



Case Study: Battlement Schoolhouse

Parachute, Colorado

By Cam Burns, CLEER



Beloved Schoolhouse Shows Historic Buildings Can Be Efficient, Too

A historic schoolhouse on Battlement Mesa is a great example of how a beloved community landmark can promote the ideals of energy efficiency. The building is one of the most popular gathering points in the Parachute/Battlement Mesa area, and though the 114-year-old, two-room schoolhouse is no longer the haunt of teachers and students, community members used the beautiful historic building 144 times last year.

Judith Hayward, president of the Grand Valley Historical Society (GVHS), thinks it's important for iconic buildings to be standout examples for smart energy use.

"The Empire State Building has been getting a lot of attention lately, but it's important that we think about energy use in all buildings, especially historic ones that people admire," she said.

The Upgrades

- Installation of storm windows over original windows
- Programmable thermostat
- Motion-sensor lighting controls

Constructed in 1897, the schoolhouse was built with red sandstone from a rock quarry two miles away (the schoolhouse sits on Old Stone Quarry Road). In 1907, the building was enlarged to its current two-room configuration. The building was used as a school and community meeting place for 50 years (until 1947), and then as a meeting place for another decade before eventually falling into disrepair.

Several years ago, the GVHS decided renovation was in order. GVHS raised \$55,000 to match a \$145,000 grant from the Colorado Historical Society (CHS). Another \$80,000 in donations rolled in and the renovation was underway.

Hayward—who had recently been appointed to the Garfield Clean Energy advisory board—learned about the Garfield Clean Energy Challenge and wondered if a few energy upgrades might be in order. GVHS officials contacted CLEER, Clean Energy Economy for the Region, which offers "energy coaching" services to businesses and homeowners. CLEER's Energy Coaches help building owners



The old schoolhouse in Battlement Mesa is one of the most beloved buildings in Western Garfield County. Photos by Cam Burns

arrange audits and energy-saving-oriented renovations, then get the various rebates they're eligible for for both the audits and the renovations.

GVHS got an energy audit from Holy Cross Energy that pointed the way: doors and windows got weather-stripping, extra panes were installed on the windows, and motion sensors were added to cer-

Lessons Learned

- Highly restrictive historical regulations can be addressed during efficiency upgrades
- All buildings—old and new—can be upgraded to use less energy
- Popular community buildings can offer educational opportunities



Left: Motion sensors were added in the bathroom and kitchen. Middle: Storm panes were added to the schoolhouse's many windows. Right: The schoolhouse still has a few relics from bygone days.

tain lights—specifically lights that are often left on (in the bathroom and a closet).

The contractor, Rex Smith of Cornerstone Construction, did all the efficiency work, and also added a programmable thermostat. When

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— Judith Hayward,
Grand Valley Historical Society

the building is not occupied in winter, the thermostat lowers the temperature inside to 60 degrees (in summer the building's kept at 75 degrees).

Although historical preservation organizations are notoriously restrictive (most are wary of any kind of changes in a building's appearance), the CHS is extremely interested in energy efficiency, so during and after the renovation, the Parachute/Battlement Mesa preservationists were able to add various

items that might not have been allowed in other states. Most significant was the second pane of glass on the building's many windows.

“I think there's almost four inches [between the panes], which is almost perfect as far as insulation,” Hayward said, noting that, serendipitously, the additional energy-saving panes also protect the windows' wooden frames, contributing to the overall goal of preservation.

Altogether, the Grand Valley Historical Society paid \$4,200 on the energy upgrades, then they qualified for rebates from Holy Cross Energy (\$120) and Garfield Clean Energy (\$3,244).

“Now, the building is a gorgeous example of historical preservation meshed with energy efficiency ideals,” said Hayward. “And it's just incredibly comfortable inside.”

For Hayward, the reawakened schoolhouse is especially poignant. In 1886, Hayward's late husband's great aunt and uncle, Jerusha and George Sipprell, moved from

Maine to Battlement Mesa, where they homesteaded on 160 acres. The couple donated the four acres upon which the building sits so that the community could establish a school, and Battlement Mesa became one of the few communities in the early years that didn't have a log cabin for a schoolhouse. “They were the envy of the area because they had a rock schoolhouse,” said Hayward.

And thanks to Hayward, the the GVHS Board of Directors, and the hundreds of local residents who contributed to the effort, the community now has a rock solid example of how energy use can be reduced in historically significant buildings.

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