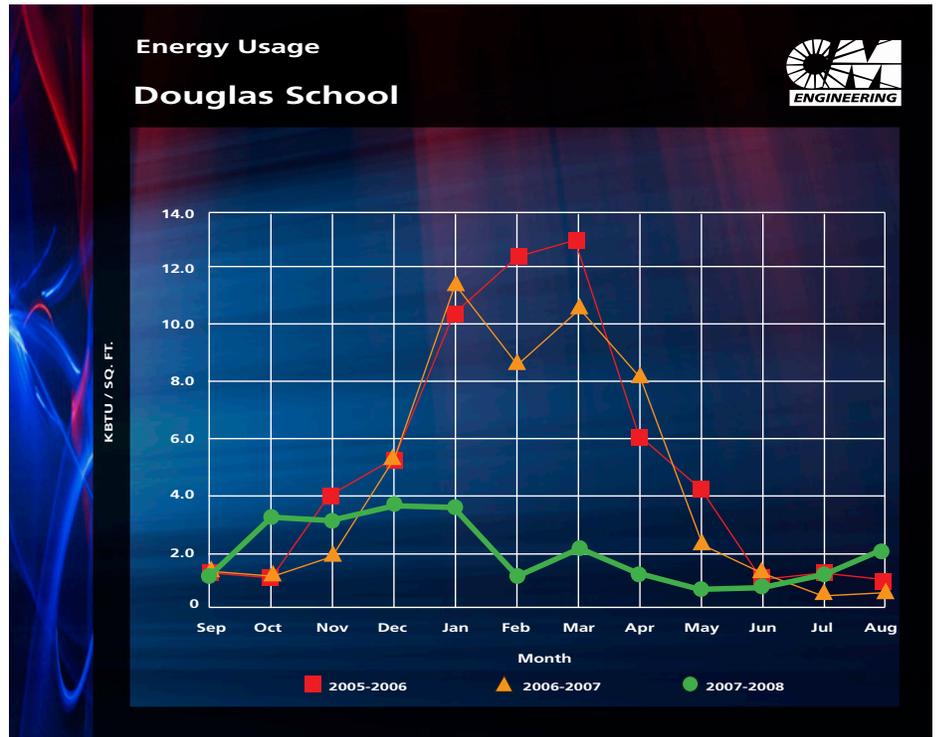
The heating system at Douglas School was nearing the end of its useful life. In spite of its fairly recent construction, the building suffered very high spikes of energy consumption during the winter months.

In the summer after the 2006-2007 school year, we installed our One-Pipe ground source geothermal exchange system. We also added individual temperature controls and air conditioning to every room in the building, at a very low first cost.

The teachers and students now enjoy year-round comfort and the school district enjoys a 72% annual savings on their energy bills.

## Retrofit of existing school

- Air conditioning added to every room
- Ground source geothermal exchange system
- One-pipe design
- 23,980 square feet
- 15 Classrooms
- Approximately 192 students ('08-'09)
- Individual temperature controls in every space
- Retrofit cost less than \$20 / sq. ft.
- Energy use BEFORE retrofit: 55.4 KBTU / sq. ft. / yr.
- Energy use AFTER retrofit: 24.8 KBTU / sq. ft. / yr.



The green tracing above shows measured energy consumption after installation of One-Pipe Geothermal exchange heating and cooling system. Red and orange show consumption for two years prior to retrofit. (Data source: Clinton, Illinois Department of Education)

*“ Even with air conditioning added, we’re using only about 40% of the energy we used previously. The system will pay for itself in less than ten years. Needless to say, we’re very happy. ”*

*Jeff Holmes,  
Superintendent, Clinton CUSD*