

Lessons of a decade Step by step, Smiley Building became model of energy efficiency

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It didn't happen at the speed of light.



JERRY McBRIDE/Herald photos

U.S. Rep. Mark Udall, D-Eldorado Springs, left, and Charles Shaw, a co-owner of the Smiley Building, discuss solar panels on the roof of the building on Aug. 29, 2007.



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Solar panels are seen atop the Smiley Building on May 4, 2007.

No, it took 10 years of retrofitting to convert the aging Smiley Building - a victim of neglect and vandalism after the 58-year-old junior high school was shuttered in 1994 - into a national leader in energy self-sufficiency, one of the owners said Wednesday.

"We have one of the most energy-efficient buildings in the United States," Charles Shaw told a near-record Green Business Roundtable lunch crowd at the Strater Hotel. "We haven't had an (electric) bill since last March."

Among the 104 attendees was brand-new Durango City Manager Ron LeBlanc, who began work Tuesday.

The three-story, yellow-brick Smiley Building at 1309 East Third Ave. produces all of its own electricity from a rooftop array of photovoltaic panels. On a good day the system, which is tied into the grid, produces enough power to make the meters spin backward, actually serving as a very minor power producer for La Plata Electric Association.

While solar-produced hot water and electricity get most attention when energy efficiency is mentioned, conservation is the way to begin, said Shaw who, with his wife, Lisa Bodwalk, and brother, John, bought the Smiley Building in 1997. John Shaw since has gone his own way with Shaw Solar & Energy Conservation.

"We started with the simple stuff," Charles Shaw said. "It's the meat and potatoes of energy efficiency."

The rehabilitation of the Smiley Building, which is on the National Register of Historic Places, began with replacement of almost 300 windows, additional insulation, the replacement of scarred wood floors and reroofing.

Over the years, energy efficiency was increased by installing features such as low-energy lighting, low-flow plumbing, an efficient heating system and occupancy sensors and photocells that produce on-demand ventilation and lights in common areas. The lawn tractor/snow blower is powered by batteries charged by the sun.

"Sensors make sure that ventilation and lights are used only when people are in the area," Shaw said. "We learned that we couldn't leave lights on for everyone all the time because there are so many different uses, and there are people there from early morning to late night."

"This is a bold effort in energy sustainability," Kent Ford, the coordinator of the Green Business Roundtable, said in introducing Shaw. Ford later added, "It's pretty dang impressive because we believe the Smiley Building is the largest commercial building in the country to produce all its own electricity from the sun."

Shaw has been successful, Ford said, for the "ruthless" way he sought out energy-conservation measures and for the solar-produced heat and electricity systems.

Tenancy in the Smiley Building is limited to those involved in the arts or environmental- or community-oriented endeavors. The more than 35 tenants include dance studios, a potter, the Iron Horse Bicycle Classic, a Montessori school and a 600-seat theater.

The State Historical Fund has granted more than \$500,000, which has been used to renovate the exterior of the building.

The December heating bill for the entire 45,000-square-foot building was less than \$1,000, Shaw said.

Shaw has a 20-year contract with Xcel Energy of Denver, which will give him a 25-cent credit for every kilowatt-hour the photovoltaic panels produce. He took advantage of one-time energy-conservation incentives, but they could be offered again, perhaps retroactively.

Shaw said energy-efficient buildings can be less expensive than traditional construction. Conservation is the place to begin, he said, noting that if the Smiley Building solar systems were removed, energy use would be 80 percent to 90 percent less than it was before rehabilitation started.

"I hope I've inspired you to do something (energy efficient) on your own," Shaw said.

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