

# 2009-10 CARD Case Study

**CARD: Commercial Audit & Retrofit Demonstration**

## Glenwood Sewing Center

Business owners: Sandy and Bob Boyd  
822 Grand Avenue  
Glenwood Springs, Colorado

The recent energy efficiency upgrades at Glenwood Sewing Center have brought a breath of fresh air into the downtown store. Even before the comparative electrical bills are in to measure cost savings, customers and staff are enjoying cool, fresh air throughout the store.

Customers who walk in the west-facing front door on a hot summer afternoon are greeted with a cool breeze that is immediately refreshing, and students who attend a class in the store's basement classroom enjoy clean, fresh air.

The basement classroom used to have a slightly musty smell that evoked the long history of the building, said Sandy Boyd, who owns Glenwood Sewing Center and the 123-year-old building at 822 Grand Ave. with her husband, Bob.

"We've never had fresh air to the basement. It was stuffy," said Sandy Boyd.

Nowadays, the brick-walled classroom is brighter and cooler, and it smells fresh. The sewing teachers and students are happier, and Boyd couldn't be more pleased.

"The fresh air is huge," Boyd said. "We all like having this source of fresh air and air conditioning in the basement. It doesn't smell like an old basement any more."

The change came as part of a package of energy-saving improvements that the Boyds commissioned for their store this past winter and spring. They were able to move forward with a variety of air sealing, lighting and air conditioning upgrades with help from the Garfield New Energy Communities Initiative CARD project, or Commercial Audit and Retrofit Demonstration project. The Boyds completed \$14,438 in work, done by local contractors, and received \$8,197 in rebates.

The Boyds have operated the sewing business since 1977, and they knew when they purchased their current location in 1994 that the old building would have extra maintenance and energy-use issues. But the

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Case study and photos by Suzie Romig



The new evaporative cooler unit (seen at top of photo) brings in fresh air and keeps customers and employees cooler and more comfortable.

quaint building fits their needs well and is in a great location.

Sandy Boyd said they knew some of the needed improvements – such as eventually replacing the single-pane storefront windows and a circa 1905, formerly coal-fired boiler – but they didn't really know where to begin. They needed help in establishing priorities for cost effective energy-efficiency improvements.

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Sandy Boyd is happy with the improved atmosphere in her basement sewing classroom with fresh air and a better quality of lighting.

Through the CARD program, the store received a free energy audit by Schmueser Gordon Meyer Engineers in Glenwood Springs. Boyd said she was intrigued by the infrared thermal imaging done by auditors.

“We never would have had access to find out exactly where all the leaks were and which ones were the worst,” Boyd said. “These old buildings can just suck up money.”

One priority suggestion for cost savings and store comfort was to install a new evaporative cooler at the second-floor windowed hallway to deliver cool air to the front of the store and fresh air to the basement classroom area. A programmable thermostat added to the new cooling system’s efficiency.

The evaporative unit replaced a 20-year-old wall-mounted air conditioner that was in back of the first floor. The Boyds were happy to decommission the old unit for reasons beyond energy efficiency: it didn’t work all that well, and was once the access point for a burglar who pushed his way inside.

### Quick Facts

#### Costs

Total retrofit cost: \$14,439

CARD rebate: \$8,197

Owner investment: \$6,242

**Savings:** (Too soon after improvements to collect comparative figures)

#### Funded energy efficiency measures:

Ceiling lighting: replace T12s with T8s: \$5,250

Replace floodlights with CFLs: \$24

Replace exit light with LED-lit unit: \$50

Air seal building: \$1,180

Install efficient evaporative cooler: \$7,935

To help save on electricity and to improve the lighting quality, Nordsiek Electric replaced eight-foot lighting ballasts that were more than a half-century-old with new energy-efficient T-8 units. The T-8 bulbs also last longer and don’t visibly flicker like the older bulbs.

To prepare for winter and tighten up the leaky building, windows were caulked and aged window woodwork replaced. The antique freight elevator shaft was insulated, the rubber seal on the elevator door replaced, and the air seal on the alley door was tightened up.

Boyd encourages other business owners to order an energy audit to plan upgrades and to take time to look for the simpler things they can do each year to save on energy bills. For example, she replaced incandescent bulbs with compact fluorescent bulbs and changed the exit light to a unit lit by LED bulbs.

“As people and business owners, we all gripe about our bills. We just don’t get around to acting on the things that could be done. Some things that you can do are really simple and not that expensive,” Boyd said.

The 2009-10 Glenwood Springs CARD, Commercial Audit & Retrofit Demonstration, is a project of the Garfield New Energy Communities Initiative, which is managed by CLEER: Clean Energy Economy for the Region.

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